GW-028

2016
AGWMR
Part 3 of 8

2017

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-137
Event: Spring 2016 (Annual)
Area of Concern: Rest (N. Refinery; Main API Separator) (4in; stickup)

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: TAB/MRB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1340	N/A	5.59	0.0	29.60	24.60	yes	yes	yes	yes		Weather: PC/Cloudy 78
4/28/16	1035	WA	5.64									

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1040	5.64	0.5	6.91	25.1	7750	1.9	-399.7	77.6	Cloudy/Yellow tint/	*Low-flow groundwater sample:*
	1042	5.64	1.0	6.90	25.0	7750	2.0	-401.4	54.7	odor / sheen	(A) peristaltic pump w/ ded tubing
	1045	5.64	1.5	6.89	24.8	7760	2.0	-403.7	48.6	sl. cloudy/yellow tint/	B) ded bladder pump
	1047	5.64	2.0	6.89	24.6	7770	2.1	-404.5	37.4	odor / sheen	C) non-ded bladder pump; or
	1050	5.64	2.5	6.88	24.5	7780	2.3	-406.8	28.6	↓	*Standard groundwater sample:*
	1052	5.64	3.0	6.88	24.5	7770	2.3	-407.1	25.4	Clear/yellow tint/	D) bailer due to limited column; or
	1055	5.64	3.5	6.84	24.5	7770	2.3	-407.2	23.9	odor / sheen	E) recovery well cycling sample
↓	1057	5.64	4.0	6.84	24.5	7780	2.3	-407.4	22.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1100	MW-137	5.64	6.84	24.5	7780	2.3	-407.4	22.4	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-138
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (N. Refinery; main API Separator) (4in; at-grade) Initials: THG / MDB

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4/26/16	1350	NA	7.19	0.0	24.81	19.81	yes	yes	yes	yes		Weather: PT/Cloudy 75
4/28/16	940	NA	7.28	0.0								

Well Purging Record Screen: 10-25

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	945	7.34	0.5	6.95	31.4	4158	2.3	-344.7	31.9	SI cloudy, grey tint	*Low-flow groundwater sample:*
	947	7.34	1.0	6.93	31.3	4140	1.8	-350.7	27.8	~/ black particles	(A) peristaltic pump w/ ded tubing
	950	7.34	1.5	6.91	31.2	4130	1.6	-353.0	21.1	clear ~/ black	B) ded bladder pump
	952	7.34	2.0	6.89	31.0	4120	1.5	-354.1	18.7	particles	C) non-ded bladder pump; or
	955	7.34	2.5	6.85	30.9	4100	1.3	-352.8	17.9		*Standard groundwater sample:*
	957	7.34	3.0	6.83	30.8	4090	1.5	-352.8	16.4		D) bailer due to limited column; or
	1000	7.34	3.5	6.79	30.8	4080	1.5	-352.5	13.5		E) recovery well cycling sample
↓	1002	7.34	4.0	6.76	30.8	4070	1.5	-352.3	11.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1005	MW-138	7.34	6.76	30.8	4070	1.5	-357.3	11.2	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-23
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (6in; stickup)

Initials: TAB MDB

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/28/16	1420	NA	10.68	0.0	23.10	17.9	yes	yes	yes	yes		Weather: pt. cloudy 70s
4/28/16	850	NA	10.81	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	855	10.87	0.5	7.07	27.7	3570	2.0	-330.0	39.6	sl. cloudy w/	*Low-flow groundwater sample:*
	857	10.94	1.0	7.05	27.1	3570	1.7	-331.8	38.4	black particles and	(A) peristaltic pump w/ ded tubing
	900	10.99	1.5	7.04	26.7	3560	1.4	-332.4	39.5	gold tint	B) ded bladder pump
	902	11.03	2.0	7.04	26.7	3550	1.1	-333.1	40.7		C) non-ded bladder pump; or
	905	11.06	2.5	7.03	26.7	3560	0.9	-333.7	40.1		*Standard groundwater sample:*
	907	11.10	3.0	7.01	26.7	3540	0.8	-335.4	41.9		D) bailer due to limited column; or
	910	11.14	3.5	7.01	26.7	3530	0.9	-336.9	40.4		E) recovery well cycling sample
	912	11.18	4.0	7.01	26.7	3530	0.9	-337.1	41.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	915	MW-23	11.18	7.01	26.7	3530	0.9	-337.1	41.3	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	~~HCL~~	8260
										Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)	~~HNO3~~	6010/6020
										Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)	HNO3	Field filtered 0.45-u
										~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO3~~	~~6010/6020 and/or 7470~~
										~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO3~~	~~Field filtered 0.45-u~~
										Anions (Chloride,Fluoride,Sulfate)	Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

+ Dup - TEL-01
(for same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-4
Event: Spring 2016 (Annual)
Area of Concern: TEL

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB/BEH

Well Inspection Information

(2 in) stickup

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1430	NA	6.90	0.0	27.27	22.2	yes	yes	yes	yes		Weather: PC/Cloudy 70s
4.28.16	730	NA	6.84	0.0	27.27	22.2						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	735	6.97	0.5	7.31	19.2	5770	3.5	-236.2	10.1	clear w/ brown tint	*Low-flow groundwater sample:*
	738	6.97	1.0	7.18	19.1	5690	1.6	-250.8	8.9		(A) peristaltic pump w/ ded tubing
	740	6.97	1.5	7.07	19.1	5630	1.0	-260.7	8.2		B) ded bladder pump
	743	6.97	2.0	7.00	19.1	5580	0.7	-272.8	7.6		C) non-ded bladder pump; or
	745	6.97	2.5	6.97	19.1	5540	0.5	-279.3	6.0		*Standard groundwater sample:*
	748	6.97	3.0	6.95	19.1	5510	0.5	-284.7	4.9		D) bailer due to limited column; or
	750	6.97	3.5	6.93	19.0	5490	0.4	-288.2	4.3		E) recovery well cycling sample
	753	6.97	4.0	6.91	19.0	5480	0.4	-291.6	3.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	755	TEL-4	6.97	6.91	19.0	5480	0.4	-291.6	3.8	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	SM4500
	1000	DUP-TEL-01	6.97	6.91	19.0	5480	0.4	-291.6	3.8	same as above	same	same
												If <0.03 feet of PSH present, remove PSH and sample groundwater

+EB-TEL-01
(for some analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-3
Event: Spring 2016 (Annual)
Area of Concern: TEL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in; stickup)

Initials: TAB / BRH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4/26/16	1440	N/A	5.73	0.0	27.19	22.2	yes	yes	yes	yes		Weather: pt/cloudy 70s
4.28.16	1005	NA	5.73	0.0	27.19	22.2						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1010	5.90	0.5	6.83	22.3	3810	2.6	-323.7	8.1	clear w/ black fint,	*Low-flow groundwater sample:*
	1013	5.90	1.0	6.78	20.9	3820	1.0	-331.6	6.9	odor	(A) peristaltic pump w/ ded tubing
	1015	5.90	1.5	6.75	20.5	3830	0.7	-337.0	5.2		B) ded bladder pump
	1018	5.90	2.0	6.72	20.2	3830	0.6	-343.4	4.8		C) non-ded bladder pump; or
	1020	5.90	2.5	6.70	20.2	3830	0.6	-348.1	4.3		*Standard groundwater sample:*
	1023	5.90	3.0	6.68	20.1	3840	0.5	-352.6	3.9		D) bailer due to limited column; or
	1025	5.90	3.5	6.66	20.0	3840	0.5	-355.7	3.6		E) recovery well cycling sample
	1028	5.90	4.0	6.64	20.0	3850	0.5	-358.0	3.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1030	TEL-3	5.90	6.64	20.0	3850	0.5	-358.0	3.1	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
										Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)	HNO_3	6010/6020
										Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)	HNO_3	Field filtered 0.45-u
										~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~6010/6020 and/or 7470~~
										~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~Field filtered 0.45-u~~
										Anions (Chloride,Fluoride,Sulfate)	Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
	1045	EB-TEL-01	NA							Same as above	Same	Same
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Trip Blank-TEL-01
4.28.16

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-2
Event: Spring 2016 (Annual)
Area of Concern: TEL

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB/BRH

Well Inspection Information

(2in; stickup)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1456	NA	6.45	0.0	27.20	22.1	Yes	Yes	Yes	Yes		Weather: PC/cloudy 70°
4-28-16	915	NA	6.49	0.0	27.20	22.1						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4-28-16	920	6.56	0.5	7.02	23.1	3720	2.8	-307.5	7.0	clear w/ black tint,	*Low-flow groundwater sample:*
	923	6.56	1.0	6.98	22.0	3730	1.8	-314.2	5.1	odor, sheen	(A) peristaltic pump w/ ded tubing
	925	6.56	1.5	6.90	21.7	3740	1.2	-319.5	4.2		B) ded bladder pump
	928	6.56	2.0	6.84	21.7	3740	0.9	-325.1	3.8		C) non-ded bladder pump; or
	930	6.56	2.5	6.78	21.6	3730	0.7	-328.2	3.1		*Standard groundwater sample:*
	933	6.56	3.0	6.75	21.5	3720	0.6	-330.8	3.0		D) bailer due to limited column; or
	935	6.56	3.5	6.74	21.5	3720	0.6	-333.2	2.6		E) recovery well cycling sample
	938	6.56	4.0	6.73	21.6	3710	0.5	-335.7	2.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4-28-16	940	TEL-2	6.56	6.73	21.6	3710	0.5	-335.7	2.9	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-1
Event: Spring 2016 (Annual)
Area of Concern: TEL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in; stickup)

Initials: TAB/BRH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1500	NA	5.68	0.0	27.00	22.9	yes	yes	yes	yes		Weather: PT/Cloudy 70s
4.28.16	830	NA	5.59	0.0	27.00	22.9						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4-28-16	835	6.08	0.5	7.26	20.9	3640	2.3	-204.9	7.5	clear w/ black	*Low-flow groundwater sample:*
	838	6.08	1.0	7.16	20.4	3600	1.2	-220.8	6.3	tint, sheen on	(A) peristaltic pump w/ ded tubing
	840	6.08	1.5	7.13	20.2	3590	0.8	-237.2	5.8	purge water.	B) ded bladder pump
	843	6.08	2.0	7.09	20.2	3570	0.6	-246.1	5.2		C) non-ded bladder pump; or
	845	6.08	2.5	7.04	20.1	3560	0.6	-252.8	5.0		*Standard groundwater sample:*
	848	6.08	3.0	7.01	20.1	3550	0.5	-255.7	4.6		D) bailer due to limited column; or
	850	6.08	3.5	6.99	20.0	3550	0.4	-260.3	4.2		E) recovery well cycling sample
↓	853	6.08	4.0	6.98	20.0	3540	0.4	-262.4	4.1	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4-28-16	855	TEL-1	6.08	6.98	20.0	3540	0.4	-262.4	4.1	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	NaOH	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-39
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: TAB / BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1230	NA	6.08	0.0	25.44	20.4	yes	yes	yes	yes		Weather: Sunny, 80s
4.28.16	1400	NA	6.05	0.0	25.44							

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1405	6.24	0.5	7.29	25.8	4710	3.0	-287.4	6.2	Clear w/ yellow	*Low-flow groundwater sample:*
↓	1408	6.26	1.0	7.16	24.4	4870	1.2	-308.3	4.8	tint, odor	(A) peristaltic pump w/ ded tubing
	1410	6.26	1.5	7.11	24.2	4900	0.8	-317.7	4.6	↓	B) ded bladder pump
	1413	6.26	2.0	7.04	24.0	4920	0.7	-321.2	4.1		C) non-ded bladder pump; or
	1415	6.26	2.5	7.01	23.9	4930	0.6	-323.8	3.8		*Standard groundwater sample:*
	1418	6.26	3.0	6.98	23.8	4930	0.5	-325.4	3.3		D) bailer due to limited column; or
	1420	6.26	3.5	6.95	23.8	4940	0.5	-327.4	2.9		E) recovery well cycling sample
↓	1423	6.26	4.0	6.94	23.8	4950	0.5	-329.2	2.7	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1425	MW-39	6.26	6.94	23.8	4950	0.5	-329.2	2.7	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-98
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(4in) stickup)

Initials: TAB/BRH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1515	NA	7.31	0.0	26.80	21.5	yes	yes	yes	yes		Weather: PT/Cloudy 70s
4.28.16	1115	NA	7.34	0.0	26.80	21.5						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1120	7.41	0.5	6.83	24.3	3300	2.6	-374.1	5.8	clear	*Low-flow groundwater sample:*
	1123	7.41	1.0	6.74	23.8	3310	1.5	-378.2	3.7		(A) peristaltic pump w/ ded tubing
	1125	7.41	1.5	6.70	23.5	3310	1.1	-381.8	2.9		B) ded bladder pump
	1128	7.41	2.0	6.66	23.1	3310	1.0	-383.5	2.6		C) non-ded bladder pump; or
	1130	7.41	2.5	6.64	22.8	3320	0.8	-386.2	1.7		*Standard groundwater sample:*
	1133	7.41	3.0	6.61	22.7	3320	0.7	-386.9	1.2		D) bailer due to limited column; or
	1135	7.41	3.5	6.58	22.6	3320	0.7	-387.2	1.0		E) recovery well cycling sample
↓	1138	7.41	4.0	6.57	22.5	3320	0.7	-387.6	0.8	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1140	MW-98	7.41	6.57	22.5	3320	0.7	-387.6	0.8	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-10
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: TAB / BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1550	NA	7.91	0.0	23.77	18.77	NO	YES	Issue	YES		Weather: PT/cloudy 80°
4.28.16	1445	NA	7.92	0.0	23.77	18.8						Sunny, 80s

Well Purging Record (corrugated metal, large diameter RW stickup; gauged to top of corrugated pipe)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1450	7.92	0.5	7.58	23.8	3450	2.6	-202.6	37.2	clear w/ yellow	*Low-flow groundwater sample:*
	1453	7.92	1.0	7.53	23.0	3440	1.2	-198.1	16.1	tint, odor	(A) peristaltic pump w/ ded tubing
	1455	7.92	1.5	7.52	22.8	3430	0.9	-196.2	10.8		B) ded bladder pump
	1458	7.92	2.0	7.52	22.6	3430	0.7	-193.8	9.4		C) non-ded bladder pump; or
	1500	7.92	2.5	7.51	22.5	3420	0.6	-190.7	8.0		*Standard groundwater sample:*
	1503	7.92	3.0	7.50	22.5	3420	0.5	-185.6	6.2		D) bailer due to limited column; or
	1505	7.92	3.5	7.50	22.4	3420	0.4	-182.1	5.8		E) recovery well cycling sample
	1508	7.92	4.0	7.49	22.4	3420	0.4	-179.4	5.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1510	RW-10	7.92	7.49	22.4	3420	0.4	-179.4	5.3	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-40
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in stick up)

Initials: TAR / BRH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1550	NA	4.18	0.0	24.75	21.75	yes	yes	yes	yes		Weather: pT/Cloudy 80s
4-28-16	1205	NA	4.22	0.0	24.75	21.75						Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4-28-16	1210	4.38	0.5	7.20	24.0	3130	4.1	-348.3	56.0	sl. cloudy, black	*Low-flow groundwater sample:*
	1213	4.38	1.0	7.06	23.9	3160	1.6	-358.2	39.7	tint, odor	(A) peristaltic pump w/ ded tubing
	1215	4.38	1.5	6.99	23.8	3180	0.9	-366.1	22.6	clear	B) ded bladder pump
	1218	4.38	2.0	6.94	23.6	3190	0.7	-369.8	14.5	clear w/ black particles	C) non-ded bladder pump; or
	1220	4.38	2.5	6.90	23.5	3190	0.6	-371.1	11.6	odor	*Standard groundwater sample:*
	1223	4.38	3.0	6.88	23.5	3200	0.6	-372.9	10.7	↓	D) bailer due to limited column; or
	1225	4.38	3.5	6.86	23.4	3200	0.7	-373.6	9.8		E) recovery well cycling sample
↓	1228	4.38	4.0	6.85	23.4	3210	0.7	-374.5	10.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4-28-16	1230	MW-40	4.38	6.85	23.4	3210	0.7	-374.5	10.2	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	SM4500
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-41
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB/SCD

Well Inspection Information (2in) stickup)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/16/16	1600	NA	4.04	0.0	21.56	18.56	yes	yes	yes	yes		Weather: pt/cloudy 85°
4/28/16	1045	NA	4.10	0.0								Clear 80's

Well Purging Record * HMI installed lock 2HI5

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1050	4.17	0.5	7.26	23.5	3270	2.6	-282.8	20.7	Clear, colorless	*Low-flow groundwater sample:*
	1052	4.17	1.0	7.17	23.0	3250	2.3	-293.0	13.8		(A) peristaltic pump w/ ded tubing
	1055	4.17	1.5	7.06	22.7	3250	2.1	-300.4	8.7		B) ded bladder pump
	1057	4.17	2.0	6.98	22.6	3260	2.1	-309.2	7.3		C) non-ded bladder pump; or
	1100	4.17	2.5	6.94	22.6	3270	2.2	-312.8	6.4		*Standard groundwater sample:*
	1102	4.17	3.0	6.92	22.5	3270	2.2	-315.6	5.8		D) bailer due to limited column; or
	1105	4.17	3.5	6.90	22.5	3270	2.3	-317.7	4.9		E) recovery well cycling sample
↓	1107	4.17	4.0	6.89	22.5	3280	2.3	-319.4	4.7	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1110	MW-41	4.17	6.89	22.5	3280	3.2	-319.4	4.7	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~

If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-9
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB / SCD

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1610	NA	7.02	0.0	21.97	16.97	yes	yes	yes	yes		Weather: ~~pt cloudy~~ 80s
4/28/16	1520	NA	7.06	0.0								clear 80's

Well Purging Record (Corrugated metal; large diameter RW stickup)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1525	7.07	0.5	7.19	24.8	3550	2.1	-341.2	6.5	Clear, colorless, odor	*Low-flow groundwater sample:*
"	1527	7.07	1.0	7.08	23.1	3550	1.8	-355.1	5.9	"	(A) peristaltic pump w/ ded tubing
	1530	7.07	1.5	7.02	22.4	3530	1.6	-364.5	5.4		B) ded bladder pump
	1532	7.07	2.0	6.98	22.3	3530	1.5	-370.6	4.8		C) non-ded bladder pump; or
	1535	7.07	2.5	6.96	22.2	3520	1.5	-373.4	4.6		*Standard groundwater sample:*
	1537	7.07	3.0	6.95	22.2	3520	1.4	-374.2	4.0		D) bailer due to limited column; or
	1540	7.07	3.5	6.95	22.2	3520	1.4	-375.8	3.7		E) recovery well cycling sample
↓	1542	7.07	4.0	6.95	22.1	3510	1.3	-376.4	3.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1545	RW-9	7.07	6.95	22.1	3510	1.3	-376.4	3.5	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-42
Event: Spring 2016 (Annual)
Area of Concern: Rest (2in; stickup)

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: JAB/SCD

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4/26/16	1620	NA	7.17	0.0	24.32	21.3	yes	yes	yes	yes		Weather: PT/Cloud/80°
4/28/16	1140	NA	7.25	0.0								Clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1145	7.27	0.5	6.95	24.2	3800	2.6	-316.4	18.1	Clear colorless	*Low-flow groundwater sample:*
↓	1147	7.28	1.0	6.88	22.8	3880	2.4	-315.2	13.5	w/ brown particles	(A) peristaltic pump w/ ded tubing
	1150	7.28	1.5	6.84	22.2	3910	2.0	-315.9	10.7	↓	B) ded bladder pump
	1152	7.28	2.0	6.79	21.9	3930	1.9	-315.2	9.8		C) non-ded bladder pump; or
	1155	7.28	2.5	6.79	21.8	3930	1.9	-317.0	8.1		*Standard groundwater sample:*
	1157	7.28	3.0	6.78	21.7	3940	1.8	-317.8	7.9		D) bailer due to limited column; or
	1200	7.28	3.5	6.78	21.7	3940	1.8	-318.5	7.4		E) recovery well cycling sample
↓	1202	7.28	4.0	6.77	21.7	3940	1.8	-319.1	7.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1205	MW-42	7.28	6.77	21.7	3940	1.8	-319.1	7.2	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
							ℓ	Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	NaOH	SM4500
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: Mw-29
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (6in PVC) Stickup) Initials: TAB

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1630	NA	8.01	0.0	22.00	16.7	Yes	Yes	Yes	Yes		Weather: PC/cloudy 80s
4/28/16	1430	NA	7.99	0.0								clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1435	8.01	0.5	7.31	23.7	3600	3.3	-215.1	14.9	Clear, colorless	*Low-flow groundwater sample:*
	1437	8.02	1.0	7.12	23.5	3580	1.9	-230.4	11.5		(A) peristaltic pump w/ ded tubing
	1440	8.02	1.5	7.05	23.4	3570	1.7	-248.7	10.8		B) ded bladder pump
	1442	8.02	2.0	7.03	23.5	3550	1.8	-261.9	9.1		C) non-ded bladder pump; or
	1445	8.02	2.5	7.02	23.4	3550	1.8	-266.7	8.2		*Standard groundwater sample:*
	1447	8.02	3.0	7.01	23.4	3540	1.7	-274.8	7.5		D) bailer due to limited column; or
	1450	8.02	3.5	7.00	23.4	3540	1.7	-278.1	7.1		E) recovery well cycling sample
	1452	8.02	4.0	7.00	23.4	3540	1.6	-280.3	6.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1455	MW-29	8.02	7.00	23.4	3540	1.6	-280.3	6.9	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			HNO3	6010~~/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			HNO3	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	SM4500
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW - #16B
Event: Spring 2016 (Annual)
Area of Concern: Rest

(stickup; 8 3/8" OD / 7 7/8" ID)

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB / SCD

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4/26/16	1640	NA	9.90	0.0	17.70	14.7	yes	yes	yes	yes		Weather: P/C/cloudy 85
4/28/16	1610	NA	9.94	0.0								Clear 70's

Well Purging Record

(Non-standard "Bell" top of PVC stickup)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1615	9.98	0.5	7.31	22.5	5140	1.9	-208.9	12.5	Clear colorless	*Low-flow groundwater sample:*
	1617	9.98	1.0	7.20	22.4	5160	1.6	-209.2	11.6		(A) peristaltic pump w/ ded tubing
	1620	9.98	1.5	7.13	22.3	5170	1.5	-210.5	9.5		B) ded bladder pump
	1622	9.98	2.0	7.05	22.3	5180	1.5	-212.5	8.7		C) non-ded bladder pump; or
	1625	9.98	2.5	7.02	22.2	5190	1.5	-213.6	8.2		*Standard groundwater sample:*
	1627	9.98	3.0	6.99	22.1	5190	1.4	-214.3	7.9		D) bailer due to limited column; or
	1630	9.98	3.5	6.98	22.1	5200	1.4	-215.1	7.8		E) recovery well cycling sample
↓	1632	9.98	4.0	6.98	22.1	5200	1.4	-215.9	7.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1635	RW-#16B	9.98	6.98	22.1	5200	1.4	-215.9	7.6	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Not in Sampling Program

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-30
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1650	NA	8.15	0.0	23.50	Not Sampled	yes	yes	yes	yes		Weather: partly cloudy 85°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
										DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-56
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

(2in) stickup

Initials: ~~TAB~~ MB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1700	NA	9.39	0.0	26.50	21.4	yes	yes	yes	yes		Weather: PT/Cloudy 85
4/28/16	1135	NA	9.42	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	1140	9.45	0.5	7.56	25.5	4720	2.0	-151.2	8.9	Clear	*Low-flow groundwater sample:*
|	1142	9.45	1.0	7.41	24.4	4710	1.7	-123.4	7.2	|	(A) peristaltic pump w/ ded tubing
|	1145	9.45	1.5	7.33	23.6	4700	1.3	-117.8	5.1	|	B) ded bladder pump
|	1147	9.45	2.0	7.25	23.4	4680	1.3	-110.7	4.8	|	C) non-ded bladder pump; or
|	1150	9.45	2.5	7.22	23.1	4670	1.3	-104.5	4.2	|	*Standard groundwater sample:*
|	1152	9.45	3.0	7.18	23.0	4650	1.4	-100.1	3.6	|	D) bailer due to limited column; or
|	1155	9.45	3.5	7.17	23.0	4630	1.4	-96.0	2.5	|	E) recovery well cycling sample
↓	1157	9.45	4.0	7.15	23.0	4630	1.4	-92.0	1.7	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1200	MW-56	9.45	7.15	23.0	4630	1.4	-92.0	1.7	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-49 * Under yellow Barricade
Event: Spring 2016 (Annual)
Area of Concern: TEL (2inlat-grade)

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: CAB/SCD

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	* broken Hinge Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4/26/16	1540	NA	7.93	0.0	33.15	27.8	yes	yes	~~yes~~	yes		Weather: PC/cloudy 80s
4/28/16	945	NA	8.00	0.0					* NO			Clear 70's

Well Purging Record * Non-standard stickup total height of protective steel casing = ~5in

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	950	8.17	0.5	6.89	24.1	2980	2.2	-307.9	18.7	Clear, colorless	*Low-flow groundwater sample:*
	952	8.17	1.0	6.83	23.6	2970	1.8	-316.2	13.5		(A) peristaltic pump w/ ded tubing
	955	8.17	1.5	6.77	23.7	2940	1.7	-331.0	10.2		B) ded bladder pump
	957	8.17	2.0	6.75	23.6	2920	1.6	-339.8	9.8		C) non-ded bladder pump; or
	1000	8.17	2.5	6.73	23.6	2910	1.6	-342.5	8.7		*Standard groundwater sample:*
	1002	8.17	3.0	6.73	23.5	2900	1.5	-342.8	7.9		D) bailer due to limited column; or
	1005	8.17	3.5	6.72	23.5	2900	1.5	-342.9	7.5		E) recovery well cycling sample
↓	1007	8.17	4.0	6.72	23.5	2890	1.5	-343.2	7.3	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	1010	MW-49	8.17	6.72	23.5	2890	1.5	-343.2	7.3	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

[Re-located from under gravel, by Surveyor, 4-9-15]

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-106
Event: Spring 2016 (Annual)
Area of Concern: Rest (4in; at-grade)

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: TAB / SCD

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	15:30	NA	5.65	0.0	22.80	17.5	yes	yes	yes	yes		Weather: PTC/partly cloudy 80s
4/28/16	850	NA	5.64	0.0								clear 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/28/16	855	5.69	0.5	6.78	24.7	3230	2.9	-333.7	15.4	Clear, black tint; odor	*Low-flow groundwater sample:*
	857	5.70	1.0	6.66	23.8	3250	1.8	-356.0	11.5	↓	(A) peristaltic pump w/ ded tubing
	900	5.71	1.5	6.63	23.6	3250	1.4	-362.7	10.1	↓	B) ded bladder pump
	902	5.73	2.0	6.62	23.3	3260	1.3	-369.9	9.5	↓	C) non-ded bladder pump; or
	905	5.75	2.5	6.61	23.2	3260	1.3	-374.6	8.7	↓	*Standard groundwater sample:*
	907	5.77	3.0	6.61	23.2	3270	1.2	-376.4	8.6	↓	D) bailer due to limited column; or
	910	5.78	3.5	6.62	23.2	3270	1.2	-378.5	8.2	↓	E) recovery well cycling sample
↓	912	5.79	4.0	6.62	23.2	3270	1.2	-379.9	7.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/28/16	915	MW-106	5.79	6.62	23.2	3270	1.2	-379.9	7.9	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-45
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in) stickup

Initials: TAB

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4/26/16	1720	NA	4.67	0.0	15.05	12.3	yes	yes	yes	yes		Weather: PT/Cloudy 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4/26/16	1725	4.87	0.5	5.75	19.0	5180	1.3	87.4	29.1	Clear	*Low-flow groundwater sample:*
	1727	4.88	1.0	5.95	19.2	5080	1.1	63.7	18.6		(A) peristaltic pump w/ ded tubing
	1730	4.88	1.5	6.00	19.2	5090	1.0	58.8	16.0		B) ded bladder pump
	1733	4.88	2.0	6.25	19.2	5030	0.8	9.9	15.4		C) non-ded bladder pump; or
	1735	4.88	2.5	6.27	19.2	5020	0.7	-1.1	15.1		*Standard groundwater sample:*
	1737	4.88	3.0	6.29	19.2	5020	0.6	-2.7	13.8		D) bailer due to limited column; or
	1740	4.88	3.5	6.31	19.2	5010	0.5	-3.8	13.5		E) recovery well cycling sample
↓	1743	4.88	4.0	6.31	19.2	5000	0.5	-4.1	13.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4/26/16	1745	MW-45	4.88	6.31	19.2	5000	0.5	-4.1	13.2	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

* Located within the Artesia Wool laydown yard N. of the main Warehouse

Monitoring Well Purging and Sampling Record

Navajo Refinery Company
Artesia Refinery
Artesia, New Mexico

Well: MW-50
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2in) stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1105	NA	14.07	0.0	28.25	24.1	yes	yes	yes	yes		Weather: Clear, 60's
4.27.16	730	NA	14.13	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	735	14.14	0.5	6.98	18.6	7230	1.8	64.1	4.7	Clear	*Low-flow groundwater sample:*
|	737	14.14	1.0	6.94	18.9	7940	1.2	72.6	4.5	|	(A) peristaltic pump w/ ded tubing
|	740	14.14	1.5	6.93	19.1	8220	1.0	80.2	4.1	|	B) ded bladder pump
|	742	14.14	2.0	6.92	19.2	8370	0.9	86.5	3.9	|	C) non-ded bladder pump; or
|	745	14.14	2.5	6.93	19.2	8420	0.9	90.1	3.7	|	*Standard groundwater sample:*
|	747	14.14	3.0	6.94	19.3	8450	0.8	93.6	3.8	|	D) bailer due to limited column; or
|	750	14.14	3.5	6.95	19.3	8470	0.7	95.5	3.6	|	E) recovery well cycling sample
↓	752	14.14	4.0	6.95	19.4	8480	0.7	97.8	3.1	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	755	MW-50	14.14	6.95	19.4	8480	0.7	97.8	3.1	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~

If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-97
Event: Spring 2016 (Annual)
Area of Concern: Rest (4 inj at-grade)

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1116	8.36	8.44	0.08	21.20		yes	yes	yes	yes		Weather: Clear, 70's
						5' off bottom as needed						

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.26.16			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5		Not Sampled due to ≥ 0.03' Presence						B) ded bladder pump
			2.0		of LNAPL.						C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
		MW-97								DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-92
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (4in's stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1130	x-NA	10.67	0.0	22.60	17.6	yes	yes	yes	yes		Weather: Clear, 60's
4.27.16	820	NA	10.75	0.0		5' off bottom as measured						

Well Purging Record *TRACE LNAPL recovered on probe

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	825	10.79	0.5	7.52	20.1	3830	1.7	-195.8	6.9	Clear, sheen, odor	*Low-flow groundwater sample:*
|	827	10.81	1.0	7.22	19.9	3510	1.4	-215.5	6.5	| | |	(A) peristaltic pump w/ ded tubing
|	830	10.82	1.5	7.12	19.9	3320	1.2	-234.5	6.4	| | |	B) ded bladder pump
|	832	10.82	2.0	7.06	19.9	3210	1.0	-244.1	6.1	| | |	C) non-ded bladder pump; or
|	835	10.82	2.5	7.04	19.8	3170	0.9	-252.4	5.9	| | |	*Standard groundwater sample:*
|	837	10.82	3.0	7.03	19.8	3140	0.8	-257.6	5.6	| | |	D) bailer due to limited column; or
|	840	10.82	3.5	7.02	19.7	3120	0.7	-261.1	5.4	| | |	E) recovery well cycling sample
↓	842	10.82	4.0	7.02	19.7	3110	0.7	-264.3	5.2	↓ ↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	845	MW-92	10.82	7.02	19.7	3110	0.7	-264.3	5.2	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			HNO_3	6010/6020 and/or 7470
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Gauge & Sample using 1-inch guide pipe [Inside doghouse]

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-1
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

* 1" guide pipe for tube only

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4.26.16	1140	NA	9.61	0.0	35.39	30.4	yes	yes	yes	yes		Weather: Clear, 70's
4.27.16	915											

Well Purging Record

Historically 35.45 TD

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	920	NM*	0.5	7.21	23.5	3270	1.5	-207.1	35.6	dSI Cloudy, black	*Low-flow groundwater sample:*
|	922	|	1.0	7.11	21.0	3370	1.3	-211.3	34.1	tint, black particles,	(A) peristaltic pump w/ ded tubing
|	925	|	1.5	7.08	20.7	3390	1.2	-214.1	33.2	odor. |	B) ded bladder pump
|	927	|	2.0	7.06	20.6	3400	1.1	-217.8	33.9	|	C) non-ded bladder pump; or
|	930	|	2.5	7.04	20.4	3400	1.0	-221.4	33.4	|	*Standard groundwater sample:*
|	932	|	3.0	7.03	20.3	3410	0.9	-226.1	32.7	|	D) bailer due to limited column; or
|	935	|	3.5	7.03	20.1	3410	0.8	-229.5	32.5	|	E) recovery well cycling sample
↓	937	↓	4.0	7.02	20.1	3410	0.8	-233.0	32.8	↓	F) irrigation well grab sample

Well Sampling Record

* Drawdown monitoring not possible due to narrow-diam (1-in) pvc guide-pipe

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	940	RW-1	NM	7.02	20.1	3410	0.8	-233.0	32.8	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-91
Event: Spring 2016 (Annual)
Area of Concern: REST

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(4in) stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1150	NA	10.11	0.0	25.35	17.9	yes	yes	yes	yes		Weather: Clear, 70's
4.27.16	1005	NA	10.15	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1010	10.24	0.5	7.00	23.7	2870	1.9	-362.9	14.1	Clear, black tint	*Low-flow groundwater sample:*
|	1012	10.27	1.0	6.92	22.7	2820	1.5	-370.1	12.4	Strong odor	(A) peristaltic pump w/ ded tubing
|	1015	10.30	1.5	6.87	22.0	2700	1.3	-379.4	10.6	|	B) ded bladder pump
|	1017	10.33	2.0	6.82	21.6	2630	1.2	-382.5	9.5	|	C) non-ded bladder pump; or
|	1020	10.35	2.5	6.80	21.5	2590	1.1	-385.1	9.4	|	*Standard groundwater sample:*
|	1022	10.37	3.0	6.78	21.5	2560	1.1	-387.6	9.0	|	D) bailer due to limited column; or
|	1025	10.39	3.5	6.77	21.5	2540	1.0	-389.7	8.9	|	E) recovery well cycling sample
↓	1027	10.40	4.0	6.76	21.4	2530	1.0	-390.9	8.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1030	MW-91	10.40	6.76	21.4	2530	1.0	-390.9	8.5	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-90
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (4in) stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1158	NA	10.89	0.0	22.80	21.5	yes	yes	yes	yes		Weather: Clear, 70's
4.27.16	1055	NA	10.94	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1100	11.04	0.5	6.92	21.4	4480	1.9	-336.1	11.2	Clear, odor	*Low-flow groundwater sample:*
|	1102	11.06	1.0	6.95	20.6	4570	1.7	-342.1	10.6	|	(A) peristaltic pump w/ ded tubing
|	1105	11.08	1.5	6.96	20.5	4590	1.6	-346.4	10.2	|	B) ded bladder pump
|	1107	11.09	2.0	6.98	20.5	4600	1.4	-349.0	10.1	|	C) non-ded bladder pump; or
|	1110	11.10	2.5	6.98	20.4	4610	1.3	-351.1	9.6	|	*Standard groundwater sample:*
|	1112	11.11	3.0	6.98	20.4	4610	1.2	-353.6	9.2	|	D) bailer due to limited column; or
|	1115	11.11	3.5	6.99	20.4	4620	1.1	-355.4	8.8	|	E) recovery well cycling sample
↓	1117	11.12	4.0	6.99	20.3	4620	1.1	-357.5	8.7	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1120	MW-90	11.12	6.99	20.3	4620	1.1	-357.5	8.7	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-96
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (4in j Stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
4.26.16	1208	NA	10.99	0.0	25.55	21.2	yes	Issue	needs lock	yes		Weather: Windy, 70s
4.27.16	1140	NA	11.03	0.0								

Well Purging Record

* Damaged hinge prevents Prot. Casing from shutting Properly, resulting in the inability to lock the Prot. Casing

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1145	11.04	0.5	7.20	22.5	2590	1.7	-352.6	30.1	Clear, white	*Low-flow groundwater sample:*
↓	1147	11.04	1.0	7.09	22.1	2530	1.6	-357.4	28.4	particles, odor	(A) peristaltic pump w/ ded tubing
	1150	11.04	1.5	7.03	21.8	2480	1.6	-361.4	26.5	↓	B) ded bladder pump
	1152	11.04	2.0	6.96	21.5	2410	1.5	-365.0	25.2		C) non-ded bladder pump; or
	1155	11.04	2.5	6.93	21.4	2380	1.5	-367.1	25.6		*Standard groundwater sample:*
	1157	11.04	3.0	6.91	21.4	2360	1.4	-369.4	25.1		D) bailer due to limited column; or
	1200	11.04	3.5	6.90	21.3	2340	1.3	-370.9	24.8		E) recovery well cycling sample
↓	1202	11.04	4.0	6.89	21.3	2330	1.3	-371.6	24.6	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1205	MW-96	11.04	6.89	21.3	2330	1.3	-371.6	24.6	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-94
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (Mini stick up) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1217	NA	12.37	0.0	23.46	16.0	yes	yes	yes	yes		Weather: Clear, 80's
4.27.16	1415	NA	12.35	0.0								

Well Purging Record * Historical LNAPL @ this well

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1420	12.47	0.5	7.57	24.2	4350	4.0	-409.0	13.8	Clear, light yellow	*Low-flow groundwater sample:*
|	1422	12.50	1.0	7.42	23.4	4390	3.1	-411	12.4	Hint, odor	(A) peristaltic pump w/ ded tubing
|	1425	12.51	1.5	7.34	23.1	4390	2.9	-412	11.5	|	B) ded bladder pump
|	1427	12.51	2.0	7.25	22.8	4370	2.7	-413	10.1	|	C) non-ded bladder pump; or
|	1430	12.51	2.5	7.21	22.6	4350	2.6	-413	9.8	|	*Standard groundwater sample:*
|	1432	12.51	3.0	7.18	22.5	4330	2.5	-414	9.5	|	D) bailer due to limited column; or
|	1435	12.51	3.5	7.16	22.4	4320	2.5	-414	9.2	|	E) recovery well cycling sample
↓	1437	12.51	4.0	7.14	22.4	4310	2.4	-414	9.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1440	MW-94	12.51	7.14	22.4	4310	2.4	-414	9.0	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Gauge & Sample using 1-inch guide-pipe [Inside doghouse]

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-8
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1227	16.22	16.48	0.26	37.19	35.2	yes	yes	yes	yes		Weather:

Well Purging Record [Historically TD: 37.22] (Sample through 1" guide pipe)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.26.16			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5			Not Sampled due to Presence					B) ded bladder pump
			2.0			of LNAPL ≥ 0.03.					C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record * when sampled, drawdown monitoring is not possible due to narrow-diam (1-in) PVC guide-pipe

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
		RW-8								DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~

If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-67
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(4in; at-grade)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1240	NA	9.35	0.0	27.30	19.9	yes	yes	yes	yes		Weather: Clear, 80's
4.27.16	1505	NA	9.32	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1516	9.46	0.5	7.43	22.6	2740	2.0	-348.4	9.5	Clear, odor	*Low-flow groundwater sample:*
↓	1512	9.52	1.0	7.34	22.2	2720	1.9	-349.7	9.2	↓ ↓	(A) peristaltic pump w/ ded tubing
	1515	9.54	1.5	7.27	22.0	2680	1.8	-351.1	9.9		B) ded bladder pump
	1517	9.56	2.0	7.24	21.9	2660	1.8	-352.5	9.4		C) non-ded bladder pump; or
	1520	9.57	2.5	7.22	21.8	2640	1.7	-353.6	8.7		*Standard groundwater sample:*
	1522	9.58	3.0	7.21	21.8	2630	1.7	-354.4	8.3		D) bailer due to limited column; or
	1525	9.59	3.5	7.20	21.7	2620	1.7	-355.1	8.1		E) recovery well cycling sample
↓	1527	9.61	4.0	7.20	21.7	2610	1.6	-355.8	7.9	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1530	MW-67	9.61	7.20	21.7	2610	1.6	-355.8	7.9	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-95
Event: Spring 2016 (Annual)
Area of Concern: REST

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(4in) stickup

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1250	NA	11.90	0.0	25.37	20.4	yes	yes	yes	yes		Weather: Clear, 70's
4.27.16	1555	NA	11.87	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1600	11.93	0.5	7.74	23.1	2460	1.8	-306.3	12.5	Clear, sl. odor	*Low-flow groundwater sample:*
↓	1602	11.94	1.0	7.50	22.3	2470	1.6	-320.1	12.1	↓ ↓	(A) peristaltic pump w/ ded tubing
↓	1605	11.94	1.5	7.38	22.0	2470	1.5	-330.6	10.1		B) ded bladder pump
↓	1607	11.94	2.0	7.28	21.7	2460	1.4	-336.2	9.8		C) non-ded bladder pump; or
↓	1610	11.94	2.5	7.21	21.5	2440	1.4	-338.4	9.4		*Standard groundwater sample:*
↓	1612	11.94	3.0	7.17	21.4	2430	1.4	-339.6	9.0		D) bailer due to limited column; or
↓	1615	11.94	3.5	7.15	21.3	2420	1.3	-340.5	8.5		E) recovery well cycling sample
↓	1617	11.94	4.0	7.13	21.2	2410	1.3	-341.7	8.2		F) irrigation well grab sample
↓	1620	11.94	4.5	7.11	21.2	2410	1.3	-342.5	7.6	↓ ↓	

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1625	MW-95	11.94	7.11	21.2	2410	1.3	-342.5	7.6	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H2SO4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Gauge & Sample using 1-inch guide-pipe

Monitoring Well Purging and Sampling Record

[Inside doghouse]

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-7
Event: Spring 2016 (Annual)
Area of Concern: REST

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1302	NA	15.61	0.0	37.00	32.0	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 70's
4.27.16	1650	NA	15.48	0.0								

Well Purging Record Historical TD = 37.01'; Recovery equiv. in well * Sample through 1" guide tube

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.27.16	1655	*NM	0.5	7.52	24.5	2310	1.7	-222.1	6.4	Clear, Sheen, ?	*Low-flow groundwater sample:*
↓	1657	↓	1.0	7.40	24.5	2300	1.5	-221.0	5.8	odor ↓	(A) peristaltic pump w/ ded tubing
	1700		1.5	7.33	24.4	2300	1.4	-220.4	5.6		B) ded bladder pump
	1702		2.0	7.26	24.5	2290	1.3	-219.5	5.5		C) non-ded bladder pump; or
	1705		2.5	7.22	24.5	2290	1.3	-218.9	5.1		*Standard groundwater sample:*
	1707		3.0	7.19	24.5	2280	1.2	-218.2	4.8		D) bailer due to limited column; or
	1710		3.5	7.17	24.4	2280	1.2	-217.6	4.7		E) recovery well cycling sample
↓	1712	↓	4.0	7.15	24.4	2280	1.2	-217.1	4.5	↓	F) irrigation well grab sample

Well Sampling Record * Drawdown monitoring not possible due to narrow-diam (1-in) PVC guide-pipe

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.27.16	1715	RW-7	NM	7.15	24.4	2280	1.2	-217.1	4.5	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
										Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)	HNO_3	6010/6020
										Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)	HNO_3	Field filtered 0.45-u
										~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~6010/6020 and/or 7470~~
										~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~Field filtered 0.45-u~~
										Anions (Chloride,Fluoride,Sulfate)	Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-34A
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in; stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1315	NA	10.46	0.0	19.31	16.9	*Issue	yes	yes	yes		Weather: Clear, 60's
4.28.16	800	NA	10.46	0.0								

Well Purging Record

*Cannot fit Cap and close Prot. Casing lid simutaneously, PVC Casing needs to be lowered, or Prot Casing raised. Left with no caps but well is secured.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	805	10.61	0.5	7.34	21.6	2630	1.6	-344.5	5.0	Clear, odor	*Low-flow groundwater sample:*
↓	807	10.64	1.0	7.13	21.3	2620	1.5	-348.3	4.6	↓	(A) peristaltic pump w/ ded tubing
	810	10.64	1.5	7.00	21.0	2600	1.5	-353.1	4.4		B) ded bladder pump
	812	10.64	2.0	6.92	20.9	2580	1.5	-354.2	4.2		C) non-ded bladder pump; or
	815	10.64	2.5	6.87	20.8	2570	1.4	-355.3	3.9		*Standard groundwater sample:*
	817	10.64	3.0	6.84	20.8	2560	1.4	-355.8	3.7		D) bailer due to limited column; or
	820	10.64	3.5	6.82	20.7	2560	1.4	-356.4	3.5		E) recovery well cycling sample
↓	822	10.64	4.0	6.80	20.7	2550	1.4	-356.9	3.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	825	NCL-34A	10.64	6.80	20.7	2550	1.4	-356.9	3.4	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-33
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2in) stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1323	NA	8.46	0.0	19.60	17.7	yes	yes	yes	yes		Weather: Clear, 60's
4.29.16	815	NA	8.48	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.29.16	820	8.59	0.5	7.00	20.7	3230	3.4	31.8	39.4	Clear, orange	*Low-flow groundwater sample:*
|	822	8.68	1.0	6.82	20.4	3240	2.6	39.1	26.1	particles |	(A) peristaltic pump w/ ded tubing
|	825	8.72	1.5	6.76	20.3	3230	2.3	42.1	21.4	|	B) ded bladder pump
|	827	8.75	2.0	6.73	20.2	3220	2.1	44.4	19.7	|	C) non-ded bladder pump; or
|	830	8.77	2.5	6.71	20.1	3200	2.0	47.0	18.6	|	*Standard groundwater sample:*
|	832	8.79	3.0	6.69	20.2	3190	1.9	48.6	19.9	|	D) bailer due to limited column; or
|	835	8.80	3.5	6.67	20.2	3180	1.8	49.7	19.1	|	E) recovery well cycling sample
↓	837	8.81	4.0	6.66	20.2	3170	1.8	50.5	18.8	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.29.16	840	NCL-33	8.81	6.66	20.2	3170	1.8	50.5	18.8	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refinery Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-44
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2in i Stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1332	NA	8.64	0.0	21.55	17.4	*Issue	yes	yes	yes		Weather: Clear, 70's
4.28.16	1235	NA	8.66	0.0								

Well Purging Record

*PVC well. Casing needs to be lowered, or prot. casing raised so a cap can be fitted and the well to be locked at the same time.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	Left with no cap, but well is secured.
4.28.16	1240	8.71	0.5	7.17	22.5	2820	2.1	-127.5	14.1	Clear	*Low-flow groundwater sample:*
↓	1242	8.71	1.0	7.08	21.7	2790	1.7	-135.0	12.9	↓	(A) peristaltic pump w/ ded tubing
	1245	8.71	1.5	6.96	21.1	2770	1.6	-144.2	10.4		B) ded bladder pump
	1247	8.71	2.0	6.90	20.8	2760	1.6	-151.6	10.1		C) non-ded bladder pump; or
	1250	8.71	2.5	6.87	20.6	2750	1.5	-157.4	9.8		*Standard groundwater sample:*
	1252	8.71	3.0	6.85	20.5	2740	1.5	-162.1	9.4		D) bailer due to limited column; or
	1255	8.71	3.5	6.83	20.4	2730	1.4	-165.2	8.4		E) recovery well cycling sample
↓	1257	8.71	4.0	6.82	20.4	2730	1.4	-167.9	7.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1300	NCL-44	8.71	6.82	20.4	2730	1.4	-167.9	7.6	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

+ EB-NCL-01
(for same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-32
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in) at-grade

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1342	NA	8.74	0.0	17.15	16.5	yes	yes	yes	yes		Weather: clear, 80s
4.28.16	1105	NA	8.78	0.0	(soft)							

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1110	9.17	0.5	7.49	20.5	2440	4.1	-46.7	>200	Very cloudy	*Low-flow groundwater sample:*
↓	1112	9.31	1.0	7.32	20.2	2360	3.0	-52.6	>200	↓	(A) peristaltic pump w/ ded tubing
	1115	9.42	1.5	7.29	19.8	2390	2.7	-91.4	>200		B) ded bladder pump
	1117	9.53	2.0	7.24	19.7	2450	2.5	-104.1	>200		C) non-ded bladder pump; or
	1122	9.59	2.5	7.20	19.7	2510	2.4	-109.6	>200		*Standard groundwater sample:*
	1127	9.63	3.0	7.16	19.6	2540	2.3	-113.4	>200		D) bailer due to limited column; or
	1132	9.65	3.5	7.13	19.5	2560	2.2	-117.3	>200		E) recovery well cycling sample
↓	1137	9.68	4.0	7.10	19.5	2580	2.2	-120.5	>200	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1140	NCL-32	9.68	7.10	19.5	2580	2.2	-120.5	>200	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			HNO_3	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
4.28.16	1220	EB-NCL-01	NA	→	→	→	→	→	→	Same as above	Same	Same
												If <0.03 feet of PSH present, remove PSH and sample groundwater

* Walk-to

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-108
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(4in; stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1420	NA	13.18	0.0	27.74	22.5	yes	yes	yes	yes		Weather: Clear, 70's
4.28.16	900	NA	13.16	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	905	13.31	0.5	7.41	22.1	2680	1.7	-365.4	19.4	Clear, yellow tint,	*Low-flow groundwater sample:*
↓	907	13.39	1.0	7.24	21.4	2700	1.6	-374.1	16.5	odor ↓	A) peristaltic pump w/ ded tubing
	910	13.43	1.5	7.20	21.1	2710	1.6	-376.3	14.1		B) ded bladder pump
	912	13.47	2.0	7.18	21.1	2710	1.5	-378.9	13.5		C) non-ded bladder pump; or
	915	13.50	2.5	7.17	21.0	2700	1.5	-380.5	12.2		*Standard groundwater sample:*
	917	13.52	3.0	7.16	21.0	2700	1.4	-381.8	10.5		D) bailer due to limited column; or
	920	13.54	3.5	7.16	20.9	2690	1.3	-382.7	9.8		E) recovery well cycling sample
↓	922	13.56	4.0	7.15	20.9	2690	1.3	-382.6	9.3	↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	925	MW-108	13.56	7.15	20.9	2690	1.3	-382.6	9.3	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

* SW of NCL field

Navajo Refinery Company
Artesia Refinery
Artesia, New Mexico

Well: NCL - 31
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in j stickup) Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1355	NA	10.21	0.0	20.16	17.4	*Issue	yes	yes	yes		Weather: Clear, 70's
4.28.16	1015	NA	10.24	0.0								

Well Purging Record

*Pvc casing is flush with Prot. Casing top, unable to use cap and secure well at the same time. Left with no cap, but well is secured.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.28.16	1020	10.44	0.5	7.74	25.7	2890	1.6	-195.6	19.4	Clear, small white	*Low-flow groundwater sample:*
↓	1022	10.46	1.0	7.61	25.2	2880	1.5	-195.9	13.6	particles, light yellow	(A) peristaltic pump w/ ded tubing
	1025	10.46	1.5	7.40	25.1	2870	1.5	-196.6	10.5	tint, sl. odor	B) ded bladder pump
	1027	10.46	2.0	7.34	24.8	2840	1.4	-198.6	9.6	↓	C) non-ded bladder pump; or
	1030	10.46	2.5	7.31	24.6	2830	1.4	-198.9	8.7		*Standard groundwater sample:*
	1032	10.46	3.0	7.28	24.5	2820	1.3	-199.7	8.1		D) bailer due to limited column; or
	1035	10.46	3.5	7.26	24.4	2810	1.2	-200.9	7.9		E) recovery well cycling sample
↓	1037	10.46	4.0	7.25	24.4	2810	1.2	-201.6	7.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.28.16	1040	NCL-31	10.46	7.25	24.4	2810	1.2	-201.6	7.5	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Not in Sampling Program

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-19 (Gauge only)
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1405	NA	10.58	0.0	22.08	Not Sampled	Yes	*Issue	*Issue	Yes		Weather:

Well Purging Record

* No Prot Casing, just exposed PVC casing, well Cannot be secured

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
										DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
										Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)	HNO_3	6010/6020
										Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)	HNO_3	Field filtered 0.45-u
										Total Metals (Hg,Ni,V,B,Cd,Co,U)	HNO_3	6010/6020 and/or 7470
										Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)	HNO_3	Field filtered 0.45-u
										Anions (Chloride,Fluoride,Sulfate)	Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-55
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2in; stickup) Initials: C JH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1442	NA	10.00	0.0	26.58	21.7	Yes	Yes	Yes	Yes		Weather: Clear, 70's
4.29.16	1015	NA	10.07	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.29.16	1020	10.09	0.5	7.54	20.4	4310	2.9	51.4	5.6	Clear	*Low-flow groundwater sample:*
↓	1022	10.09	1.0	7.31	20.2	4260	2.0	59.8	4.7	↓	(A) peristaltic pump w/ ded tubing
	1025	10.09	1.5	7.19	20.1	4220	1.8	62.7	4.5		B) ded bladder pump
	1027	10.09	2.0	7.10	21.3	4190	1.7	63.9	4.1		C) non-ded bladder pump; or
	1030	10.09	2.5	7.03	21.5	4170	1.6	65.5	3.8		*Standard groundwater sample:*
	1032	10.09	3.0	7.00	21.4	4160	1.6	66.8	3.7		D) bailer due to limited column; or
	1035	10.09	3.5	6.98	21.3	4150	1.7	68.4	3.5		E) recovery well cycling sample
↓	1037	10.09	4.0	6.97	21.2	4150	1.7	69.5	3.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.29.16	1040	MW-55	10.09	6.97	21.2	4150	1.7	69.5	3.9	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#17A
Event: Spring 2016 (Annual)
Area of Concern: Rest

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1450	NA	9.34	0.0	16.02	14.0	yes	*Issue	*Issue	yes		Weather: Clear, 60's
4.29.16	915	NA	9.42		(soft)							

Well Purging Record

No prot. casing, just exposed PVC, well is unable to be secured.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.29.16	920	9.43	0.5	7.05	19.4	5470	1.8	54.4	14.6	Clear	*Low-flow groundwater sample:*
	922	9.43	1.0	7.04	19.2	5460	1.6	57.1	12.8		(A) peristaltic pump w/ ded tubing
	925	9.43	1.5	7.03	19.1	5460	1.5	58.9	10.0		B) ded bladder pump
	927	9.43	2.0	7.03	19.0	5450	1.4	59.7	9.1		C) non-ded bladder pump; or
	930	9.43	2.5	7.02	19.0	5450	1.4	60.4	8.3		*Standard groundwater sample:*
	932	9.43	3.0	7.02	18.9	5440	1.3	61.1	7.4		D) bailer due to limited column; or
	935	9.43	3.5	7.02	18.9	5440	1.3	61.8	6.9		E) recovery well cycling sample
	937	9.43	4.0	7.02	18.9	5440	1.3	62.7	5.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.29.16	940	RW-#17A	9.43	7.02	18.9	5440	1.3	62.7	5.8	DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-18
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1432	NA	9.98	0.0	22.20	20.2	Yes	Yes	Yes	Yes		Weather: Clear, 70's
4.29.16	1105	NA	10.06	0.0								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.29.16	1110	10.10	0.5	7.42	21.7	3510	3.1	56.4	4.1	Clear	*Low-flow groundwater sample:*
	1112	10.10	1.0	7.31	21.2	3470	2.6	66.2	3.9		(A) peristaltic pump w/ ded tubing
	1115	10.10	1.5	7.21	20.6	3450	2.4	70.5	3.7		B) ded bladder pump
	1117	10.10	2.0	7.15	20.5	3440	2.3	74.0	3.7		C) non-ded bladder pump; or
	1120	10.10	2.5	7.12	20.4	3430	2.3	75.6	3.6		*Standard groundwater sample:*
	1122	10.10	3.0	7.11	20.4	3420	2.4	76.1	3.4		D) bailer due to limited column; or
	1125	10.10	3.5	7.10	20.3	3410	2.4	76.9	3.1		E) recovery well cycling sample
	1127	10.10	4.0	7.10	20.3	3400	2.5	77.4	2.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.29.16	1130	MW-18	10.10	7.10	20.3	3400	2.5	77.4	2.8	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								Total Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	6010/6020 and/or 7470 ✓
								Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)			HNO_3	Field filtered 0.45-u ✓
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										Cyanide	NaOH	SM4500 ✓
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-54A
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2in; stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1655	NA	10.87	0.0	31.30	23.6	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.26.16	1700	10.92	0.5	7.18	21.5	2100	4.0	112.6	5.9	Clear	*Low-flow groundwater sample:*
	1702	10.92	1.0	7.00	21.4	2090	2.7	115.8	5.6		(A) peristaltic pump w/ ded tubing
	1705	10.92	1.5	6.89	21.3	2060	2.4	118.7	5.4		B) ded bladder pump
	1707	10.92	2.0	6.85	21.1	2040	2.3	121.2	5.1		C) non-ded bladder pump; or
	1710	10.92	2.5	6.82	21.1	2020	2.2	123.4	4.6		*Standard groundwater sample:*
	1712	10.92	3.0	6.80	20.0	2010	2.1	125.2	4.4		D) bailer due to limited column; or
	1715	10.92	3.5	6.78	20.0	2010	2.0	127.1	4.5		E) recovery well cycling sample
	1717	10.92	4.0	6.76	20.0	1996	2.0	128.8	3.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.26.16	1720	MW-54A	10.92	6.76	20.0	1996	2.0	128.8	3.9	DRO	HCL	8015M
										~~GRO~~	HCL	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
										If <0.03 feet of PSH present, remove PSH and sample groundwater		

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-54B (Gauge only) (2in) stickup)
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas
Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1755	NA	10.87	0.0	46.80	41.8	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
										DRO	HCL	8015M
										GRO	HCL	8015M
										VOC	HCL	8260
										Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)	HNO_3	6010/6020
										Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)	HNO_3	Field filtered 0.45-u
										~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~6010/6020 and/or 7470~~
										~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~	~~HNO_3~~	~~Field filtered 0.45-u~~
										Anions (Chloride,Fluoride,Sulfate)	Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	SM4500
												If <0.03 feet of PSH present, remove PSH and sample groundwater

† Dup-NCL-01 for same analysis | Trip Blank-NCL-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-49
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information

(2in stickup)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1605	NA	14.86	0.0	32.18	27.2	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.26.16	1610	14.90	0.5	7.25	21.8	2920	2.5	106.3	8.4	Clear	*Low-flow groundwater sample:*
↓	1612	14.90	1.0	7.06	21.6	2910	2.3	105.5	8.1	↓	(A) peristaltic pump w/ ded tubing
	1615	14.90	1.5	6.98	21.5	2900	2.2	105.1	7.5		B) ded bladder pump
	1617	14.90	2.0	6.95	21.3	2870	2.2	104.7	7.0		C) non-ded bladder pump; or
	1620	14.90	2.5	6.94	21.1	2840	2.1	104.3	6.7		*Standard groundwater sample:*
	1622	14.90	3.0	6.92	21.1	2820	2.0	103.9	6.2		D) bailer due to limited column; or
	1625	14.90	3.5	6.90	21.0	2800	1.9	103.5	5.9		E) recovery well cycling sample
↓	1627	14.90	4.0	6.89	21.0	2710	1.9	102.8	5.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.26.16	1630	NCL-49	14.90	6.89	21.0	2710	1.9	102.8	5.5	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO3	6010/6020
							Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)				HNO3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
4.26.16	1500	Dup-NCL-01	14.90	6.89	21.0	2710	1.9	102.8	5.5	Same as above	Same	Same
												If <0.03 feet of PSH present, remove PSH and sample groundwater

~15ft S. of 70mile marker off 285 N. bound

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-53
Event: Spring 2016 (Annual)
Area of Concern: NCL

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (2 inj at grade)

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection					Comments
							Cap	Casing	Well Secured	Label	Other	
4.26.16	1515	NA	10.72	0.0	23.60	19.6	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
4.26.16	1520	10.88	0.5	7.11	21.6	3070	2.1	118.3	7.2	Clear	*Low-flow groundwater sample:*
↓	1522	10.90	1.0	7.00	21.1	3040	1.9	112.1	7.0	↓	(A) peristaltic pump w/ ded tubing
	1525	10.90	1.5	6.97	21.0	3030	1.8	110.0	6.8		B) ded bladder pump
	1527	10.90	2.0	6.95	20.9	3020	1.7	108.4	6.5		C) non-ded bladder pump; or
	1530	10.90	2.5	6.93	20.9	3010	1.7	106.5	6.7		*Standard groundwater sample:*
	1532	10.90	3.0	6.92	20.8	3010	1.6	105.2	6.1		D) bailer due to limited column; or
	1535	10.90	3.5	6.91	20.8	3000	1.6	104.5	5.8		E) recovery well cycling sample
↓	1537	10.90	4.0	6.90	20.8	3000	1.5	103.7	5.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: ESC Lab Sciences, Mt. Juliet, TN
4.26.16	1540	MW-53	10.90	6.90	20.8	3000	1.5	103.7	5.6	DRO	HCL	8015M
										~~GRO~~	~~HCL~~	~~8015M~~
										VOC	HCL	8260
						Total Metals (As,Ba,Cr,Fe,Pb,Mn,Se) and/or Cations (Ca,K,Na)					HNO_3	6010/6020
								Dissolved Metals (As,Ba,Cr,Fe,Pb,Mn,Se)			HNO_3	Field filtered 0.45-u
								~~Total Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~6010/6020 and/or 7470~~
								~~Dissolved Metals (Hg,Ni,V,B,Cd,Co,U)~~			~~HNO_3~~	~~Field filtered 0.45-u~~
								Anions (Chloride,Fluoride,Sulfate)			Neat	300
										Nitrate-Nitrite	H_2SO_4	per historical, ESC Lab Sciences
										TDS	Neat	2540C
										~~Cyanide~~	~~NaOH~~	~~SM4500~~
												If <0.03 feet of PSH present, remove PSH and sample groundwater

Instrument Calibration Log

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Hydrologic Monitoring
for TRC
Houston, Texas

Date	Time	pH Hanna (Std. units)	Specific Conductivity Hanna (umho/cm)	Dissolved Oxygen Hanna (Slope Cal. in saturated air)	Turbidity Lamotte (NTU)	ORP Hanna HI 7020 Soln (200-275 mV)	PID Thermo Environmental 100 ppm Isobutylene	Initials / Comments
4/26/16	650	4.01 / 7.00	1,000	100%	10.0	241.7	100 ppm	SCH
4/26/16	653	4.01 / 7.00	1,000	100%	10.0	236.1	NA	BRH
4/26/16	658	4.01 / 7.00	1,000	100%	10.0	240.1	NA	GDS
4/26/16	700	4.01 / 7.00	1,000	100%	10.0	250.6	NA	BJ
4/26/16	703	4.01 / 7.00	1,000	100%	10.0	244.9	NA	MDB
4-26-16	705	4.01 / 7.00	1,000	100%	10.0	251.4	NA	CJH
4-26-16	708	4.01 / 7.00	1,000	100%	10.0	239.4	NA	SCD
4-26-16	710	4.01 / 7.00	1,000	100%	10.0	247.8	NA	TAB
4/27/16	640	4.01 / 7.00	1,000	100%	10.0	240.0	NA	SCH
4/27/16	646	4.01 / 7.00	1,000	100%	10.0	237.1	100 ppm	GDS
4/27/16	649	4.01 / 7.00	1,000	100%	10.0	248.6	NA	BJ
4/27/16	652	4.01 / 7.00	1,000	100%	10.0	243.8	NA	SCD
4/27/16	655	4.01 / 7.00	1,000	100%	10.0	249.4	NA	MDB
4-27-16	658	4.01 / 7.00	1,000	100%	10.0	237.1	NA	CJH
4-27-16	700	4.01 / 7.00	1,000	100%	10.0	235.7	NA	BRH
4/28/16	610	4.01 / 7.00	1,000	100%	10.0	241.7	100 ppm	SCH
4/28/16	612	4.01 / 7.00	1,000	100%	10.0	243.6	NA	MDB
4-28-16	615	4.01 / 7.00	1,000	100%	10.0	245.1	NA	CJH
4-28-16	618	4.01 / 7.00	1,000	100%	10.0	241.5	NA	SCD
4/28/16	624	4.01 / 7.00	1,000	100%	10.0	242.6	NA	GDS
4-28-16	627	4.01 / 7.00	1,000	100%	10.0	236.8	NA	BRH
4/28/16	630	4.01 / 7.00	1,000	100%	10.0	251.3	NA	BJ

p. 2/2

Instrument Calibration Log

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Hydrologic Monitoring
for TRC
Houston, Texas

Date	Time	pH Hanna (Std. units)	Specific Conductivity Hanna (umho/cm)	Dissolved Oxygen Hanna (Slope Cal. in saturated air)	Turbidity Lamotte (NTU)	ORP Hanna HI 7020 Soln (200-275 mV)	PID Thermo Environmental 100 ppm Isobutylene	Initials / Comments
4/29/16	0615	4.01/7.00	1,000	100%	10.0	240.1	100 ppm	SCG
4/29/16	0621	4.01/7.00	1,000	100%	10.0	237.1	NA	GDS
4-29-16	0624	4.01/7.00	1,000	100%	10.0	235.4	NA	CJH
4-29-16	627	4.01/7.00	1,000	100%	10.0	241.2	NA	BRH
4-29-16	630	4.01/7.00	1,000	100%	10.0	242.8	NA	SCD
4-29-16	632	4.01/7.00	1,000	100%	10.0	232.1	NA	MDB
4/29/16	635	4.01/7.00	1,000	100%	10.0	247.3	NA	BB

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: **REST Spring 2016 ~~Team F~~ std**
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project #: TRCATX-REST SPRING

Collected by (print): Scott Ude + HM1 Team
Site/Facility ID #: **REST - Navajo- Artesia**
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Acctnum: TRCATX
Template: T111393
Prelogin: P549621
TSR: Chris McCord
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO -40ml Amb-HCl-BT	GRO - 40ml Amb-HCl	V8260 - 40ml Amb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500ml HDPE-HNO3	Cyanide (CN) - 250ml HDPE Amb-NaOH	Cations-Total Ca, K, Na - 500ml HDPE-HNO3	Anions - Chloride, Fluoride, Sulfate - 125ml HDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250ml HDPE-H2SO4	TDS - 250ml HDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
UG-1	Grab	GW		4/27/16	925		✓	✓	✓		✓	✓	✓	✓	✓	✓		
UG-2				4/27/16	835		✓	✓	✓		✓	✓	✓	✓	✓	✓		
UG-3R				4/27/16	1135		✓	✓	✓		✓	✓	✓	✓	✓	✓		
UG-4				4/27/16	1020		✓	✓	✓		✓	✓	✓	✓	✓	✓		
Trip Blank-Rest-03				4/27/16	—				✓									
MW-117				4/26/16	1815		✓	✓	✓	✓		✓	✓	✓	✓			
MW-118				4/26/16	1720		✓	✓	✓	✓		✓	✓	✓	✓			
MW-119				4/26/16	1630		✓	✓	✓	✓		✓	✓	✓	✓			
MW-57				4/27/16	1025		✓	✓	✓	✓		✓	✓	✓	✓			
MW-111	↓	↓		4/27/16	1120		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Hold #:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: Y N NA
pH Checked: NCF:

Page 2 of 2

Chain of Custody

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Company Name/Address:	Billing Information:
TRC Solutions - Austin, TX 505 E. Huntland Dr, Ste 250 Austin, TX 78752	Accounts Payable 21 Griffin Road North Windsor, CT 06095
Report to: jspeer@trcsolutions.com	Email To: jspeer@trcsolutions.com
Project Description: REST Spring 2016 ~~Team F SH~~	City/State Collected: Artesia, NM
Phone: 512-684-3170 Fax:	Client Project # Lab Project #: TRCATX-REST SPRING
Collected by (print): Scott Ude + AMI Team	Site/Facility ID #: REST - Navajo- Artesia P.O. #
Collected by (signature): Scott Ude Immediately Packed on Ice N ___ Y ✓	*Rush?* (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%
	Date Results Needed Email? ___No ___Yes FAX? ___No ___Yes

Lab #:
Table #:
Acctnum: TRCATX
Template: T111393
Prelogin: P549621
TSR: Chris McCord
Cooler:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
KWB-5		GW		4/27/16	1220		✓		✓	✓		✓	✓	✓	✓			
KWB-12A				4/27/16	830		✓	✓	✓		✓	✓	✓	✓	✓	✓		
KWB-12B				4/27/16	915		✓	✓	✓		✓	✓	✓	✓	✓	✓		
DUP-REST-05				4/27/16	800		✓	✓	✓		✓	✓	✓	✓	✓	✓		
EB-REST-05				4/27/16	935		✓	✓	✓		✓	✓	✓	✓	✓	✓		
KWB-11B				4/27/16	1140		✓	✓	✓		✓	✓	✓	✓	✓	✓		
KWB-11A				4/27/16	1055		✓	✓	✓		✓	✓	✓	✓	✓	✓		
RW-13R				4/27/16	950		✓		✓	✓		✓	✓	✓	✓			
RA-4196				4/27/16	835				✓			✓	✓	✓	✓			
Trip Blank-REST-01	↓	↓		4/27/16	—				✓									

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: °C Bottles Received:

Date: Time:

Condition: (lab use only)

COC Seal Intact: Y N NA

pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: REST Spring 2016 - ~~Team H~~
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-REST SPRING

Collected by (print): Scott Uck + HMI Team
Site/Facility ID # REST - Navajo- Artesia
P.O. #

Collected by (signature): Scott Uck.
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111397
Prelogin: P549625
TSR: Chris McCord
Cooler: 4-1.2-16pm
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide,(CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride, Fluoride, Sulfate-125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
RA-4798		GW		4/27/16	850				✓			✓	✓	✓	✓			
MW-50	|	|		4/27/16	755		✓		✓	✓		✓	✓	✓	✓			
MW-92	|	|		4/27/16	845		✓	✓	✓	✓		✓	✓	✓	✓			
RW-1	|	|		4/27/16	940		✓	✓	✓	✓		✓	✓	✓	✓			
MW-91	|	|		4/27/16	1030		✓	✓	✓	✓		✓	✓	✓	✓			
MW-90	|	|		4/27/16	1120		✓	✓	✓	✓		✓	✓	✓	✓			
MW-96	↓	↓		4/27/16	1205		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Hold #
Condition: (lab use only)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Uck	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp. °C Bottles Received:
COC Seal Intact: ____Y ____N ____NA
Date: Time:
pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: EP Spring 2016 -~~Team C~~ CJH
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-EP SPRING

Collected by (print): Scott Ude + HMI Team
Site/Facility ID # Navajo- Artesia
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions: Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-83		GW		4/27/16	1310		✓	✓	✓	✓		✓	✓	✓	✓			
Trip Blank-EP-02				4/27/16	—				✓									
MW-4A				4/27/16	1215		✓	✓	✓	✓		✓	✓	✓	✓			
MW-123				4/27/16	1115		✓	✓	✓	✓		✓	✓	✓	✓			
MW-10				4/27/16	1020		✓	✓	✓	✓		✓	✓	✓	✓			
MW-22A				4/27/16	900		✓	✓	✓	✓		✓	✓	✓	✓			
DUP-EP-02				4/27/16	1000		✓	✓	✓	✓		✓	✓	✓	✓			
MW-88				4/27/16	810		✓	✓	✓	✓		✓	✓	✓	✓			
MW-5A				4/26/16	1750		✓	✓	✓	✓		✓	✓	✓	✓			
EB-EP-03	✓	✓		4/26/16	1810		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
COC Seal Intact: Y N NA
Date: Time:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111232
Prelogin: P549272
TSR: Chris McCord
Cooler: 1 1.7/1.6 DRC
Shipped Via:

Hold #
Condition: (lab use only)
pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: **EP Spring 2016 - ~~Team C~~** CTH
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-EP SPRING

Collected by (print): Scott Ude + HMI Team
Site/Facility ID # **Navajo- Artesia**
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed
Email? ___No: __Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

LF#
Table #
Acctnum: TRCATX
Template: T111232
Prelogin: P549272
TSR: Chris McCord
Cooler: 3.1/1.6 NP
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPE-Amb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions: Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-7A		GW		4/26/16	1635		✓	✓	✓	✓		✓	✓	✓	✓			
DUP-EP-01				4/26/16	1200		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-8A				4/26/16	1535		✓	✓	✓		✓	✓	✓	✓	✓	✓		
MW-73				4/26/16	1450		✓	✓	✓	✓		✓	✓	✓	✓			
Trip Blank-EP-01				4/26/16	—				✓									
MW-74				4/26/16	1545		✓	✓	✓	✓		✓	✓	✓	✓			
EB-EP-01				4/26/16	1605		✓	✓	✓	✓		✓	✓	✓	✓			
MW-79				4/26/16	1645		✓	✓	✓	✓		✓	✓	✓	✓			
EB-EP-04				4/26/16	1710		✓	✓	✓	✓		✓	✓	✓	✓			
MW-6A	↓	↓		4/27/16	810		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date Time

Condition: (lab use only)
COC Seal Intact: ____Y ____N ____NA
pH Checked: NCF:

3 4

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com

Email To: jspeer@trcsolutions.com

Project Description: EP Spring 2016 - ~~Team C~~ CJH

City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:

Client Project #

Lab Project # TRCATX-EP SPRING

Collected by (print): Scott Ude + HMI Team

Site/Facility ID # Navajo- Artesia

P.O. #

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

L#

Table #

Acctnum: TRCATX
Template: T111232
Prelogin: P549272
TSR: Chris McCord
Cooler: 1 (4/27/16 AE)
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions - Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
OCD-7AR	Grab	GW		4/27/16	900		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-6				4/27/16	955		✓	✓	✓	✓		✓	✓	✓	✓			
MW-72				4/27/16	1045		✓	✓	✓	✓		✓	✓	✓	✓			
MW-2A				4/27/16	1135		✓	✓	✓	2		✓	✓	2	2			
MW-122				4/27/16	1235		✓	✓	✓	2		2	✓	✓	✓			
MW-121				4/27/16	1325		✓	✓	✓	✓		✓	✓	✓	✓			
MW-124				4/26/16	1725		✓	✓	✓	✓		✓	✓	✓	✓			
EB-EP-02				4/26/16	1740		✓	✓	✓	✓		✓	✓	✓	✓			
MW-18A				4/26/16	1540		✓		✓		✓	✓	✓	✓	✓	✓		
MW-70	↓	↓		4/26/16	1640		✓	✓	✓	✓		✓	✓	✓	✓			

Analysis / Container / Preservative

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: Log all metals by 6020. Dissolved metals are field filtered.

pH _____ Temp _____
Flow _____ Other _____

Hold #

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Condition: (lab use only)

Temp: °C Bottles Received:

COC Seal Intact: ____Y ____N ____NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: Time:

Company Name/Address:	Billing Information:
TRC Solutions - Austin, TX 505 E. Huntland Dr, Ste 250 Austin, TX 78752	**Accounts Payable** **21 Griffin Road North** **Windsor, CT 06095**
Report to: jspeer@trcsolutions.com	Email To: jspeer@trcsolutions.com
Project Description: **EP Spring 2016 - ~~Team C~~**	City/State Collected: Artesia, NM
Phone: 512-684-3170 Fax:	Client Project #	Lab Project # TRCATX-EP SPRING
Collected by (print): Scott Ude + HMI Team	Site/Facility ID # **Navajo- Artesia**	P.O. #
Collected by (signature): Scott Ude Immediately Packed on Ice N ___ Y ✓	***Rush?*** (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%	Date Results Needed Email? ___No ___Yes FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Acctnum: TRCATX
Template: T111232
Prelogin: P549272
TSR: Chris McCord
Cooler: N/A
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40ml Amb-HCl-BT	GRO - 40ml Amb-HCl	V8260 - 40ml Amb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500ml HDPE-HNO3	Cyanide (CN) - 250ml HDPE Amb-NaOH	Cations-Total Ca, K, Na - 500ml HDPE-HNO3	Anions - Chloride, Fluoride, Sulfate - 125ml HDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250ml HDPE-H2SO4	TDS - 250ml HDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
OCD-1R		GW		4-27-16	800		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-2A				4/27/16	850		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-3				4/27/16	940		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-4				4/27/16	1030		✓	✓	✓	✓		✓	✓	✓	✓			
OCD-5				4/27/16	1115		✓	✓	✓	✓		✓	✓	✓	✓			
~~MW-11A~~				~~4/27/16~~	~~1200~~		✓	✓	✓		✓	✓	✓	✓	✓	✓	54	
MW-11A				4/27/16	1200		✓	✓	✓	✓		✓	✓	✓	✓			
MW-15	↓	↓		4/27/16	1300		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: NCL Spring 2016 - ~~Team H~~ COC
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-NCL SPRING

Collected by (print): Scott Ude + Hmi Team
Site/Facility ID # NCL - Navajo- Artesia
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%
Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions: Chloride, Fluoride, Sulfate- 125ml-HDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-45	Grab	GW		4/26/16	1745		✓		✓		✓	✓	✓	✓	✓	✓		
Trip Blank-NCL-01				4/26/16	—				✓									
NCL-49				4/26/16	1630		✓		✓	✓		✓	✓	✓	✓			
DUP-NCL-01				4/26/16	1500		✓		✓	✓		✓	✓	✓	✓			
MW-54A				4/26/16	1720		✓		✓	✓		✓	✓	✓	✓			
MW-53	↓	↓		4/26/16	1540		✓		✓	✓		✓	✓	✓	✓			

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111398
Prelogin: P549626
TSR: Chris McCord
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: Log all metals by 6020. Dissolved metals are field filtered.

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/27/16	1400	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: **REST Spring 2016 - ~~Team H.C.~~**
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project #: TRCATX-REST SPRING

Collected by (print): Scott Ude + 4M1 Team
Site/Facility ID #: **REST - Navajo- Artesia**
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111397
Prelogin: P549625
TSR: Chris McCord
Cooler: 4 (0) (Temp)
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride, Fluoride, Sulfate- 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-48	Grab	GW		4/27/16	1525		✓	✓	✓	✓		✓	✓	✓	✓			
MW-130				4/27/16	1730		✓	✓	✓	✓		✓	✓	✓	✓			
MW-67				4/27/16	1530		✓	✓	✓		✓	✓	✓	✓	✓	✓		
MW-94				4/27/16	1440		✓	✓	✓	✓		✓	✓	✓	✓			
MW-95				4/27/16	1625		✓	✓	✓	✓		✓	✓	✓	✓			
RW-7				4/27/16	1715		✓	✓	✓	✓		✓	✓	✓	✓			
MW-126A				4/27/16	1815		✓	✓	✓	✓		✓	✓	✓	✓			
MW-127				4/27/16	1720		✓	✓	✓	✓		✓	✓	✓	✓			
MW-129				4/27/16	1625		✓	✓	✓	✓		✓	✓	✓	✓			
MW-131	↓	↓		4/27/16	1535		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/28/16	0900	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: ____ Y ____ N ____ NA
pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: **REST Spring 2016 - ~~Team H~~CTH**
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-REST SPRING

Collected by (print): Scott Ude + HMI Team
Site/Facility ID # **REST - Navajo- Artesia**
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40ml Amb-HCl-BT	GRO - 40ml Amb-HCl	V8260 - 40ml Amb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500ml HDPE-HNO3	Cyanide (CN) - 250ml HDPE Amb-NaOH	Cations-Total Ca, K, Na - 500ml HDPE-HNO3	Anions-Chloride, Fluoride, Sulfate - 125ml HDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250ml HDPE-H2SO4	TDS - 250ml HDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-134	Grab	GW		4/27/16	1820		✓	✓	✓	✓		✓	✓	✓	✓			
EB-REST-03	"	"		4/27/16	1845		✓	✓	✓	✓		✓	✓	✓	✓			
DUP-REST-03	"	"		4/27/16	1500		✓	✓	✓	✓		✓	✓	✓	✓			
KWB-7	"	"		4/27/16	1450		✓		✓		✓	✓	✓	✓	✓	✓		
RA-313	↓	✓		4/27/16	1400				✓			✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/28/16	0900	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Chain of Custody Page 2 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111397
Prelogin: P549625
TSR: Chris McCord
Cooler: 4.0 4 Esp
Shipped Via:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com
Email To: jspeer@trcsolutions.com

Project Description: **EP Spring 2016 ~~Team C~~** CJH
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #
Lab Project # TRCATX-EP SPRING

Collected by (print): Scott Ude + HSI Team
Site/Facility ID # **Navajo- Artesia**
P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Lab # ___
Table # ___
Acctnum: TRCATX
Template: T111232
Prelogin: P549272
TSR: Chris McCord
Cooler: 4 thermo no
Shipped Via ___

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride,Fluoride,Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-120		GW		4/27/16	1420		✓	✓	✓	✓		✓	✓	✓	✓			
MW-81				4/27/16	1510		✓	✓	✓	✓		✓	✓	✓	✓			
MW-80				4/27/16	1600		✓	✓	✓	✓		✓	✓	✓	✓			
MW-84				4/27/16	1655		✓	✓	✓	✓		✓	✓	✓	✓			
MW-82				4/27/16	1750		✓	✓	✓	✓		✓	✓	✓	✓			
MW-78				4/27/16	1730		✓	✓	✓	✓		✓	✓	✓	✓			
MW-77				4/27/16	1430		✓	✓	✓	✓		✓	✓	✓	✓			
MW-76				4/27/16	1640		✓	✓	✓	✓		✓	✓	✓	✓			
MW-3				4/27/16	1525		✓	✓	✓	✓		✓	✓	✓	✓			
DUP-EP-03	↓	↓		4/27/16	1200		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other ___

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

pH ___ Temp ___
Flow ___ Other ___

Hold # ___

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/28/16	0900	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ___
Temp: °C Bottles Received:
Date: Time:

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Chain of Custody Page 2 of 2

ESC LAB SCIENCES — YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Company Name/Address: TRC Solutions - Austin, TX 505 E. Huntland Dr, Ste 250 Austin, TX 78752	Billing Information: **Accounts Payable** **21 Griffin Road North** **Windsor, CT 06095**
Report to: jspeer@trcsolutions.com	Email To: jspeer@trcsolutions.com
Project Description: **EP Spring 2016 ~~- Team B~~ C7H**	City/State Collected: Artesia, NM
Phone: 512-684-3170 Fax:	Client Project #
	Lab Project # TRCATX-EP SPRING
Collected by (print): Scott Ude + HMI Team	Site/Facility ID # **Navajo- Artesia**
	P.O. #
Collected by (signature): Scott Ude Immediately Packed on Ice N ___ Y ✓	***Rush?*** (Lab MUST Be Notified) ____ Same Day .... 200% ____ Next Day .... 100% ____ Two Day .... 50% ____ Three Day 25%
	Date Results Needed Email? ___No ___Yes FAX? ___No ___Yes

Lab use: L# / Table # / Acctnum: TRCATX / Template: T111231 / Prelogin: P549243 / TSR: Chris McCord / Cooler: / Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPE/Amb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-75	Grab	GW		4/27/16	1710		✓	✓	✓	✓		✓	✓	✓	✓			
MW-87	Grab	GW		4/27/16	1615		✓	✓	✓	✓		✓	✓	✓	✓			
Trip Blank-EP-03	Grab	GW		4/27/16	—				✓									
MW-1R	Grab	GW		4/27/16	1520		✓		✓	✓		✓		✓	✓			

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other__________

pH ________ Temp ________

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Flow ________ Other ________

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	
Scott Ude	4/28/16	0900		Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

Condition: (lab use only)

COC Seal Intact ___Y ___N ___NA

pH Checked: NCF:

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com

Email To: jspeer@trcsolutions.com

Project Description: **TMD Spring 2016 ~~Team F~~ CJH**

City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:

Client Project #

Lab Project #
TRCATX-TMD SPRING

Collected by (print): Scott Ude + HMI Team

Site/Facility ID #
TMD - Navajo- Artesia

P.O. #

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride-Fluoride-Sulfate-1125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-25	Grab	GW		4/27/16	1430		✓		✓	✓		✓	✓	✓	✓			
MW-27	Grab	GW		4/27/16	1730		✓		✓	✓		✓	✓	✓	✓			
MW-89	Grab	GW		4/27/16	1640		✓		✓	✓		✓	✓	✓	✓			
MW-26	Grab	GW		4/27/16	1550		✓		✓	✓		✓	✓	✓	✓			

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111389
Prelogin: P549617
TSR: Chris McCord
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Scott Ude	4/28/16	0900			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	COC Seal Intact: ___Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	pH Checked: NCF:

Company Name/Address: TRC Solutions - Austin, TX 505 E. Huntland Dr, Ste 250 Austin, TX 78752	Billing Information: **Accounts Payable** **21 Griffin Road North** **Windsor, CT 06095**	Analysis / Container / Preservative
Report to: jspeer@trcsolutions.com	Email To: jspeer@trcsolutions.com	
Project Description: **REST Spring 2016 - ~~Team H~~ CTJ**	City/State Collected: Artesia, NM	
Phone: 512-684-3170 Fax:	Client Project #	Lab Project # TRCATX-REST SPRING
Collected by (print): Scott Udt + HMI Team	Site/Facility ID # **REST - Navajo- Artesia**	P.O. #
Collected by (signature): Scott Udt Immediately Packed on Ice N ___ Y ✓	***Rush?*** (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%	Date Results Needed Email? ___No ___Yes FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions - Chloride, Fluoride, Sulfate - 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-103		GW		4/28/16	945		✓	✓	✓	✓		✓	✓	✓	✓			
MW-104				4/28/16	1050		✓	✓	✓	✓		✓	✓	✓	✓			
EB-REST-02				4/28/16	1105		✓	✓	✓	✓		✓	✓	✓	✓			
DUP-REST-02				4/28/16	900		✓	✓	✓	✓		✓	✓	✓	✓			
MW-126B				4/28/16	1020		✓	✓	✓	✓		✓	✓	✓	✓			
KWB-1A				4/28/16	1220		✓		✓		✓	✓	✓	✓	✓	✓		
KWB-6				4/28/16	925		✓		✓	✓		✓	✓	✓	✓			
KWB-10R				4/28/16	1125		✓		✓	✓		✓	✓	✓	✓			
RW-#18A				4/28/16	1315				✓	✓		✓	✓	✓	✓			
Trip Blank-REST-02	↓	↓		4/28/16	—				✓									

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Udt	4/28/16	1415	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: _____ °C Bottles Received: _____

Date _____ Time _____

Chain of Custody Page 1 of 2

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#

Table #

Acctnum: TRCATX

Template: T111397

Prelogin: P549625

TSR: Chris McCord

Cooler: 6 1.0 Therm

Shipped Via:

Hold #

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: _____ NCF: _____

Company Name/Address:
TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: jspeer@trcsolutions.com

Email To: jspeer@trcsolutions.com

Project Description: **REST Spring 2016 - ~~Team H~~** CJH

City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:

Client Project #

Lab Project #
TRCATX-REST SPRING

Collected by (print): Scott Uck + HMI Team

Site/Facility ID #
REST - Navajo- Artesia

P.O. #

Collected by (signature): Scott Uck

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T111397
Prelogin: P549625
TSR: Chris McCord
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO - 40mlAmb-HCl-BT	GRO - 40mlAmb-HCl	V8260 - 40mlAmb-HCl	Tot./Diss. As,Ba,Cr,Fe,Pb,Mn,Se - 500mlHDPE-HNO3	Cyanide (CN) - 250mlHDPEAmb-NaOH	Cations-Total Ca, K, Na - 500mlHDPE-HNO3	Anions-Chloride, Fluoride, Sulfate- 125mlHDPE-NoPres	Nitrate/Nitrite (NO2NO3) - 250mlHDPE-H2SO4	TDS - 250mlHDPE-NoPres	Tot/Diss. As,B,Ba,Cd,Co,Cr,Fe,Hg,Mn,Ni,Pb,Se,U,V	Rem./Contaminant	Sample # (lab only)
MW-40		GW		4/28/16	1230		✓	✓	✓	✓		✓	✓	✓	✓			
MW-98				4/28/16	1140		✓	✓	✓	✓		✓	✓	✓	✓			
MW-93				4/28/16	825		✓	✓	✓	✓		✓	✓	✓	✓			
MW-23				4/28/16	915		✓	✓	✓	✓		✓	✓	✓	✓			
MW-138				4/28/16	1005		✓	✓	✓		✓	✓	✓	✓	✓	✓		
MW-137				4/28/16	1100		✓	✓	✓		✓	✓	✓	✓	✓	✓		
MW-42				4/28/16	1205		✓	✓	✓	✓		✓	✓	✓	✓			
MW-41				4/28/16	1110		✓	✓	✓	✓		✓	✓	✓	✓			
MW-106				4/28/16	915		✓	✓	✓	✓		✓	✓	✓	✓			
MW-101	↓	↓		4/28/16	825		✓	✓	✓	✓		✓	✓	✓	✓			

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Flow _____ Other _____

Remarks: **Log all metals by 6020. Dissolved metals are field filtered.**

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Scott Uck	4/28/16	1415			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	COC Seal Intact: Y ___ N ___ NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	pH Checked: NCF: