Appendix B, Table B.1 - Summary of Groundwater Analytical Data - Total Petroleum Hydrocarbons

2022 Annual Groundwater Monitoring Report
HF Sinclair Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Cross-Gradient	KWB-13	Apr-19			<0.0247	
	KWB-13	Jun-20			0.0396 J	
	KWB-13	Apr-21			0.0527 J	
	KWB-13	Apr-22			<0.0247	
	MW-136	Jun-20		**0.326 V3**	**0.0924 J**	
	MW-136	Oct-20		**0.0320 J**	**0.0873 JB**	
	MW-136	Apr-21		<0.0314	**0.110**	
	MW-136	Sep-21		<0.0314	0.0432 J	
	MW-136	Apr-22		<0.0314	0.0485 J	
	MW-136	Oct-22		**0.0314 J**	**0.124**	
	NP-5	Apr-15			0.0387 J	
	NP-5	Apr-17			<0.0247	
	NP-5	Apr-19			<0.0247	
	NP-5	Apr-21			0.0663 J	
	RA-3156	Apr-19				
	RA-3156	Jun-20				
	RA-3156	Apr-21				
	RA-3156	Apr-22				
Evaporation Ponds	MW-1R	Apr-19				**0.0756 J**
	MW-1R	Jun-20				<0.0247
	MW-1R	Apr-21				**0.124**
	MW-1R	Apr-22				**0.0957 J**
	MW-2A	Jun-20		**0.0484 J**		<0.0247
	MW-2A	Oct-20		<0.0314		**0.153**
	MW-2A	Apr-21		<0.0314		**1.25**
	MW-2A	Sep-21		**0.0423 J**		**0.181**
	MW-2A	Apr-22		**0.0387 JB**		**0.0837 JB**
	MW-2A	Oct-22		<0.0314		**0.151**
	MW-3	Jun-20		<1.57		**7.01**
	MW-3	Jun-20	FD	**0.691**		**7.98**
	MW-3	Oct-20		**4.06 JB**		**6.84**
	MW-3	Oct-20	FD	**0.491**		**7.08**
	MW-3	Apr-21		**0.681**		**7.71**
	MW-3	Apr-21	FD	**0.591**		**7.86**
	MW-3	Sep-21		**0.242**		**6.28**
	MW-3	Sep-21	FD	**0.239**		**7.13**
	MW-3	Apr-22		**0.446**		**6.46**
	MW-3	Apr-22	FD	<0.157		**6.38**
	MW-3	Oct-22		**0.394 B**		**8.39**
	MW-3	Oct-22	FD	**0.398**		**8.21**
	MW-4A	Jun-20		**0.377**		**4.07**
	MW-4A	Oct-20		**0.586**		**4.93**
	MW-4A	Apr-21		**0.620**		**5.71**
	MW-4A	Sep-21		**0.291**		**4.50**
	MW-4A	Apr-22		**0.605**		**5.86**
	MW-4A	Oct-22		**0.507 Q**		**6.46**
	MW-4B	Apr-15		**0.119**		**1.31**
	MW-4B	Apr-17		**0.318**		**1.21**
	MW-4B	Apr-19		**0.181**		**1.13**
	MW-4B	Apr-21		**0.176 B**		**0.970**
	MW-5A	Jun-20		**0.959**		**7.01**
	MW-5A	Oct-20		**1.75**		**6.72**
	MW-5A	Apr-21		**2.56**		**7.21**
	MW-5A	Sep-21		**1.31**		**3.76**
	MW-5A	Apr-22		**1.75**		**5.82**
	MW-5A	Oct-22		**0.887**		**1.92**
	MW-5B	Apr-15		**1.14**		**11.0**
	MW-5B	Apr-17		**2.08**		**11.2**
	MW-5B	Apr-19		**1.82**		**11.5**
	MW-5B	Apr-21		**0.0371 JB**		**0.389**
	MW-5C	Apr-15		<0.0310		**0.580**
	MW-5C	Apr-17		<0.0314		**0.500**
	MW-5C	Apr-19		**0.0423 JB**		**0.442**
	MW-5C	Apr-21		**1.98**		**11.3**
	MW-6A	Apr-19		**0.315**		**11.0**
	MW-6A	Jun-20		**0.192**		**4.86**
	MW-6A	Apr-21		**0.356 B**		**6.04**
	MW-6A	Apr-22		**0.421**		**8.03**
	MW-6B	Apr-15		<0.0310		**0.386**
	MW-6B	Apr-17		<0.0314		**0.276**
	MW-6B	Apr-19		**0.0356 J**		**0.427**
	MW-6B	Apr-21		**0.0463 JB**		**0.346**
	MW-7A	Jun-20		**0.240**		**0.928**
	MW-7A	Jun-20	FD	**0.337**		**0.915**
	MW-7A	Oct-20		**0.351 B**		**0.940**
	MW-7A	Oct-20	FD	**0.379**		**0.886**
	MW-7A	Apr-21		**0.364 B**		**1.06**
	MW-7A	Apr-21	FD	**0.358**		**1.07**
	MW-7A	Sep-21		**0.299**		**1.00**
	MW-7A	Sep-21	FD	**0.298**		**0.959**
	MW-7A	Apr-22		**0.263**		**0.870**
	MW-7A	Apr-22	FD	**0.254**		**0.873**
	MW-7A	Oct-22		**0.285**		**0.842**
	MW-7A	Oct-22	FD	**0.280**		**1.39**
	MW-7B	Apr-15		<0.0310		**0.120**
	MW-7B	Apr-17		<0.0314		**0.0845 J**
	MW-7B	Apr-19		**0.0647 JB**		**0.0676 J**
	MW-7B	Apr-21		**0.0342 J**		**0.0850 J**
	MW-10	Jun-20		**0.931**		**1.57**
	MW-10	Oct-20		**0.640**		**1.76**
	MW-10	Apr-21		**0.712**		**2.00**
	MW-10	Sep-21		**0.849**		**1.81**
	MW-10	Apr-22		**0.426**		**1.67**
	MW-10	Oct-22		**1.11**		**1.73**
	MW-11A	Jun-20		<0.0314		<0.0247
	MW-11A	Oct-20				
	MW-11A	Apr-21		<0.0314		**0.0459 J**
	MW-11A	Sep-21				
	MW-11A	Apr-22		<0.0314		**0.0464 J**
	MW-11A	Oct-22				
	MW-11B	Apr-15		<0.0310		<0.0250
	MW-11B	Apr-17		<0.0314		<0.0247
	MW-11B	Apr-19		**0.0345 JB**		<0.0247
	MW-11B	Apr-21		<0.0314		**0.0402 J**
	MW-15	Apr-19		**0.136 B**		**0.475**
	MW-15	Jun-20		<0.0314		<0.0247
	MW-15	Apr-21		**0.0455 J**		**0.358**
	MW-15	Apr-22		**0.0437 J**		**0.719**

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Evaporation Ponds	MW-18A	Jun-20				**0.408**
	MW-18A	Oct-20				**0.373 B**
	MW-18A	Apr-21				**0.518**
	MW-18A	Sep-21				**0.491**
	MW-18A	Apr-22				**0.495**
	MW-18A	Oct-22				**0.417**
	MW-18B	Apr-15		<0.0310		**0.280**
	MW-18B	Apr-17		**0.0932 J**		**0.287**
	MW-18B	Apr-19		**0.105 B**		**0.230**
	MW-18B	Apr-21		**0.0456 J**		**0.335**
	MW-22A	Jun-20		**2.73**		**2.91**
	MW-22A	Jun-20	FD	**2.10**		**2.72**
	MW-22A	Oct-20		**1.68**		**3.45**
	MW-22A	Oct-20	FD	**2.13**		**3.13**
	MW-22A	Apr-21		**1.43**		**4.19**
	MW-22A	Apr-21	FD	**1.45**		**3.94**
	MW-22A	Sep-21		**0.539**		**1.16**
	MW-22A	Sep-21	FD	**0.541**		**1.37**
	MW-22A	Apr-22		**0.955**		**3.11**
	MW-22A	Apr-22	FD	**0.989**		**3.11**
	MW-22A	Oct-22		**0.824**		**1.36**
	MW-22A	Oct-22	FD	**0.750 Q**		**0.839**
	MW-22B	Apr-15		**2.34**		**5.60**
	MW-22B	Apr-17		**1.76**		**5.25**
	MW-22B	Apr-19		**2.58**		**4.77**
	MW-22B	Apr-21		**1.97**		**5.69**
	MW-70	Jun-20		**1.29**		**0.833**
	MW-70	Oct-20		**2.28**		**0.805**
	MW-70	Apr-21		**1.57**		**1.05**
	MW-70	Sep-21		**1.81**		**0.860**
	MW-70	Apr-22		**1.18**		**1.10**
	MW-70	Oct-22		**2.10**		**1.04**
	MW-72	Apr-19		**0.0396 J**		**0.497**
	MW-72	Jun-20		**0.0544 J**		**0.303**
	MW-72	Apr-21		**0.0371 JB**		**0.362**
	MW-72	Apr-22		**0.0505 JB**		**0.281 B**
	MW-73	Apr-19		**0.0435 J**		**2.56**
	MW-73	Jun-20		**0.408**		**2.86**
	MW-73	Apr-21		**0.426**		**3.48**
	MW-73	Apr-22		**0.363 B**		**2.17**
	MW-74	Jun-20		**0.490**		**21.9**
	MW-74	Oct-20		**1.64**		**15.6**
	MW-74	Apr-21		**1.47**		**15.9**
	MW-74	Sep-21		**3.56**		**8.38**
	MW-74	Apr-22		**1.66**		**17.4**
	MW-74	Oct-22		**2.16**		**15.6**
	MW-75	Jun-20		**2.44 J**		**12.2**
	MW-75	Oct-20		**3.45**		**15.1**
	MW-75	Apr-21		**2.15**		**13.8**
	MW-75	Sep-21		**2.89**		**13.3**
	MW-75	Apr-22		**1.07**		**14.6**
	MW-75	Oct-22		**3.34**		**18.8**
	MW-76	Jun-20		**1.89**		**20.8**
	MW-76	Oct-20		**1.11**		**16.4**
	MW-76	Apr-21		**0.902**		**12.2**
	MW-76	Sep-21		**0.790 J**		**11.1**
	MW-76	Apr-22		**0.890**		**8.17**
	MW-76	Oct-22		**0.537**		**7.14**
	MW-77	Apr-19		**1.04**		**72.5**
	MW-77	Jun-20		**2.88 J**		**53.1**
	MW-77	Apr-21		**0.649**		**68.5**
	MW-77	Apr-22		**0.193**		**69.0**
	MW-78	Apr-19		<0.314		**28.6**
	MW-78	Jun-20		<1.57		**38.5**
	MW-78	Apr-21		**0.0950 J**		**385**
	MW-78	Apr-22		<0.157		**32.5**
	MW-79	Jun-20		**0.0534 J**		**0.0762 J**
	MW-79	Oct-20		**0.0582 J**		**0.333**
	MW-79	Apr-21		<0.0314		**0.331 B**
	MW-79	Sep-21		**0.0338 J**		**0.255**
	MW-79	Apr-22		**0.0515 JB**		**0.351**
	MW-79	Oct-22		<0.0314		**0.333**
	MW-80	Apr-19		<0.0314		**0.210**
	MW-80	Jun-20		<0.0314		<0.0247
	MW-80	Apr-21		<0.0314		**0.254 B**
	MW-80	Apr-22		**0.0418 JB**		**0.0947 JB**
	MW-81	Apr-19		<0.0314		**1.42**
	MW-81	Jun-20		**0.0978 J**		**0.269**
	MW-81	Apr-21		<0.0314		**0.866 B**
	MW-81	Apr-22		**0.0517 JB**		**0.596**
	MW-82	Apr-19		**0.0619 J**		**5.49**
	MW-82	Jun-20		**0.689**		**2.58**
	MW-82	Apr-21		**0.216**		**1.75**
	MW-82	Apr-22		**0.257 B**		**3.71**
	MW-83	Jun-20		**0.843**		**8.93**
	MW-83	Oct-20		**1.17**		**10.2**
	MW-83	Apr-21		**0.904**		**7.60**
	MW-83	Sep-21		**0.288**		**23.0**
	MW-83	Apr-22		**0.312**		**13.7**
	MW-83	Oct-22		**0.149**		**16.6**
	MW-84	Jun-20		**1.45**		**58.9**
	MW-84	Oct-20		<3.14		**59.2**
	MW-84	Apr-21		**0.537**		**62.9**
	MW-84	Sep-21		**1.37**		**74.6**
	MW-84	Apr-22		**0.279**		**79.4**
	MW-84	Oct-22		**0.855**		**42.2**
	MW-86	Jun-20		**1.77 J**		**93.9**
	MW-86	Oct-20		<6.28		**80.2**
	MW-87	Jun-20		<0.0314		**0.260**
	MW-87	Oct-20		**0.0469 JB**		**0.270 B**
	MW-87	Apr-21		<0.0314		**0.371**
	MW-87	Sep-21		<0.0314		**0.386**
	MW-87	Apr-22		<0.0314		**0.386**
	MW-87	Oct-22		<0.0314		**0.282**

Appendix B, Table B.1 - Summary of Groundwater Analytical Data - Total Petroleum Hydrocarbons

2022 Annual Groundwater Monitoring Report
HF Sinclair Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Evaporation Ponds	MW-88	Jun-20		0.0434 J		0.317	
	MW-88	Oct-20		0.0806 JB		0.405	
	MW-88	Apr-21		0.0750 JB		0.410	
	MW-88	Sep-21		0.0602 J		0.421	
	MW-88	Apr-22		<0.0314		0.458	
	MW-88	Oct-22		0.0489 J		0.460	
	MW-120	Jun-20		0.0458 J		0.262	
	MW-120	Oct-20		<0.0314		0.402	
	MW-120	Apr-21		0.0797 J		0.614 B	
	MW-120	Sep-21		0.0867 J		0.346	
	MW-120	Apr-22		0.0765 JB		0.240	
	MW-120	Oct-22		0.0449 J		0.640	
	MW-121	Jun-20		<0.0314		0.204	
	MW-121	Oct-20		<0.0314		0.268	
	MW-121	Apr-21		<0.0314		0.368 B	
	MW-121	Sep-21		<0.0314		0.212	
	MW-121	Apr-22		<0.0314		0.115	
	MW-121	Oct-22		<0.0314		0.245	
	MW-122	Jun-20		<1.57		0.0398 J	
	MW-122	Oct-20		<1.57		0.122	
	MW-122	Apr-21		<0.0314		0.0845 J	
	MW-122	Sep-21		<0.0314		0.0810 J	
	MW-122	Apr-22		0.0541 JB		0.202 B	
	MW-122	Oct-22		<0.0314		0.165	
	MW-123	Jun-20		2.03		2.01	
	MW-123	Oct-20		1.30		2.29	
	MW-123	Apr-21		1.24		2.51	
	MW-123	Sep-21		0.989		2.35	
	MW-123	Apr-22		0.956		2.14	
	MW-123	Oct-22		0.793		2.09	
	MW-124	Jun-20		<0.0314		<0.0247	
	MW-124	Oct-20		<0.0314		0.0406 JB	
	MW-124	Apr-21		<0.0314		0.0508 J	
	MW-124	Sep-21		<0.0314		0.0518 J	
	MW-124	Apr-22		<0.0314		0.0566 J	
	MW-124	Oct-22		<0.0314		0.0283 J	
	OCD-1R	Jun-20		<0.0314		0.110	
	OCD-1R	Oct-20		0.0461 JB		0.117	
	OCD-1R	Apr-21		<0.0314		0.174	
	OCD-1R	Sep-21		<0.0314		0.184	
	OCD-1R	Apr-22		0.0387 JB		0.176	
	OCD-1R	Oct-22		<0.0314		0.227	
	OCD-2A	Jun-20		<0.0314		<0.0247	
	OCD-2A	Oct-20		0.0374 JB		0.0650 J	
	OCD-2A	Apr-21		<0.0314		0.0839 J	
	OCD-2A	Sep-21		<0.0314		0.0849 J	
	OCD-2A	Apr-22		0.0328 JB		0.0656 J	
	OCD-2A	Oct-22		<0.0314		0.0796 J	
	OCD-3	Jun-20		<0.0314		<0.0247	
	OCD-3	Oct-20		0.0381 JB		0.0499 J	
	OCD-3	Apr-21		<0.0314		0.0580 J	
	OCD-3	Sep-21		<0.0314		0.0529 J	
	OCD-3	Apr-22		<0.0314		0.0720 J	
	OCD-3	Oct-22		<0.0314		<0.0247	
	OCD-4	Jun-20		<0.0314		<0.0247	
	OCD-4	Oct-20		0.0326 JB		0.0404 J	
	OCD-4	Apr-21		<0.0314		0.0556 J	
	OCD-4	Sep-21		<0.0314		0.0605 J	
	OCD-4	Apr-22		<0.0314		0.0558 J	
	OCD-4	Oct-22		<0.0314		<0.0247	
	OCD-5	Jun-20		1.09		0.773	
	OCD-5	Oct-20		0.724		0.917	
	OCD-5	Apr-21		0.337		0.467	
	OCD-5	Sep-21		0.845		1.08	
	OCD-5	Apr-22		0.428		0.954	
	OCD-5	Oct-22		0.794		1.03	
	OCD-6	Jun-20		0.134		0.517	
	OCD-6	Oct-20		0.159		0.622	
	OCD-6	Apr-21		0.186 B		0.666	
	OCD-6	Sep-21		0.361		0.677	
	OCD-6	Apr-22		0.256 B		0.686	
	OCD-6	Oct-22		0.230		0.744	
	OCD-7AR	Jun-20		0.637		3.21	
	OCD-7AR	Oct-20		0.878		3.45	
	OCD-7AR	Apr-21		1.38		4.76	
	OCD-7AR	Sep-21		1.72		4.00	
	OCD-7AR	Apr-22		1.43		3.79	
	OCD-7AR	Oct-22		1.24		4.06	
	OCD-7B	Apr-15		<0.0310		0.120	
	OCD-7B	Apr-17		<0.0314		0.0746 J	
	OCD-7B	Apr-19		<0.0314		0.0638 J	
	OCD-7B	Apr-21		0.0516 JB		0.128	
	OCD-8A	Jun-20		0.419		2.19	
	OCD-8A	Oct-20		0.644		2.17	
	OCD-8A	Apr-21		1.04		2.86	
	OCD-8A	Sep-21		0.373		1.57	
	OCD-8A	Apr-22		0.524		1.75	
	OCD-8A	Oct-22		0.255 B		0.816	
	OCD-8B	Apr-15		<0.0310		0.840	
	OCD-8B	Apr-17		<0.0314		0.585	
	OCD-8B	Apr-19		0.0648 JB		0.612	
	OCD-8B	Apr-21		0.0690 J		0.632	
Field East of Refinery	KWB-1A	Oct-19			0.0614 J		
	KWB-1A	Jun-20			0.123		
	KWB-1A	Oct-20			0.0960 JB		
	KWB-1A	Oct-22			0.182		
	KWB-1C	Apr-15			0.113		
	KWB-1C	Apr-17			0.140		
	KWB-1C	Apr-19			0.0921 J		
	KWB-1C	Apr-21			0.0847 J		
	KWB-7	Jun-20			7.29		
	KWB-7	Oct-20			1.05		
	KWB-7	Apr-21			1.94		
	KWB-7	Sep-21			1.37		
	KWB-7	Apr-22			1.07		
	KWB-7	Oct-22			2.14		

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Field East of Refinery	KWB-8	Oct-16				3.02	
	KWB-8	Apr-17				3.41	
	KWB-8	Oct-17				3.30	
	KWB-8	Oct-20				6.80	
	KWB-10R	Apr-17				4.01	
	KWB-10R	Oct-17				5.18	
	KWB-10R	Apr-18				3.23	
	KWB-10R	Oct-18				3.35	
	KWB-11A	Jun-20			0.444	2.28	
	KWB-11A	Oct-20			0.0992 J	0.376	
	KWB-11A	Sep-21			0.994	1.35	
	KWB-11A	Oct-22			0.153	0.341	
	KWB-11B	Jun-20			<0.0314	0.0514 J	
	KWB-11B	Oct-20			<0.0314	0.0956 J	
	KWB-11B	Apr-21			<0.0314	0.0356 J	
	KWB-11B	Sep-21			<0.0314	0.0363 J	
	KWB-11B	Apr-22			<0.0314	0.0827 J	
	KWB-11B	Oct-22			<0.0314	0.0733 J	
	KWB-12A	Jun-20			<0.0314	0.0477 J	
	KWB-12A	Oct-20			0.0364 J	<0.0247	
	KWB-12A	Sep-21			<0.0314	<0.0247	
	KWB-12A	Oct-22			<0.0314	0.0451 J	
	KWB-12B	Jun-20			<0.0314	0.0305 J	
	KWB-12B	Jun-20	FD		0.0359 JB	0.0415 J	
	KWB-12B	Oct-20			0.0358 J	<0.0247	
	KWB-12B	Oct-20	FD		<0.0314	0.0684 J	
	KWB-12B	Apr-21			<0.0314	0.0955 J	
	KWB-12B	Apr-21	FD		0.0590 J	0.0537 J	
	KWB-12B	Sep-21			<0.0314	<0.0247	
	KWB-12B	Sep-21	FD		<0.0314	<0.0247	
	KWB-12B	Apr-22			<0.0314	<0.0247	
	KWB-12B	Apr-22	FD		<0.0314	<0.0247	
	KWB-12B	Oct-22			<0.0314	<0.0247	
	KWB-12B	Oct-22	FD		<0.0314	<0.0247	
	KWB-P4	Apr-15				0.0820 J	
	KWB-P4	Apr-17				0.0526 J	
	KWB-P4	Apr-19				0.0361 J	
	KWB-P4	Apr-21				0.0330 J	
	MW-57	Jun-20			<0.0314	0.0661 J	
	MW-57	Oct-20			0.0579 J	0.0475 JB	
	MW-57	Apr-21			<0.0314	0.117	
	MW-57	Sep-21			<0.0314	<0.0247	
	MW-57	Apr-22			<0.0314	0.0636 J	
	MW-58	Oct-17				9.77	
	MW-58	Apr-18				5.73	
	MW-58	Oct-18				4.86	
	MW-58	Oct-19				12.1	
	MW-111	Oct-18			1.36	2.63	
	MW-111	Apr-19			1.88	1.54	
	MW-111	Oct-19			1.37	1.80	
	MW-111	Jun-20			3.86	1.77	
	MW-112	Nov-14			28.0	2.20	
	MW-113	Jun-20			1.30	0.226	
	MW-113	Jun-20	FD		0.798 V3	0.158	
	MW-113	Oct-20			3.18	0.784	
	MW-113	Oct-20	FD		3.30	0.814	
	MW-113	Apr-21			3.66	0.330	
	MW-113	Apr-21	FD		4.52	0.405	
	MW-113	Sep-21			22.6	6.19	
	MW-113	Sep-21	FD		20.7	3.49	
	MW-113	Apr-22			1.30	0.328	
	MW-113	Apr-22	FD		1.24	0.334	
	MW-113	Oct-22			22.1	4.82	
	MW-113	Oct-22	FD		24.1	3.86	
	MW-125	Jun-20			<0.0314	0.0700 J	
	MW-125	Oct-20			0.0382 J	0.0942 JB	
	MW-125	Apr-21			<0.0314	0.0654 J	
	MW-125	Sep-21			0.0493 J	0.0250 J	
	MW-125	Apr-22			<0.0314	0.122	
	MW-125	Oct-22			<0.0314	0.0624 J	
	MW-126A	Apr-19			0.124 B	0.370	
	MW-126A	Oct-19			0.903	0.583	
	MW-126A	Jun-20			0.0319 J	0.461	
	MW-126A	Oct-20			0.0669 J	0.451 B	
	MW-126B	Jun-20			<0.0314	0.461	
	MW-126B	Oct-20			0.0343 J	0.312 B	
	MW-126B	Apr-21			<0.0314	0.250	
	MW-126B	Sep-21			<0.0314	0.181	
	MW-126B	Apr-22			<0.0314	0.214	
	MW-126B	Oct-22			0.0325 JB	0.338	
	MW-127	Oct-17			1.68	1.41	
	MW-127	Apr-18			5.15	1.06	
	MW-127	Oct-18			3.13	1.30	
	MW-127	Apr-19			5.94	1.11	
	MW-128	Oct-17			1.14	2.37	
	MW-128	Apr-18			0.932	1.58	
	MW-128	Oct-18			2.76	2.04	
	MW-128	Apr-19			3.13	1.81	
	MW-129	Apr-16			2.70	1.68	
	MW-129	Oct-16			2.17	1.68	
	MW-129	Apr-17			1.79	2.13	
	MW-129	Apr-18			4.33	1.40	
	MW-130	Jun-20			<0.0314	0.609	
	MW-130	Oct-20			<0.0314	0.676	
	MW-130	Apr-21			<0.0314	0.586	
	MW-130	Sep-21			0.0326 J	0.387	
	MW-130	Apr-22			0.0341 JB	0.653	
	MW-130	Oct-22			<0.0314	0.657	
	MW-131	Apr-17			6.81	1.77	
	MW-131	Oct-17			4.95	1.58	
	MW-131	Oct-19			8.71	1.46	
	MW-131	Jun-20			8.68	1.83	
	MW-133	Nov-14			9.40	2.80	
	MW-133	Apr-15			11.3	3.10	

Appendix B, Table B.1 - Summary of Groundwater Analytical Data - Total Petroleum Hydrocarbons

2022 Annual Groundwater Monitoring Report
HF Sinclair Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Field East of Refinery	MW-134	Jun-20		**0.0330 JB**	0.0820 J	
	MW-134	Jun-20	FD	**0.0332 J**	<0.0247	
	MW-134	Oct-20		<0.0314	**0.107 B**	
	MW-134	Oct-20	FD	<0.0314	**0.129**	
	MW-134	Apr-21		**0.0419 J**	**0.120**	
	MW-134	Apr-21	FD	**0.101**	**0.0992 J**	
	MW-134	Sep-21		<0.0314	**0.297**	
	MW-134	Sep-21	FD	<0.0314	**0.304**	
	MW-134	Apr-22		<0.0314	**0.0989 J**	
	MW-134	Apr-22	FD	<0.0314	**0.104**	
	MW-134	Oct-22		<0.0314	**0.108**	
	MW-134	Oct-22	FD	<0.0314	**0.117**	
	MW-135	Jun-20		**0.0425 J**	0.0380 J	
	MW-135	Oct-20		<0.0314	0.0723 JB	
	MW-135	Apr-21		<0.0314	0.0720 J	
	MW-135	Sep-21		<0.0314	<0.0247	
	MW-135	Apr-22		<0.0314	<0.0247	
	MW-135	Oct-22		<0.0314	0.0437 J	
	MW-145	Oct-20				
	MW-145	Oct-20	FD			
	MW-145	Apr-21		<0.0314	**0.288**	
	MW-145	Sep-21		<0.0314	**0.302**	
	MW-145	Apr-22		<0.0314	**0.133**	
	MW-145	Oct-22		<0.0314	**0.225**	
	MW-146	Oct-20				
	MW-146	Apr-21		<0.0314	0.0733 J	
	MW-146	Sep-21		<0.0314	**0.0874 J**	
	MW-146	Sep-21	FD	<0.0314	**0.0993 J**	
	MW-146	Apr-22		<0.0314	<0.0247	
	MW-146	Apr-22	FD	<0.0314	**0.0918 J**	
	MW-146	Oct-22		<0.0314	0.0433 J	
	MW-146	Oct-22	FD	<0.0314	0.0341 J	
	MW-147	Oct-20				
	MW-147	Apr-21		<0.0314	<0.0247	
	MW-147	Sep-21		<0.0314	**0.0884 J**	
	MW-147	Apr-22		<0.0314	<0.0247	
	MW-147	Oct-22		<0.0314	0.0355 J	
	MW-148	Oct-20				
	MW-148	Apr-21		<0.0314	**0.102**	
	MW-148	Sep-21		<0.0314	**0.212**	
	MW-148	Apr-22		<0.0314	<0.0247	
	MW-148	Oct-22		<0.0314	0.0760 J	
	RA-4196	Apr-19				
	RA-4196	Oct-19				
	RA-4196	Jun-20				
	RA-4196	Oct-20				
	RA-4798	Jun-20				
	RA-4798	Oct-20				
	RA-4798	Apr-21				
	RA-4798	Sep-21				
	RA-4798	Apr-22				
	RW-12R	Apr-17			**1.61**	
	RW-12R	Apr-18			**0.514 B**	
	RW-12R	Apr-19			**0.822**	
	RW-12R	Jun-20			**0.633**	
	RW-13R	Apr-16			**0.808**	
	RW-13R	Apr-18			**0.526 B**	
	RW-18A	Apr-17				
	RW-18A	Apr-18				
	RW-18A	Apr-19				
	RW-18A	Jun-20				
	RW-20	Apr-15			**2.10**	
	RW-22	Apr-15			**5.40**	
NCL	MW-18	Apr-19			**0.842**	
	MW-18	Jun-20			**0.812**	
	MW-18	Apr-21			**1.59**	
	MW-18	Apr-22			**1.54**	
	MW-45	Jun-20			**0.739**	
	MW-45	Oct-20			**0.728**	
	MW-45	Apr-21			**0.967**	
	MW-45	Sep-21			**1.98**	
	MW-45	Apr-22			**1.37**	
	MW-45	Oct-22			**1.20**	
	MW-53	Apr-16			**0.316**	
	MW-53	Apr-17			**0.258**	
	MW-53	Apr-18			**0.158**	
	MW-53	Apr-19			**0.229**	
	MW-53R	Oct-20			**0.206**	
	MW-53R	Apr-21			**0.123**	
	MW-53R	Apr-22			**0.136**	
	MW-54A	Jun-20			**1.97**	
	MW-54A	Oct-20			**2.82**	
	MW-54A	Apr-21			**3.49**	
	MW-54A	Sep-21			**3.89**	
	MW-54A	Apr-22			**3.72**	
	MW-54A	Oct-22			**5.32**	
	MW-54B	Apr-15		<0.0310	**2.47**	
	MW-54B	Apr-17		<0.0314	**0.881**	
	MW-54B	Apr-19		<0.0314	**1.84**	
	MW-54B	Apr-21		<0.0314	**2.02**	
	MW-55	Jun-20		**0.140**	**0.950**	
	MW-55	Oct-20		**0.635**	**1.34**	
	MW-55	Apr-21		**0.412**	**1.81**	
	MW-55	Sep-21		**0.187**	**1.41**	
	MW-55	Apr-22		**0.190**	**1.48**	
	MW-55	Oct-22		**0.0658 J**	**0.661**	
	MW-56	Apr-19			**0.583**	
	MW-56	Jun-20			**0.110**	
	MW-56	Apr-21			**0.175**	
	MW-56	Apr-22			**0.197**	
	MW-108	Jun-20			**2.79**	
	MW-108	Oct-20			**3.18**	
	MW-108	Apr-21			**4.44**	
	MW-108	Sep-21			**2.90**	
	MW-108	Apr-22			**2.83**	
	MW-108	Oct-22			**3.10**	
	NCL-31	Jun-20			**0.494**	
	NCL-31	Oct-20			**0.587**	
	NCL-31	Apr-21			**0.974**	
	NCL-31	Sep-21			**0.720**	
	NCL-31	Apr-22			**0.469**	
	NCL-31	Oct-22			**0.457**	

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
NCL	NCL-32	Jun-20			**0.533**	
	NCL-32	Oct-20			**0.800**	
	NCL-32	Apr-21			**0.984**	
	NCL-32	Sep-21			**1.56**	
	NCL-32	Apr-22			**0.962**	
	NCL-32	Oct-22			**3.46**	
	NCL-33	Jun-20			**7.21**	
	NCL-33	Oct-20			**8.54**	
	NCL-33	Apr-21			**17.3**	
	NCL-33	Sep-21			**10.2**	
	NCL-33	Apr-22			**12.6**	
	NCL-33	Oct-22			**13.0**	
	NCL-34A	Oct-18			**7.41**	
	NCL-34A	Apr-19			**6.59**	
	NCL-34A	Oct-19			**5.90**	
	NCL-34A	Jun-20			**6.58**	
	NCL-44	Jun-20			**4.52**	
	NCL-44	Oct-20			**5.12**	
	NCL-44	Apr-21			**5.52**	
	NCL-44	Sep-21			**3.77**	
	NCL-44	Apr-22			**3.70**	
	NCL-44	Oct-22			**3.07**	
	NCL-49	Jun-20			**0.0917 J**	
	NCL-49	Jun-20	FD		0.0640 J	
	NCL-49	Oct-20			0.0702 J	
	NCL-49	Oct-20	FD		0.0750 J	
	NCL-49	Apr-21			0.0315 J	
	NCL-49	Apr-21	FD		0.0728 J	
	NCL-49	Sep-21			<0.0247	
	NCL-49	Sep-21	FD		**0.0925 JB**	
	NCL-49	Apr-22			0.0474 J	
	NCL-49	Apr-22	FD		0.0337 J	
	NCL-49	Oct-22			0.0734 J	
	NCL-49	Oct-22	FD		0.0464 J	
North Refinery	MW-23	Apr-19		**15.0**	**13.4**	
	MW-23	Oct-19		**4.70 B**	**20.1**	
	MW-23	Jun-20		**8.73**	**13.0**	
	MW-23	Oct-20		**2.93**	**17.9**	
	MW-29	Jun-20		**0.0764 JB**	**2.75**	
	MW-29	Oct-20		**0.0886 J**	**2.28**	
	MW-29	Apr-21		**0.113**	**3.66**	
	MW-29	Sep-21		**0.0560 J**	**8.12**	
	MW-29	Apr-22		<0.0314	**4.53**	
	MW-29	Oct-22		**0.0889 J**	**4.28**	
	MW-39	Apr-19		**0.785**	**6.54**	
	MW-39	Oct-19		**0.736 B**	**5.64**	
	MW-39	Jun-20		**0.740**	**7.00**	
	MW-39	Oct-20		**0.412**	**6.28**	
	MW-40	Apr-17		**1.29**	**4.15**	
	MW-40	Apr-18		**1.18**	**2.45**	
	MW-40	Apr-19		**0.769**	**3.38**	
	MW-40	Jun-20		**0.500**	**2.45**	
	MW-41	Apr-18		**0.111**	**3.30**	
	MW-41	Apr-19		**0.229**	**6.47**	
	MW-41	Jun-20		**0.309 B**	**3.53**	
	MW-41	Apr-21		**0.245**	**2.32**	
	MW-42	Apr-19		**0.822**	**5.48**	
	MW-42	Jun-20		**1.26 J**	**4.95**	
	MW-42	Apr-21		**0.433**	**4.92**	
	MW-42	Apr-22		**0.323**	**3.00**	
	MW-43	Apr-19		**2.12**	**7.90**	
	MW-43	Oct-19		**32.6 B**	**13.5**	
	MW-43	Jun-20		**14.1**	**6.55**	
	MW-43	Oct-20		**34.2**	**7.74**	
	MW-59	Apr-17		**0.163**	**0.835**	
	MW-59	Apr-18		**0.232**	**0.576**	
	MW-59	Apr-19		**0.0605 JB**	**1.08**	
	MW-59	Jun-20		**0.302 B**	**2.97**	
	MW-60	Jun-20		**0.466**	**0.754**	
	MW-60	Jun-20	FD	**0.337**	**0.707**	
	MW-60	Oct-20		**0.528**	**1.03**	
	MW-60	Oct-20	FD	**0.587**	**0.930**	
	MW-61	Jun-20		**13.0 B**	**4.45**	
	MW-61	Oct-20		**11.7**	**4.58**	
	MW-61	Apr-21		**10.4**	**4.79**	
	MW-61	Sep-21		**11.2**	**6.38**	
	MW-61	Apr-22		**9.90**	**5.57**	
	MW-61	Oct-22		**9.03**	**4.44**	
	MW-62	Jun-20		**9.16**	**7.79**	
	MW-62	Oct-20		**7.35**	**7.46**	
	MW-62	Sep-21		**21.8**	**11.3**	
	MW-62	Apr-22		**14.9**	**7.53**	
	MW-62	Oct-22		**11.5**	**7.71**	
	MW-62R	Oct-20		**7.74**	**11.4**	
	MW-62R	Apr-21		**2.40**	**9.88**	
	MW-62R	Apr-22		**9.56**	**9.22**	
	MW-67	Oct-17		**0.649**	**8.48 J3J4**	
	MW-67	Apr-18		**1.53**	**4.25**	
	MW-67	Oct-18		**0.562**	**7.73**	
	MW-67	Apr-19		**0.868**	**9.31**	
	MW-90	Jun-20		**0.412**	**3.69**	
	MW-90	Oct-20		**0.498**	**3.99**	
	MW-90	Apr-21		**0.477**	**4.25**	
	MW-90	Sep-21		**0.384**	**3.31**	
	MW-90	Apr-22		**0.399**	**3.92**	
	MW-90	Oct-22		**0.396**	**4.23**	
	MW-91	Oct-18		**16.7**	**11.8**	
	MW-91	Apr-19		**13.8**	**15.8**	
	MW-91	Oct-19		**34.8 B**	**10.8**	
	MW-91	Jun-20		**36.2**	**11.5**	
	MW-92	Apr-16		**5.50**	**20.4**	
	MW-92	Oct-16		**6.05**	**22.8**	
	MW-93	Apr-17		**3.73**	**7.89**	
	MW-93	Apr-18		**3.59**	**5.05**	
	MW-93	Apr-19		**2.82**	**7.92**	
	MW-93	Jun-20		**6.28**	**8.54**	
	MW-94	Oct-15		**6.12**	**25.6**	
	MW-94	Apr-16		**7.91**	**8.69**	
	MW-94	Oct-16		**6.83**	**9.76**	
	MW-94	Apr-17		**10.2**	**9.96**	

Appendix B, Table B.1 - Summary of Groundwater Analytical Data - Total Petroleum Hydrocarbons

2022 Annual Groundwater Monitoring Report
HF Sinclair Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
North Refinery	MW-95	Apr-17		0.0826 J	6.96	
	MW-95	Apr-18		<0.0314	3.68	
	MW-95	Apr-19		<0.0314	7.34	
	MW-95	Jun-20		0.162 B	6.29	
	MW-96	Jun-20		30.4	8.28	
	MW-96	Oct-20		71.6	6.91	
	MW-96	Sep-21		14.5	8.33	
	MW-96	Apr-22		13.8	7.75	
	MW-96	Oct-22		24.9	8.20	
	MW-98	Jun-20		16.7	6.31	
	MW-98	Oct-20		22.0	5.31	
	MW-98	Apr-21		14.4	4.89	
	MW-98	Sep-21		14.1	6.01	
	MW-98	Apr-22		16.5	5.19	
	MW-98	Oct-22		7.46	5.13	
	MW-137	Oct-17		33.1	11.3	
	MW-137	Apr-18		26.6	9.60	
	MW-137	Oct-18		32.6	8.76	
	MW-137	Apr-19		33.2	9.76	
	MW-138	Oct-17		2.20	15.0	
	MW-138	Apr-18		2.44	6.05	
	MW-138	Oct-18		4.06	6.00	
	MW-138	Apr-19		4.17	6.67	
	RW-1R	Apr-16		2.13	8.54	
	RW-1	Apr-17		2.20	21.5	
	RW-1	Apr-18		6.05	8.92	
	RW-1	Apr-19		5.13	16.1	
	RW-2	Apr-15		18.3	19.7	
	RW-2R	Apr-16		20.8	17.3	
	RW-2	Apr-17		17.2	11.6	
	RW-2	Apr-18		20.5	8.31	
	RW-7	Apr-17		<0.0314	1.15	
	RW-7	Apr-18		0.177	11.3	
	RW-7	Apr-19		0.230	19.1	
	RW-7	Jun-20		0.334 JB	7.54	
	RW-8	Apr-15			7.30	
	RW-8	Apr-17			11.6	
	RW-9	Apr-19		1.67	4.33	
	RW-9	Jun-20		0.821	4.02	
	RW-9	Apr-21		0.903	3.37	
	RW-9	Apr-22		1.16	3.63	
	RW-10	Apr-18		0.380	2.81	
	RW-10	Apr-19		0.195	3.06	
	RW-10	Jun-20		0.219	3.33	
	RW-10	Apr-21		0.532	6.96	
	RW-16B	Apr-17			1.08	
	RW-16B	Apr-18			0.350	
	RW-16B	Apr-19			0.744	
	RW-16B	Jun-20			2.12	
	RW-17A	Apr-17		0.0622 J	2.57	
	RW-17A	Apr-18		0.0927 J	1.57	
	RW-17A	Apr-19		<0.0314	1.45	
	RW-17A	Jun-20		0.0426 J	1.44	
North RO Field	MW-117	Jun-20		<0.0314	0.109	
	MW-117	Oct-20		<0.0314	0.0997 JB	
	MW-117	Apr-21		<0.0314	0.211	
	MW-117	Sep-21		0.0573 J	0.146	
	MW-117	Apr-22		<0.0314	0.247	
	MW-117	Oct-22		<0.0314	0.248	
	MW-118	Jun-20		<0.0314	<0.0247	
	MW-118	Oct-20		<0.0314	0.0817 JB	
	MW-118	Apr-21		<0.0314	0.0499 J	
	MW-118	Sep-21		<0.0314	<0.0247	
	MW-118	Apr-22		<0.0314	<0.0247	
	MW-118	Oct-22		<0.0314	<0.0247	
	MW-119	Jun-20		<0.0314	0.376	
	MW-119	Oct-20		<0.0314	0.215 B	
	MW-119	Apr-21		<0.0314	0.135	
	MW-119	Sep-21		<0.0314	0.0272 J	
	MW-119	Apr-22		<0.0314	<0.0247	
	MW-119	Oct-22		<0.0314	0.0534 J	
South Refinery	KWB-2R	Apr-17			1.35	
	KWB-2R	Oct-17			4.84	
	KWB-2R	Apr-19			0.887	
	KWB-2R	Oct-19			4.64	
	KWB-5	Oct-17			1.55	
	KWB-5	Apr-18			1.70	
	KWB-5	Oct-18			1.62	
	KWB-5	Apr-19			1.73	
	KWB-6	Apr-17			2.04	
	KWB-6	Oct-17			2.16	
	KWB-6	Apr-18			1.77	
	KWB-6	Oct-18			1.52	
	MW-28	Apr-19		5.37	8.80	
	MW-28	Oct-19		10.4 B	11.6	
	MW-28	Jun-20		3.94	3.91	
	MW-28	Oct-20		1.65	5.28	
	MW-48	Apr-18		45.6	6.50	
	MW-48	Oct-18		21.8	5.56	
	MW-48	Apr-19		17.7	6.53	
	MW-48	Oct-19		31.9 B	6.48	
	MW-50	Jun-20			0.522	
	MW-50	Oct-20			0.526	
	MW-50	Apr-21			0.396	
	MW-50	Sep-21			0.437	
	MW-50	Apr-22			0.506	
	MW-50	Oct-22			0.373	
	MW-52	Jun-20		<0.0314	0.294	
	MW-52	Oct-20		<0.0314	0.282	
	MW-52	Apr-21		<0.0314	0.270	
	MW-52	Sep-21		<0.0314	0.432	
	MW-52	Apr-22		<0.0314	0.332	
	MW-52	Oct-22		<0.0314	0.328	
	MW-64	Jun-20		102	8.18	
	MW-64	Oct-20		94.8	6.54	
	MW-64	Apr-21		100	6.54	
	MW-64	Sep-21		98.2	7.63	
	MW-64	Apr-22		110	5.63	
	MW-64	Oct-22		88.0	6.84	

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
South Refinery	MW-65	Apr-18		15.5	5.05	
	MW-65	Oct-18		10.4	4.57	
	MW-65	Apr-19		16.9	4.86	
	MW-65	Oct-19		21.4 B	3.59	
	MW-66	Oct-19		7.15 B	2.77	
	MW-66	Jun-20		8.44	2.19	
	MW-66	Oct-20		4.41	3.36	
	MW-66	Apr-21		5.16	3.52	
	MW-99	Oct-18		11.9	2.23	
	MW-99	Apr-19		14.9	2.93	
	MW-99	Oct-19		5.02	2.30	
	MW-99	Jun-20		3.97	4.19	
	MW-101	Jun-20		0.553	4.85	
	MW-101	Oct-20		5.37	6.07	
	MW-101	Apr-21		2.91	4.65	
	MW-101	Sep-21		2.07	6.14	
	MW-101	Apr-22		1.08	6.81	
	MW-101	Oct-22		2.54	6.12	
	MW-102	Jun-20		27.1	5.50	
	MW-102	Oct-20		28.9	9.97	
	MW-102	Apr-21		19.7	12.6	
	MW-102	Sep-21		33.4	14.5	
	MW-102	Sep-21	FD	37.6	14.4	
	MW-102	Apr-22		43.0	6.24	
	MW-102	Apr-22	FD	41.3	8.66	
	MW-102	Oct-22		44.6	4.12	
	MW-102	Oct-22	FD	41.4	4.66	
	MW-103	Apr-19		6.55	7.87	
	MW-103	Jun-20		5.15	6.08	
	MW-103	Apr-21		4.84	6.58	
	MW-103	Apr-22		5.10	5.37	
	MW-104	Jun-20		1.44	1.14	
	MW-104	Jun-20	FD	1.22	1.03	
	MW-104	Oct-20		1.32	1.04	
	MW-104	Oct-20	FD	1.15	1.10	
	MW-104	Apr-21		1.06	0.762	
	MW-104	Apr-21	FD	1.07	0.800	
	MW-104	Sep-21		0.911	0.722	
	MW-104	Apr-22		0.813	0.888	
	MW-104	Oct-22		0.999	1.12	
	MW-105	Jun-20		25.6	9.03	
	MW-105	Oct-20		32.8	9.39	
	MW-105	Apr-21		20.2	12.8	
	MW-105	Apr-22		16.4	14.6	
	MW-105	Oct-22		5.46	2.36	
	MW-106	Oct-19		60.5 B	16.1	
	MW-106	Jun-20		28.4 B	14.6	
	MW-106	Oct-20		54.4	16.5	
	MW-106	Apr-21		24.4	26.3	
	MW-107	Oct-16		17.7	7.24	
	MW-107	Apr-17		6.67	7.91	
	MW-107	Apr-18		21.6	4.50	
	MW-107	Apr-19		23.3	7.93	
	MW-109	Jun-20		5.44	2.61	
	MW-109	Oct-20		3.77	2.33	
	MW-109	Apr-21		2.44	1.57	
	MW-109	Sep-21		5.69 J3	6.03	
	MW-109	Apr-22		3.31	2.47	
	MW-109	Oct-22		3.03	2.43	
	MW-110	Jun-20		0.587	0.696	
	MW-110	Oct-20		0.406	0.721	
	MW-110	Apr-21		0.639	0.999	
	MW-110	Sep-21		0.616	1.49	
	MW-110	Apr-22		1.89	1.91	
	MW-110	Oct-22		0.554	1.06	
	MW-139	Jun-20		0.411	1.55	
	MW-139	Oct-20		0.490	1.30	
	MW-139	Apr-21		0.383	1.67	
	MW-139	Sep-21		0.635	1.91	
	MW-139	Apr-22		0.313	0.880	
	MW-139	Oct-22		0.311	1.39	
	RA-313	Apr-19				
	RA-313	Jun-20				
	RA-313	Apr-21				
	RA-313	Apr-22				
	RW-4	Apr-18			1.02	
	RW-4	Apr-19			2.53	
	RW-4	Jun-20			1.63	
	RW-4	Apr-22			1.42	
	RW-5R	Apr-15			6.42	
	RW-5R	Apr-16			7.39	
	RW-6	Apr-15			11.4	
	RW-6R	Apr-16			4.20	
	RW-6	Apr-18			3.04	
	RW-6	Apr-19			3.23	
	RW-15C	Apr-17			9.74	
	RW-15C	Apr-18			9.27	
	RW-15C	Apr-19			11.7	
South RO Field	MW-114	Jun-20		<0.0314	0.436	
	MW-114	Oct-20		<0.0314	0.663	
	MW-114	Apr-21		<0.0314	0.736	
	MW-114	Sep-21		0.0655 J	0.502	
	MW-114	Apr-22		<0.0314	0.756	
	MW-114	Oct-22		0.0652 J	1.85	
	MW-115	Jun-20		<0.0314	0.0430 J	
	MW-115	Oct-20		<0.0314	0.222 B	
	MW-115	Apr-21		<0.0314	0.313	
	MW-115	Sep-21		<0.0314	0.173	
	MW-115	Apr-22		0.0420 J	0.460	
	MW-115	Oct-22		<0.0314	0.621	
	MW-116	Jun-20		<0.0314	<0.0247	
	MW-116	Oct-20		<0.0314	0.127 B	
	MW-116	Apr-21		<0.0314	0.231	
	MW-116	Sep-21		<0.0314	0.214	
	MW-116	Apr-22		<0.0314	0.0610 J	
	MW-116	Oct-22		<0.0314	0.219	

Appendix B, Table B.1 - Summary of Groundwater Analytical Data - Total Petroleum Hydrocarbons

2022 Annual Groundwater Monitoring Report
HF Sinclair Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
TEL	MW-49	Jun-20		**5.45**	**4.96**		
	MW-49	Oct-20		**5.05**	**5.44**		
	MW-49	Apr-21		**2.56**	**6.65**		
	MW-49	Sep-21		**2.57**	**6.81**		
	MW-49	Apr-22		**4.35**	**6.29**		
	MW-49	Oct-22		**2.84**	**4.55**		
	TEL-1	Oct-18		**0.381**	**8.36**		
	TEL-1	Apr-19		**0.357**	**8.30**		
	TEL-1	Oct-19		**0.736 JB**	**8.74**		
	TEL-1	Jun-20		**0.366 J**	**5.74**		
	TEL-2	Oct-18		**5.19**	**14.8**		
	TEL-2	Apr-19		**4.27**	**15.8**		
	TEL-2	Oct-19		**3.00 B**	**13.5**		
	TEL-2	Jun-20		**1.89**	**8.16**		
	TEL-3	Apr-18		**2.05**	**7.42**		
	TEL-3	Apr-19		**0.999**	**4.14**		
	TEL-3	Oct-19		**1.54 B**	**4.82**		
	TEL-3	Oct-20		**2.28**	**6.36**		
	TEL-4	Jun-20		**0.456 J**	**5.73**		
	TEL-4	Jun-20	FD	**0.976 J**	**5.68**		
	TEL-4	Oct-20		**0.837 J**	**5.91**		
	TEL-4	Oct-20	FD	**1.07**	**6.12**		
	TEL-4	Apr-21		**0.834**	**6.87**		
	TEL-4	Apr-21	FD	**0.829**	**6.87**		
	TEL-4	Sep-21		**0.847**	**6.36**		
	TEL-4	Sep-21	FD	**0.821**	**6.37**		
	TEL-4	Apr-22		**0.540**	**2.74**		
	TEL-4	Apr-22	FD	**0.292**	**3.82**		
	TEL-4	Oct-22		**0.479**	**3.45**		
	TEL-4	Oct-22	FD	**0.512**	**4.52**		
Three Mile Ditch	MW-8	Apr-19		**0.127 B**	**0.0861 J**		
	MW-8	Jun-20		**0.300**	0.0458 J		
	MW-8	Apr-21		**0.107**	**0.0902 J**		
	MW-8	Apr-22		**0.0546 J**	**0.155**		
	MW-16	Apr-19			**0.156**		
	MW-16	Jun-20			**0.120**		
	MW-16	Apr-21			**0.138**		
	MW-16	Apr-22			0.0724 J		
	MW-20	Apr-19			0.0561 J		
	MW-20	Jun-20			<0.0247		
	MW-20	Apr-21			**0.141**		
	MW-20	Apr-22			**0.0979 J**		
	MW-21	Jun-20		**0.284**	**0.149**		
	MW-21	Oct-20		**0.492**	**0.163**		
	MW-21	Apr-21		**0.0899 J**	**0.354**		
	MW-21	Sep-21		**0.100 J**	**0.174**		
	MW-21	Apr-22		<0.0314	**0.305**		
	MW-21	Oct-22		**0.180**	0.0743 J		
	MW-25	Apr-19			0.0401 J		
	MW-25	Jun-20			<0.0247		
	MW-25	Apr-21			0.0537 J		
	MW-25	Apr-22			**0.233**		
	MW-26	Apr-19			0.0502 J		
	MW-26	Jun-20			0.0276 J		
	MW-26	Apr-21			0.0537 J		
	MW-26	Apr-22			<0.0247		
	MW-27	Apr-19			0.0517 J		
	MW-27	Jun-20			<0.0247		
	MW-27	Apr-21			0.0659 J		
	MW-27	Apr-22			**0.0950 J**		
	MW-46R	Jun-20			0.0408 J		
	MW-46R	Oct-20			**0.111**		
	MW-46R	Apr-21			**0.217**		
	MW-46R	Sep-21			**0.209**		
	MW-46R	Apr-22			0.0424 J		
	MW-46R	Oct-22			**0.157**		
	MW-68	Apr-19			0.0267 J		
	MW-68	Jun-20			0.0250 J		
	MW-68	Apr-21			**0.0962 J**		
	MW-68	Apr-22			**0.0940 J**		
	MW-71	Apr-19			<0.0247		
	MW-71	Jun-20			0.0323 J		
	MW-71	Apr-21			**0.0936 J**		
	MW-71	Apr-22			**0.0860 J**		
	MW-89	Apr-19			**0.611**		
	MW-89	Jun-20			**0.218**		
	MW-89	Apr-21			**0.175**		
	MW-89	Apr-22			**0.248**		

				Analyte Group:	TPH		
				Analyte:	GRO	DRO	DRO - EP
				Units:	mg/L	mg/L	mg/L
				CGWSL:	0.0101	0.0858	0.0167
				CGWSL Source:	NMED TPH	NMED TPH	NMED TPH
Area	Well ID	Date	Dup				
Three Mile Ditch	NP-1	Jun-20					
	NP-1	Oct-20					
	NP-1	Apr-21					
	NP-1	Sep-21					
	NP-1	Apr-22					
	NP-1	Oct-22					
	NP-6	Apr-15					
	NP-6	Apr-17					
	NP-6	Apr-19					
	NP-6	Apr-21					
Upgradient	UG-1	Apr-19		<0.0314	<0.0247		
	UG-1	Jun-20		<0.0314	<0.0247		
	UG-1	Apr-21		<0.0314	0.0579 J		
	UG-1	Apr-22		<0.0314	<0.0247		
	UG-2	Apr-19		<0.0314	0.0647 J		
	UG-2	Jun-20		<0.0314	<0.0247		
	UG-2	Apr-21		<0.0314	0.0316 J		
	UG-2	Apr-22		<0.0314	<0.0247		
	UG-3R	Apr-19		<0.0314	<0.0247		
	UG-3R	Jun-20		**0.0421 J**	0.0478 J		
	UG-3R	Apr-21		<0.0314	**0.0931 J**		
	UG-3R	Apr-22		<0.0314	0.0857 J		
	UG-4	Apr-19		<0.0314	<0.0247		
	UG-4	Jun-20		<0.0314	<0.0247		
	UG-4	Apr-21		<0.0314	0.0643 J		
	UG-4	Apr-22		<0.0314	<0.0247		

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
---	No applicable CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
CGWSL Source	Source for CGWSL value (see Table 3)
DRO	Diesel Range Organics
DRO-EP	Diesel Range Organics data from wells located in the Evaporation Ponds area
Dup	Duplicate sample
FD	Field duplicate sample
GRO	Gasoline Range Organics
mg/L	Milligrams per Liter
TPH	Total Petroleum Hydrocarbons
NMED TPH	NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022, Table 6-4, TPH Groundwater Screening Level.

Lab Footnote

B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
Q	Sample was prepared and/or analyzed past recommended holding time.
V3	Internal standard exhibited poor recovery due to sample matrix interference; analytical result biased high.

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCClrr	WQCClrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCClrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Cross-Gradient	KWB-13	Apr-19		0.00485	0.0372	0.376	0.000325 J	0.00113 J	0.00514 B	**2.18**	0.00472	0.0829	<0.0000490	0.00325	0.0151	0.0250	0.0308
	KWB-13	Jun-20		0.00587	0.0485	0.306	<0.000478	0.00163 J	0.00721	**4.41**	0.00654	0.113	<0.000100	0.0110	0.0103	0.0260	0.0327
	KWB-13	Apr-21		0.00822	0.0713	0.287	0.000652 J	0.00279	0.0152	**10.8**	0.00870	0.179	<0.000100	0.0107	0.0115	0.0196 J	0.0446
	KWB-13	Apr-22		0.00263	0.0198	0.308	<0.000150	0.000227 J	0.00217	0.933	0.000921 J	0.0195	<0.000100	<0.000816	0.0109	0.0223	0.0210
	MW-136	Jun-20		0.00245	0.0147 J	0.571	<0.000478	0.000685 J	<0.00149	0.171	<0.00249	0.0352	<0.000100	0.00183 J	0.00593	**0.0639**	0.0161
	MW-136	Oct-20		0.00247	0.0123 J	0.556	<0.000478	<0.000477	<0.00149	0.0705 J	<0.00249	0.0123 B	<0.000100	0.00248	0.00553	**0.0558**	0.0158
	MW-136	Apr-21		0.00252	0.0122 J	0.475	<0.000150	0.000526 J	0.00160 J	0.116	0.00247	0.0207	<0.000100	0.00359	0.00730	**0.0459**	0.0153
	MW-136	Sep-21		0.00287	0.0125	0.505	<0.000150	0.000760 J	<0.00124	0.0558 J	<0.000849	0.0162	<0.000100	0.00251	0.00591	**0.0396**	0.0149
	MW-136	Apr-22		0.00250	0.0118	0.486	<0.000150	0.000959 J	0.00402	0.112	<0.000849	0.0166	<0.000100	<0.000816	0.00657	**0.0380**	0.0156
	MW-136	Oct-22		0.00262	0.0111	0.505	<0.000150	0.000968 J	<0.00124	0.0480 J	<0.000849	0.0184	<0.000100	0.00280	0.00649	**0.0368**	0.0155
	NP-5	Apr-15		0.00288	0.0159				0.00109 J	0.437	0.000415 J	0.00318 J			0.0125		
	NP-5	Apr-17		0.00305	0.00938				<0.000540	0.0632 J	<0.000240	0.000586 J			0.0124		
	NP-5	Apr-19		0.00313	0.00844				<0.000540	0.0278 J	0.000709 J	0.000563 J			0.0119		
	NP-5	Apr-21		0.00331	0.00873 J				<0.00124	0.0551 J	<0.000849	0.00154 J			0.00904		
	RA-3156	Apr-19															
	RA-3156	Jun-20															
	RA-3156	Apr-21															
	RA-3156	Apr-22															
Evaporation Ponds	MW-1R	Apr-19		0.00176 J	0.0213				<0.000540	**2.17**	<0.000240	**0.995**			<0.000380		
	MW-1R	Jun-20		0.00119 J	0.0219				<0.00149	**1.87**	<0.00249	**1.30**			<0.000657		
	MW-1R	Apr-21		0.00120 J	0.0204				<0.00124	**1.67**	<0.000849	**0.996**			<0.000300		
	MW-1R	Apr-22		0.00220	0.0203				<0.00124	**2.95**	<0.000849	**1.26**			<0.000300		
	MW-2A	Jun-20		**0.0140**	0.0200				<0.00149	**2.78**	<0.00249	**1.74**			<0.000657		
	MW-2A	Oct-20		0.00798	0.0148 J				<0.00149	0.700	<0.00249	**0.491 V**			0.000658 J		
	MW-2A	Apr-21		0.00878	0.0266				0.00282	0.335	<0.00424	**1.66**			0.00169 J		
	MW-2A	Sep-21		0.00921	0.0322				0.00135 J	0.375	<0.000849	**1.17**			0.00287		
	MW-2A	Apr-22		0.00698	0.0228				0.00163 J	0.185	<0.000849	**0.579**			0.00412		
	MW-2A	Oct-22		**0.0145 J**	0.0295				<0.0124	**1.76**	<0.00849	**0.777**			0.00356 J		
	MW-3	Jun-20		**0.0278**	0.0125 J				<0.00149	<0.0489	<0.00249	**0.880**			0.00995		
	MW-3	Jun-20	FD	**0.0299**	0.0152 J				<0.00149	<0.0489	<0.00249	**0.913**			0.0100		
	MW-3	Oct-20		**0.0340**	0.0142 J				<0.00149	0.0772 J	<0.00249	**1.27**			0.00722		
	MW-3	Oct-20	FD	**0.0343**	0.0150 J				<0.00149	0.0500 J	<0.00249	**1.38**			0.00646		
	MW-3	Apr-21		**0.0415**	0.0154 J				**0.0536**	0.503	<0.000849	**1.96**			0.00471		
	MW-3	Apr-21	FD	**0.0417**	0.0158 J				0.0174	0.334 J	<0.00424	**1.90**			0.00570 J		
	MW-3	Sep-21		**0.0275**	0.0150				<0.00124	0.0896 J	<0.000849	**0.764**			0.0167		
	MW-3	Sep-21	FD	**0.0276**	0.0157				<0.00124	0.0840 J	<0.000849	**0.839**			0.0172		
	MW-3	Apr-22		**0.0505**	0.0151				<0.00124	0.552	<0.000849	**1.96**			0.00370		
	MW-3	Apr-22	FD	**0.0497**	0.0122				<0.00124	0.569	<0.000849	**1.91**			0.00398		
	MW-3	Oct-22		**0.0286**	0.0138				<0.00620	0.191 J	<0.00424	**0.860**			0.0112		
	MW-3	Oct-22	FD	**0.0282**	0.0146				0.0135	0.235 J	<0.00424	**0.856**			0.0108		
	MW-4A	Jun-20		**0.111**	0.0125 J				<0.00149	**2.55**	<0.00249	**1.79**			<0.000657		
	MW-4A	Oct-20		**0.114**	0.0133 J				0.00183 J	**1.73**	<0.00249	**1.74**			<0.000657		
	MW-4A	Apr-21		**0.0799**	0.0125 J				<0.00124	**1.20**	<0.000849	**1.78**			0.000630 J		
	MW-4A	Sep-21		**0.0304**	0.0130				<0.00124	0.465	<0.000849	**2.17**			0.000490 J		
	MW-4A	Apr-22		**0.108**	0.0111				<0.00124	**2.06**	<0.000849	**1.64**			0.000494 J		
	MW-4A	Oct-22		**0.0601**	0.0126				<0.00620	**1.43**	<0.00424	**1.71**			<0.00150		
	MW-4B	Apr-15		**0.101**	0.0349				<0.00110	**3.60**	0.00189 J	**8.68**			<0.000760		
	MW-4B	Apr-17		**0.0371**	0.0182				<0.000540	**3.42**	<0.000240	**7.35**			<0.000380		
	MW-4B	Apr-19		**0.0699**	0.0165				0.000725 J	**1.54**	0.000544 JB	**11.1**			<0.000380		
	MW-4B	Apr-21		**0.0515**	0.0169 J				<0.00124	**2.05**	<0.000849	**8.88**			<0.000300		
	MW-5A	Jun-20		**0.195**	0.0153 J				0.00159 J	**3.57**	<0.00249	**0.653**			0.00116 J		
	MW-5A	Oct-20		**0.202**	0.0160 J				<0.00149	**5.02**	<0.00249	**0.848**			0.000974 J		
	MW-5A	Apr-21		**0.165**	0.0148 J				<0.00124	**5.64**	<0.000849	**1.01**			0.000927 J		
	MW-5A	Sep-21		**0.116**	0.0143				<0.00124	**4.84**	<0.000849	**1.69**			0.000862 J		
	MW-5A	Apr-22		**0.153**	0.0128				<0.00124	**4.54**	<0.000849	**1.03**			0.000863 J		
	MW-5A	Oct-22		**0.0712**	0.0112 J				<0.0124	**4.13**	<0.00849	**1.63**			<0.00300		
	MW-5B	Apr-15		**0.201**	0.0112 J				0.00277 J	**6.11**	<0.00120	**3.87**			0.00197 J		
	MW-5B	Apr-17		**0.154**	0.0115				<0.000540	**4.61**	<0.000240	**3.32**			0.00139 J		
	MW-5B	Apr-19		**0.169**	0.0105				0.000773 J	**4.70**	<0.000240	**3.10**			0.00244		
	MW-5B	Apr-21		**0.0117**	0.0132 J				0.00390	0.828	<0.000849	**1.01**			<0.000300		
	MW-5C	Apr-15		**0.0145**	0.0200 J				<0.00270	**1.15**	<0.00120	**0.975**			<0.00190		
	MW-5C	Apr-17		**0.0113**	0.0237				<0.000540	**1.09**	0.000287 J	**0.918**			<0.000380		
	MW-5C	Apr-19		**0.0114**	0.0127				<0.000540	0.858	0.000611 JB	**0.971**			<0.000380		
	MW-5C	Apr-21		**0.178**	0.0114 J				0.00149 J	**4.87**	<0.000849	**3.00**			0.00162 J		
	MW-6A	Apr-19		0.00818	0.0127				0.000969 J	0.468	0.000315 JB	**0.304**			0.000599 J		
	MW-6A	Jun-20		0.00491	0.0121 J				<0.00149	0.472	<0.00249	**0.259**			<0.000657		
	MW-6A	Apr-21		0.00554	0.0129 J				0.00184 J	0.478	0.000966 J	**0.282**			0.000382 J		
	MW-6A	Apr-22		0.00483	0.0137				<0.00124	0.585	<0.000849	**0.266**			0.000475 J		
	MW-6B	Apr-15		**0.0333**	0.0164				<0.00110	**1.37**	<0.000480	**3.45**			<0.000760		
	MW-6B	Apr-17		**0.0115**	0.0134				<0.000540	0.149	<0.000240	**0.889**			<0.000380		
	MW-6B	Apr-19		**0.0421 O1**	0.0154				<0.000540	**1.48 O1**	0.00132 JB	**2.34 O1V**			0.000416 J		
	MW-6B	Apr-21		**0.0462**	0.0141 J				0.00209	**1.59**	<0.000849	**2.24**			<0.000300		
	MW-7A	Jun-20		**0.0158**	0.0135 J				0.00168 J	**1.86**	<0.00249	**0.384**			<0.000657		
	MW-7A	Jun-20	FD	**0.0178**	<0.0389				<0.00745	**2.25**	<0.0124	**0.448**			<0.00328		
	MW-7A	Oct-20		**0.0373**	0.0164 J				0.00394	**4.89**	<0.00249	**0.400**			<0.000657		
	MW-7A	Oct-20	FD	**0.0240**	0.0170 J				0.00266	**2.97**	<0.00249	**0.386**			<0.000657		
	MW-7A	Apr-21		**0.0482**	0.0183 J				0.0119	**9.48**	0.00198 J	**0.501**			0.000516 J		
	MW-7A	Apr-21	FD	**0.0235**	0.0158 J				0.00392 B	**3.45**	<0.000849	**0.477**			0.000495 J		
	MW-7A	Sep-21		**0.0118**	0.0166				<0.00124	0.869	<0.000849	**0.557**			0.000622 J		
	MW-7A	Sep-21	FD	**0.0122**	0.0168				0.00277	0.905	<0.000849	**0.543**			0.000662 J		
	MW-7A	Apr-22		**0.0149**	0.0162				0.00180 J	**2.38**	<0.000849	**0.428**			<0.000300		
	MW-7A	Apr-22	FD	**0.0159**	0.0182				0.00414	**2.59**	0.000952 J	**0.444**			0.000360 J		
	MW-7A	Oct-22		**0.0121 J**	0.0178 J				<0.0124	0.864 J	<0.00849	**0.549**			<0.00300		
	MW-7A	Oct-22	FD	**0.0123 J**	0.0182 J				<0.0124	0.884 J	<0.00849	**0.528**			<0.00300		
	MW-7B	Apr-15		0.00588	0.0111				0.000702 J	0.188	<0.000240	**0.580**			<0.000380		
	MW-7B	Apr-17		0.00397	0.0111				<0.000540	0.146	<0.000240	**0.472**			<0.000380		
	MW-7B	Apr-19		0.00400	0.0114				<0.000540	0.0885 J	0.000403 JB	**0.488**			<0.000380		
	MW-7B	Apr-21		0.00427	0.0112 J				<0.00124	0.121 B	<0.000849	**0.570**			0.000437 J		
	MW-10	Jun-20		**0.0143**	0.0132 J				<0.00149	0.199	<0.00249	**2.13 V**			<0.000657		
	MW-10	Oct-20		**0.0149**	0.0129 J				<0.00149	0.208	<0.00249	**2.40**			<0.000657		
	MW-10	Apr-21		**0.0142**	0.0143 J				0.00169 J	0.342 B	<0.000849	**2.66**			<0.000300		
	MW-10	Sep-21		**0.0194**	0.0184				<0.00124	0.809	<0.000849	**2.45**			0.000515 J		
	MW-10	Apr-22		**0.0429**	0.0176				0.00209	**5.85**	0.00189 J	**2.41**			<0.000300		
	MW-10	Oct-22		**0.0204**	0.0219				<0.0124	**1.17**	<0.00849	**2.27**			<0.00300		
	MW-11A	Jun-20		<0.000735	0.0294				0.00339	**1.76**	<0.00249	**1.55**			<0.000657		
	MW-11A	Oct-20															
	MW-11A	Apr-21		<0.00180	0.0285 J				<0.0124	0.919 J	<0.00849	0.145			<0.00300		
	MW-11A	Sep-21															
	MW-11A	Apr-22		0.000586 J	0.0240				0.0183	**1.36**	<0.000849	**0.201**			<0.000300		
	MW-11A	Oct-22															
	MW-11B	Apr-15		0.00453 J	0.0189 J				<0.00540	**4.38**	<0.00240	**0.427**			<0.00380		
	MW-11B	Apr-17		0.00420	0.0189				<0.000540	**4.59**	<0.000240	**0.374**			<0.000380		
	MW-11B	Apr-19		0.00336	0.0160				<0.000540	**3.67**	<0.000240	**0.367**			<0.000380		
	MW-11B	Apr-21		0.00370 J	0.0203 J				<0.00620	**3.96**	<0.00424	**0.403**			<0.00150		

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Evaporation Ponds	MW-15	Apr-19		**0.0204**	0.0242				<0.000540	0.0520 J	0.000401 J	0.166			0.00101 J		
	MW-15	Jun-20		0.00841	0.0175 J				<0.00149	<0.0489	<0.00249	**0.547**			<0.000657		
	MW-15	Apr-21		**0.0192**	0.0168 J				<0.00124	0.0483 J	<0.000849	**0.206**			0.000799 J		
	MW-15	Apr-22		**0.0249**	0.0149				<0.00124	<0.0281	<0.000849	0.0627			0.000468 J		
	MW-18A	Jun-20		0.00419 J	<0.0389 J5	**1.88**	<0.00239	<0.00238	<0.00745	**1.65**	<0.0124	**1.13** O1V	<0.000100	0.00735 J	<0.00328	**<0.0377** J5	<0.00493
	MW-18A	Oct-20		0.00468	0.0171 J	**1.98**	<0.000478	0.00139 J	<0.00149	0.348	<0.00249	**1.39**	<0.000100	0.00846	<0.000657	0.0226	<0.000986
	MW-18A	Apr-21		0.00467	0.0160 J	**1.93**	<0.000150	0.000366 J	0.00204 B	0.0895 JB	<0.000849	0.0562	<0.000100	0.0122	0.000977 J	0.0275	<0.000664
	MW-18A	Sep-21		0.00452	0.0168	**2.02**	<0.000150	0.000294 J	<0.00124	0.310	<0.000849	**1.52**	<0.000100	0.0103	<0.000300	0.0221	0.000672 J
	MW-18A	Apr-22		0.00572	0.0169	**1.87**	<0.000150	0.00446	0.00154 J	0.864	<0.000849	**0.477**	<0.000100	0.0115	0.000709 J	0.0247	0.00196 JB
	MW-18A	Oct-22		0.00472 J	0.0175 J	**2.04**	<0.00150	<0.000596	<0.0124	0.623 J	<0.00849	**1.54**	<0.000100	0.00820 J	<0.00300	0.0222	<0.00664
	MW-18B	Apr-15		**0.0120**	0.0125				0.000942 J	0.139	0.000814 J	**0.789**			<0.000380		
	MW-18B	Apr-17		0.00883	0.0137				<0.000540	0.0793 J	0.00104 J	**0.803**			<0.000380		
	MW-18B	Apr-19		**0.0115**	0.0168				<0.000540	0.138	0.000778 J	**1.26**			<0.000380		
	MW-18B	Apr-21		0.00806	0.0137 J				<0.00124	0.0497 JB	<0.000849	**1.09**			<0.000300		
	MW-22A	Jun-20		**0.0299**	0.0168 J				<0.00149	**2.21**	<0.00249	**2.94**			0.00271		
	MW-22A	Jun-20	FD	**0.0311**	0.0177 J				<0.00149	**1.77**	<0.00249	**3.10**			0.00171 J		
	MW-22A	Oct-20		**0.0309**	0.0163 J				<0.00149	**3.96**	<0.00249	**3.57**			0.00147 J		
	MW-22A	Oct-20	FD	**0.0301**	0.0165 J				<0.00149	**4.02**	<0.00249	**3.69**			0.00132 J		
	MW-22A	Apr-21		**0.0277**	0.0138 J				<0.00124	0.976	<0.000849	**3.63**			0.000986 J		
	MW-22A	Apr-21	FD	**0.0262**	0.0143 J				<0.00620	0.725	<0.00424	**3.67**			<0.00150		
	MW-22A	Sep-21		**0.0335**	0.0268				<0.00124	0.195	<0.000849	**0.849**			0.0279		
	MW-22A	Sep-21	FD	**0.0328**	0.0285				<0.00124	0.168	<0.00849	**0.868**			0.0288		
	MW-22A	Apr-22		**0.0274**	0.0156				<0.00124	0.268	<0.000849	**0.670**			0.00292		
	MW-22A	Apr-22	FD	**0.0264**	0.0136				<0.00124	0.254	<0.000849	**0.657**			0.00304		
	MW-22A	Oct-22		**0.0334**	0.0256				<0.0124	<0.281	<0.00849	**0.311**			0.0274		
	MW-22A	Oct-22	FD	**0.0331**	0.0227				<0.0124	<0.281	<0.00849	**0.326**			0.0319		
	MW-22B	Apr-15		**0.0389**	0.0160 J				<0.00270	**2.32**	0.00134 J	**4.32**			<0.00190		
	MW-22B	Apr-17		**0.0255**	0.0116				<0.000540	**1.03**	0.000313 J	**3.35**			0.000603 J		
	MW-22B	Apr-19		**0.0316**	0.0134				0.00173 J	**1.99**	<0.000240	**4.31**			0.000766 J		
	MW-22B	Apr-21		**0.0298**	0.0150 J				<0.00124	**2.04**	<0.000849	**5.02**			0.000614 J		
	MW-70	Jun-20		**0.0157**	0.0156 J				<0.00149	**4.07**	<0.00249	**0.257**			<0.000657		
	MW-70	Oct-20		**0.0166**	0.0171 J				<0.00149	**4.50**	<0.00249	**0.299**			<0.000657		
	MW-70	Apr-21		**0.0168**	0.0144 J				<0.00124	**1.78**	<0.000849	0.0996			<0.000300		
	MW-70	Sep-21		**0.0187**	0.0193				<0.00124	**6.21**	<0.000849	**0.987**			<0.000300		
	MW-70	Apr-22		**0.0148**	0.0127				<0.00124	**1.05**	<0.000849	0.189			<0.000300		
	MW-70	Oct-22		**0.0196**	0.0167				0.00158 J	**7.56**	<0.000849	**0.317**			<0.000300		
	MW-72	Apr-19		**0.0109**	0.0123				0.000785 J	**1.21**	<0.000240	**1.27**			0.00232		
	MW-72	Jun-20		0.00851	0.0124 J				<0.00149	**1.99**	<0.00249	**1.91**			0.00175 J		
	MW-72	Apr-21		0.00548	0.0114 J				0.00175 J	0.730	<0.00424	**0.952**			0.00102 J		
	MW-72	Apr-22		0.00435	0.0112				0.00134 J	0.313	<0.000849	**0.493**			0.00171 J		
	MW-73	Apr-19		**0.0806**	0.0106				0.00152 J	0.315	<0.000240	0.0807			0.00616		
	MW-73	Jun-20		**0.0493**	0.00886 J				0.00186 J	**2.78**	<0.00249	**1.89**			0.00195 J		
	MW-73	Apr-21		**0.0440**	0.00786 J				0.00337	**1.45**	<0.00424	**0.337**			0.00136 J		
	MW-73	Apr-22		**0.0424**	0.00967				0.00158 J	**2.35**	<0.000849	**0.597**			0.00114 J		
	MW-74	Jun-20		**0.0552**	0.0160 J				0.00165 J	0.325	<0.00249	**1.13**			**0.151**		
	MW-74	Oct-20		**0.0779**	0.0153 J				<0.00149	0.0779 J	0.00433 J	**1.39**			0.0354		
	MW-74	Apr-21		**0.104**	0.0120 J				0.00131 J	0.0333 J	<0.000849	**1.36**			0.0146		
	MW-74	Sep-21		**0.101**	0.0151				<0.00124	**1.49**	0.00121 J	**2.03**			0.0132		
	MW-74	Apr-22		**0.107**	0.0145				0.00295	0.121	<0.000849	**2.13**			0.0137		
	MW-74	Oct-22		**0.107**	0.0163 J				<0.0124	0.468 J	<0.00849	**2.13**			0.0111 J		
	MW-75	Jun-20		**0.270**	0.0149 J				0.00163 J	**4.58**	<0.00249	**1.13**			0.00228		
	MW-75	Oct-20		**0.320**	0.0146 J				0.00240	**5.28**	<0.00249	**0.885**			0.00271		
	MW-75	Apr-21		**0.102**	0.0157 J				0.00132 J	0.314	<0.000849	**1.01**			0.00208		
	MW-75	Sep-21		**0.372**	0.0142				0.00140 J	**7.31**	<0.000849	**1.11**			0.00209		
	MW-75	Apr-22		**0.106**	0.0168				0.00172 J	0.409	<0.000849	**1.11**			0.00218		
	MW-75	Oct-22		**0.277**	0.0124 J				<0.0124	**4.89**	<0.00849	**1.10**			<0.00300		
	MW-76	Jun-20		**0.0378**	0.0121 J				0.00180 J	**3.52**	<0.00249	**0.737**			0.00379		
	MW-76	Oct-20		**0.0401**	0.0127 J				0.00176 J	**3.36**	<0.00249	**0.682**			0.00228		
	MW-76	Apr-21		**0.0333**	0.0126 J				<0.00124	**2.78**	<0.000849	**0.689**			0.00154 J		
	MW-76	Sep-21		**0.0325**	0.0135				<0.00124	**3.27**	<0.000849	**1.15**			0.00192 J		
	MW-76	Apr-22		**0.0287**	0.0128				<0.00124	**2.54**	<0.000849	**0.719**			0.00149 J		
	MW-76	Oct-22		**0.0273**	0.0159				<0.00124	**3.05**	<0.000849	**0.879**			0.00270		
	MW-77	Apr-19		**0.0406**	0.00936				0.0113	**9.12**	0.000342 J	**0.551**			0.0125		
	MW-77	Jun-20		**0.0416**	0.0107 J				0.00879	**8.79**	<0.00249	**0.576**			0.00835		
	MW-77	Apr-21		**0.0281**	0.0115 J				0.0138	**2.35**	<0.000849	**0.637**			0.00866		
	MW-77	Apr-22		**0.0196**	0.0158				0.0438	0.610	<0.000849	**0.506**			0.0131		
	MW-78	Apr-19		0.00686	0.0506				**0.248**	0.175	0.000454 J	0.0582			0.0185		
	MW-78	Jun-20		**0.0237**	0.0498				**0.126**	**6.51**	<0.00249	**0.735**			0.00764		
	MW-78	Apr-21		0.00985	0.0433				**0.215**	0.436	<0.000849	**0.372**			0.0120		
	MW-78	Apr-22		0.00692	0.0549				**0.147**	0.120	<0.000849	**0.236**			0.00963		
	MW-79	Jun-20		0.00291	0.0154 J				<0.00149	0.998	<0.00249	**4.60**			<0.000657		
	MW-79	Oct-20		0.00397	0.0158 J				<0.00149	**1.95**	<0.00249	**4.98**			<0.000657		
	MW-79	Apr-21		0.00266	0.0136 J				<0.00124	0.0976 J	<0.000849	**0.620**			0.000434 J		
	MW-79	Sep-21		0.00371	0.0155				<0.00124	0.318	<0.000849	**2.88**			0.000333 J		
	MW-79	Apr-22		0.00473	0.0141				**0.0709** J6O1	0.357	<0.000849	**0.393** O1V			0.000925 J		
	MW-79	Oct-22		0.00278 J	0.0130				<0.00620	<0.140	<0.00424	**2.23**			<0.00150		
	MW-80	Apr-19		0.00215	0.0139				**0.0511**	0.176	<0.000240	0.180			0.000866 J		
	MW-80	Jun-20		0.00174 J	0.0137 J				<0.00149	0.276	<0.00249	**1.47**			<0.000657		
	MW-80	Apr-21		0.00170 J	0.0130 J				<0.00124	0.0443 J	<0.000849	0.0589			0.000549 J		
	MW-80	Apr-22		0.00820	0.0139				0.00365	**2.51**	<0.000849	**0.447**			0.000860 J		
	MW-81	Apr-19		0.00687	0.0132				0.00109 J	<0.0150	0.000324 J	0.0379 O1			0.00488		
	MW-81	Jun-20		0.00402	0.0110 J				<0.00149	<0.0489	<0.00249	**0.506**			0.00331		
	MW-81	Apr-21		0.00614	0.0144 J				<0.00124	<0.0281	<0.000849	0.0251			0.00699		
	MW-81	Apr-22		0.00621	0.0141				<0.00124	0.0450 J	<0.000849	0.0213			0.0120		
	MW-82	Apr-19		**0.0282**	0.0234				0.00139 J	0.0888 J	0.000348 J	**1.86**			0.00186 J		
	MW-82	Jun-20		**0.0964**	0.0235				0.00215	**4.11**	<0.00249	**2.22**			0.00109 J		
	MW-82	Apr-21		**0.0153**	0.0230				<0.00124	0.156	<0.000849	**2.70**			0.000571 J		
	MW-82	Apr-22		**0.0235**	0.0257				<0.00124	0.235	<0.000849	**2.55**			0.00103 J		
	MW-83	Jun-20		**0.0378**	0.0246				0.00317	0.151	<0.00249	**0.332**			0.0101		
	MW-83	Oct-20		**0.0321**	0.0276				0.0189	**6.79**	<0.00249	**0.258**			0.00298		
	MW-83	Apr-21		**0.0423**	0.0311				0.00416	0.269	<0.000849	0.169			0.00282		
	MW-83	Sep-21		**0.0456**	0.0164				0.00337	0.192	<0.000849	0.0963			0.0111		
	MW-83	Apr-22		**0.0440**	0.0299				0.00546	0.586	0.00103 J	**0.469**			0.00577		
	MW-83	Oct-22		**0.0379**	0.0219				0.00419	**6.02**	<0.000849	**0.482**			0.0105		
	MW-84	Jun-20		**0.147**	0.0137 J				0.00570	**5.90**	<0.00249	**2.54**			0.00751		
	MW-84	Oct-20		**0.187**	0.0134 J				0.00501	**9.43**	0.00278 J	**3.05**			0.00589		
	MW-84	Apr-21		**0.102**	0.0129 J				0.00369	**1.25**	<0.000849	**2.46**			0.00662		
	MW-84	Sep-21		**0.218**	0.0158				0.0103	**9.62**	0.00101 J	**2.24**			0.0112		
	MW-84	Apr-22		**0.110**	0.0135				0.00551	**1.93**	<0.000849	**2.81**			0.00766		
	MW-84	Oct-22		**0.184**	0.0123				<0.00620	**11.6**	<0.00424	**2.68**			0.00870 J		
	MW-86	Jun-20		**0.104**	0.0255	0.626	<0.000478	0.000506 J	**0.0552**	**4.20**	<0.00249	0.158	<0.000100	0.00828	0.00715	<0.00754	0.0220
	MW-86	Oct-20		**0.0948**	0.0184 J	0.671	<0.000478	<0.000477	0.0388	0.210	0.00356 J	0.170	<0.000100	0.00447	0.00443	<0.00754	0.0209

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Evaporation Ponds	MW-87	Jun-20		0.00424	0.0145 J				0.00174 J	0.0502 J	<0.0124	**2.65**			<0.000657		
	MW-87	Oct-20		0.00783	0.0169 J				<0.00149	0.925	<0.00249	**1.56 V**			<0.000657		
	MW-87	Apr-21		0.00657	0.0156 J				<0.00124	0.881	<0.000849	**1.08**			<0.000300		
	MW-87	Sep-21		0.00620	0.0167				<0.00124	0.361	<0.000849	**1.90**			<0.000300		
	MW-87	Apr-22		0.00467	0.0139				0.00209	0.181	<0.000849	0.0806			0.000323 J		
	MW-87	Oct-22		0.00536 J	0.0162 J				<0.0124	<0.281	<0.00849	**1.37**			<0.00300		
	MW-88	Jun-20		0.00559	0.00971 J				<0.00149	0.0546 J	<0.00249	**0.807**			<0.000657		
	MW-88	Oct-20		0.00645	0.0106 J				<0.00149	<0.0489	<0.00249	**0.898**			<0.000657		
	MW-88	Apr-21		0.00716	0.0110 J				0.00295	0.0286 JB	<0.000849	**0.983**			0.000381 J		
	MW-88	Sep-21		0.00750	0.0103				<0.00124	0.0347 J	<0.000849	**0.982**			<0.000300		
	MW-88	Apr-22		0.00732	0.0116				<0.00124	0.0285 J	<0.000849	**0.937**			<0.000300		
	MW-88	Oct-22		0.00715 J	0.0110				<0.00620	<0.140	<0.00424	**0.750**			<0.00150		
	MW-120	Jun-20		0.00614	0.00971 J				<0.00149	**2.94**	<0.00249	**0.973**			<0.000657		
	MW-120	Oct-20		0.00769	0.0109 J				<0.00149	**4.31**	<0.00249	**1.38**			0.000719 J		
	MW-120	Apr-21		0.00624	0.0107 J				<0.00124	**4.59**	<0.000849	**1.32**			<0.000300		
	MW-120	Sep-21		0.00561	0.0104				<0.00124	**4.29**	<0.000849	**1.36 O1V**			0.000527 J		
	MW-120	Apr-22		0.00541	0.0106				<0.00124	**4.34**	<0.000849	**1.27**			0.00110 J		
	MW-120	Oct-22		0.00257 J	0.0124 J				<0.0124	**4.24**	<0.00849	**1.41 V**			<0.00300		
	MW-121	Jun-20		**0.131**	0.0115 J				<0.00149	**2.33**	<0.00249	**2.29**			0.00453		
	MW-121	Oct-20		**0.105**	0.0134 J				0.00380	**1.88**	<0.00249	**2.51**			0.00320		
	MW-121	Apr-21		**0.0252**	0.0120 J				<0.00124	0.0709 J	<0.000849	**1.83**			0.00686		
	MW-121	Sep-21		**0.0251**	0.0120				<0.00124	0.0384 J	<0.000849	**1.94**			0.0108		
	MW-121	Apr-22		**0.0461**	0.0121				<0.00124	0.552	<0.000849	**1.70**			0.00509		
	MW-121	Oct-22		**0.0566**	0.0146				<0.00124	0.823	<0.000849	**2.00**			0.00898		
	MW-122	Jun-20		0.00412	0.0194 J				<0.00149	**3.11**	<0.00249	**1.02 V**			0.000840 J		
	MW-122	Oct-20		0.00425	0.0223				<0.00149	**4.97**	<0.00249	**1.01**			<0.000657		
	MW-122	Apr-21		0.00184 J	0.0191 J				0.00163 J	**1.02**	<0.000849	0.115			<0.000300		
	MW-122	Sep-21		0.00393	0.0221				<0.00124	**5.22**	<0.000849	**1.16**			<0.000300		
	MW-122	Apr-22		0.00179 J	0.0204				0.00182 J	**1.18**	<0.000849	**0.451**			<0.000300		
	MW-122	Oct-22		0.00387	0.0224				<0.00124	**4.51**	<0.000849	**1.11**			<0.000300		
	MW-123	Jun-20		**0.0185**	0.0328				<0.00149	0.0870 J	<0.00249	**3.19**			<0.000657		
	MW-123	Oct-20		**0.0195**	0.0317				<0.00149	0.0586 J	<0.00249	**3.23**			<0.000657		
	MW-123	Apr-21		**0.0181**	0.0316				<0.00124	0.0591 J	<0.000849	**3.40**			0.000398 J		
	MW-123	Sep-21		**0.0182**	0.0305				<0.00124	0.0900 J	<0.000849	**3.44**			<0.000300		
	MW-123	Apr-22		**0.0182**	0.0379				<0.00124	0.0518 J	<0.000849	**3.47**			<0.000300		
	MW-123	Oct-22		**0.0194 JO1**	0.0317				<0.0124	<0.281	<0.00849	**3.28 V**			<0.00300		
	MW-124	Jun-20		<0.00368	<0.0389				<0.00745	**6.01**	<0.0124	**0.440**			<0.00328		
	MW-124	Oct-20		0.00195 J	0.0214				<0.00149	**5.78**	<0.00249	**0.435**			<0.000657		
	MW-124	Apr-21		0.00144 J	0.0180 J				<0.00124	**3.65**	<0.000849	**0.390**			<0.000300		
	MW-124	Sep-21		0.00182 J	0.0190				<0.00124	**3.85**	<0.000849	**0.579**			<0.000300		
	MW-124	Apr-22		0.00150 J	0.0185				<0.00124	**3.33**	<0.000849	**0.671**			<0.000300		
	MW-124	Oct-22		<0.00180	0.0193 J				<0.0124	**4.75**	<0.00849	**0.540**			<0.00300		
	OCD-1R	Jun-20		0.00374	0.0202				<0.00149	**1.19**	<0.00249	**2.06**			<0.000657		
	OCD-1R	Oct-20		0.00318	0.0176 J				0.00201	0.435	<0.00249	**1.03**			0.000844 J		
	OCD-1R	Apr-21		0.00254	0.0194 J				0.00169 J	0.155	<0.000849	0.178			0.000499 J		
	OCD-1R	Sep-21		0.00689	0.0236				<0.00124	**2.41**	<0.000849	**2.00**			0.000465 J		
	OCD-1R	Apr-22		0.00235	0.0181				0.00532	0.224	<0.000849	**0.205**			0.000402 J		
	OCD-1R	Oct-22		**0.0307**	0.0388				<0.0124	**14.7**	<0.00849	**5.93**			<0.00300		
	OCD-2A	Jun-20		0.00147 J	0.0206				<0.00149	**1.85**	<0.00249	**1.32**			<0.000657		
	OCD-2A	Oct-20		0.00376	0.0224				<0.00149	**4.39**	<0.00249	**1.16**			<0.000657		
	OCD-2A	Apr-21		0.00108 J	0.0221				0.00166 J	0.794	<0.000849	**0.445**			0.000378 J		
	OCD-2A	Sep-21		0.00279	0.0217				<0.00124	**2.04**	<0.000849	**0.736**			0.000395 J		
	OCD-2A	Apr-22		0.00129 J	0.0208				0.00128 J	0.752	<0.000849	**0.414**			<0.000300		
	OCD-2A	Oct-22		0.00184 J	0.0220				<0.00620	**3.59**	<0.00424	**1.21**			<0.00150		
	OCD-3	Jun-20		0.000791 J	0.0168 J				<0.00149	0.174	<0.00249	**0.511**			<0.000657		
	OCD-3	Oct-20		0.000998 J	0.0185 J				0.00151 J	0.317	<0.00249	0.199			<0.000657		
	OCD-3	Apr-21		0.000755 J	0.0194 J				<0.00124	0.165	<0.000849	0.150			<0.000300		
	OCD-3	Sep-21		0.000890 J	0.0206				<0.00124	0.183	<0.000849	0.0832			0.000419 J		
	OCD-3	Apr-22		0.000875 J	0.0174				0.00147 J	0.0805 J	<0.000849	0.110			<0.000300		
	OCD-3	Oct-22		0.000856 J	0.0231				<0.00124	0.211	<0.000849	**0.311**			0.000643 J		
	OCD-4	Jun-20		0.00325	0.0229				<0.00149	**3.26**	<0.00249	**0.300**			<0.000657		
	OCD-4	Oct-20		0.00221	0.0245				<0.00149	**1.95**	<0.00249	**0.218**			<0.000657		
	OCD-4	Apr-21		0.00159 J	0.0266 J				<0.00620	0.923	<0.00424	0.0597			<0.00150		
	OCD-4	Sep-21		0.00405	0.0256				<0.00124	**3.07**	<0.000849	**0.271**			<0.000300		
	OCD-4	Apr-22		0.00216	0.0212				0.00249	**1.41**	<0.000849	0.0678			<0.000300		
	OCD-4	Oct-22		0.00653 J	0.0217				<0.0124	**4.91**	<0.00849	**0.350**			<0.00300		
	OCD-5	Jun-20		**0.0146**	0.0256				<0.00149	**8.25**	<0.00249	**0.279**			<0.000657		
	OCD-5	Oct-20		**0.0142**	0.0266				0.00194 J	**7.26**	<0.00249	**0.332**			<0.000657		
	OCD-5	Apr-21		0.00580 J	0.0272 J				<0.00620	**5.05**	<0.00424	**0.269**			<0.00150		
	OCD-5	Sep-21		**0.0142**	0.0278				<0.00124	**9.83**	<0.000849	**0.357**			0.000322 J		
	OCD-5	Apr-22		**0.0149**	0.0237				0.00180 J	**13.5**	<0.000849	0.171			<0.000300		
	OCD-5	Oct-22		**0.0159 J**	0.0270 O1				<0.0124	**12.2**	<0.00849	**0.436**			<0.00300		
	OCD-6	Jun-20		0.00686	0.0213				<0.00149	**2.80**	<0.00249	**2.28**			<0.000657		
	OCD-6	Oct-20		0.00831	0.0220				<0.00149	**4.53**	<0.00249	**2.54 V**			<0.000657		
	OCD-6	Apr-21		0.00751	0.0209				0.00202	**1.36**	<0.00424	**2.44**			0.000675 J		
	OCD-6	Sep-21		0.00808	0.0255				<0.00124	**3.86**	<0.000849	**1.92**			0.000818 J		
	OCD-6	Apr-22		0.00637	0.0219				<0.00124	0.543	<0.000849	**2.06**			0.00122 J		
	OCD-6	Oct-22		0.00876	0.0241				<0.00124	**3.32**	<0.000849	**1.82 V**			0.000730 J		
	OCD-7AR	Jun-20		**0.0978**	0.0138 J				<0.00149	**9.81**	<0.00249	**2.62**			0.00152 J		
	OCD-7AR	Oct-20		**0.0974**	0.0149 J				<0.00149	**10.4**	<0.00249	**2.63**			0.00159 J		
	OCD-7AR	Apr-21		**0.110**	0.0154 J				<0.00124	**13.1**	<0.000849	**3.04 V**			0.00203		
	OCD-7AR	Sep-21		**0.0915**	0.0155				<0.00124	**11.8**	<0.000849	**3.07**			0.00163 J		
	OCD-7AR	Apr-22		**0.0953**	0.0142				0.00201	**11.8**	<0.000849	**2.76**			0.00126 J		
	OCD-7AR	Oct-22		**0.0927**	0.0171				<0.00124	**11.9**	<0.000849	**3.27**			0.00145 J		
	OCD-7B	Apr-15		0.00294 J	0.0196 J				<0.00270	**3.52**	<0.00120	**0.710**			<0.00190		
	OCD-7B	Apr-17		0.00194 J	0.0179				<0.000540	**2.73**	<0.000240	**0.621**			<0.000380		
	OCD-7B	Apr-19		0.00184 J	0.0163				0.000918 J	**4.81**	0.000715 JB	**0.564**			<0.000380		
	OCD-7B	Apr-21		0.00169 J	0.0151 J				<0.00124	**4.34**	<0.000849	**0.669**			<0.000300		
	OCD-8A	Jun-20		**0.0630**	0.0160 J	**0.958**	<0.000478	0.00175 J	0.00323	**4.76**	<0.00249	**1.88**	<0.000100	0.0670	0.00134 J	<0.00754	<0.000986	
	OCD-8A	Oct-20		**0.0669**	0.0196 J	**1.08**	<0.000478	0.00192 J	0.00203	**5.36**	<0.00249	**2.42**	<0.000100	0.0384	0.00156 J	<0.00754	0.00105 J	
	OCD-8A	Apr-21		**0.0621**	0.0174 J	**0.906**	<0.000150	0.00185 J	<0.00124	**5.53**	<0.000849	**2.49**	<0.000100	0.0310	0.00119 J	0.00343 J	0.000846 J	
	OCD-8A	Sep-21		**0.0449**	0.0205	**1.19**	<0.000150	0.00332	<0.00124	**2.45**	<0.00849	**2.94**	<0.000100	0.0350	0.00117 J	0.00636 J	0.00120 J	
	OCD-8A	Apr-22		**0.0436**	0.0163	**1.02**	<0.000150	0.00277	<0.00124	**2.49**	<0.000849	**2.23**	<0.000100	0.0322	0.00108 J	0.00485	0.00224 JB	
	OCD-8A	Oct-22		**0.0333**	0.0269	**1.25**	<0.00150	0.00329 J	<0.0124	**1.13**	<0.00849	**3.16**	<0.000100	0.0199 J	<0.00300	0.00686 J	<0.00664	
	OCD-8B	Apr-15		**0.0126**	0.0141				0.000872 J	0.239	0.000392 J	**5.98**			0.000525 J			
	OCD-8B	Apr-17		0.00912	0.0124				<0.000540	0.266	0.000256 J	**6.36**			<0.000380			
	OCD-8B	Apr-19		0.0100	0.0135				<0.000540	0.240	0.000392 J	**7.21 V**			0.000541 J			
	OCD-8B	Apr-21		0.00986	0.0128 J				<0.00124	0.198 B	<0.000849	**6.01**			0.000465 J			
Field East of Refinery	KWB-1A	Oct-19		0.00353	0.00810	0.749	<0.000160	0.0135	<0.000540	<0.0150	0.000643 JB	**0.498**	0.0000552 JB	0.00727	0.000491 J	0.0156	0.0233	
	KWB-1A	Jun-20		0.00334	0.00826 J	0.723	<0.000478	0.00315	<0.00149	<0.0489	<0.00249	**0.305**	<0.000100	0.00630	<0.000657	0.0157 J	0.0230	
	KWB-1A	Oct-20		0.00378	0.00798 J	0.712	<0.000478	0.00550	<0.00149	<0.0489	<0.00249	**0.399**	<0.000100	0.00769	<0.000657	0.0128 J	0.0236	
	KWB-1A	Oct-22		0.00361	0.00822	0.700	<0.000150	0.00658	<0.00124	0.0287 J	<0.000849	**0.430**	<0.000100	0.00788	<0.000300	0.0106	0.0203	
	KWB-1C	Apr-15		0.00338	0.00918				<0.000540	0.0537 J	0.000320 J	**0.462**			0.000549 J			
	KWB-1C	Apr-17		0.00303	0.00955				<0.000540	<0.0150	<0.000240	**0.501**			<0.000380			
	KWB-1C	Apr-19		0.00347	0.00925				0.00162 JB	0.0269 J	0.000292 JB	**0.482**			<0.000380			
	KWB-1C	Apr-21		0.00331	0.00957 J				<0.00124	0.0295 J	<0.000849	**0.420**			0.000303 J			

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Field East of Refinery	KWB-7	Jun-20		0.00153 J	0.0692	0.418	<0.000478	<0.000477	<0.00149	0.678	0.00545	**2.57**	<0.000100	0.00133 J	<0.000657	<0.00754	0.00412 J
	KWB-7	Oct-20		<0.00368	0.0528 J	0.439	<0.00239	<0.00238	<0.00745	<0.244	<0.0124	**2.15**	<0.000100	<0.00476	<0.00328	**<0.0377**	<0.00493
	KWB-7	Apr-21		0.00346	0.259	0.435	<0.000150	0.00108 J	<0.00124	**1.58**	0.00264	**1.34**	<0.000100	0.00336	0.000427 J	0.00404 J	0.00459 J
	KWB-7	Sep-21		0.000478 J	0.0668	0.450	<0.000150	0.000222 J	<0.00124	0.673	0.00123 J	**2.06**	<0.000100	0.000855 J	<0.000300	0.000474 J	0.00116 J
	KWB-7	Apr-22		0.00198 J	0.0642	0.449	<0.000150	0.00121 J	<0.00124	**1.43**	0.00124 J	**1.42**	<0.000100	0.00374	<0.000300	0.000367 J	0.00362 JB
	KWB-7	Oct-22		0.000673 J	0.0583	0.441	<0.000150	0.000173 J	<0.00124	0.243	<0.000849	**2.31**	<0.000100	0.000968 J	<0.000300	0.000476 J	0.00288 J
	KWB-8	Oct-16		0.00109 J	0.139	0.665	<0.000160	<0.000260	0.000710 JB	0.672	0.00387	**0.997**	<0.0000490 J6	0.00102 JB	0.000475 J	0.000746 J	0.00122 J
	KWB-8	Apr-17		0.00129 J	0.106	0.632	<0.000160	0.000264 J	0.000851 J	**1.07**	0.00495	**1.83**	<0.0000490	0.00120 J	<0.000380	<0.000330	0.00157 J
	KWB-8	Oct-17		0.00135 J	0.130	**0.769**	<0.000160	<0.000260	0.00153 J	0.0804 J	0.00296	**0.510**	<0.0000490	0.000997 J	0.0463	<0.000330	0.00112 J
	KWB-8	Oct-20		0.00348	0.0706	0.661	<0.000478	0.000490 J	0.00626	**1.32**	0.00678	0.0432	<0.000100	0.00306	<0.000657	<0.00754	0.00115 J
	KWB-10R	Apr-17		**0.0157**	**3.82**				<0.000540	**5.21**	0.000971 J	0.157			<0.000380		
	KWB-10R	Oct-17		**0.0170**	**3.85**				<0.000540	**5.24**	0.000996 J	0.163			<0.000380		
	KWB-10R	Apr-18		**0.0169**	**3.91**				<0.000540	**4.57**	0.00320	0.170			<0.000380		
	KWB-10R	Oct-18		**0.0164**	**3.93**				<0.00270	**4.24**	0.00124 J	0.168			<0.00190		
	KWB-11A	Jun-20		**0.0111**	0.0329	0.380	<0.000478	0.00371	<0.00149	**7.33**	0.00307 J	**0.570**	<0.000100	0.00429	0.00104 J	0.0143 J	0.00286 J
	KWB-11A	Oct-20		0.00403	0.0227	0.387	<0.000478	0.00271	<0.00149	**1.05**	<0.00249	**0.471**	<0.000100	0.00413	0.00134 J	0.0118 J	0.00555
	KWB-11A	Sep-21		0.00815	0.0251	0.379	<0.000150	0.00133 J	<0.00124	**4.00**	0.00116 J	**0.651**	<0.000100	0.00286	0.000361 J	0.0115	0.00404 J
	KWB-11A	Oct-22		0.00238	0.0219	0.360	<0.000150	0.000703 J	<0.00124	0.732	<0.000849	**0.336**	<0.000100	0.00270	<0.000300	0.0142	0.00792
	KWB-11B	Jun-20		0.00119 J	0.0144 J	0.0989 J	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.00213 J	<0.000100	<0.000952	0.00865	0.0125 J	0.00855
	KWB-11B	Oct-20		<0.00368	<0.0389	0.111 J	<0.00239	<0.00238	<0.00745	<0.244	<0.0124	<0.00660	<0.000100	<0.00476	0.00750 J	**<0.0377**	0.00905 J
	KWB-11B	Apr-21		0.00147 J	0.0146 J	0.102 J	<0.000150	<0.0000596	0.00141 J	0.0796 J	<0.000849	0.00333 J	<0.000100	<0.000816	0.00854	0.0125 J	0.00965
	KWB-11B	Sep-21		0.00146 J	0.0149	0.115 J	<0.000150	<0.0000596	<0.00124	<0.0281	<0.000849	0.00340 J	<0.000100	<0.000816	0.00639	0.0132	0.00872
	KWB-11B	Apr-22		0.000340 J	0.0119	0.0973 J	<0.000150	<0.0000596	<0.00124	0.0306 J	<0.000849	0.000734 J	<0.000100	<0.000816	0.00694	0.00777	0.00241 J
	KWB-11B	Oct-22		0.00157 J	0.0142	0.116 J	<0.000150	<0.0000596	<0.00124	<0.0281	<0.000849	0.00167 J	0.000160 J	<0.000816	0.00605	0.0141	0.00953
	KWB-12A	Jun-20		0.00217	0.0182 J	0.552	<0.000478	<0.000477	<0.00149	0.195	<0.00249	0.0199	<0.000100	0.00213	0.00292	0.0268	0.0112
	KWB-12A	Oct-20		0.00148 J	0.0188 J	0.535	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.00279 JB	<0.000100	<0.000952	0.00371	0.0267	0.00976
	KWB-12A	Sep-21		0.00158 J	0.0194	0.503	<0.000150	0.0000641 J	0.00124 J	0.0498 J	<0.000849	0.00144 J	<0.000100	0.000944 J	0.00549	0.0260	0.0135
	KWB-12A	Oct-22		0.00180 J	0.0174	0.556	<0.000150	0.0000698 J	<0.00124	<0.0281	<0.000849	0.000810 J	<0.000100	0.000856 J	0.00368	0.0259	0.0156
	KWB-12B	Jun-20		0.00169 J	0.00835 J	0.594	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	<0.000952	0.00268	0.0275	0.0129
	KWB-12B	Jun-20	FD	0.00178 JB	0.00890 J	0.590	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	0.0162	0.00254	0.0266	0.0126
	KWB-12B	Oct-20		0.00189 J	0.00994 J	0.580	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	0.00146 J	0.00294	0.0287	0.0135
	KWB-12B	Oct-20	FD	0.00173 J	0.00955 J	0.577	<0.000478	<0.000477	0.00173 J	<0.0489	<0.00249	<0.00132	<0.000100	<0.000952	0.00269	0.0268	0.0134
	KWB-12B	Apr-21		0.00177 J	0.0102 J	0.600	<0.000150	0.0000762 J	<0.00124	0.0567 J	0.00113 J	0.00260 J	<0.000100	0.00113 J	0.00317	0.0278	0.0133
	KWB-12B	Apr-21	FD	0.00170 J	0.0103 J	0.594	<0.000150	0.0000869 J	<0.00124	0.0513 J	<0.000849	0.00145 J	<0.000100	0.000957 J	0.00265	0.0296	0.0130
	KWB-12B	Sep-21		0.00183 J	0.0133	0.596	<0.000150	0.0000597 J	<0.00124	<0.0281	<0.000849	0.00255 J	<0.000100	<0.000816	0.00737	0.0298	0.0147
	KWB-12B	Sep-21	FD	0.00185 J	0.0166	0.595	<0.000150	0.0000796 J	<0.00124	0.0380 J	0.000863 J	0.00136 J	<0.000100	<0.000816	0.00704	0.0299	0.0155
	KWB-12B	Apr-22		0.00176 J	0.00962	0.625	<0.000150	<0.0000596	<0.00124	<0.0281	<0.000849	<0.000704	<0.000100	<0.000816	0.00203	**0.0304**	0.0132
	KWB-12B	Apr-22	FD	0.00175 J	0.00978				<0.00124	<0.0281	<0.000849	<0.000704			0.00262		
	KWB-12B	Oct-22		0.00210	0.0150	0.637	<0.000150	0.0000735 J	<0.00124	0.0329 J	<0.000849	0.00162 J	0.000107 J	<0.000816	0.00469	**0.0309**	0.0159
	KWB-12B	Oct-22	FD	0.00213	0.0147	0.641	<0.000150	0.0000788 J	<0.00124	0.0308 J	<0.000849	0.00109 J	<0.000100	<0.000816	0.00498	**0.0309**	0.0161
	KWB-P4	Apr-15															
	KWB-P4	Apr-17															
	KWB-P4	Apr-19															
	KWB-P4	Apr-21															
	MW-57	Jun-20		0.00366	0.0166 J				<0.00149	0.358	<0.00249	0.0473			0.0114		
	MW-57	Oct-20		**0.0157**	0.136				0.00879	**6.56**	0.0100	**0.333**			0.0120		
	MW-57	Apr-21		0.00954	0.0573				0.00558	**2.15**	0.00445	0.195			0.0145		
	MW-57	Sep-21		0.00799	0.0374				0.00249	**1.38**	0.00718	0.0587			0.0193		
	MW-57	Apr-22		0.00825	0.0460				0.00354	**1.80**	0.00776	**0.527**			0.0104		
	MW-58	Oct-17		0.00648	1.15	0.471	<0.000160	<0.000260	<0.000540	0.385	0.00204	**0.319**	<0.0000490	0.00129 J	<0.000380	<0.00165	0.00422 J
	MW-58	Apr-18		0.00453	1.35	0.511	<0.000160	<0.000260	<0.000540	**1.54**	0.00185 J	**0.210**	<0.0000490	0.00105 J	<0.000380	<0.000330	0.00270 J
	MW-58	Oct-18		0.00336	1.29	0.348	<0.000160	<0.000260	0.000567 J	0.721	0.00167 J	**0.335**	<0.0000490	0.000975 J	<0.000380	0.000458 J	0.00305 J
	MW-58	Oct-19		0.00549	0.988	0.736	<0.000160	0.000479 J	0.000715 J	0.767	0.00437	0.0912	0.0000567 JB	0.00160 J	<0.000380	<0.000330	0.00441 J
	MW-111	Oct-18		0.00849 J	0.0674				<0.00270	**6.39**	<0.00120	**1.42**			<0.00190		
	MW-111	Apr-19		**0.0199**	0.364				0.0112	**13.1**	0.00704	**1.79**			0.000631 J		
	MW-111	Oct-19		0.00909	0.0915				0.00109 J	**6.90**	0.000687 JB	**1.37**			<0.000380		
	MW-111	Jun-20		**0.0183**	0.285				0.00596	**9.23**	0.00469 J	**1.61**			<0.000657		
	MW-112	Nov-14		0.00500	**7.60**				0.00210	**5.80**	0.00130 J	**0.310**			0.00180 J		
	MW-113	Jun-20		0.00185 J	0.0334				0.00155 J	**1.16**	<0.00249	**1.29**			<0.000657		
	MW-113	Jun-20	FD	0.00186 J	0.0313				<0.00149	**1.03**	<0.00249	**1.34**			<0.000657		
	MW-113	Oct-20		<0.000735	0.0438				<0.00149	0.253	<0.00249	**1.08**			<0.000657		
	MW-113	Oct-20	FD	<0.00368	0.0408 J				<0.00745	<0.244	<0.0124	**1.12**			<0.00328		
	MW-113	Apr-21		0.00103 J	0.0245				<0.00124	0.730	<0.000849	**1.25**			<0.000300		
	MW-113	Apr-21	FD	0.00106 J	0.0251				<0.00124	0.776	<0.000849	**1.32**			<0.000300		
	MW-113	Sep-21		0.00194 J	0.162				<0.00124	<0.0281	0.00281	**0.390**			<0.000300		
	MW-113	Sep-21	FD	0.00176 J	0.169				<0.00124	0.0476 J	0.00258	**0.375**			<0.000300		
	MW-113	Apr-22		0.000661 J	0.0336				<0.00124	**1.01**	<0.000849	**1.19**			<0.000300		
	MW-113	Apr-22	FD	0.000677 J	0.0331				<0.00124	0.998	<0.000849	**1.16**			<0.000300		
	MW-113	Oct-22		0.00111 J	0.276				<0.00124	<0.0281	0.00230	**0.259**			<0.000300		
	MW-113	Oct-22	FD	0.000976 J	0.285				0.00158 J	<0.0281	0.00222	**0.252**			<0.000300		
	MW-125	Jun-20		0.00388	0.00983 J				<0.00149	<0.0489	<0.00249	**0.431**			0.00289		
	MW-125	Oct-20		0.00367	0.0101 J				<0.00149	<0.0489	<0.00249	**0.430**			0.00180 J		
	MW-125	Apr-21		0.00388	0.00964 J				<0.00124	0.0682 J	<0.000849	**0.444**			0.00128 J		
	MW-125	Sep-21		0.00331	0.0100				<0.00124	<0.0281	<0.000849	**0.413**			0.00129 J		
	MW-125	Apr-22		0.00343	0.00848				<0.00124	<0.0281	<0.000849	**0.387**			0.000565 J		
	MW-125	Oct-22		0.00348	0.00960				<0.00124	<0.0281	<0.000849	**0.408**			0.00102 J		
	MW-126A	Apr-19		0.00122 J	0.0151				0.00136 JB	0.431	<0.000240	**0.776**			<0.000380		
	MW-126A	Oct-19		0.00261	0.0205				0.00105 J	**2.05**	0.000799 J	**0.649**			<0.000380		
	MW-126A	Jun-20		0.00110 J	0.0157 J				<0.00149	0.437	<0.00249	**0.617**			<0.000657		
	MW-126A	Oct-20		0.00225	0.0158 J				<0.00149	**1.78**	<0.00249	**0.707**			<0.000657		
	MW-126B	Jun-20		0.00346	0.0100 J				<0.00149	<0.0489	<0.00249	0.0425			0.00276		
	MW-126B	Oct-20		0.00367	0.00961 J				<0.00149	<0.0489	<0.00249	0.0481			0.00364		
	MW-126B	Apr-21		0.00367	0.00942 J				<0.00124	<0.0281	<0.000849	0.0464			0.00348		
	MW-126B	Sep-21		0.00366	0.0101				<0.00124	<0.0281	<0.000849	0.0421			0.00345		
	MW-126B	Apr-22		0.00399	0.0108				<0.00124	0.135	<0.000849	0.0613			0.00271		
	MW-126B	Oct-22		0.00404	0.00883				<0.00124	<0.0281	<0.000849	0.0527			0.00307		
	MW-127	Oct-17		**0.0114**	0.212				0.00109 J	**1.39**	0.000965 J	0.135			<0.000380		
	MW-127	Apr-18		0.00381	0.0682				0.00370 B	0.144 B	<0.000240	0.106			<0.000380		
	MW-127	Oct-18		0.00439	0.0589				<0.00108	0.0981 J	<0.000480	0.121			<0.000760		
	MW-127	Apr-19		0.00451	0.0960				0.000909 JB	0.0634 J	0.000461 JB	0.113			<0.000380		
	MW-128	Oct-17		**0.0554**	0.0610				0.000618 J	**3.07**	0.000404 J	**2.09**			0.00122 J		
	MW-128	Apr-18		**0.0566**	0.0728				0.00278	**4.19**	0.00257 B	**2.04**			0.000436 JB		
	MW-128	Oct-18		**0.0447**	0.0604				<0.000540	**2.40**	0.000261 J	**1.78** O1V			<0.000380		
	MW-128	Apr-19		**0.0546**	0.0910				0.00303 B	**4.19**	0.00535	**2.01**			0.000397 J		
	MW-129	Apr-16		**0.0272**	0.593				<0.00270	**5.49**	<0.00120	**1.10**			<0.00190		
	MW-129	Oct-16		**0.0236**	0.607				0.000625 JB	**4.79**	0.000529 J	**1.00**			<0.000380		
	MW-129	Apr-17		**0.0226**	0.627				<0.000540	**5.10**	<0.000240	**0.987**			<0.000380		
	MW-129	Apr-18		**0.0252**	0.516				<0.000540	**5.42**	<0.000240	**1.01**			<0.000380		
	MW-130	Jun-20		0.00375	0.0168 J				<0.00149	0.0745 J	<0.00249	0.0968			0.00436		
	MW-130	Oct-20		0.00374	0.0173 J				0.00174 J	0.0826 J	<0.00249	0.101			0.00581		
	MW-130	Apr-21		0.00888	0.101				0.0257	**15.6**	0.0137	**0.282**			0.00862		
	MW-130	Sep-21		0.00432	0.0318				0.00557	**3.73**	0.00438	0.138			0.00421		
	MW-130	Apr-22		0.00390	0.0209				0.00179 J	0.712	0.00252	0.106			0.00315		
	MW-130	Oct-22		0.00405	0.0272				0.00324	**1.74**	0.00241	0.111			0.00242		

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Field East of Refinery	MW-131	Apr-17		**0.0214**	**2.75**				<0.000540	**1.29**	<0.000240	**0.294**			<0.000380		
	MW-131	Oct-17		**0.0223**	1.98				<0.000540	**1.56**	<0.000240	**0.283**			<0.000380		
	MW-131	Oct-19		**0.0261**	1.65				<0.000540	**1.55**	0.000845 JB	**0.293**			<0.000380		
	MW-131	Jun-20		**0.0241**	**2.39**				<0.00149	**1.35**	<0.00249	**0.294**			<0.000657		
	MW-133	Nov-14		**0.0190**	0.130				0.000600 J	**3.50**	0.000800 J	**0.380**			<0.000380		
	MW-133	Apr-15		0.00897	0.157				<0.000540	**5.53**	0.00145 J	**0.312**			0.00124 J		
	MW-134	Jun-20		0.00368	0.00896 J				<0.00149	<0.0489	<0.00249	0.00741			0.00631		
	MW-134	Jun-20	FD	0.00384	0.00932 J				<0.00149	<0.0489	<0.00249	0.00677			0.00602		
	MW-134	Oct-20		0.00362	0.0101 J				<0.00149	0.0916 J	<0.00249	0.0370			0.00592		
	MW-134	Oct-20	FD	0.00356	0.0101 J				<0.00149	0.0671 J	<0.00249	0.0339			0.00527		
	MW-134	Apr-21		0.00352	0.00901 J				0.00150 J	0.0433 J	<0.000849	0.0163			0.00550		
	MW-134	Apr-21	FD	0.00344	0.0103 J				<0.00124	<0.0281	<0.000849	0.0165			0.00500		
	MW-134	Sep-21		0.00375	0.00927				<0.00124	0.0299 J	<0.000849	0.115			0.00469		
	MW-134	Sep-21	FD	0.00386	0.0106				<0.00124	0.0307 J	<0.000849	0.120			0.00443		
	MW-134	Apr-22		0.00350	0.00866				<0.00124	0.0424 J	<0.000849	0.00706			0.00416		
	MW-134	Apr-22	FD	0.00334	0.00859				0.00192 J	0.0328 J	<0.000849	0.00566			0.00441		
	MW-134	Oct-22		0.00961	0.0104				0.00144 J	0.542	<0.000849	0.0910			0.00478		
	MW-134	Oct-22	FD	0.00898	0.0103				0.00191 J	0.500	<0.000849	0.0927			0.00464		
	MW-135	Jun-20		0.00326	0.0158 J				<0.00149	0.203	<0.00249	0.0119			0.0221		
	MW-135	Oct-20		<0.00368	<0.0389				<0.00745	0.745	<0.0124	0.0315			0.0186		
	MW-135	Apr-21		0.00321	0.0116 J				<0.00124	0.127	<0.000849	0.00777			0.0197		
	MW-135	Sep-21		0.00300	0.0186				<0.00124	0.253	<0.000849	0.0142			0.0221		
	MW-135	Apr-22		0.00294	0.0176				<0.00124	0.208	<0.000849	0.0131			0.0221		
	MW-135	Oct-22		0.00324	0.00895				<0.00124	0.0470 J	<0.000849	0.00340 J			0.0224		
	MW-145	Oct-20															
	MW-145	Oct-20	FD														
	MW-145	Apr-21		0.00414	0.00871 J				<0.00124	0.0308 J	<0.000849	0.0259			0.00398		
	MW-145	Sep-21		0.00362	0.0102				0.00140 J	0.228	0.00237	0.0278			0.00345		
	MW-145	Apr-22		0.00448	0.0217				0.00210	0.765	0.000995 J	0.0395			0.00271		
	MW-145	Oct-22		0.00371	0.00879				<0.00124	0.0285 J	<0.000849	0.0261			0.00239		
	MW-146	Oct-20															
	MW-146	Apr-21		0.00463	0.00848 J				<0.00124	<0.0281	<0.000849	0.00171 J			0.00815		
	MW-146	Sep-21		0.00404	0.00850				<0.00124	<0.0281	<0.000849	<0.000704			0.00953		
	MW-146	Sep-21	FD	0.00390	0.00907				<0.00124	<0.0281	<0.000849	<0.000704			0.00983		
	MW-146	Apr-22		0.00407	0.00863				0.00181 J	0.0430 J	<0.000849	0.00195 J			0.00591		
	MW-146	Apr-22	FD	0.00407	0.0102				<0.00124	0.0764 J	<0.000849	0.00329 J			0.00699		
	MW-146	Oct-22		0.00438	0.00856				<0.00124	<0.0281	<0.000849	<0.000704			0.0107		
	MW-146	Oct-22	FD	0.00426	0.00800				<0.00124	<0.0281	<0.000849	<0.000704			0.0104		
	MW-147	Oct-20															
	MW-147	Apr-21		0.00308	0.0825				0.00282	**1.40**	0.00648	0.0783			0.0193		
	MW-147	Sep-21		0.00286	0.0156				0.00140 J	0.259	0.00381	0.0112			0.0180		
	MW-147	Apr-22		0.00286	0.0577				<0.00124	0.571	0.00417	0.0482			0.0177		
	MW-147	Oct-22		0.00307	0.00746				<0.00124	0.0731 J	0.00130 J	0.00866			0.0229		
	MW-148	Oct-20															
	MW-148	Apr-21		0.00268	0.0192 J				0.00135 J	0.264	0.000893 J	0.0507			0.0114		
	MW-148	Sep-21		0.00317	0.0977				0.00275	**2.02**	0.00322	**0.477**			0.0101		
	MW-148	Apr-22		0.00302	0.0844				0.00281	**2.10**	0.00392	**0.400**			0.0101		
	MW-148	Oct-22		0.00279	0.00989				0.00126 J	0.0903 J	0.00392	0.0253			0.00933		
	RA-4196	Apr-19															
	RA-4196	Oct-19															
	RA-4196	Jun-20															
	RA-4196	Oct-20															
	RA-4798	Jun-20															
	RA-4798	Oct-20															
	RA-4798	Apr-21															
	RA-4798	Sep-21															
	RA-4798	Apr-22															
	RW-12R	Apr-17		0.000503 J	0.0409				0.0359	0.241	0.00193 J	**0.398**			<0.000380		
	RW-12R	Apr-18		0.000291 J	0.0387				0.00973	0.0459 J	0.00104 J	**0.718**			0.000554 J		
	RW-12R	Apr-19		0.00109 J	0.0354				0.00771 B	0.0800 J	0.00177 JB	**1.28**			0.000508 J		
	RW-12R	Jun-20		<0.000735	0.0342				**0.0557**	0.150	<0.00249	**1.39**			<0.000657		
	RW-13R	Apr-16		0.00922 J	0.0165				<0.00270	0.572	<0.00120	**1.26**			<0.00190		
	RW-13R	Apr-18		0.000839 J	0.0475				0.00357	0.349	0.000602 J	**0.985**			0.00161 J		
	RW-18A	Apr-17		0.00331	0.0107				<0.000540	<0.0150	<0.000240	0.000927 J			0.00406		
	RW-18A	Apr-18		0.00278	0.0105				<0.000540	<0.0150	<0.000240	0.00299 J			0.00321		
	RW-18A	Apr-19		0.00293	0.0117				0.00130 JB	0.0191 J	0.000246 JB	0.000480 J			0.00449		
	RW-18A	Jun-20		0.00451	0.0243				0.00223	**3.06**	0.00276 J	0.0307			0.00475		
	RW-20	Apr-15		0.00375 J	0.527				<0.00270	**1.75**	0.00354 J	**0.872**			<0.00190		
	RW-22	Apr-15		0.00248	0.816				0.00320	0.140	0.00397	**0.845**			0.00234		
NCL	MW-18	Apr-19		0.00342	0.0184	**1.60**	<0.000160	<0.000260	0.00228	0.0171 JB	<0.000240	0.00442 J	0.0000529 J	0.000907 J	0.0167	0.0283	0.0174
	MW-18	Jun-20		0.00271	0.0126 J	**2.52**	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.0169	<0.000100	0.00103 J	0.00739	**0.0451**	0.0180
	MW-18	Apr-21		0.00283	0.0126 J	**2.29**	<0.000150	0.000160 J	<0.00124	<0.0281	<0.000849	0.0190	<0.000100	0.00226	0.00494	**0.0484**	0.0189
	MW-18	Apr-22		0.00279	0.0125	**2.17**	<0.000150	<0.0000596	<0.00124	<0.0281	<0.000849	0.0200	<0.000100	<0.000816	0.00480	**0.0460**	0.0185
	MW-45	Jun-20		0.00395	0.0157 J	0.573	<0.000478	<0.000477	<0.00149	**1.02**	<0.00249	**0.481**	<0.000100	0.00525	<0.000657	<0.00754	<0.000986
	MW-45	Oct-20		0.00493	0.0149 J	0.620	<0.000478	<0.000477	<0.00149	**1.26**	<0.00249	**0.526**	<0.000100	0.00569	<0.000657	<0.00754	0.00106 J
	MW-45	Apr-21		0.00782	0.0160 J	0.578	<0.000150	0.00122 J	<0.00124	**1.68**	**0.0155**	**0.692**	<0.000100	0.00859	<0.000300	0.00166 J	0.00226 J
	MW-45	Sep-21		0.00845	0.0167	0.625	<0.000150	0.000134 J	<0.00124	**3.30**	0.0113	**0.661**	<0.000100	0.00527	0.000446 J	0.00101	0.00100 J
	MW-45	Apr-22		0.00394	0.0135	0.568	<0.000150	0.000186 J	<0.00124	**1.08**	0.00168 J	**0.639**	<0.000100	0.00549	0.000481 J	0.000763 J	0.00116 J
	MW-45	Oct-22		0.00693	0.0154	0.642	<0.000150	0.0000902 J	0.00136 J	**3.87**	0.00706	**0.633**	<0.000100	0.00565	<0.000300	0.000467 J	0.00119 J
	MW-53	Apr-16		0.00193 J	0.0308				<0.00270	<0.0750	<0.00120	**1.07**			0.00617 J		
	MW-53	Apr-17		0.00166 J	0.0201				<0.000540	<0.0150	<0.000240	**1.60**			0.00281		
	MW-53	Apr-18		0.00259	0.0423				0.000742 JJ3J4	0.0922 J	0.000794 J	**2.34**			0.000729 J		
	MW-53	Apr-19		0.00161 J	0.0190				<0.000540	0.0333 J	0.000346 J	**0.799**			<0.000380		
	MW-53R	Oct-20		0.00190 J	0.0482				0.00177 J	0.426	<0.00249	**0.474**			<0.000657		
	MW-53R	Apr-21		0.00191 J	0.0278				<0.00124	0.135 B	<0.000849	**0.663**			<0.000300		
	MW-53R	Apr-22		0.00227	0.0200				<0.00124	0.0446 J	<0.000849	**0.701**			0.00560		
	MW-54A	Jun-20		0.00452	0.0168 J				<0.00149	0.188	<0.00249	**0.589**			<0.000657		
	MW-54A	Oct-20		0.00516	0.0161 J				<0.00149	0.121	<0.00249	**0.625**			<0.000657		
	MW-54A	Apr-21		0.00595	0.0185 J				0.00137 JB	0.302 B	<0.000849	**0.778**			<0.000300		
	MW-54A	Sep-21		0.00450	0.0163				<0.00124	0.135	<0.000849	**0.768**			0.000825 J		
	MW-54A	Apr-22		0.00451	0.0152				<0.00124	0.0730 J	<0.000849	**0.777**			0.000497 J		
	MW-54A	Oct-22		0.00465	0.0175				<0.00124	0.125	<0.000849	**0.760**			0.00877		
	MW-54B	Apr-15		0.00220	0.0165				<0.000540	0.0520 J	<0.000240	0.165			0.000400 J		
	MW-54B	Apr-17		0.00181 J	0.0158				<0.000540	<0.0150	<0.000240	**0.253**			0.000720 J		
	MW-54B	Apr-19		0.00251	0.0161				<0.000540	0.116	0.000628 J	0.197			0.000402 J		
	MW-54B	Apr-21		0.00222	0.0193 J				<0.00124	0.977	<0.000849	**0.582**			<0.000300		
	MW-55	Jun-20		0.00632	0.0119 J	**0.979**	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.148	<0.000100	0.00713	0.00121 J	**0.0549**	0.0189
	MW-55	Oct-20		0.00684	0.0131 J	0.695	<0.000478	<0.000477	0.00201	0.0508 J	<0.00249	0.168	<0.000100	0.00670	0.00120 J	**0.0364**	0.0186
	MW-55	Apr-21		0.00683	0.0157 J	0.631	<0.000150	0.000304 J	<0.00124	<0.0281	0.00103 J	0.185	<0.000100	0.00602	0.000784 J	**0.0314**	0.0185
	MW-55	Sep-21		0.00611	0.0144	0.608	<0.000150	0.000311 J	<0.00124	<0.0281	<0.000849	**0.202**	<0.000100	0.00617	0.00121 J	0.0272	0.0176
	MW-55	Apr-22		0.00633	0.0151	0.550	<0.000150	0.000316 J	<0.00124	<0.0281	<0.000849	**0.211**	<0.000100	0.00383	0.00131 J	0.0201	0.0174
	MW-55	Oct-22		0.00550	0.0153	0.449	<0.000150	0.00341	<0.00124	<0.0281	<0.000849	**0.350**	0.000113 J	0.00967	0.0130	0.0215	0.0140

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	**Well ID**	**Date**	**Dup**															
NCL	MW-56	Apr-19			0.00631	0.0132				<0.000540	0.0310 J	0.000718 J	**0.325**			0.00217		
	MW-56	Jun-20			0.00529	0.0104 J				<0.00149	<0.0489	<0.00249	**0.302**			0.000968 J		
	MW-56	Apr-21			0.00529	0.0113 J				<0.00124	<0.0281	0.00105 J	**0.287**			0.00177 J		
	MW-56	Apr-22			0.00501	0.0104				<0.00124	0.0459 J	<0.000849	**0.219**			0.00177 J		
	MW-108	Jun-20			0.00111 J	0.0411				<0.00149	0.230	<0.00249	0.0401			<0.000657		
	MW-108	Oct-20			0.00115 J	0.0469				<0.00149	<0.0489	<0.00249	0.0593			<0.000657		
	MW-108	Apr-21			0.00120 J	0.0709				0.00169 JB	0.703	0.00174 J	**0.231**			<0.000300		
	MW-108	Sep-21			0.00103 J	0.0593				0.00152 J	0.363	<0.000849	0.0665			<0.000300		
	MW-108	Apr-22			0.000526 J	0.0461				<0.00124	0.0411 J	<0.000849	0.0392			<0.000300		
	MW-108	Oct-22			0.000445 J	0.0442				<0.00124	0.700	<0.000849	0.0573			**0.0638**		
	NCL-31	Jun-20			**0.0135**	0.0134 J				<0.00149	**1.13**	<0.00249	**2.24**			<0.000657		
	NCL-31	Oct-20			**0.0120**	0.0129 J				<0.00149	0.689	<0.00249	**2.15**			<0.000657		
	NCL-31	Apr-21			0.00668	0.0326				0.00265 B	**1.37**	0.00233	**1.49**			<0.000300		
	NCL-31	Sep-21			**0.0104**	0.0217				<0.00124	0.526	0.000940 J	**1.47**			<0.000300		
	NCL-31	Apr-22			**0.0115**	0.0143				<0.00124	0.476	<0.000849	**1.55**			<0.000300		
	NCL-31	Oct-22			**0.0134**	0.0258				<0.00124	0.616	<0.000849	**1.69**			0.00374		
	NCL-32	Jun-20			0.00203	0.0165 J				<0.00149	<0.0489	<0.00249	**1.31**			0.00321		
	NCL-32	Oct-20			0.00236	0.0160 J				<0.00149	0.0494 J	<0.00249	**1.73**			0.00271		
	NCL-32	Apr-21			0.00270	0.0318				0.00688 B	**1.06**	0.00515	**1.60**			0.00222		
	NCL-32	Sep-21			0.00214	0.0185				0.00301	0.676	0.00172 J	**1.67**			0.00265		
	NCL-32	Apr-22			0.00232	0.0219				0.00544	0.353	0.00255	**1.33**			0.00239		
	NCL-32	Oct-22			0.00276	0.0199				<0.00124	0.0726 J	<0.000849	**2.00**			0.00501		
	NCL-33	Jun-20			0.00452	0.0289				<0.00149	**3.52**	<0.00249	0.194			0.00130 J		
	NCL-33	Oct-20			0.00531	0.0231				<0.00149	**4.03**	<0.00249	0.188			0.00144 J		
	NCL-33	Apr-21			0.00613	0.0243				<0.00124	**3.00**	<0.000849	0.191			0.00167 J		
	NCL-33	Sep-21			0.00642	0.0206				<0.00124	**3.17**	<0.000849	0.167			0.00154 J		
	NCL-33	Apr-22			0.00652	0.0224				0.00146 J	**3.76**	<0.000849	0.165			0.00158 J		
	NCL-33	Oct-22			0.00573	0.0202				<0.00124	**2.72**	<0.000849	0.155			0.00809		
	NCL-34A	Oct-18			0.000692 J	0.376				<0.000540	<0.0150	<0.000240	0.0191			0.000423 J		
	NCL-34A	Apr-19			0.000663 JJ6	0.966 V				<0.000540	0.0216 J	<0.000240	0.0158 O1			**0.101 J3J6O1**		
	NCL-34A	Oct-19			0.000719 J	0.293				0.000842 JB	0.0403 JB	0.000906 JB	0.0318			0.000403 J		
	NCL-34A	Jun-20			0.000811 J	0.242				<0.00149	<0.0489	<0.00249	0.0416			<0.000657		
	NCL-44	Jun-20			**0.0305**	0.0218				<0.00149	**1.09**	<0.00249	**0.842**			<0.000657		
	NCL-44	Oct-20			**0.0211**	0.0201				0.00369	0.641	<0.00249	**0.820**			<0.000657		
	NCL-44	Apr-21			**0.0211**	0.0196 J				0.00152 JB	**1.14**	<0.000849	**0.831**			0.000456 J		
	NCL-44	Sep-21			**0.0188**	0.0190				<0.00124	0.661	<0.000849	**0.743**			<0.000300		
	NCL-44	Apr-22			**0.0149**	0.0186				0.00237	0.611	0.00107 J	**0.777**			0.000418 J		
	NCL-44	Oct-22			**0.0155**	0.0179				<0.00124	0.591	<0.000849	**0.770**			0.0205		
	NCL-49	Jun-20			0.00135 J	0.0145 J				<0.00149	<0.0489	<0.00249	0.0222			0.00832		
	NCL-49	Jun-20	FD		0.00123 J	0.0126 J				<0.00149	<0.0489	<0.00249	0.00204 J			0.00717		
	NCL-49	Oct-20			0.00141 J	0.0129 J				0.00153 J	<0.0489	<0.00249	<0.00132			0.00873		
	NCL-49	Oct-20	FD		0.00155 J	0.0123 J				<0.00149	<0.0489	<0.00249	<0.00132			0.00920		
	NCL-49	Apr-21			0.00157 J	0.0132 J				<0.00124	<0.0281	<0.000849	0.00243 J			0.0104		
	NCL-49	Apr-21	FD		0.00163 J	0.0128 J				<0.00124	<0.0281	<0.000849	<0.000704			0.0103		
	NCL-49	Sep-21			0.00149 J	0.0112				<0.00124	<0.0281	<0.000849	<0.000704			0.0121		
	NCL-49	Sep-21	FD		0.00145 J	0.0129				<0.00124	<0.0281	<0.000849	<0.000704			0.0105		
	NCL-49	Apr-22			0.00168 J	0.0130				<0.00124	<0.0281	<0.000849	<0.000704			0.0116		
	NCL-49	Apr-22	FD		0.00160 J	0.0123				<0.00124	<0.0281	<0.000849	<0.000704			0.0105		
	NCL-49	Oct-22			0.00159 J	0.0133				<0.00124	<0.0281	<0.000849	<0.000704			0.0125		
	NCL-49	Oct-22	FD		0.00150 J	0.0122				<0.00124	<0.0281	<0.000849	<0.000704			0.0193		
North Refinery	MW-23	Apr-19			0.00499	**9.47**				0.000969 JB	0.0226 J	0.00230	0.0709			0.00135 J		
	MW-23	Oct-19			0.00587	**9.44**				<0.000540	0.0573 J	0.0150	0.0696			0.000501 J		
	MW-23	Jun-20			0.00595	**9.81 V**				<0.00149	0.0693 J	0.00484 J	0.0692			<0.000657		
	MW-23	Oct-20			0.00627	**12.3**				<0.00149	0.0501 J	0.00712	0.0769			<0.000657		
	MW-29	Jun-20			0.00842	0.0172 J				<0.00149	0.0632 J	<0.00249	**0.258**			<0.000657		
	MW-29	Oct-20			**0.0170**	0.0188 J				<0.00149	0.294	<0.00249	**0.233 V**			0.000944 J		
	MW-29	Apr-21			**0.0433**	0.0232				<0.00124	**1.62**	0.00137 J	**0.414**			0.00150 J		
	MW-29	Sep-21			**0.104**	0.0213				<0.00124	**25.5**	0.00119 J	**1.40**			0.00301		
	MW-29	Apr-22			**0.0110**	0.0179				<0.00124	0.801	<0.000849	**0.385**			0.00481		
	MW-29	Oct-22			**0.103**	0.0227				<0.00124	**12.9**	0.00265	**1.16**			0.00301		
	MW-39	Apr-19			0.00933	0.0590				<0.000540	0.0175 J	0.000354 J	0.0267			0.000668 J		
	MW-39	Oct-19			0.00690	0.0118				<0.000540	<0.0150	<0.000240	0.0282			<0.000380		
	MW-39	Jun-20			0.00757	0.0145 J				<0.00149	<0.0489	<0.00249	0.0410			<0.000657		
	MW-39	Oct-20			0.00755	0.0130 J				<0.00149	<0.0489	<0.00249	0.0546			<0.000657		
	MW-40	Apr-17			0.000786 J	0.0249				<0.000540	0.0151 J	0.000660 J	0.0241			**0.0704**		
	MW-40	Apr-18			0.000656 J	0.0227				0.000593 JB	0.0289 J	0.000415 J	0.0161			<0.000380		
	MW-40	Apr-19			0.000873 J	0.0234				<0.000540	0.0848 J	0.000467 JB	0.0166			<0.000380		
	MW-40	Jun-20			<0.000735	0.0218				<0.00149	0.181	<0.00249	0.0270			<0.000657		
	MW-41	Apr-18			0.00729	0.0206				<0.000540	0.0230 J	0.000304 J	**1.03**			0.000470 J		
	MW-41	Apr-19			0.00673	0.0370				<0.000540	0.0802 JB	0.000601 J	**0.570**			0.000498 J		
	MW-41	Jun-20			**0.0107**	0.0183 J				<0.00149	<0.0489	<0.00249	**0.857**			<0.000657		
	MW-41	Apr-21			**0.0240**	0.0205				<0.00124	0.0987 J	<0.000849	**0.758**			0.000626 J		
	MW-42	Apr-19			0.00516	0.0196				0.000790 J	0.0282 JB	0.000332 J	0.120			<0.000380		
	MW-42	Jun-20			0.00520	0.0191 J				<0.00149	0.233	<0.00249	0.144			<0.000657		
	MW-42	Apr-21			0.00948	0.0200				<0.00124	0.715	<0.000849	**0.335**			<0.000300		
	MW-42	Apr-22			0.00733	0.0195				<0.00124	0.116	<0.000849	0.143			0.000333 J		
	MW-43	Apr-19			0.00725	0.449	**1.14**	<0.000160	<0.000260	0.00113 JB	0.0770 J	0.00106 J	0.184	<0.0000490	0.00695	0.00568	<0.000330	0.00197 J
	MW-43	Oct-19			**0.0101**	0.171	**0.964**	<0.000160	<0.000260	0.00120 J	0.285	0.000752 J	**0.361**	0.0000655 JB	0.00654	0.00140 J	0.00403 J	0.0127
	MW-43	Jun-20			0.00612	0.443	**0.781**	<0.000478	<0.000477	<0.00149	0.375	<0.00249	**0.297**	<0.000100	0.00536	<0.000657	<0.00754	0.00385 J
	MW-43	Oct-20			0.00541	0.801	**0.770**	<0.000478	<0.000477	0.00150 J	0.106	<0.00249	**0.252**	<0.000100	0.00410	<0.000657	<0.00754	0.00249 J
	MW-59	Apr-17			**0.0234**	0.0202				<0.000540	0.123	<0.000240	**0.440**			<0.000380		
	MW-59	Apr-18			**0.0240**	0.0236				<0.000540	0.102 B	<0.000240	**0.448**			<0.000380		
	MW-59	Apr-19			**0.0213**	0.0293				0.000709 JB	0.0987 J	0.000432 J	**0.409**			<0.000380		
	MW-59	Jun-20			**0.0360**	0.0184 J				<0.00149	0.0703 J	<0.00249	**0.369**			<0.000657		
	MW-60	Jun-20			0.00590	0.0194 J	0.447	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	**0.237**	<0.000100	0.00132 J	<0.000657	<0.00754	<0.000986
	MW-60	Jun-20	FD		0.00559	0.0188 J	0.432	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	**0.229**	<0.000100	0.00121 J	<0.000657	<0.00754	<0.000986
	MW-60	Oct-20			0.00621	0.0203	0.465	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	**0.227**	<0.000100	0.00161 J	<0.000657	<0.00754	<0.000986
	MW-60	Oct-20	FD		0.00634	0.0193 J	0.461	<0.000478	<0.000477	<0.00149	<0.0489	0.00319 J	**0.222**	<0.000100	0.00110 J	<0.000657	<0.00754	<0.000986
	MW-61	Jun-20			0.00296	0.0482				<0.00149	<0.0489	0.00396 J	0.0197			<0.000657		
	MW-61	Oct-20			0.00299	0.0460				0.00151 J	<0.0489	0.00337 J	0.0141 B			<0.000657		
	MW-61	Apr-21			0.00352	0.0469				<0.00124	0.0503 J	0.00322	0.0229			<0.000300		
	MW-61	Sep-21			0.00312	0.0629				<0.00124	0.0379 J	0.00372	0.0182			0.000341 J		
	MW-61	Apr-22			0.00244	0.0532				<0.00124	0.0625 J	0.00376	0.0265			<0.000300		
	MW-61	Oct-22			0.00196 J	0.0521				<0.00124	<0.0281	0.00358	0.0234			<0.000300		
	MW-62	Jun-20			**0.0426**	0.0608				<0.00149	<0.0489	<0.00249	0.00669			<0.000657		
	MW-62	Oct-20			**0.0451**	0.0535				<0.00149	<0.0489	<0.00249	0.00657 B			<0.000657		
	MW-62	Sep-21			**0.0901**	0.0578				<0.00124	<0.0281	<0.000849	0.00840			<0.000300		
	MW-62	Apr-22			**0.0504**	0.0827				0.00125 J	0.219	<0.000849	0.00771			0.000378 J		
	MW-62	Oct-22			**0.0825**	0.0635				0.00236	<0.0281	<0.000849	0.0115			0.000484 J		
	MW-62R	Oct-20			**0.0788**	0.129				0.00169 J	**2.90**	<0.00249	**1.09**			<0.000657		
	MW-62R	Apr-21			**0.0449**	**3.61**				<0.00124	**4.03**	<0.000849	**0.245**			<0.000300		
	MW-62R	Apr-22			**0.0692**	0.611				<0.00124	<0.0281	<0.000849	0.0118			0.000401 J		
	MW-67	Oct-17			**0.0103**	0.0906	0.464	<0.000160	<0.000260	0.000639 J	0.0172 J	0.00112 J	0.0986	<0.0000490	0.000648 J	<0.000380	<0.000330	0.000547 J
	MW-67	Apr-18			**0.0107**	0.120	0.456	<0.000160	<0.000260	0.000927 JJ3J4	0.0743 J	0.00171 J	0.0943	<0.0000490	0.000828 J	0.000518 J	<0.000330	0.000584 J
	MW-67	Oct-18			0.00516	0.0745	0.401	0.000220 JB	<0.000260	0.000568 J	0.0289 J	0.00192 JB	0.126	0.000120 J	0.000595 J	<0.000380	<0.000330	0.000634 J
	MW-67	Apr-19			0.00750	0.0933	0.457	<0.000160	<0.000260	<0.000540	0.0253 J	0.000626 JB	0.0866	<0.0000490	0.000703 J	<0.000380	<0.000330	0.000405 J

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
North Refinery	MW-90	Jun-20		0.00299 B	0.0150 J				<0.00149	0.295	<0.00249	0.0909			<0.000657		
	MW-90	Oct-20		0.00318	0.0163 J				0.00157 J	0.495	<0.00249	0.124			<0.000657		
	MW-90	Apr-21		0.00598	0.0161 J				<0.00124	0.511	<0.000849	0.107			0.000845 J		
	MW-90	Sep-21		0.00920	0.0174				<0.00124	0.800	<0.000849	**0.533**			0.00178 J		
	MW-90	Apr-22		0.00603	0.0259				0.00450	0.129	<0.000849	0.0463			0.000543 J		
	MW-90	Oct-22		0.00358	0.0212				<0.00124	0.0355 J	<0.000849	0.0781			**0.0724**		
	MW-91	Oct-18		0.00772	0.0484				0.000738 J	0.0472 J	0.00440 B	0.00539			0.000542 J		
	MW-91	Apr-19		0.00693	0.0460				<0.000540	0.0388 J	0.00412 B	0.00762			0.00460		
	MW-91	Oct-19		0.00392	0.0552				<0.000540	0.0186 J	0.00475	0.00710 B			0.0214		
	MW-91	Jun-20		0.00524 B	0.0561				<0.00149	0.197	0.00610	0.00381 J			<0.000657		
	MW-92	Apr-16		0.00316 J	**3.44** O1V				<0.00270	0.328 J	<0.00120	0.0363			0.00207 J		
	MW-92	Oct-16		0.00732	**2.81**				0.00101 JB	0.0744 J	0.00183 J	0.0274			0.00172 J		
	MW-93	Apr-17		0.00456	0.0228				0.00367	0.278	0.00116 J	0.0258			0.00683		
	MW-93	Apr-18		0.00706	0.0304				0.00945	0.145 B	0.00152 JB	0.0325			0.00377 B		
	MW-93	Apr-19		0.00456	0.0394				0.00174 JB	0.110	0.00105 J	0.0615			0.0144		
	MW-93	Jun-20		0.00827	0.0351				0.00257	0.181	<0.00249	**0.208**			0.00412		
	MW-94	Oct-15		**0.0215**	1.57				0.00144 J	<0.0150	<0.000240	0.00194 J			0.000935 J		
	MW-94	Apr-16		**0.0286**	0.353				<0.00270	<0.0750	<0.00120	0.00666 J			<0.00190		
	MW-94	Oct-16		**0.0115**	0.635				0.00119 JB	0.0159 J	0.000255 J	0.00631			0.000962 J		
	MW-94	Apr-17		**0.0170**	0.873				0.00141 J	0.134	0.000298 J	0.00382 J			0.00304		
	MW-95	Apr-17		0.00173 J	0.0612				<0.000540	<0.0150	<0.000240	0.0330			0.000407 J		
	MW-95	Apr-18		0.00154 J	0.0691				<0.000540	0.0155 J	<0.000240	0.0556			<0.000380		
	MW-95	Apr-19		0.00141 J	0.0597				<0.000540	<0.0150	0.000528 JB	0.0904			<0.000380		
	MW-95	Jun-20		0.00135 JB	0.0431				<0.00149	0.0879 J	<0.00249	0.156			<0.000657		
	MW-96	Jun-20		0.00241 B	0.176				<0.00149	<0.0489	<0.00249	<0.00132			<0.000657		
	MW-96	Oct-20		0.00207	0.175				<0.00149	<0.0489	<0.00249	<0.00132			<0.000657		
	MW-96	Sep-21		0.00294	0.175				<0.00124	0.892	<0.000849	0.0364			0.000317 J		
	MW-96	Apr-22		0.00198 J	0.289				<0.00124	<0.0281	<0.000849	0.00153 J			0.000743 J		
	MW-96	Oct-22		0.00172 J	0.226				<0.00124	0.156	<0.000849	0.000793 J			0.0425		
	MW-98	Jun-20		0.000895 J	0.0180 J				0.00316	0.0721 J	0.00815	0.0213			<0.000657		
	MW-98	Oct-20		0.000795 J	0.0176 J				<0.00149	<0.0489	0.00690	0.0208			<0.000657		
	MW-98	Apr-21		0.000700 J	0.0193 J				0.00134 J	0.0480 J	0.00642	0.0219			0.000516 J		
	MW-98	Sep-21		0.000689 J	0.0171				0.00133 J	0.0339 J	0.00671	0.0192			<0.000300		
	MW-98	Apr-22		0.00131 J	0.0162				<0.00124	<0.0281	0.00563	0.0149			<0.000300		
	MW-98	Oct-22		0.00132 J	0.0172				<0.00124	<0.0281	0.00659	0.0165			<0.000300		
	MW-137	Oct-17		**0.0156**	0.0756	**1.03**	<0.000160	<0.000260	0.00109 J	0.260	0.00338	**0.209**	<0.0000490	0.0198	0.0393	<0.000330	0.00771
	MW-137	Apr-18		**0.0512**	0.0711	**0.997**	<0.000160	<0.000260	0.00132 J	0.0740 JB	0.00433	0.154	<0.0000490	0.0134	0.00240 B	<0.000330	0.00718
	MW-137	Oct-18		**0.0129**	0.0942	**0.989**	<0.000160	<0.000260	0.000586 J	0.0553 J	0.00318	0.183	<0.0000490	0.0126	**0.341**	<0.000330	0.00844
	MW-137	Apr-19		**0.0285**	0.103	**1.02**	<0.000160	<0.000260	0.000596 JB	0.0240 J	0.00268	0.157	<0.0000490	0.0133	0.00601	<0.000330	0.00838
	MW-138	Oct-17		0.00507	0.103	**1.11**	<0.000160	<0.000260	0.000747 J	0.0334 J	0.000271 J	0.0931	<0.0000490	0.00619	0.00945	<0.000330	0.00195 J
	MW-138	Apr-18		0.00514	0.124	**0.984**	<0.000160	<0.000260	0.000785 J	0.160 B	<0.000240	0.103	<0.0000490	0.00977	0.000667 JB	<0.000330	0.00169 J
	MW-138	Oct-18		0.00464	0.108	**0.927**	<0.000160	<0.000260	<0.000540	0.0235 J	0.000249 J	0.111	<0.0000490	0.00490	**0.0973**	<0.000330	0.00120 J
	MW-138	Apr-19		0.00560	0.141	**0.951**	<0.000160	<0.000260	0.000855 JB	0.0228 J	0.000353 J	0.128	<0.0000490	0.00504	0.00102 J	<0.000330	0.00121 J
	RW-1R	Apr-16		0.00695 J	0.0414				<0.00270	**17.1**	0.00149 J	**0.317**			0.00246 J		
	RW-1	Apr-17		**0.0359**	0.0243				0.00254	**4.88**	0.00492	**0.240**			0.00573 B		
	RW-1	Apr-18		**0.0204**	0.0328				0.000826 JJ3J4	**1.50**	0.00156 J	0.0237			0.00213		
	RW-1	Apr-19		**0.0172**	0.0357				0.00100 JB	**1.14**	0.00100 JB	0.0173			0.00211		
	RW-2	Apr-15		**0.0264**	0.0245 J				0.00553 J	0.381 J	0.00233 J	**0.313**			**0.0705**		
	RW-2R	Apr-16		0.00552 J	0.171				0.00750 J	**2.25**	**0.0153**	0.0705			**0.422**		
	RW-2	Apr-17		0.00504	0.0566				0.00173 J	0.264	0.000960 J	0.0161			0.0100		
	RW-2	Apr-18		0.00374	0.139				0.00362	0.123 B	0.00163 JB	0.0215			0.00128 JB		
	RW-7	Apr-17		0.00332	0.0198				<0.000540	0.183	<0.000240	**1.13**			<0.000380		
	RW-7	Apr-18		**0.0174**	0.144				0.00434 B	**2.92**	0.000599 J	0.106			<0.000380		
	RW-7	Apr-19		**0.0246**	0.122				0.00234 B	**7.78**	0.000979 JB	0.173			0.000381 J		
	RW-7	Jun-20		0.00738	0.176				<0.00149	**2.57**	<0.00249	0.108			<0.000657		
	RW-8	Apr-15		0.00556 J	0.0889				<0.00270	0.427 J	<0.00120	0.0556			0.00200 J		
	RW-8	Apr-17		**0.0343**	0.0593				0.00135 J	**9.50**	0.00169 J	**1.12**			<0.000380		
	RW-9	Apr-19		0.00334	0.0411				<0.000540	0.0195 J	0.00200 B	**0.507**			0.000485 J		
	RW-9	Jun-20		0.00452	0.0367				<0.00149	<0.0489	<0.00249	**0.355**			<0.000657		
	RW-9	Apr-21		0.00432	0.0373				<0.00124	<0.0281	<0.000849	**0.320**			0.000308 J		
	RW-9	Apr-22		0.00503	0.0327				0.00174 J	0.0498 J	<0.000849	**0.318**			<0.000300		
	RW-10	Apr-18		0.00234	0.0224				<0.000540	<0.0150	0.000469 J	0.189			<0.000380		
	RW-10	Apr-19		0.00158 J	0.0207				<0.000540	<0.0150	<0.000240	0.199			0.000555 J		
	RW-10	Jun-20		0.00405	0.0187 J				0.00188 J	<0.0489	<0.00249	0.182			<0.000657		
	RW-10	Apr-21		0.00573	0.0209				<0.00124	0.0380 J	<0.000849	0.157			0.000422 J		
	RW-16B	Apr-17		**0.0129**	0.0126				0.00108 J	0.0227 J	0.00125 J	**0.263**			0.00658		
	RW-16B	Apr-18		0.00922	0.0130				0.000754 JB	0.0239 J	0.000343 J	**0.201**			0.00643		
	RW-16B	Apr-19		**0.0135**	0.0158				<0.000540	0.0160 JB	0.000494 J	**0.508**			0.00933		
	RW-16B	Jun-20		**0.0267**	0.0591				0.00287	**1.10**	0.00385 J	0.0348			**0.0922**		
	RW-17A	Apr-17		**0.0113**	0.0223				0.000584 J	0.0569 J	0.0106	**0.719**			0.0106		
	RW-17A	Apr-18		**0.0106**	0.0232				<0.000540 J3J4	0.0346 J	0.00975	**0.767**			0.00322		
	RW-17A	Apr-19		**0.0151**	0.0205				0.000799 J	0.140	0.0138	**0.751**			0.000700 J		
	RW-17A	Jun-20		**0.0163**	0.0206				0.00178 J	0.232	0.0104	0.105			0.0154		
North RO Field	MW-117	Jun-20		0.00249	0.0115 J				<0.00149	0.121	<0.00249	0.00283 J			0.00969		
	MW-117	Oct-20		0.00255	0.0110 J				<0.00149	0.132	<0.00249	0.00353 J			0.0123		
	MW-117	Apr-21		0.00260	0.0108 J				0.00191 J	0.112	0.00109 J	0.00472 J			0.0141		
	MW-117	Sep-21		0.00286	0.0130				<0.00124	0.144	0.00213	0.00367 J			0.00817		
	MW-117	Apr-22		0.00285	0.00960				<0.00124	<0.0281	<0.000849	0.00412 J			0.00714		
	MW-117	Oct-22		0.00265	0.00999				<0.00124	0.0455 J	<0.000849	0.00419 J			0.00371		
	MW-118	Jun-20		0.00806	0.0122 J				0.00175 J	<0.0489	<0.00249	<0.00132			0.0129		
	MW-118	Oct-20		0.00770	0.0149 J				0.00230	0.249	<0.00249	0.00273 J			0.0126		
	MW-118	Apr-21		0.00732	0.0108 J				0.00125 J	0.0458 J	<0.000849	<0.000704			0.0137		
	MW-118	Sep-21		0.00641	0.0111				0.00557	0.0652 J	<0.000849	0.00119 J			0.0145		
	MW-118	Apr-22		0.00634	0.0121				0.00321	0.117	<0.000849	0.00124 J			0.0143		
	MW-118	Oct-22		0.00621	0.0104				<0.00124	0.0611 J	<0.000849	0.00142 J			0.0162		
	MW-119	Jun-20		0.00394	0.0105 J				<0.00149	<0.0489	<0.00249	0.00689			0.00466		
	MW-119	Oct-20		0.00451	0.0101 J				0.00163 J	0.0836 J	<0.00249	0.0114 B			0.00422		
	MW-119	Apr-21		0.00449	0.0129 J				0.00278	0.276	<0.000849	0.0119			0.00456		
	MW-119	Sep-21		0.00343	0.0107				0.00190 J	0.0477 J	<0.000849	0.00435 J			0.00413		
	MW-119	Apr-22		0.00442	0.0137				<0.00124	0.206	<0.000849	0.0144			0.00467		
	MW-119	Oct-22		0.00414	0.00941				<0.00124	0.0524 J	<0.000849	0.00497 J			0.00554		
South Refinery	KWB-2R	Apr-17		0.00152 J	0.0271				<0.000540	0.0346 J	0.000273 J	**0.564**			<0.000380		
	KWB-2R	Oct-17		0.00258	0.324				<0.000540	0.0522 J	0.00130 J	0.0596			<0.000380		
	KWB-2R	Apr-19		0.00182 J	0.0278				0.00151 JB	0.0333 J	0.000866 JB	**0.626**			<0.000380		
	KWB-2R	Oct-19		0.00126 J	0.290				<0.000540	<0.0150	0.00467	0.171			<0.000380		
	KWB-5	Oct-17		**0.0202**	**5.06**				<0.000540	**2.11**	0.000287 J	**1.64**			<0.000380		
	KWB-5	Apr-18		**0.0201**	**5.09**				<0.000540	**1.21**	0.000758 JB	**1.29**			<0.000380		
	KWB-5	Oct-18		**0.0166**	**3.75**				<0.00270	**2.13**	<0.00120	**1.55**			<0.00190		
	KWB-5	Apr-19		**0.0226**	**3.72**				0.00131 JB	**2.66**	0.00178 JB	**1.50**			<0.000380		
	KWB-6	Apr-17		0.00406	0.152				<0.000540	0.152	0.000533 J	**1.91**			<0.000380		
	KWB-6	Oct-17		0.00898	0.0998				<0.000540	0.250	0.000661 J	**2.15**			<0.000380		
	KWB-6	Apr-18		**0.0251**	0.120				0.00170 J	**4.68**	0.00564	**2.03**			<0.000380		
	KWB-6	Oct-18		0.00813	0.0699				<0.000540	0.149	<0.000240	**1.91**			0.000421 J		

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
South Refinery	MW-28	Apr-19		0.00422	0.0660	**1.48**	<0.000160	<0.000260	0.00131 JB	0.0910 J	0.00990	0.0749	<0.0000490	0.00465	<0.000380	<0.000330	0.00270 J
	MW-28	Oct-19		0.00396	0.0522	**1.53**	<0.000160	<0.000260	0.000933 J	0.0502 JB	0.00717	0.0261	0.0000582 JB	0.00275	0.00329	<0.000330	0.00228 J
	MW-28	Jun-20		0.00705	0.0449	**1.32**	<0.000478	0.000802 J	<0.00149	0.122	0.0117	**0.708**	<0.000100 J6	0.00624	<0.000657	<0.00754	0.00364 J
	MW-28	Oct-20		0.00538	0.0371	**1.32**	<0.000478	<0.000477	<0.00149	0.0940 J	0.00540	**0.389**	<0.000100	0.00504	<0.000657	<0.00754	0.00375 JB
	MW-48	Apr-18		0.00554	1.82				<0.000540	0.105	0.00142 J	0.136			**0.247**		
	MW-48	Oct-18		0.00561	1.13 V				0.00119 J	0.231	0.00268	**0.347**			0.00132 J		
	MW-48	Apr-19		0.00395	1.04				0.000613 JB	0.195	0.00297	**0.481**			0.0405		
	MW-48	Oct-19		0.00646	1.04				0.00117 J	0.234	0.00232	**0.604**			0.000428 J		
	MW-50	Jun-20		0.00379 B	0.0113 J				<0.00149	0.226	<0.00249	**0.536**			0.0309		
	MW-50	Oct-20		0.00301	0.0128 J				<0.00149	0.0795 J	<0.00249	**0.450**			0.0377		
	MW-50	Apr-21		**0.0121**	0.0142 J				<0.00124	**3.96**	0.00161 J	**1.04**			0.000675 J		
	MW-50	Sep-21		0.00292	0.0142				<0.00124	0.191	<0.000849	0.156			**0.120**		
	MW-50	Apr-22		0.00338	0.0112				<0.00124	0.164	<0.000849	**0.473**			0.0132		
	MW-50	Oct-22		0.00373	0.0151				<0.00124	0.126	<0.000849	**0.507**			**0.0551**		
	MW-52	Jun-20		0.00344	0.0149 J	**0.767**	<0.000478	0.000742 J	0.00273	0.252	<0.00249	0.0928	<0.000100	0.0260	0.00612	0.0131 J	0.0247
	MW-52	Oct-20		0.00361	0.0123 J	**0.772**	<0.000478	0.000636 J	<0.00149	<0.0489	<0.00249	0.0661	<0.000100	0.0304	0.00578	0.0125 J	0.0240
	MW-52	Apr-21		0.00350	0.0126 J	**0.765**	<0.000150	0.000735 J	<0.00124	0.0283 J	<0.000849	0.0738	<0.000100	0.0314	0.00522	0.0117 J	0.0255
	MW-52	Sep-21		0.00363	0.0113	**0.774**	<0.000150	0.000791 J	<0.00124	<0.0281	<0.000849	0.0640	<0.000100	0.0377	0.00312	0.0104	0.0243
	MW-52	Apr-22		0.00384	0.0113	**0.762**	<0.000150	0.000818 J	<0.00124	<0.0281	<0.000849	0.0673	<0.000100	0.0446	0.00355	0.00937	0.0266
	MW-52	Oct-22		0.00384	0.0126	**0.761**	<0.000150	0.00101 J	<0.00124	0.0543 J	<0.000849	0.0783	<0.000100	0.0436	0.00363	0.0120	0.0247
	MW-64	Jun-20		**0.0246**	**2.29**				<0.00149	0.349	<0.00249	0.0920			<0.000657		
	MW-64	Oct-20		**0.0249**	**2.15**				<0.00149	0.0846 J	<0.00249	0.0742			<0.000657		
	MW-64	Apr-21		**0.0237**	1.91				<0.00124	0.0631 J	0.00110 J	0.0619			0.000381 J		
	MW-64	Sep-21		**0.0234**	1.88				<0.00124	0.0938 J	<0.000849	0.0667			0.000570 J		
	MW-64	Apr-22		**0.0231**	**2.13**				<0.00124	0.0716 J	<0.000849	0.0566			0.000401 J		
	MW-64	Oct-22		**0.0248**	**2.12**				<0.00124	0.0336 J	<0.000849	0.0610			0.000550 J		
	MW-65	Apr-18		**0.0108**	**2.60**				<0.000540	**2.18**	0.000448 J	**0.527**			<0.000380		
	MW-65	Oct-18		0.00679 J	1.71				<0.00270	0.624	<0.00120	**0.431**			<0.00190		
	MW-65	Apr-19		0.00832	1.88				<0.000540	0.739	0.000373 JB	**0.530**			<0.000380		
	MW-65	Oct-19		0.00653	1.58				<0.000540	0.265	0.000311 JB	**0.405**			<0.000380		
	MW-66	Oct-19		0.00236	1.44	0.206	<0.000160	<0.000260	0.000717 J	0.426 B	0.00104 JB	**0.283**	0.0000567 JB	0.0131	0.00393	<0.000330	0.00180 J
	MW-66	Jun-20		0.00235	1.99	0.250	<0.000478	<0.000477	<0.00149	0.748	<0.00249	**0.306**	<0.000100	0.00565	<0.000657	<0.00754	<0.000986
	MW-66	Oct-20		0.00267	1.68	0.229	<0.000478	<0.000477	<0.00149	0.704	<0.00249	**0.339**	<0.000100	0.00675	<0.000657	<0.00754	0.00212 JB
	MW-66	Apr-21		0.00481	**2.28**	0.294	0.000184 J	0.00135 J	0.00745	**3.81**	**0.0176**	**0.412**	<0.000100	0.0133	0.000342 J	0.000188 J	0.00606
	MW-99	Oct-18		0.00821	0.452				0.000542 J	0.163	0.000718 J	**0.224**			0.00169 J		
	MW-99	Apr-19		0.00789	0.404				0.00207 B	0.346	0.00319	**0.225**			0.000538 J		
	MW-99	Oct-19		0.00338	0.200				0.00124 J	0.465 B	0.00301	0.193			0.00451		
	MW-99	Jun-20		0.00301	0.209				0.00275	0.168	<0.00249	**0.229**			<0.000657		
	MW-101	Jun-20		**0.0735**	0.0551				<0.00149	**3.42**	<0.00249	**1.15**			<0.000657		
	MW-101	Oct-20		**0.0107**	0.0786				<0.00149	**1.75**	<0.00249	**0.912**			<0.000657		
	MW-101	Apr-21		0.00423	0.168				0.00212	0.337	0.00181 J	**0.669**			0.00102 J		
	MW-101	Sep-21		0.00301	0.0949				<0.00124	0.182	<0.000849	**0.651**			<0.000300		
	MW-101	Apr-22		0.00428	0.126				<0.00124	0.133	<0.000849	**0.665**			<0.000300		
	MW-101	Oct-22		0.00450	0.117				<0.00124	0.622	<0.000849	**0.747**			<0.000300		
	MW-102	Jun-20		**0.0129**	**8.69**				<0.00149	0.187	0.00498 J	0.0370			<0.000657		
	MW-102	Oct-20		**0.0147**	**8.81**				0.00155 J	0.159	0.00387 J	0.0405			<0.000657		
	MW-102	Apr-21		**0.0169**	**8.02**				0.00128 J	0.131	0.00328	0.0441			<0.000300		
	MW-102	Sep-21		**0.0144**	1.05				<0.00124	0.0583 J	0.00266	0.0242			0.000649 J		
	MW-102	Sep-21	FD	**0.0143**	1.26				0.00162 J	0.0985 J	0.00288	0.0252			0.000829 J		
	MW-102	Apr-22		**0.0138**	**2.16**				<0.00124	0.136	0.00403	0.0412			<0.000300		
	MW-102	Apr-22	FD	**0.0140**	**2.17**				<0.00124	0.0541 J	0.00356	0.0396			<0.000300		
	MW-102	Oct-22		0.00931	0.360				0.00133 J	0.0871 J	0.00517	0.0354			<0.000300		
	MW-102	Oct-22	FD	0.00997	0.363				<0.00124	0.0281 J	0.00558	0.0356			0.000325 J		
	MW-103	Apr-19		0.00567	1.34				0.00111 JB	0.316	0.00298 B	0.00530			0.000937 J		
	MW-103	Jun-20		0.00213	**2.61**				<0.00149	<0.0489	<0.00249	0.00522			<0.000657		
	MW-103	Apr-21		0.00139 J	1.26				0.00127 J	0.0716 J	0.00123 J	0.00923			<0.000300		
	MW-103	Apr-22		0.00192 J	1.51				0.00278	0.0607 J	<0.000849	0.00535			<0.000300		
	MW-104	Jun-20		0.00181 J	0.0253				<0.00149	<0.0489	<0.00249	0.0188			<0.000657		
	MW-104	Jun-20	FD	0.00163 JB	0.0237				<0.00149	<0.0489	<0.00249	0.0181			<0.000657		
	MW-104	Oct-20		0.00203	0.0248				0.00191 J	0.370	<0.00249	0.0252 B			<0.000657		
	MW-104	Oct-20	FD	0.00192 J	0.0238				0.00210	0.312	<0.00249	0.0245			<0.000657		
	MW-104	Apr-21		0.00144 J	0.0225				0.00174 J	<0.0281	0.000964 J	0.0383			<0.000300		
	MW-104	Apr-21	FD	0.00155 J	0.0228				0.00125 J	<0.0281	<0.000849	0.0395			0.000316 J		
	MW-104	Sep-21		0.00108 J	0.0225				<0.00124	<0.0281	<0.000849	0.0277			<0.000300		
	MW-104	Apr-22		0.00185 J	0.0180				0.00174 J	0.0432 J	<0.000849	0.0173			<0.000300		
	MW-104	Oct-22		0.000998 J	0.0257				<0.00124	<0.0281	<0.000849	0.0190			<0.000300		
	MW-105	Jun-20		0.00808	0.983				0.00172 J	0.456	<0.00249	0.0818			<0.000657		
	MW-105	Oct-20		**0.0123**	**8.29**				0.00278	0.411	<0.00249	0.138			<0.000657		
	MW-105	Apr-21		0.00487	0.179				0.00274	**2.48**	<0.000849	**0.560**			<0.000300		
	MW-105	Apr-22		**0.0133**	0.0755				0.00317	0.298	<0.000849	0.0553			<0.000300		
	MW-105	Oct-22		0.00757	0.103				0.00164 J	**3.26**	0.00383	0.166			0.00133 J		
	MW-106	Oct-19		**0.0128**	0.0352				0.00208	0.0341 J	0.00187 J	0.0288			0.00324		
	MW-106	Jun-20		**0.0201**	0.0341				0.00229	0.224	0.00386 J	0.0118			0.000680 J		
	MW-106	Oct-20		**0.0255**	0.0306				0.00250	0.161	0.00411 J	0.00472 J			0.000967 J		
	MW-106	Apr-21		**0.0209**	0.0281				0.00210	0.279	0.00341	0.0323			0.000651 J		
	MW-107	Oct-16		0.00388	1.30				0.000930 JB	0.158	0.000595 J	0.0896			<0.000380		
	MW-107	Apr-17		0.00143 J	1.99				<0.000540	**5.17**	0.000437 J	0.105			0.0145		
	MW-107	Apr-18		0.00157 J	**2.32**				<0.000540	**4.54**	0.000427 JB	0.146			<0.000380		
	MW-107	Apr-19		0.00174 J	**2.64**				0.00139 JB	**2.77**	0.000542 J	0.185			<0.000380		
	MW-109	Jun-20		0.00261	0.0574				<0.00149	<0.0489	<0.00249	0.0531			<0.000657		
	MW-109	Oct-20		0.00193 J	0.0713				<0.00149	<0.0489	<0.00249	0.0544			<0.000657		
	MW-109	Apr-21		0.00417	0.177				<0.00124	0.0501 J	<0.000849	0.0800			<0.000300		
	MW-109	Sep-21		0.00199 J	0.110				<0.00124	0.0387 J	<0.000849	0.0424			<0.000300		
	MW-109	Apr-22		0.00178 J	0.0893				<0.00124	<0.0281	<0.000849	0.0494			<0.000300		
	MW-109	Oct-22		0.00411	1.33				0.00470	**3.39**	0.00254	0.149			<0.000300		
	MW-110	Jun-20		**0.0345**	0.0516				<0.00149	0.919	<0.00249	**1.92**			<0.000657		
	MW-110	Oct-20		**0.0386**	0.0453				<0.00149	0.995	<0.00249	**2.01**			<0.000657		
	MW-110	Apr-21		**0.0507**	0.0598				0.00248	**3.19**	0.00142 J	**1.85**			0.000319 J		
	MW-110	Sep-21		**0.0278**	0.0602				<0.00124	**2.22**	0.00124 J	**1.54**			<0.000300		
	MW-110	Apr-22		0.00429	0.0615				<0.00124	0.414	<0.000849	**0.566**			<0.000300		
	MW-110	Oct-22		**0.0388**	0.0483				<0.00124	**1.19**	<0.000849	**2.00**			<0.000300		
	MW-139	Jun-20		0.00587 B	0.0324				<0.00149	0.561	<0.00249	**1.72**			<0.000657		
	MW-139	Oct-20		0.00744	0.0321				<0.00149	0.608	<0.00249	**1.89**			<0.000657		
	MW-139	Apr-21		0.00843	0.0335				0.00138 J	0.528	<0.000849	**1.71**			<0.000300		
	MW-139	Sep-21		0.00715	0.0298				<0.00124	0.355	<0.000849	**1.35**			<0.000300		
	MW-139	Apr-22		0.00650	0.0298				<0.00124	0.485	<0.000849	**1.44**			<0.000300		
	MW-139	Oct-22		0.00563	0.0298				<0.00124	0.302	<0.000849	**1.50**			**0.145**		
	RA-313	Apr-19															
	RA-313	Jun-20															
	RA-313	Apr-21															
	RA-313	Apr-22															
	RW-4	Apr-18		0.00293	0.0671				0.000673 J	0.0270 JB	0.000685 JB	0.0548			0.000499 JB		
	RW-4	Apr-19		0.00271	0.148				0.000959 JB	0.0510 J	0.000725 J	0.0379			0.000455 J		
	RW-4	Jun-20		0.00356	0.0676				<0.00149	0.238	<0.00249	0.133			<0.000657		
	RW-4	Apr-22		0.00552	0.0742				<0.00124	0.0784 J	<0.000849	0.181			<0.000300		

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
South Refinery	RW-5R	Apr-15		0.00136 J	0.0259				<0.000540	0.0952 J	0.000336 J	0.0177			<0.000380		
	RW-5R	Apr-16		0.00183 J	0.0282				<0.00270	<0.0750	<0.00120	0.0191 J			<0.00190		
	RW-6	Apr-15		**0.0332**	1.66				<0.000540	**13.8**	0.000574 J	**0.280**			<0.000380		
	RW-6R	Apr-16		**0.0712**	0.480				<0.00270	**3.70**	<0.00120	**0.553**			<0.00190		
	RW-6	Apr-18		**0.0170**	1.94				0.00106 J	**1.59**	0.000764 JB	**0.298**			<0.000380		
	RW-6	Apr-19		0.00630	**6.89**				0.000826 JB	0.173	0.000482 J	0.156			<0.000380		
	RW-15C	Apr-17		**0.0274**	0.885				<0.000540	0.316	0.0116	**0.358**			0.000461 JB		
	RW-15C	Apr-18		**0.0239**	1.19				0.000699 J	0.264	0.000822 J	**0.372**			0.000836 J		
	RW-15C	Apr-19		**0.0135**	1.70				0.00534 B	0.473	0.00106 JB	**0.457**			0.00895		
South RO Field	MW-114	Jun-20		0.00348	0.0145 J				<0.00149	<0.0489	<0.00249	**0.980**			0.00355		
	MW-114	Oct-20		0.00400	0.0131 J				<0.00149	<0.0489	<0.00249	**0.925**			0.00293		
	MW-114	Apr-21		0.00459	0.0148 J				<0.00124	0.340	<0.000849	**0.834**			0.00440		
	MW-114	Sep-21		0.00483	0.0151				<0.00124	<0.0281	<0.000849	**0.842**			0.00321		
	MW-114	Apr-22		0.00377	0.0120				<0.00124	<0.0281	<0.000849	**0.695**			0.000752 J		
	MW-114	Oct-22		0.00529	0.0181				<0.00124	<0.0281	<0.000849	**0.890**			0.00182 J		
	MW-115	Jun-20		0.00388	0.00892 J				<0.00149	<0.0489	<0.00249	0.115			0.00483		
	MW-115	Oct-20		0.00435	0.0112 J				<0.00149	<0.0489	<0.00249	0.0983			0.00844		
	MW-115	Apr-21		0.00467	0.0111 J				<0.00124	<0.140	<0.000849	0.0602			0.00972		
	MW-115	Sep-21		0.00433	0.0101				<0.00124	<0.0281	<0.000849	0.0334			0.00669		
	MW-115	Apr-22		0.00444	0.00893				0.00296	<0.0281	<0.000849	0.0593			0.00576		
	MW-115	Oct-22		0.00533	0.0106				<0.00124	<0.0281	<0.000849	0.0465			0.00406		
	MW-116	Jun-20		0.00294	0.00939 J				<0.00149	0.161	<0.00249	0.0241			0.00730		
	MW-116	Oct-20		0.00300	0.00929 J				<0.00149	0.0902 J	<0.00249	0.0150 B			0.00619		
	MW-116	Apr-21		0.00289	0.0144 J				0.00169 J	0.366	<0.000849	0.0199			0.00685		
	MW-116	Sep-21		0.00306	0.00954				0.00147 J	0.0549 J	<0.000849	0.0227			0.00754		
	MW-116	Apr-22		0.00296	0.00856				<0.00124	0.0323 J	<0.000849	0.0366			0.00656		
	MW-116	Oct-22		0.00373	0.00971				<0.00124	0.0502 J	<0.000849	0.0916			0.00573		
TEL	MW-49	Jun-20		0.00514	0.0552	0.638	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.147	<0.000100	0.00696	<0.000657	<0.00754	<0.000986
	MW-49	Oct-20		0.00538	0.0500	0.661	<0.000478	<0.000477	<0.00149	0.0526 J	<0.00249	**0.220**	<0.000100	0.00835	<0.000657	<0.00754	<0.000986
	MW-49	Apr-21		0.00564	0.0467	0.691	<0.000150	<0.0000596	<0.00124	0.113	<0.000849	**0.295**	<0.000100	0.00991	<0.000300	<0.0000700	<0.000664
	MW-49	Sep-21		0.00466	0.0472	0.698	<0.000150	<0.0000596	<0.00124	0.0669 J	<0.000849	**0.213**	<0.000100	0.00919	0.000783 J	0.0000789	<0.000664
	MW-49	Apr-22		0.00488	0.0505	0.701	<0.000150	0.0000771 J	<0.00124	0.0693 J	<0.000849	0.188 J6	<0.000100	0.00944	<0.000300	<0.0000789	0.000690 J
	MW-49	Oct-22		0.00430	0.0665	0.728	<0.000150	<0.0000596	<0.00124	0.0800 J	0.00135 J	0.173	<0.000100	0.00935	<0.000300	<0.0000789	0.000728 J
	TEL-1	Oct-18		**0.0173**	0.0171				0.00240	0.0675 J	<0.000240	0.0419			<0.000380		
	TEL-1	Apr-19		**0.0142**	0.0203				0.00480	0.158	0.000325 J	0.0425			<0.000380		
	TEL-1	Oct-19		**0.0136**	0.0158				0.00444 B	0.0598 JB	0.000418 JB	0.0365			<0.000380		
	TEL-1	Jun-20		**0.0116**	0.0152 J				0.00273	0.120	<0.00249	0.0315			<0.000657		
	TEL-2	Oct-18		**0.0152**	0.101				0.00151 J	0.0287 J	0.000727 J	0.0273			0.000520 J		
	TEL-2	Apr-19		**0.0117**	0.111				0.00208	0.0688 J	0.00130 J	0.0190			0.00137 J		
	TEL-2	Oct-19		**0.0115**	0.0914				0.00295 B	0.0484 JB	0.000814 JB	0.0281			0.000498 J		
	TEL-2	Jun-20		0.00826	0.131				0.00193 J	0.0517 J	<0.00249	0.0341			<0.000657		
	TEL-3	Apr-18		**0.0109**	0.0248				**0.334**	**1.47**	0.000726 J	0.0114			<0.000380		
	TEL-3	Apr-19		0.00228	0.0214				**0.0851**	0.336	0.00111 J	0.0142			0.000982 J		
	TEL-3	Oct-19		0.00161 J	0.0182				0.0248	0.112 B	0.000803 JB	0.0205			<0.000380		
	TEL-3	Oct-20		0.00434	0.0158 J				0.0275	0.158	<0.00249	0.0170			<0.000657		
	TEL-4	Jun-20		0.00632	0.0169 J				**0.103**	0.455	<0.00249	**1.17 V**			0.000712 J		
	TEL-4	Jun-20	FD	0.00618	0.0178 J				**0.125**	0.506	<0.00249	**1.19**			<0.000657		
	TEL-4	Oct-20		0.00923	0.0180 J				**0.106**	0.479	<0.00249	**1.24 V**			<0.000657		
	TEL-4	Oct-20	FD	0.00921	0.0181 J				**0.0522**	0.360	<0.00249	**1.19**			<0.000657		
	TEL-4	Apr-21		**0.0128**	0.0172 J				**0.316**	**1.18**	0.00118 J	**1.53**			0.000534 J		
	TEL-4	Apr-21	FD	**0.0130**	0.0185 J				**0.313**	**1.11**	0.00178 J	**1.49**			0.000518 J		
	TEL-4	Sep-21		0.00826	0.0164				**0.0655**	0.486	0.000871 J	**1.68**			0.000424 J		
	TEL-4	Sep-21	FD	0.00807	0.0183				**0.0560**	0.450	0.000975 J	**1.67**			0.000577 J		
	TEL-4	Apr-22		0.00436	0.0129				**0.0570**	0.244	<0.000849	**0.731**			0.000375 J		
	TEL-4	Apr-22	FD	0.00437	0.0118				**0.111**	0.423	<0.000849	**0.746**			<0.000300		
	TEL-4	Oct-22		0.00574	0.0200				**0.303**	0.322	0.000873 J	**1.03**			<0.000300		
	TEL-4	Oct-22	FD	0.00540	0.0206				**0.191**	0.223	0.00113 J	**1.01**			0.000321 J		
Three Mile Ditch	MW-8	Apr-19		0.00965	0.0134				**0.0651**	0.364	0.000715 J	**0.747**			0.0213		
	MW-8	Jun-20		0.00709	0.0155 J				0.00547 B	<0.0489	<0.00249	**0.808**			**0.0626**		
	MW-8	Apr-21		0.00685	0.0155 J				0.0140	0.0819 J	<0.000849	**0.371**			**0.0543**		
	MW-8	Apr-22		0.00617	0.0138				0.0118	0.0779 J	<0.000849	**0.359**			**0.0783**		
	MW-16	Apr-19		0.00526	0.0129				<0.000540	0.0197 JB	0.000278 J	0.0793			0.00750		
	MW-16	Jun-20		0.00508	0.0161 J				<0.00149	<0.0489	<0.00249	0.116			0.0135		
	MW-16	Apr-21		0.00528	0.0186 J				<0.00124	0.0632 J	<0.000849	**0.215**			0.00859		
	MW-16	Apr-22		0.00498	0.0158				<0.00124	<0.0281	<0.000849	**0.254**			0.00853		
	MW-20	Apr-19		0.00582	0.0110				<0.000540	<0.0150	0.000327 J	0.0134			0.00866		
	MW-20	Jun-20		0.00549	0.00996 J				<0.00149	<0.0489	<0.00249	0.00342 J			0.00505		
	MW-20	Apr-21		0.00531	0.0109 J				<0.00124	<0.0281	<0.000849	0.0237			0.00615		
	MW-20	Apr-22		0.00495	0.00958				<0.00124	<0.0281	<0.000849	0.00169 J			0.00953		
	MW-21	Jun-20		0.00561	0.00916 J				<0.00149	<0.0489	<0.00249	**0.353**			**0.0521**		
	MW-21	Oct-20		0.00571	<0.00778				<0.00149	<0.0489	<0.00249	0.193			0.0429		
	MW-21	Apr-21		0.00614	0.0102 J				<0.00124	<0.0281	<0.000849	0.0684			0.0340		
	MW-21	Sep-21		0.00490	0.0104				<0.00124	<0.0281	<0.000849	**1.35**			**0.0557**		
	MW-21	Apr-22		0.00534	0.00993				<0.00124	0.0618 J	<0.000849	0.113			**0.0524**		
	MW-21	Oct-22		0.00587	0.00936				<0.00124	<0.0281	<0.000849	**0.637**			**0.0549**		
	MW-25	Apr-19		0.00224	0.0135				0.000854 J	0.0348 JB	<0.000240	**0.439**			0.00299		
	MW-25	Jun-20		0.00216	0.0150 J				<0.00149	<0.0489	<0.00249	**0.906**			0.00318		
	MW-25	Apr-21		0.00178 J	0.0189 J				<0.00124	<0.0281	<0.000849	**2.16**			0.00249		
	MW-25	Apr-22		0.00347	0.0451				<0.00124	<0.0281	<0.000849	**2.51**			0.000351 J		
	MW-26	Apr-19		0.00326	0.00888				<0.000540	<0.0150	<0.000240	**0.521**			0.0226		
	MW-26	Jun-20		0.00335	0.00884 J				<0.00149	<0.0489	<0.00249	**0.295**			0.0196		
	MW-26	Apr-21		0.00310	0.0101 J				<0.00124	<0.0281	<0.000849	0.0517			0.0201		
	MW-26	Apr-22		0.00317	0.00780				<0.00124	<0.0281	<0.000849	**0.267**			0.0171		
	MW-27	Apr-19		0.00203	0.0158				<0.000540	<0.0150	<0.000240	0.0240			0.0127		
	MW-27	Jun-20		0.00228	0.0166 J				<0.00149	<0.0489	<0.00249	0.00890			0.0169		
	MW-27	Apr-21		0.00223	0.0179 J				<0.00124	<0.0281	<0.000849	0.0143			0.0173		
	MW-27	Apr-22		0.00231	0.0187				<0.00124	<0.0281	<0.000849	0.0229			0.0158		
	MW-46R	Jun-20		0.00285	0.0128 J				<0.00149	0.0754 J	<0.00249	0.0688			0.00120 J		
	MW-46R	Oct-20		0.00290	0.0110 J				<0.00149	0.0522 J	<0.00249	0.0720			<0.000657		
	MW-46R	Apr-21		0.00230	0.0237				0.00246	0.961	0.00132 J	0.0628			0.00148 J		
	MW-46R	Sep-21		0.00319	0.0195				0.00189 J	0.492	0.00112 J	0.0335			0.00365		
	MW-46R	Apr-22		0.00256	0.0109				0.00171 J	0.0768 J	<0.000849	0.0475			0.0351		
	MW-46R	Oct-22		0.00463	0.0274				0.00420	**1.71**	0.00493	0.0905			0.0181		
	MW-68	Apr-19		0.00215	0.0127				<0.000540	<0.0150	0.000318 J	0.00165 JB			0.0148		
	MW-68	Jun-20		0.00280	0.0155 J				<0.00149	<0.0489	<0.00249	<0.00132			0.0317		
	MW-68	Apr-21		0.00276	0.0134 J				<0.00124	0.0401 J	<0.000849	0.00543			0.0224		
	MW-68	Apr-22		0.00246	0.0127				<0.00124	0.102	0.00175 J	0.00437 J			0.0259		
	MW-71	Apr-19		0.00315	0.00901	0.670	<0.000160	<0.000260	0.000803 JB	0.0423 JB	<0.000240	0.00260 JB	<0.0000490	0.00130 J	0.0320	**0.0654**	0.0247
	MW-71	Jun-20		0.00391	0.00943 J	0.622	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	0.00111 J	0.0332	**0.0698**	0.0251
	MW-71	Apr-21		0.00385	0.00911 J	0.655	<0.000150	0.000147 J	<0.00124	<0.0281	<0.000849	0.00147 J	0.000261	0.00115 J	0.0264	**0.0666**	0.0242
	MW-71	Apr-22		0.00397	0.00728	0.654	<0.000150	<0.0000596	<0.00124	<0.0281	<0.000849	<0.000704	<0.000100	<0.000816	0.0270	**0.0693**	0.0246
	MW-89	Apr-19		0.00748	0.0140				0.000808 JB	0.0326 JB	0.000744 J	**0.439**			0.0299		
	MW-89	Jun-20		0.00857	0.0133 J				<0.00149	<0.0489	<0.00249	**0.579**			0.00476		
	MW-89	Apr-21		**0.0132**	0.0139 J				0.00131 J	0.305	<0.000849	**0.663 V**			0.00303		
	MW-89	Apr-22		**0.0105**	0.0122				<0.00124	0.0409 J	<0.000849	0.191			0.00485		

Appendix B, Table B.2 - Summary of Groundwater Analytical Data - Total Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Total Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Three Mile Ditch	NP-1	Jun-20																
	NP-1	Oct-20																
	NP-1	Apr-21																
	NP-1	Sep-21																
	NP-1	Apr-22																
	NP-1	Oct-22																
	NP-6	Apr-15																
	NP-6	Apr-17																
	NP-6	Apr-19																
	NP-6	Apr-21																
Upgradient	UG-1	Apr-19		0.00158 J	0.0165	0.727	<0.000160	0.000332 J	0.000624 JB	<0.0150	<0.000240	0.00109 J	<0.0000490	0.00226 B	0.0149	**0.0353**	0.0147
	UG-1	Jun-20		0.00139 J	0.0137 J	0.691	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	0.000984 J	0.0131	**0.0385**	0.0133
	UG-1	Apr-21		0.00134 J	0.0137 J	0.741	<0.000150	0.000148 J	0.00204 B	<0.0281	<0.000849	0.00184 J	<0.000100	0.00238	0.0167	**0.0388**	0.0140
	UG-1	Apr-22		0.00162 J	0.0132	0.733	<0.000150	0.0000957 J	<0.00124	<0.0281	<0.000849	<0.000704	<0.000100	<0.000816	0.0130	**0.0431**	0.0140
	UG-2	Apr-19		0.00227	0.0183	0.299	0.000295 J	0.000357 J	0.000732 JB	0.0286 J	0.00107 JB	0.0129	<0.0000490	0.00316 B	0.00766	0.0160	0.0174
	UG-2	Jun-20		0.00253	0.0141 J	0.274	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.00395 J	<0.000100	0.00250	0.00616	0.0161 J	0.0185
	UG-2	Apr-21		0.00224	0.0160 J	0.265	<0.000150	0.000107 J	0.00271 B	0.0303 J	<0.000849	0.00420 J	<0.000100	0.00295	0.00599	0.0161 J	0.0200
	UG-2	Apr-22		0.00238	0.0152	0.267	<0.000150	0.0000828 J	<0.00124	<0.0281	<0.000849	0.00569 B	<0.000100	0.00183 J	0.00570	0.0156	0.0198
	UG-3R	Apr-19		0.00164 J	0.0183	0.223	<0.000160	<0.000260	0.000713 JB	<0.0150	<0.000240	0.00132 J	<0.0000490	0.000581 JB	0.00266	0.0160	0.00947
	UG-3R	Jun-20		0.00126 J	0.0205	0.173 J	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	<0.00132	<0.000100	<0.000952	0.00389	0.0167 J	0.00867
	UG-3R	Apr-21		0.00140 J	0.0221	0.169 J	<0.000150	0.000113 J	0.00429 B	0.0430 J	0.000853 J	0.00180 J	<0.000100	0.00108 J	0.00420	0.0181 J	0.00939
	UG-3R	Apr-22		0.00149 J	0.0191	0.183 J	<0.000150	0.0000759 J	<0.00124	<0.0281	<0.000849	0.000775 JB	<0.000100	<0.000816	0.00472	0.0273	0.00900
	UG-4	Apr-19		0.00128 J	0.0171	**1.07**	<0.000160	<0.000260	<0.000540	0.0596 J	<0.000240	0.00792	<0.0000490	0.000696 JB	0.0167	**0.0379**	0.00813
	UG-4	Jun-20		0.00105 J	0.0164 J	**1.02**	<0.000478	<0.000477	<0.00149	<0.0489	<0.00249	0.00403 J	<0.000100	0.00177 J	0.00925	**0.0357**	0.00757
	UG-4	Apr-21		0.00146 J	0.0150 J	**0.983**	<0.000150	0.000184 J	<0.00124	0.0350 J	<0.000849	0.00426 J	<0.000100	<0.000816	0.00959	**0.0356**	0.00929
	UG-4	Apr-22		0.00147 J	0.0229	0.749	<0.000150	0.000862 J	0.00295	0.200	<0.000849	0.0492	<0.000100	0.00120 J	0.0119	**0.0334**	0.00923

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
CGWSL Source	Source for CGWSL value (see Table 3)
Dup	Duplicate sample
FD	Field duplicate sample
mg/L	Milligrams per Liter
NMED TW	NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022, Table A-1, Tap Water Screening Level
WQCC Dom	NMED Groundwater standard for domestic exposure, 20.6.2.3103.B NMAC
WQCC HH	NMED Groundwater standard for human health exposure, 20.6.2.3103.A NMAC
WQCC Irr	NMED Groundwater standard for irrigation exposure, 20.6.2.3103.C NMAC

Lab Footnote

B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	**Well ID**	**Date**	**Dup**															
Cross-Gradient	KWB-13	Apr-19		0.00250	0.0179	0.311	<0.000160	0.000721 J	<0.000260	<0.0150	<0.000240	0.000914 JB	<0.0000490	0.00165 J	0.0145	0.0238	0.0193	
	KWB-13	Jun-20		0.00244	0.0141 J	0.326	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	<0.00132	<0.000100	<0.000952	0.00955	0.0240	0.0191	
	KWB-13	Apr-21		0.00217	0.0142 J	0.291	<0.000150	0.00124 J	0.000138 J	<0.0281	<0.000849	0.00336 J	<0.000100	0.00114 J	0.0126	0.0220	0.0174	
	KWB-13	Apr-22		0.00251	0.0137	0.311	<0.000150	0.00135 J	0.000143 J	<0.0281	<0.000849	<0.000704	<0.000100	0.000948 JB	0.0116	0.0199	0.0193	
	MW-136	Jun-20		0.00256	0.0102 J	0.590	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00499 J	<0.000100	0.00214	0.00481	**0.0624**	0.0174	
	MW-136	Oct-20																
	MW-136	Apr-21		0.00251	0.00885 J	0.485	<0.000150	<0.00124	0.000378 J	<0.0281	0.00127 J	0.00464 J	<0.000100	0.00276	0.00726	**0.0405**	0.0148	
	MW-136	Sep-21																
	MW-136	Apr-22		0.00223	0.0110	0.487	<0.000150	<0.00124	0.000887 J	<0.0281	<0.000849	0.00142 J	<0.000100	0.00287	0.00879	**0.0338**	0.0140	
	MW-136	Oct-22																
	NP-5	Apr-15		0.00306	0.00760			<0.000540		<0.0150	<0.000240	0.000511 J			0.0128			
	NP-5	Apr-17		0.00315	0.00738			<0.000540		<0.0150	<0.000240	<0.000250			0.0125			
	NP-5	Apr-19		0.00303	0.00741			<0.000540		<0.0150	0.000353 J	0.000297 J			0.0126			
	NP-5	Apr-21		0.00345	0.00814 J			<0.00124		<0.0281	<0.000849	0.000958 J			0.00956			
	RA-3156	Apr-19																
	RA-3156	Jun-20																
	RA-3156	Apr-21																
	RA-3156	Apr-22																
Evaporation Ponds	MW-1R	Apr-19		0.000828 J	0.0180			0.00170 J		<0.0150	<0.000240	**0.876**			<0.000380			
	MW-1R	Jun-20		0.00118 J	0.0199 J			<0.00149		**1.62**	<0.00249	**1.37**			<0.000657			
	MW-1R	Apr-21		0.000654 J	0.0194 J			<0.00124		<0.0281	<0.000849	**0.971**			0.000505 J			
	MW-1R	Apr-22		0.00132 J	0.0189			<0.00124		**1.81**	<0.000849	**1.23**			<0.000300			
	MW-2A	Jun-20		0.00932	0.0180 J			<0.00149		**1.67**	<0.00249	**1.46**			<0.000657			
	MW-2A	Oct-20																
	MW-2A	Apr-21		0.00609	0.0282			<0.00124		<0.0281	<0.000849	**1.80 V**			0.00179 J			
	MW-2A	Sep-21																
	MW-2A	Apr-22		0.00667	0.0230			<0.00124		0.135	<0.000849	**0.632**			0.00344			
	MW-2A	Oct-22																
	MW-3	Jun-20		**0.0276**	0.0135 J			<0.00149		<0.0489	<0.00249	**0.885**			0.00866			
	MW-3	Jun-20	FD	**0.0301**	0.0134 J			<0.00149		<0.0489	<0.00249	**0.936**			0.00844			
	MW-3	Oct-20																
	MW-3	Oct-20	FD															
	MW-3	Apr-21		**0.0327**	0.0132 J			<0.00124		<0.0281	<0.000849	**1.77**			0.00508			
	MW-3	Apr-21	FD	**0.0361**	0.0144 J			<0.00124		<0.0281	<0.000849	**1.86**			0.00756			
	MW-3	Sep-21																
	MW-3	Sep-21	FD															
	MW-3	Apr-22		**0.0399**	0.0131			<0.00124		0.391	<0.000849	**1.84**			0.00407			
	MW-3	Apr-22	FD	**0.0434**	0.0130			<0.00124		0.398	<0.000849	**1.91**			0.00350			
	MW-3	Oct-22																
	MW-3	Oct-22	FD															
	MW-4A	Jun-20		**0.104**	0.0125 J			<0.00149		**2.43**	<0.00249	**1.84**			0.00109 J			
	MW-4A	Oct-20																
	MW-4A	Apr-21		**0.0687**	0.0121 J			<0.00124		<0.0281	<0.000849	**1.94**			0.000615 J			
	MW-4A	Sep-21																
	MW-4A	Apr-22		**0.101**	0.0124			<0.00124		**1.94**	<0.000849	**1.68**			0.000483 J			
	MW-4A	Oct-22																
	MW-4B	Apr-15		**0.0930**	0.0202			<0.000540		**2.05**	<0.000240	**8.49 J**			0.000414 J			
	MW-4B	Apr-17		**0.0471**	0.0188			<0.000540		0.0449 J	<0.000240	**9.32**			<0.000380			
	MW-4B	Apr-19		**0.0455**	0.0169			0.000548 JB		<0.0150	0.000686 J	**9.36**			<0.000380			
	MW-4B	Apr-21		**0.0660**	0.0160 J			0.0113		0.0572 J	0.00225	**10.1**			<0.000300			
	MW-5A	Jun-20		**0.192**	0.0150 J			<0.00149		**3.70**	<0.00249	**0.725**			0.00136 J			
	MW-5A	Oct-20																
	MW-5A	Apr-21		**0.0892**	0.0147 J			<0.00124		0.0333 J	0.000985 J	**1.06**			0.000921 J			
	MW-5A	Sep-21																
	MW-5A	Apr-22		**0.152**	0.0150			<0.00124		**4.67**	<0.000849	**1.10**			0.000815 J			
	MW-5A	Oct-22																
	MW-5B	Apr-15		**0.198**	0.0104			0.000978 J		**4.71**	<0.000240	**3.49**			0.00197 J			
	MW-5B	Apr-17		**0.127**	0.0111			<0.000540		0.0226 J	<0.000240	**3.51**			0.00155 J			
	MW-5B	Apr-19		**0.131**	0.0118			0.000965 JB		0.0237 JB	0.000840 J	**3.16**			0.00217			
	MW-5B	Apr-21		0.00944	0.0140 J			0.00205		<0.0281	<0.000849	**1.04**			<0.000300			
	MW-5C	Apr-15		**0.0124**	0.0172			0.00115 J		0.770	0.000449 J	**0.687**			<0.000380			
	MW-5C	Apr-17		0.00981	0.0140			<0.000540		<0.0150	<0.000240	**0.906**			<0.000380			
	MW-5C	Apr-19		0.00761	0.0128			0.000815 JB		<0.0150	<0.000240	**0.956**			<0.000380			
	MW-5C	Apr-21		**0.133**	0.0105 J			<0.00124		0.0358 J	<0.000849	**3.21**			0.00134 J			
	MW-6A	Apr-19		0.00735	0.0133			0.000814 JB		<0.0150	0.000483 J	**0.302**			0.000398 J			
	MW-6A	Jun-20		0.00472	0.0127 J			<0.00149		0.378	<0.00249	**0.262**			<0.000657			
	MW-6A	Apr-21		0.00481	0.0134 J			0.00141 JB		0.0319 J	<0.000849	**0.285**			0.000402 J			
	MW-6A	Apr-22		0.00490	0.0125			0.00158 J		0.493	<0.000849	**0.280**			0.000882 J			
	MW-6B	Apr-15		**0.0319**	0.0186			<0.000540		**1.21**	<0.000240	**3.52**			<0.000380			
	MW-6B	Apr-17		0.00863	0.0141			<0.000540		<0.0150	<0.000240	**1.01**			<0.000380			
	MW-6B	Apr-19		**0.0303**	0.0141			<0.000540		<0.0150	0.000822 J	**2.38**			<0.000380			
	MW-6B	Apr-21		**0.0344**	0.0147 J			<0.00124		<0.0281	0.00128 J	**2.31**			<0.000300			
	MW-7A	Jun-20		**0.0163**	0.0139 J			<0.00149		**1.99**	<0.00249	**0.421**			<0.000657			
	MW-7A	Jun-20	FD	**0.0175**	0.0148 J			<0.00149		**2.16**	<0.00249	**0.447**			<0.000657			
	MW-7A	Oct-20																
	MW-7A	Oct-20	FD															
	MW-7A	Apr-21		0.00982	0.0168 J			0.00141 J		<0.0281	<0.000849	**0.424**			<0.000300			
	MW-7A	Apr-21	FD	0.00926	0.0147 J			<0.00124		<0.0281	<0.000849	**0.409**			<0.000300			
	MW-7A	Sep-21																
	MW-7A	Sep-21	FD															
	MW-7A	Apr-22		**0.0152**	0.0159			<0.00124		**2.37**	<0.000849	**0.426**			<0.000300			
	MW-7A	Apr-22	FD	**0.0153**	0.0148			<0.00124		**2.29**	<0.000849	**0.439**			<0.000300			
	MW-7A	Oct-22																
	MW-7A	Oct-22	FD															
	MW-7B	Apr-15		0.00529	0.0110			<0.000540		0.0879 J	<0.000240	**0.541 J**			<0.000380			
	MW-7B	Apr-17		0.00373	0.0118			<0.000540		<0.0150	<0.000240	**0.493**			<0.000380			
	MW-7B	Apr-19		0.00346	0.0107			<0.000540		<0.0150	0.000722 J	**0.486**			<0.000380			
	MW-7B	Apr-21		0.00383	0.0122 J			<0.00124		<0.0281	<0.000849	**0.594**			<0.000300			
	MW-10	Jun-20		**0.0142**	0.0131 J			<0.00149		0.176	<0.00249	**2.11**			<0.000657			
	MW-10	Oct-20																
	MW-10	Apr-21		**0.0145**	0.0139 J			<0.00124		<0.0281	<0.000849	**2.71**			<0.000300			
	MW-10	Sep-21																
	MW-10	Apr-22		**0.0129**	0.0129			<0.00124		0.171	<0.000849	**2.20**			<0.000300			
	MW-10	Oct-22																
	MW-11A	Jun-20		<0.000735	0.0310			<0.00149		**1.11**	<0.00249	**1.53**			<0.000657			
	MW-11A	Oct-20																
	MW-11A	Apr-21		0.000276 J	0.0256			<0.00124		<0.0281	<0.00849	0.175			0.000873 J			
	MW-11A	Sep-21																
	MW-11A	Apr-22		0.000399 J	0.0241			<0.00124		0.329	<0.000849	**0.256**			<0.000300			
	MW-11A	Oct-22																
	MW-11B	Apr-15		0.00458 J	0.0187 J			<0.00270		**3.59**	<0.00120	**0.376**			<0.00190			
	MW-11B	Apr-17		0.00103 J	0.0188			<0.000540		0.0826 J	<0.000240	**0.370**			<0.000380			
	MW-11B	Apr-19		0.00108 J	0.0185			<0.000540		<0.0150	0.000794 JB	**0.372**			<0.000380			
	MW-11B	Apr-21		0.00133 J	0.0172 J			<0.00124		<0.0281	<0.00424	**0.385**			0.000363 J			

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Evaporation Ponds	MW-15	Apr-19		**0.0195**	0.0203			0.00141 J		<0.0150	0.00107 JB	0.125			0.000792 J		
	MW-15	Jun-20		0.00780	0.0156 J			<0.00149		<0.0489	<0.00249	**0.543**			<0.000657		
	MW-15	Apr-21		**0.0180**	0.0164 J			<0.00124		<0.0281	<0.000849	0.154			0.00106 J		
	MW-15	Apr-22		**0.0234**	0.0150			<0.00124		<0.0281	<0.000849	0.0321			0.000731 J		
	MW-18A	Jun-20		0.00447	0.0168 J	**1.92**	<0.000478	<0.00149	<0.000477	**1.74**	<0.00249	**1.23**	<0.000100	0.00766	<0.000657	0.0258	<0.000986
	MW-18A	Oct-20															
	MW-18A	Apr-21		0.00571	0.0184 J	**1.91**	<0.000150	<0.00124	0.000457 J	<0.0281	0.000998 J	0.0580	<0.000100	0.0114	0.000639 J	0.0283	<0.000664
	MW-18A	Sep-21															
	MW-18A	Apr-22		0.00470	0.0149	**1.87**	<0.000150	<0.00124	0.000273 J	<0.0281	<0.000849	0.0515	<0.000100	0.00907	0.000809 J	0.0232	0.000714 J
	MW-18A	Oct-22															
	MW-18B	Apr-15		**0.0104**	0.0116			<0.000540		0.0398 J	<0.000240	**0.723**			<0.000380		
	MW-18B	Apr-17		0.00962	0.0130			<0.000540		<0.0150	<0.000240	**0.897**			<0.000380		
	MW-18B	Apr-19		**0.0105**	0.0136			0.00157 J		0.0189 J	<0.000240	**0.896**			0.000617 J		
	MW-18B	Apr-21		0.00878	0.0146 J			<0.00124		<0.0281	0.00464	**1.09**			<0.000300		
	MW-22A	Jun-20		**0.0260**	0.0181 J			<0.00149		0.559	<0.00249	**2.95**			0.00318		
	MW-22A	Jun-20	FD	**0.0281**	0.0163 J			<0.00149		0.565	<0.00249	**3.08**			0.00238		
	MW-22A	Oct-20															
	MW-22A	Oct-20	FD														
	MW-22A	Apr-21		**0.0232**	0.0121 J			<0.00124		<0.0281	<0.000849	**3.54 V**			0.00199 J		
	MW-22A	Apr-21	FD	**0.0264**	0.0146 J			0.00160 J		0.0307 J	<0.000849	**4.04**			0.000901 J		
	MW-22A	Sep-21															
	MW-22A	Sep-21	FD														
	MW-22A	Apr-22		**0.0254**	0.0134			<0.00124		0.0552 J	<0.000849	**0.660**			0.00266		
	MW-22A	Apr-22	FD	**0.0253**	0.0138			<0.00124		0.0584 J	<0.000849	**0.655**			0.00261		
	MW-22A	Oct-22															
	MW-22A	Oct-22	FD														
	MW-22B	Apr-15		**0.0383**	0.0154 J			<0.00270		**2.20**	<0.00120	**4.64**			<0.00190		
	MW-22B	Apr-17		**0.0242**	0.0109			<0.000540		<0.0150	<0.000240	**3.53**			0.000555 J		
	MW-22B	Apr-19		**0.0270**	0.0130			0.00147 J		0.0304 J	<0.000240	**4.13**			0.000414 J		
	MW-22B	Apr-21		**0.0236**	0.0125 J			<0.00124		<0.0281	<0.000849	**4.79**			0.00110 J		
	MW-70	Jun-20		**0.0192**	0.0150 J			<0.00149		**3.48**	<0.00249	**0.257**			<0.000657		
	MW-70	Oct-20															
	MW-70	Apr-21		**0.0166**	0.0155 J			0.00259		<0.0281	<0.000849	0.102			<0.000300		
	MW-70	Sep-21															
	MW-70	Apr-22		**0.0147**	0.0138			<0.00124		0.482	<0.000849	0.190			<0.000300		
	MW-70	Oct-22															
	MW-72	Apr-19		0.00752	0.0142			0.00117 JB		<0.0150	0.000746 J	**1.17**			0.00165 J		
	MW-72	Jun-20		0.00634	0.0141 J			<0.00149		**1.01**	<0.00249	**2.14**			0.000890 J		
	MW-72	Apr-21		0.00445	0.0151 J			<0.00124		<0.0281	<0.000849	**1.02**			0.00151 J		
	MW-72	Apr-22		0.00474	0.0120			<0.00124		0.522	<0.000849	**0.760**			0.00151 J		
	MW-73	Apr-19		**0.0804**	0.00903			0.00126 J		0.0212 J	<0.000240	0.0172			0.00547		
	MW-73	Jun-20		**0.0496**	0.00883 J			<0.00149		**2.27**	<0.00249	**2.12**			0.00193 J		
	MW-73	Apr-21		**0.0410**	0.00843 J			<0.00124		0.0430 J	<0.000849	**0.437**			0.00142 J		
	MW-73	Apr-22		**0.0376**	0.00947			<0.00124		0.858	<0.000849	**0.341**			0.00126 J		
	MW-74	Jun-20		**0.0563**	0.0140 J			<0.00149		<0.0489	<0.00249	**1.20**			**0.160**		
	MW-74	Oct-20															
	MW-74	Apr-21		**0.106**	0.0139 J			0.00142 JB		<0.0281	<0.000849	**1.37**			0.0128		
	MW-74	Sep-21															
	MW-74	Apr-22		**0.105**	0.0129			0.00127 J		<0.0281	<0.000849	**2.14**			0.0118		
	MW-74	Oct-22															
	MW-75	Jun-20		**0.268**	0.0166 J			<0.00149		**4.51**	<0.00249	**1.14**			0.00286		
	MW-75	Oct-20															
	MW-75	Apr-21		**0.0888**	0.0145 J			0.00237		0.0421 J	<0.000849	**0.960**			0.00392		
	MW-75	Sep-21															
	MW-75	Apr-22		**0.0930**	0.0143			<0.00124		0.289	<0.000849	**1.04**			0.00223		
	MW-75	Oct-22															
	MW-76	Jun-20		**0.0374**	0.0113 J			0.00180 J		**3.20**	<0.00249	**0.764**			0.00314		
	MW-76	Oct-20															
	MW-76	Apr-21		**0.0228**	0.0130 J			0.00140 J		0.0396 J	<0.00424	**0.690**			0.00197 J		
	MW-76	Sep-21															
	MW-76	Apr-22		**0.0252**	0.0131			<0.00124		**2.24**	<0.000849	**0.742**			0.00109 J		
	MW-76	Oct-22															
	MW-77	Apr-19		**0.0283**	0.00978			0.00911		0.157	<0.000240	**0.596**			0.0157		
	MW-77	Jun-20		**0.0404**	0.0103 J			0.00801		**8.27**	<0.00249	**0.581**			0.00777		
	MW-77	Apr-21		**0.0247**	0.0114 J			0.0106		0.110	<0.000849	**0.656**			0.00814		
	MW-77	Apr-22		**0.0230**	0.0166			0.0416		**1.07**	<0.000849	**0.557**			0.0238		
	MW-78	Apr-19		0.00674	0.0480			**0.252**		0.0178 J	<0.000240	0.0618			0.0150		
	MW-78	Jun-20		**0.0223**	0.0503			**0.122**		**6.29**	<0.00249	**0.756**			0.00718		
	MW-78	Apr-21		0.00912	0.0456			**0.193**		0.0721 J	<0.000849	**0.388**			0.0126		
	MW-78	Apr-22		0.00710	0.0483			**0.143**		0.0706 J	<0.000849	**0.257**			0.00818		
	MW-79	Jun-20		0.00278	0.0176 J			<0.00149		**1.04**	<0.00249	**4.61**			<0.000657		
	MW-79	Oct-20															
	MW-79	Apr-21		0.00248	0.0144 J			<0.00124		<0.0281	<0.000849	**0.635**			0.000497 J		
	MW-79	Sep-21															
	MW-79	Apr-22		0.00410	0.0133			<0.00124		<0.0281	<0.000849	**0.380**			0.00118 J		
	MW-79	Oct-22															
	MW-80	Apr-19		0.00172 J	0.0153			0.00142 J		<0.0150	<0.000240	0.165			<0.000380		
	MW-80	Jun-20		0.00174 J	0.0129 J			<0.00149		0.140	<0.00249	**1.39**			<0.000657		
	MW-80	Apr-21		0.00176 J	0.0135 J			<0.00124		<0.0281	<0.000849	0.0444			0.000623 J		
	MW-80	Apr-22		0.00174 J	0.0120			<0.00124		0.0560 J	<0.000849	0.125			0.000603 J		
	MW-81	Apr-19		0.00756	0.0138			<0.000540		<0.0150	0.000251 J	0.0297			0.00604		
	MW-81	Jun-20		0.00396	0.0109 J			<0.00149		<0.0489	<0.00249	**0.474**			0.00297		
	MW-81	Apr-21		0.00633	0.0145 J			0.00142 J		<0.0281	<0.000849	0.0265			0.00757		
	MW-81	Apr-22		0.00596	0.0134			<0.00124		<0.0281	<0.000849	0.0526			0.0116		
	MW-82	Apr-19		**0.0309**	0.0260			0.00151 J		<0.0150	<0.000240	**1.84**			0.00106 J		
	MW-82	Jun-20		**0.0974**	0.0226			<0.00149		**4.09**	<0.00249	**2.23**			0.00109 J		
	MW-82	Apr-21		**0.0130**	0.0248			<0.00124		0.0371 J	<0.00424	**2.79**			0.000542 J		
	MW-82	Apr-22		**0.0190**	0.0233			<0.00124		0.103	<0.000849	**2.60**			0.00103 J		
	MW-83	Jun-20		**0.0372**	0.0227			0.00278		0.0650 J	<0.00249	**0.336**			0.0102		
	MW-83	Oct-20															
	MW-83	Apr-21		**0.0409**	0.0292			0.00287		<0.0281	<0.000849	0.142			0.00445		
	MW-83	Sep-21															
	MW-83	Apr-22		**0.0399**	0.0269			0.00336		0.344	<0.000849	**0.450**			0.00490		
	MW-83	Oct-22															
	MW-84	Jun-20		**0.144**	0.0129 J			0.00557		**5.90**	<0.00249	**2.52**			0.00816		
	MW-84	Oct-20															
	MW-84	Apr-21		**0.0870**	0.0128 J			0.00359		0.0775 J	<0.00424	**2.49**			0.00590		
	MW-84	Sep-21															
	MW-84	Apr-22		**0.0947**	0.0106 B			<0.00620		**1.25**	<0.00424	**2.79**			0.00735 J		
	MW-84	Oct-22															
	MW-86	Jun-20		**0.102**	0.0223	0.617	<0.000478	**0.0508**	<0.000477	0.944	<0.00249	0.155	0.000109 J	0.00699	0.00794	<0.00754	0.0206
	MW-86	Oct-20															

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Evaporation Ponds	MW-87	Jun-20		0.00454	0.0162 J			<0.00149		<0.0489	<0.00249	**3.02**			<0.000657		
	MW-87	Oct-20															
	MW-87	Apr-21		0.00530	0.0158 J			<0.00124		<0.0281	<0.000849	**1.16**			<0.000300		
	MW-87	Sep-21															
	MW-87	Apr-22		0.00430	0.0123			<0.00124		0.0295 J	<0.000849	0.0431			<0.000300		
	MW-87	Oct-22															
	MW-88	Jun-20		0.00595	0.0115 J			<0.00149		<0.0489	<0.00249	**0.869**			<0.000657		
	MW-88	Oct-20															
	MW-88	Apr-21		0.00690	0.0117 J			<0.00124		<0.0281	<0.000849	**1.01**			<0.000300		
	MW-88	Sep-21															
	MW-88	Apr-22		0.00661	0.0108			<0.00124		<0.0281	<0.000849	**0.875**			<0.000300		
	MW-88	Oct-22															
	MW-120	Jun-20		0.00646	0.00974 J			<0.00149		**3.08**	<0.00249	**1.06**			<0.000657		
	MW-120	Oct-20															
	MW-120	Apr-21		0.00250	0.0112 J			<0.00124		<0.0281	<0.000849	**1.32**			<0.000300		
	MW-120	Sep-21															
	MW-120	Apr-22		0.00461	0.0112			<0.00124		**4.04**	<0.000849	**1.22**			0.00119 J		
	MW-120	Oct-22															
	MW-121	Jun-20		**0.0253**	0.0109 J			<0.00149		<0.0489	<0.00249	**2.16**			0.00388		
	MW-121	Oct-20															
	MW-121	Apr-21		**0.0231**	0.0131 J			<0.00124		<0.0281	<0.000849	**1.80**			0.00648		
	MW-121	Sep-21															
	MW-121	Apr-22		**0.0251**	0.00987			<0.00124		0.0354 J	<0.000849	**1.80**			0.00472		
	MW-121	Oct-22															
	MW-122	Jun-20		0.00365	0.0194 J			<0.00149		**1.85**	<0.00249	**1.05**			<0.000657		
	MW-122	Oct-20															
	MW-122	Apr-21		0.000931 J	0.0203			<0.00124		<0.0281	0.00218	0.182			<0.000300		
	MW-122	Sep-21															
	MW-122	Apr-22		0.00158 J	0.0192			<0.00124		0.941	<0.000849	**0.423**			<0.000300		
	MW-122	Oct-22															
	MW-123	Jun-20		**0.0178**	0.0316			<0.00149		<0.0489	<0.00249	**3.21**			<0.000657		
	MW-123	Oct-20															
	MW-123	Apr-21		**0.0191**	0.0293			<0.00124		<0.0281	<0.000849	**3.66**			0.000711 J		
	MW-123	Sep-21															
	MW-123	Apr-22		**0.0171**	0.0317			<0.00124		<0.0281	<0.000849	**3.26**			0.000320 J		
	MW-123	Oct-22															
	MW-124	Jun-20		0.00127 J	0.0182 J			<0.00149		**4.91**	<0.00249	**0.411**			<0.000657		
	MW-124	Oct-20															
	MW-124	Apr-21		0.000375 J	0.0164 J			<0.00124		<0.0281	<0.000849	**0.274**			<0.000300		
	MW-124	Sep-21															
	MW-124	Apr-22		0.000872 J	0.0170			<0.00124		**2.29**	<0.000849	**0.553**			<0.000300		
	MW-124	Oct-22															
	OCD-1R	Jun-20		0.00322	0.0186 J			<0.00149		**1.07**	<0.00249	**1.98**			<0.000657		
	OCD-1R	Oct-20															
	OCD-1R	Apr-21		0.00211	0.0176 J			<0.00124		<0.0281	<0.000849	**0.220**			0.000703 J		
	OCD-1R	Sep-21															
	OCD-1R	Apr-22		0.00215	0.0163			<0.00124		0.114	<0.000849	**0.346**			0.000659 J		
	OCD-1R	Oct-22															
	OCD-2A	Jun-20		0.00138 J	0.0201			<0.00149		**1.95**	<0.00249	**1.48 V**			<0.000657		
	OCD-2A	Oct-20															
	OCD-2A	Apr-21		0.000544 J	0.0208			<0.00124		<0.0281	<0.000849	**0.768**			0.000405 J		
	OCD-2A	Sep-21															
	OCD-2A	Apr-22		0.00113 J	0.0191			<0.00124		0.866	<0.000849	**0.743**			<0.000300		
	OCD-2A	Oct-22															
	OCD-3	Jun-20		0.000822 J	0.0181 J			<0.00149		0.102	<0.00249	**0.511**			<0.000657		
	OCD-3	Oct-20															
	OCD-3	Apr-21		0.000686 J	0.0191 J			<0.00124		<0.0281	<0.000849	0.130			<0.000300		
	OCD-3	Sep-21															
	OCD-3	Apr-22		0.000735 J	0.0174			<0.00124		<0.0281	<0.000849	0.123			<0.000300		
	OCD-3	Oct-22															
	OCD-4	Jun-20		0.00262	0.0233			<0.00149		**2.66**	<0.00249	**0.293**			<0.000657		
	OCD-4	Oct-20															
	OCD-4	Apr-21		0.000608 J	0.0234			<0.00124		<0.0281	<0.000849	0.0824			0.000700 J		
	OCD-4	Sep-21															
	OCD-4	Apr-22		0.00128 J	0.0214			<0.00124		0.801	<0.000849	0.0890			<0.000300		
	OCD-4	Oct-22															
	OCD-5	Jun-20		**0.0123**	0.0239			<0.00149		**3.04**	<0.00249	**0.293**			<0.000657		
	OCD-5	Oct-20															
	OCD-5	Apr-21		0.00389	0.0234			<0.00124		<0.0281	<0.00424	**0.284**			<0.000300		
	OCD-5	Sep-21															
	OCD-5	Apr-22		0.00672	0.0204 O1			<0.00124		**1.02**	<0.000849	0.152			<0.000300		
	OCD-5	Oct-22															
	OCD-6	Jun-20		0.00577	0.0228			<0.00149		**2.32**	<0.00249	**2.52**			<0.000657		
	OCD-6	Oct-20															
	OCD-6	Apr-21		0.00605	0.0217			<0.00124		<0.0281	<0.000849	**2.59**			0.000336 J		
	OCD-6	Sep-21															
	OCD-6	Apr-22		0.00553	0.0233			<0.00124		0.224	<0.000849	**2.05**			0.000675 J		
	OCD-6	Oct-22															
	OCD-7AR	Jun-20		**0.101**	0.0154 J			<0.00149		**10.3**	<0.00249	**2.92**			0.00126 J		
	OCD-7AR	Oct-20															
	OCD-7AR	Apr-21		**0.0773**	0.0142 J			<0.00124		0.0711 J	<0.000849	**3.20**			0.00142 J		
	OCD-7AR	Sep-21															
	OCD-7AR	Apr-22		**0.0639**	0.0140			<0.00124		**5.05**	<0.000849	**2.87**			0.00120 J		
	OCD-7AR	Oct-22															
	OCD-7B	Apr-15		0.00304	0.0178			0.000838 J		**2.72**	<0.000240	**0.626**			<0.000380		
	OCD-7B	Apr-17		0.00131 J	0.0195			<0.000540		<0.0150	<0.000240	**0.667**			<0.000380		
	OCD-7B	Apr-19		0.000838 J	0.0163			<0.000540		<0.0150	<0.000240	**0.561**			0.000672 J		
	OCD-7B	Apr-21		0.00122 J	0.0161 J			<0.00124		<0.0281	<0.000849	**0.706**			<0.000300		
	OCD-8A	Jun-20		**0.0537**	0.0180 J	**0.980**	<0.000478	<0.00149	0.00167 J	**3.53**	<0.00249	**2.00**	<0.000100	0.0379	0.00187 J	<0.00754	<0.000986
	OCD-8A	Oct-20															
	OCD-8A	Apr-21		**0.0423**	0.0160 J	**0.952**	<0.000150	<0.00124	0.00206	0.0507 J	0.00124 J	**2.72**	<0.000100	0.0359	0.00111 J	0.00369 J	<0.000664
	OCD-8A	Sep-21															
	OCD-8A	Apr-22		**0.0400**	0.0169	**1.04**	<0.000150	<0.00124	0.00274	**2.14**	<0.000849	**2.21**	<0.000100	0.0337	0.00118 J	0.00473	0.00287 JB
	OCD-8A	Oct-22															
	OCD-8B	Apr-15		**0.0113**	0.0120			0.000653 J		0.200	<0.000240	**5.18**			0.000497 J		
	OCD-8B	Apr-17		0.00910	0.0127			<0.000540		0.0155 J	<0.000240	**6.46**			<0.000380		
	OCD-8B	Apr-19		0.00878	0.0133			0.000655 J		<0.0150	0.000266 JB	**6.75 V**			0.00108 J		
	OCD-8B	Apr-21		0.00956	0.0129 J			<0.00124		<0.0281	<0.000849	**6.32**			<0.000300		
Field East of Refinery	KWB-1A	Oct-19															
	KWB-1A	Jun-20		0.00362	0.00833 J	**0.756**	<0.000478	<0.00149	0.00291	<0.0489	<0.00249	**0.306**	<0.000100	0.00802	<0.000657	0.0150 J	0.0241
	KWB-1A	Oct-20															
	KWB-1A	Oct-22															
	KWB-1C	Apr-15		0.00297	0.00870			<0.000540		<0.0150	0.000528 J	**0.451**			0.00155 J		
	KWB-1C	Apr-17		0.00303	0.00839			<0.000540		<0.0150	<0.000240	**0.472**			<0.000380		
	KWB-1C	Apr-19		0.00331	0.00878			0.000616 J		<0.0150	0.000282 J	**0.461**			0.000518 J		
	KWB-1C	Apr-21		0.00315	0.0100 J			<0.00124		<0.0281	<0.000849	**0.400**			<0.000300		

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Field East of Refinery	KWB-7	Jun-20		0.00116 J	0.0589	0.439	<0.000478	<0.00149	<0.000477	0.400	<0.00249	**2.40**	<0.000100	0.00117 J	<0.000657	<0.00754	0.00370 J
	KWB-7	Oct-20															
	KWB-7	Apr-21		0.00255	0.243	0.451	<0.000150	<0.00124	<0.0000596	0.0377 J	<0.000849	**1.33**	<0.000100	0.00100 J	0.000575 J	0.00369 J	0.00298 J
	KWB-7	Sep-21															
	KWB-7	Apr-22		0.000458 J	0.0583	0.453	<0.000150	0.00138 J	<0.0000596	0.0382 J	<0.000849	**1.55**	<0.000100	<0.000816	<0.000300	0.000531 J	0.00356 JB
	KWB-7	Oct-22															
	KWB-8	Oct-16															
	KWB-8	Apr-17		0.000904 J	0.0870	0.600	<0.000160	<0.000540	<0.000260	0.0772 J	0.000556 J	**1.77**	<0.0000490	0.000663 J	<0.000380	<0.000330	0.00112 J
	KWB-8	Oct-17															
	KWB-8	Oct-20															
	KWB-10R	Apr-17		**0.0115**	**3.39**			<0.000540		0.281	0.000478 J	0.145			<0.000380		
	KWB-10R	Oct-17															
	KWB-10R	Apr-18		**0.0178**	**4.22**			0.00201		**4.73**	0.00295	0.182			<0.000380		
	KWB-10R	Oct-18															
	KWB-11A	Jun-20		**0.0103**	0.0297	0.390	<0.000478	<0.00149	0.00386	**7.20**	<0.00249	**0.580**	<0.000100	0.00423	0.000928 J	0.0136 J	0.00207 J
	KWB-11A	Oct-20															
	KWB-11A	Sep-21															
	KWB-11A	Oct-22															
	KWB-11B	Jun-20		0.00138 J	0.0130 J	0.115 J	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00148 J	<0.000100	<0.000952	0.00822	0.0117 J	0.00849
	KWB-11B	Oct-20															
	KWB-11B	Apr-21		0.00196 J	0.0161 J	0.118 J	0.000276 J	<0.00124	<0.0000596	<0.0281	<0.000849	0.00755 B	<0.000100	0.000844 J	0.00861	0.0132 J	0.00866
	KWB-11B	Sep-21															
	KWB-11B	Apr-22		0.000509 J	0.0119	0.0918 J	<0.000150	0.00353	<0.0000596	0.0300 J	<0.000849	0.00142 J	<0.000100	<0.000816	0.00786	0.00908	0.00491 JB
	KWB-11B	Oct-22															
	KWB-12A	Jun-20		0.00223	0.0177 J	0.561	<0.000478	<0.00149	<0.000477	0.180	<0.00249	0.0179	<0.000100	0.00126 J	0.00343	0.0265	0.0117
	KWB-12A	Oct-20															
	KWB-12A	Sep-21															
	KWB-12A	Oct-22															
	KWB-12B	Jun-20		0.00162 J	0.00864 J	0.613	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	<0.00132	<0.000100	<0.000952	0.00286	0.0276	0.0127
	KWB-12B	Jun-20	FD	0.00163 J	0.00779 J	0.605	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00177 J	<0.000100	<0.000952	0.00391	0.0271	0.0129
	KWB-12B	Oct-20															
	KWB-12B	Oct-20	FD														
	KWB-12B	Apr-21		0.00173 J	0.00936 J	0.606	<0.000150	0.00305	0.0000950 J	0.0404 J	<0.000849	0.00344 J	<0.000100	0.00262	0.00288	0.0266	0.0120
	KWB-12B	Apr-21	FD	0.00182 J	0.00985 J	0.587	<0.000150	<0.00124	0.0000984 J	0.0319 J	<0.000849	0.00604	<0.000100	<0.000816	0.00332	0.0273	0.0123
	KWB-12B	Sep-21															
	KWB-12B	Sep-21	FD														
	KWB-12B	Apr-22		0.00166 J	0.00886	0.640	<0.000150	0.00183 JB	0.000112 J	<0.0281	<0.000849	<0.000704	<0.000100	0.000903 JB	0.00255	0.0263	0.0130
	KWB-12B	Apr-22	FD	0.00169 J	0.00935			<0.00124		<0.0281	<0.000849	<0.000704			0.00248		
	KWB-12B	Oct-22															
	KWB-12B	Oct-22	FD														
	KWB-P4	Apr-15															
	KWB-P4	Apr-17															
	KWB-P4	Apr-19															
	KWB-P4	Apr-21															
	MW-57	Jun-20		0.00282	0.0136 J			<0.00149		<0.0489	<0.00249	0.0458			0.0126		
	MW-57	Oct-20															
	MW-57	Apr-21		0.00345	0.0226			<0.00124		<0.0281	<0.000849	0.158			0.0143		
	MW-57	Sep-21															
	MW-57	Apr-22		0.00602	0.0148			<0.00124		0.0715 J	<0.000849	**0.500**			0.00952		
	MW-58	Oct-17															
	MW-58	Apr-18		0.00405	1.47	0.517	<0.000160	<0.000540	<0.000260	0.160 B	0.000816 J	**0.219**	<0.0000490	0.000927 J	0.000412 J	<0.000330	0.00108 J
	MW-58	Oct-18															
	MW-58	Oct-19															
	MW-111	Oct-18															
	MW-111	Apr-19		0.00770	0.205			<0.000540		<0.0150	0.000380 JB	**1.39**			0.000475 J		
	MW-111	Oct-19															
	MW-111	Jun-20		**0.0170**	0.167			<0.00149		**5.34**	<0.00249	**1.62**			<0.000657		
	MW-112	Nov-14															
	MW-113	Jun-20		0.00192 J	0.0245			<0.00149		0.776	<0.00249	**1.31**			<0.000657		
	MW-113	Jun-20	FD	0.00179 J	0.0239			<0.00149		0.777	<0.00249	**1.30**			<0.000657		
	MW-113	Oct-20															
	MW-113	Oct-20	FD														
	MW-113	Apr-21		0.000887 J	0.0234			<0.00124		<0.0281	<0.000849	**1.38**			<0.000300		
	MW-113	Apr-21	FD	0.000800 J	0.0208			<0.00124		<0.0281	<0.000849	**1.39**			<0.000300		
	MW-113	Sep-21															
	MW-113	Sep-21	FD														
	MW-113	Apr-22		0.000670 J	0.0353			<0.00124		**1.17**	<0.000849	**1.41**			<0.000300		
	MW-113	Apr-22	FD	0.000770 J	0.0350			<0.00124		**1.13**	<0.000849	**1.36**			<0.000300		
	MW-113	Oct-22															
	MW-113	Oct-22	FD														
	MW-125	Jun-20		0.00341	0.00972 J			<0.00149		<0.0489	<0.00249	**0.427**			0.00322		
	MW-125	Oct-20															
	MW-125	Apr-21		0.00330	0.00917 J			<0.00124		<0.0281	<0.000849	**0.402**			0.00121 J		
	MW-125	Sep-21															
	MW-125	Apr-22		0.00371	0.00942			0.00129 J		<0.0281	<0.000849	**0.411**			0.000765 J		
	MW-125	Oct-22															
	MW-126A	Apr-19		0.00116 J	0.0167			0.00243		0.0168 J	<0.000240	**0.701**			<0.000380		
	MW-126A	Oct-19															
	MW-126A	Jun-20		0.00101 J	0.0135 J			<0.00149		0.350	<0.00249	**0.620**			<0.000657		
	MW-126A	Oct-20															
	MW-126B	Jun-20		0.00390	0.00876 J			<0.00149		<0.0489	<0.00249	0.0456			0.00302		
	MW-126B	Oct-20															
	MW-126B	Apr-21		0.00385	0.00918 J			<0.00124		<0.0281	<0.000849	0.0532			0.00204		
	MW-126B	Sep-21															
	MW-126B	Apr-22		0.00382	0.0107			<0.00124		0.119	<0.000849	0.0590			0.00291		
	MW-126B	Oct-22															
	MW-127	Oct-17															
	MW-127	Apr-18		0.00350	0.0793			<0.000540		0.0507 JB	<0.000240	0.108			<0.000380		
	MW-127	Oct-18															
	MW-127	Apr-19		0.00422	0.0905			<0.000540		<0.0150	<0.000240	0.110			0.000503 J		
	MW-128	Oct-17															
	MW-128	Apr-18		**0.0530**	0.0634			<0.000540		**2.60**	0.000403 JB	**1.93**			<0.000380		
	MW-128	Oct-18															
	MW-128	Apr-19		**0.0239**	0.0554			<0.000540		<0.0150	<0.000240	**1.74**			<0.000380		
	MW-129	Apr-16		**0.0256**	0.614			<0.00270		**5.58**	<0.00120	**1.17**			0.00253 J		
	MW-129	Oct-16															
	MW-129	Apr-17		**0.0152**	0.585			<0.000540		<0.0150	<0.000240	**1.03**			0.000611 JB		
	MW-129	Apr-18		**0.0244**	0.558			<0.000540		**5.17**	<0.000240	**1.08**			<0.000380		
	MW-130	Jun-20		0.00369	0.0169 J			<0.00149		<0.0489	<0.00249	0.102			0.00498		
	MW-130	Oct-20															
	MW-130	Apr-21		0.00328	0.0193 J			<0.00124		<0.0281	<0.000849	0.0986			0.00728		
	MW-130	Sep-21															
	MW-130	Apr-22		0.00381	0.0152			<0.00124		0.0540 J	<0.000849	0.101			0.00305		
	MW-130	Oct-22															

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
Field East of Refinery	MW-131	Apr-17		**0.0183**	**2.48**			<0.000540		<0.0150	<0.000240	**0.309**			0.000632 JB		
	MW-131	Oct-17															
	MW-131	Oct-19															
	MW-131	Jun-20		**0.0237**	**2.32**			<0.00149		**1.30**	<0.00249	**0.300**			<0.000657		
	MW-133	Nov-14															
	MW-133	Apr-15		**0.0102**	0.138			<0.000540		**2.59**	0.000513 J	**0.290**			0.00325		
	MW-134	Jun-20		0.00399	0.00946 J			<0.00149		<0.0489	<0.00249	0.00664			0.00596		
	MW-134	Jun-20	FD	0.00383	0.00852 J			0.00150 J		<0.0489	<0.00249	0.00608			0.00661		
	MW-134	Oct-20															
	MW-134	Oct-20	FD														
	MW-134	Apr-21		0.00366	0.00904 J			<0.00124		<0.0281	<0.000849	0.0142			0.00487		
	MW-134	Apr-21	FD	0.00366	0.00935 J			<0.00124		<0.0281	<0.000849	0.0185			0.00492		
	MW-134	Sep-21															
	MW-134	Sep-21	FD														
	MW-134	Apr-22		0.00367	0.00894			0.00178 J		<0.0281	<0.000849	0.00782			0.00507		
	MW-134	Apr-22	FD	0.00353	0.00932			<0.00124		<0.0281	<0.000849	0.00713			0.00512		
	MW-134	Oct-22															
	MW-134	Oct-22	FD														
	MW-135	Jun-20		0.00314	<0.00778			<0.00149		<0.0489	<0.00249	<0.00132			0.0224		
	MW-135	Oct-20															
	MW-135	Apr-21		0.00312	0.00760 J			0.00173 J		<0.0281	<0.000849	0.000786 J			0.0199		
	MW-135	Sep-21															
	MW-135	Apr-22		0.00281	0.00744			<0.00124		<0.0281	<0.000849	<0.000704			0.0221		
	MW-135	Oct-22															
	MW-145	Oct-20															
	MW-145	Oct-20	FD														
	MW-145	Apr-21		0.00374	0.00948 J			<0.00124		<0.0281	<0.000849	0.0245			0.00385		
	MW-145	Sep-21															
	MW-145	Apr-22		0.00361	0.00989			<0.00124		0.0557 J	<0.000849	0.0245			0.00284		
	MW-145	Oct-22															
	MW-146	Oct-20															
	MW-146	Apr-21		0.00442	0.00946 J			<0.00124		<0.0281	<0.000849	0.00298 J			0.00878		
	MW-146	Sep-21															
	MW-146	Sep-21	FD														
	MW-146	Apr-22		0.00407	0.00859			0.00155 JB		0.0468 J	<0.000849	<0.000704			0.00674		
	MW-146	Apr-22	FD	0.00400	0.00990			<0.00124		0.0893 J	<0.000849	0.00175 J			0.00645		
	MW-146	Oct-22															
	MW-146	Oct-22	FD														
	MW-147	Oct-20															
	MW-147	Apr-21		0.00243	0.00895 J			<0.00124		<0.0281	<0.000849	0.00731 B			0.0187		
	MW-147	Sep-21															
	MW-147	Apr-22		0.00256	0.00814			<0.00124		<0.0281	<0.000849	0.00179 J			0.0168		
	MW-147	Oct-22															
	MW-148	Oct-20															
	MW-148	Apr-21		0.00236	0.00946 J			<0.00124		<0.0281	<0.000849	0.00290 J			0.0104		
	MW-148	Sep-21															
	MW-148	Apr-22		0.00263	0.0108			0.00178 JB		0.0520 J	<0.000849	0.00382 J			0.0100		
	MW-148	Oct-22															
	RA-4196	Apr-19															
	RA-4196	Oct-19															
	RA-4196	Jun-20															
	RA-4196	Oct-20															
	RA-4798	Jun-20															
	RA-4798	Oct-20															
	RA-4798	Apr-21															
	RA-4798	Sep-21															
	RA-4798	Apr-22															
	RW-12R	Apr-17		0.000617 J	0.0410			0.0230		<0.0150	0.000776 J	**0.425**			0.000720 JB		
	RW-12R	Apr-18		<0.00125	0.0341			0.00339 J		<0.0750	<0.00120	**0.760**			<0.00190		
	RW-12R	Apr-19		<0.000250	0.0317 O1			0.00286		<0.0150	0.000497 JB	**1.20 O1V**			<0.000380		
	RW-12R	Jun-20		<0.000735	0.0348			0.0266		<0.0489	<0.00249	**1.41**			<0.000657		
	RW-13R	Apr-16		0.00890 J	0.0888			<0.00270		0.470 J	<0.00120	**1.36**			<0.00190		
	RW-13R	Apr-18		<0.00125	0.0490			<0.00270		0.352 J	<0.00120	**1.03**			<0.00190		
	RW-18A	Apr-17		0.00331	0.0105			<0.000540		0.0200 J	<0.000240	0.00103 J			0.00340		
	RW-18A	Apr-18		0.00355	0.0118			<0.000540		<0.0150	<0.000240	0.00395 J			0.00389		
	RW-18A	Apr-19		0.00289	0.0116			<0.000540		<0.0150	<0.000240	0.00167 JB			0.00404		
	RW-18A	Jun-20		0.00253	0.0103 J			<0.00149		0.0508 J	<0.00249	0.00789			0.00517		
	RW-20	Apr-15		0.00171 J	0.464			<0.000540		0.270	<0.000240	**0.717**			0.00488		
	RW-22	Apr-15		<0.00250	0.802			<0.00540		0.394 J	0.00305 J	**0.886**			0.0326		
TCN	MW-18	Apr-19		0.00296	0.0180	**1.56**	<0.000160	0.00272 B	<0.000260	<0.0150	0.000333 J	0.00172 JB	<0.0000490	0.00142 J	0.0154	0.0255	0.0159
	MW-18	Jun-20		0.00297	0.0128 J	**2.49**	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.0131	<0.000100	0.00166 J	0.00785	**0.0442**	0.0181
	MW-18	Apr-21		0.00270	0.0120 J	**2.32**	<0.000150	<0.00124	0.000105 J	<0.0281	<0.000849	0.0171	<0.000100	0.00237	0.00464	**0.0440**	0.0187
	MW-18	Apr-22		0.00274	0.0117	**2.17**	<0.000150	<0.00124	<0.0000596	<0.0281	<0.000849	0.0178	<0.000100	0.00189 J	0.00410	**0.0433**	0.0190
	MW-45	Jun-20		0.00386	0.0132 J	0.566	<0.000478	<0.00149	<0.000477	0.967	<0.00249	**0.502**	<0.000100	0.00643	<0.000657	<0.00754	<0.000986
	MW-45	Oct-20															
	MW-45	Apr-21		0.00421	0.0168 J	0.574	<0.000150	0.00216	0.00112 J	0.0468 J	0.00156 J	**0.695**	<0.000100	0.00963	0.000476 J	0.00184 J	0.000803 J
	MW-45	Sep-21															
	MW-45	Apr-22		0.00388	0.0127	0.571	<0.000150	<0.00124	0.000303 J	0.876	<0.000849	**0.620**	<0.000100	0.00733 B	0.000368 J	0.000739 J	0.00139 JB
	MW-45	Oct-22															
	MW-53	Apr-16		0.00166 J	0.0246 J			<0.00270		<0.0750	<0.00120	**0.605**			0.00498 J		
	MW-53	Apr-17		0.00162 J	0.0210			<0.000540		<0.0150	<0.000240	**1.50**			0.00293		
	MW-53	Apr-18		0.00144 J	0.0197			<0.000540		<0.0150	<0.000240	**0.437**			0.00109 J		
	MW-53	Apr-19		0.00170 J	0.0153			<0.000540		0.0285 JB	<0.000240	**0.380**			0.000569 J		
	MW-53R	Oct-20															
	MW-53R	Apr-21		0.00155 J	0.0241			<0.00124		<0.0281	<0.000849	**0.430**			<0.000300		
	MW-53R	Apr-22		0.00179 J	0.0186			<0.00124		<0.0281	<0.000849	**0.455**			<0.000300		
	MW-54A	Jun-20		0.00496	0.0159 J			<0.00149		0.0929 J	<0.00249	**0.633**			<0.000657		
	MW-54A	Oct-20															
	MW-54A	Apr-21		0.00363	0.0151 J			0.00177 J		0.0541 J	<0.000849	**0.700**			<0.000300		
	MW-54A	Sep-21															
	MW-54A	Apr-22		0.00414	0.0158			<0.00124		0.0670 J	<0.000849	**0.784**			0.000356 J		
	MW-54A	Oct-22															
	MW-54B	Apr-15		0.00205	0.0150			<0.000540		0.0456 J	<0.000240	0.164			0.00289		
	MW-54B	Apr-17		0.00173 J	0.0168			<0.000540		<0.0150	<0.000240	**0.246**			0.000795 J		
	MW-54B	Apr-19		0.00210	0.0158			<0.000540		<0.0150	0.000281 JB	**0.211**			0.000505 J		
	MW-54B	Apr-21		0.00185 J	0.0171 J			0.00150 J		<0.0281	<0.000849	**0.512**			0.000332 J		
	MW-55	Jun-20		0.00696	0.0122 J	**0.985**	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.166	<0.000100	0.00645	0.000735 J	**0.0513**	0.0214
	MW-55	Oct-20															
	MW-55	Apr-21		0.00628	0.0140 J	0.644	<0.000150	<0.00124	0.000223 J	<0.0281	0.00144 J	0.171	<0.000100	0.00638	0.000882 J	0.0292	0.0191
	MW-55	Sep-21															
	MW-55	Apr-22		0.00679	0.0158	0.555	0.000499 J	<0.00124	0.000849 J	<0.0281	<0.000849	**0.206**	<0.000100	0.00603	0.00174 J	0.0188	0.0182
	MW-55	Oct-22															

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
NCL	MW-56	Apr-19		0.00597	0.0107			<0.000540		<0.0150	0.000471 JB	**0.328**			0.000934 J		
	MW-56	Jun-20		0.00665	0.0113 J			<0.00149		<0.0489	<0.00249	**0.342**			<0.000657		
	MW-56	Apr-21		0.00538	0.0117 J			<0.00124		<0.0281	0.00128 J	**0.274**			0.00185 J		
	MW-56	Apr-22		0.00541	0.00912			0.00155 J		<0.0281	<0.000849	**0.207**			0.00135 J		
	MW-108	Jun-20		0.00121 J	0.0427			<0.00149		<0.0489	<0.00249	0.0364			<0.000657		
	MW-108	Oct-20															
	MW-108	Apr-21		0.00113 J	0.0658			<0.00124		0.111	<0.000849	**0.238**			<0.000300		
	MW-108	Sep-21															
	MW-108	Apr-22		0.000635 J	0.0451			<0.00124		<0.0281	<0.000849	0.0409			<0.000300		
	MW-108	Oct-22															
	NCL-31	Jun-20		**0.0135**	0.0116 J			<0.00149		0.720	<0.00249	**2.31**			<0.000657		
	NCL-31	Oct-20															
	NCL-31	Apr-21		0.00381	0.0158 J			<0.00124		0.0411 J	<0.000849	**1.45**			<0.000300		
	NCL-31	Sep-21															
	NCL-31	Apr-22		**0.0115**	0.0153			<0.00124		0.503	0.00224	**1.56**			0.000671 J		
	NCL-31	Oct-22															
	NCL-32	Jun-20		0.00233	0.0169 J			<0.00149		<0.0489	<0.00249	**1.31**			0.00326		
	NCL-32	Oct-20															
	NCL-32	Apr-21		0.00191 J	0.0141 J			<0.00124		<0.0281	<0.000849	**1.55**			0.00214		
	NCL-32	Sep-21															
	NCL-32	Apr-22		0.00284	0.0159			<0.00124		<0.0281	<0.000849	**1.35**			0.00279		
	NCL-32	Oct-22															
	NCL-33	Jun-20		0.00369	0.0263			<0.00149		**2.79**	<0.00249	**0.205**			0.00192 J		
	NCL-33	Oct-20															
	NCL-33	Apr-21		0.00421	0.0197 J			<0.00124		<0.0281	<0.000849	0.177			0.00143 J		
	NCL-33	Sep-21															
	NCL-33	Apr-22		0.00575	0.0199			<0.00124		**2.85**	<0.000849	0.157			0.00128 J		
	NCL-33	Oct-22															
	NCL-34A	Oct-18															
	NCL-34A	Apr-19		0.000603 J	0.947			<0.000540		<0.0150	<0.000240	0.0159			<0.000380		
	NCL-34A	Oct-19															
	NCL-34A	Jun-20		<0.000735	0.229			<0.00149		<0.0489	<0.00249	0.0415			<0.000657		
	NCL-44	Jun-20		**0.0273**	0.0214			<0.00149		0.787	<0.00249	**0.905 V**			<0.000657		
	NCL-44	Oct-20															
	NCL-44	Apr-21		**0.0125**	0.0176 J			<0.00124		<0.0281	<0.000849	**0.732**			<0.000300		
	NCL-44	Sep-21															
	NCL-44	Apr-22		**0.0168**	0.0180			<0.00124		0.660	<0.000849	**0.794**			<0.000300		
	NCL-44	Oct-22															
	NCL-49	Jun-20		0.00149 J	0.0135 J			<0.00149		<0.0489	<0.00249	0.00448 J			0.00782		
	NCL-49	Jun-20	FD	0.00165 J	0.0138 J			<0.00149		<0.0489	<0.00249	0.00492 J			0.00785		
	NCL-49	Oct-20															
	NCL-49	Oct-20	FD														
	NCL-49	Apr-21		0.00149 J	0.0121 J			<0.00124		<0.0281	<0.000849	<0.000704			0.00981		
	NCL-49	Apr-21	FD	0.00146 J	0.0118 J			<0.00124		<0.0281	<0.000849	<0.000704			0.00959		
	NCL-49	Sep-21															
	NCL-49	Sep-21	FD														
	NCL-49	Apr-22		0.00149 J	0.0121			<0.00124		0.0413 J	<0.000849	0.00126 J			0.0103		
	NCL-49	Apr-22	FD	0.00146 J	0.0113			<0.00124		<0.0281	<0.000849	<0.000704			0.0108		
	NCL-49	Oct-22															
	NCL-49	Oct-22	FD														
North Refinery	MW-23	Apr-19		0.00417	**7.78**			<0.000540		<0.0150	0.000775 J	0.0646			0.000900 J		
	MW-23	Oct-19															
	MW-23	Jun-20		0.00639	**9.73**			<0.00149		<0.0489	<0.00249	0.0725			<0.000657		
	MW-23	Oct-20															
	MW-29	Jun-20		0.00598	0.0170 J			<0.00149		<0.0489	<0.00249	**0.249**			0.00119 J		
	MW-29	Oct-20															
	MW-29	Apr-21		**0.0165**	0.0204			<0.00124		0.217	<0.000849	**0.456**			0.00192 J		
	MW-29	Sep-21															
	MW-29	Apr-22		0.00923	0.0189			<0.00124		0.373	<0.000849	**0.381**			0.00397		
	MW-29	Oct-22															
	MW-39	Apr-19		0.00759	0.0118			<0.000540		<0.0150	<0.000240	0.0227			0.000391 J		
	MW-39	Oct-19															
	MW-39	Jun-20		0.00754	0.0141 J			<0.00149		<0.0489	<0.00249	0.0417			<0.000657		
	MW-39	Oct-20															
	MW-40	Apr-17		0.00103 J	0.0255			<0.000540		<0.0150	<0.000240	0.0249			<0.000380		
	MW-40	Apr-18		0.00213	0.0247			0.0314		0.143	0.00213	0.0190			0.00164 J		
	MW-40	Apr-19		0.000780 J	0.0199			<0.000540		<0.0150	<0.000240	0.0133			<0.000380		
	MW-40	Jun-20		<0.000735	0.0204			<0.00149		<0.0489	<0.00249	0.0260			<0.000657		
	MW-41	Apr-18		0.00774	0.0206			0.00773		0.0416 J	0.000558 J	**0.996**			0.000464 J		
	MW-41	Apr-19		0.00703	0.0275			<0.000540		<0.0150	0.000393 JB	**0.819**			<0.000380		
	MW-41	Jun-20		**0.0101**	0.0175 J			<0.00149		<0.0489	<0.00249	**0.838**			<0.000657		
	MW-41	Apr-21		**0.0207**	0.0219			<0.00124		0.0325 J	<0.000849	**0.748**			0.000712 J		
	MW-42	Apr-19		0.00472	0.0201			<0.000540		<0.0150	<0.000240	0.104			<0.000380		
	MW-42	Jun-20		0.00551	0.0189 J			<0.00149		<0.0489	<0.00249	0.156			<0.000657		
	MW-42	Apr-21		0.00879	0.0186 J			<0.00124		0.0415 J	<0.000849	**0.340**			<0.000300		
	MW-42	Apr-22		0.00753	0.0194			<0.00124		0.247	<0.000849	0.195			0.000334 J		
	MW-43	Apr-19		0.00728	0.435	**1.11**	<0.000160	<0.000540	<0.000260	<0.0150	0.000341 J	0.159	<0.0000490	0.00605	0.000682 J	<0.000330	0.000959 J
	MW-43	Oct-19															
	MW-43	Jun-20		0.00613	0.413	**0.790**	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	**0.297**	<0.000100	0.00507	<0.000657	<0.00754	0.00336 J
	MW-43	Oct-20															
	MW-59	Apr-17		**0.0260**	0.0210			<0.000540		0.0343 J	<0.000240	**0.468**			0.000557 JB		
	MW-59	Apr-18		**0.0223**	0.0246			<0.000540		0.0876 JB	0.000405 JB	**0.427**			<0.000380		
	MW-59	Apr-19		**0.0215**	0.0190			<0.000540		<0.0150	<0.000240	**0.374**			<0.000380		
	MW-59	Jun-20		**0.0357**	0.0178 J			<0.00149		0.0695 J	<0.00249	**0.364**			<0.000657		
	MW-60	Jun-20		0.00557	0.0188 J	0.454	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	**0.240**	<0.000100 J6	0.00164 J	<0.000657	<0.00754	<0.000986
	MW-60	Jun-20	FD	0.00547	0.0186 J	0.448	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	**0.241**	<0.000100	0.00123 J	<0.000657	<0.00754	<0.000986
	MW-60	Oct-20															
	MW-60	Oct-20	FD														
	MW-61	Jun-20		0.00315	0.0464			<0.00149		<0.0489	0.00263 J	0.0207			<0.000657		
	MW-61	Oct-20															
	MW-61	Apr-21		0.00413	0.0451			<0.00124		<0.0281	0.00204	0.0239			<0.000300		
	MW-61	Sep-21															
	MW-61	Apr-22		0.00281	0.0531			0.00253		<0.0281	0.00372	0.0270			<0.000300		
	MW-61	Oct-22															
	MW-62	Jun-20		**0.0450**	0.0562			<0.00149		<0.0489	<0.00249	0.00690			<0.000657		
	MW-62	Oct-20															
	MW-62	Sep-21															
	MW-62	Apr-22		**0.0543**	0.0386			0.00129 J		0.0360 J	<0.000849	0.00600			0.000409 J		
	MW-62	Oct-22															
	MW-62R	Oct-20															
	MW-62R	Apr-21		**0.0593**	**3.66**			<0.00124		0.0788 J	<0.000849	**0.232**			<0.000300		
	MW-62R	Apr-22		**0.0941**	0.793			<0.00124		<0.0281	<0.000849	0.00696			<0.000300		
	MW-67	Oct-17															
	MW-67	Apr-18		0.00676	0.0921	0.470	<0.000160	0.000938 J	<0.000260	<0.0150	0.000391 J	0.0930	<0.0000490	0.000912 J	<0.000380	<0.000330	0.000590 J
	MW-67	Oct-18															
	MW-67	Apr-19		0.00778	0.0907	0.408	<0.000160	0.000857 J	<0.000260	<0.0150	0.000639 J	0.0930	<0.0000490	0.00233	<0.000380	<0.000330	0.000472 J

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
North Refinery	MW-90	Jun-20		0.00285	0.0146 J			<0.00149		0.273	<0.00249	0.0892			<0.000657		
	MW-90	Oct-20															
	MW-90	Apr-21		0.00744	0.0167 J			<0.00124		<0.0281	<0.000849	0.101			0.000531 J		
	MW-90	Sep-21															
	MW-90	Apr-22		0.00577	0.0255			0.00128 J		0.0389 J	<0.000849	0.0451			0.000568 J		
	MW-90	Oct-22															
	MW-91	Oct-18															
	MW-91	Apr-19		0.00427	0.0470			0.000589 J		<0.0150	0.00196 J	0.00753			0.0188		
	MW-91	Oct-19															
	MW-91	Jun-20		0.00555	0.0603			<0.00149		<0.0489	0.00498 J	0.00244 J			<0.000657		
	MW-92	Apr-16		0.00285 J	**3.57**			<0.00270		0.217 J	<0.00120	0.0349			<0.00190		
	MW-92	Oct-16															
	MW-93	Apr-17		0.00375	0.0210			0.00235		0.0197 J	0.000486 J	0.0255			0.0145		
	MW-93	Apr-18		0.00554	0.0288			0.00278		<0.0150	0.000746 JB	0.0282			0.00375		
	MW-93	Apr-19		0.00774	0.0326			0.00134 J		<0.0150	0.000308 J	0.0551			0.00347		
	MW-93	Jun-20		0.00919	0.0340			0.00291		<0.0489	<0.00249	**0.213**			0.00299		
	MW-94	Oct-15															
	MW-94	Apr-16		**0.0163**	0.356			<0.00270		<0.0750	<0.00120	0.00601 J			0.0334		
	MW-94	Oct-16															
	MW-94	Apr-17		**0.0106**	0.771			0.00124 J		<0.0150	0.000343 J	0.00235 J			0.00973		
	MW-95	Apr-17		0.00162 J	0.0592			<0.000540		<0.0150	0.000323 J	0.0285			0.00164 J		
	MW-95	Apr-18		0.00135 J	0.0690			<0.000540		<0.0150	<0.000240	0.0559			0.000786 J		
	MW-95	Apr-19		0.00113 J	0.0570			0.000653 J		<0.0150	<0.000240	0.0902			0.000845 J		
	MW-95	Jun-20		0.00135 J	0.0434			<0.00149		<0.0489	<0.00249	0.151			0.000657 J		
	MW-96	Jun-20		0.00225	0.166			<0.00149		<0.0489	<0.00249	<0.00132			0.000663 J		
	MW-96	Oct-20															
	MW-96	Sep-21															
	MW-96	Apr-22		0.00208	0.279			<0.00124		<0.0281	<0.000849	0.00152 J			0.000351 J		
	MW-96	Oct-22															
	MW-98	Jun-20		0.000790 J	0.0165 J			<0.00149		<0.0489	0.00616	0.0201			<0.000657		
	MW-98	Oct-20															
	MW-98	Apr-21		0.00100 J	0.0187 J			<0.00124		<0.0281	0.00492	0.0208			<0.000300		
	MW-98	Sep-21															
	MW-98	Apr-22		0.00142 J	0.0159			0.00185 JB		<0.0281	0.00501	0.0127			0.000321 J		
	MW-98	Oct-22															
	MW-137	Oct-17															
	MW-137	Apr-18		**0.0491**	0.0727	**0.973**	<0.000160	<0.000540	<0.000260	<0.0150	0.00404	0.147	<0.000490	0.0110	0.00248	<0.000330	0.00694
	MW-137	Oct-18															
	MW-137	Apr-19		**0.0453**	0.0818	**0.971**	<0.000160	<0.000540	<0.000260	<0.0150	0.00243	0.145	<0.0000490	0.0125	0.000905 J	<0.000330	0.00708
	MW-138	Oct-17															
	MW-138	Apr-18		0.00517	0.133	**0.955**	<0.000160	<0.000540	<0.000260	<0.0150	<0.000240	0.111	<0.0000490	0.00593	<0.000380	<0.000330	0.00128 J
	MW-138	Oct-18															
	MW-138	Apr-19		0.00428	0.121	**0.878**	<0.000160	<0.000540	<0.000260	<0.0150	<0.000240	0.124	<0.0000490	0.00524	0.000668 J	<0.000330	0.000806 J
	RW-1R	Apr-16		0.00435 J	0.0367			<0.00270		**11.3**	<0.00120	**0.301**			<0.00190		
	RW-1	Apr-17		**0.0234**	0.0229			0.00338		0.184	<0.000240	**0.218**			0.00286		
	RW-1	Apr-18		0.00532	0.0308			0.000552 J		0.0584 J	0.000322 J	0.0124			0.00122 J		
	RW-1	Apr-19		0.00919	0.0308			0.00100 J		<0.0150	0.000281 J	0.00768			0.00148 J		
	RW-2	Apr-15		**0.0194**	0.0174			0.00494		0.0471 J	0.000546 J	**0.285**			0.00133 J		
	RW-2R	Apr-16		0.00883 J	0.0206 J			0.00400 JB		0.770	<0.00120	0.0466			0.00516 J		
	RW-2	Apr-17		0.00230	0.0530			0.00131 J		0.0200 J	0.000647 J	0.0157			0.0364		
	RW-2	Apr-18		0.00314	0.131			0.000882 J		<0.0150	0.000739 JB	0.0203			0.000515 J		
	RW-7	Apr-17		0.00273	0.0191			<0.000540		0.0228 J	<0.000240	**1.12**			0.00142 J		
	RW-7	Apr-18		0.00798	0.138			0.00243 B		0.0450 J	<0.000240	0.0650			0.000791 J		
	RW-7	Apr-19		**0.0145**	0.120			0.00172 J		0.0780 J	<0.000240	0.161			<0.000380		
	RW-7	Jun-20		0.00695	0.174			<0.00149		<0.0489	<0.00249	0.113			<0.000657		
	RW-8	Apr-15		0.00521	0.0797			<0.000540		0.163	0.000591 J	0.0744			<0.000380		
	RW-8	Apr-17		**0.0346**	0.0661			<0.000540		**2.13**	<0.000240	**1.14**			<0.000380		
	RW-9	Apr-19		0.00295	0.0400			<0.000540		<0.0150	0.000632 J	**0.474**			0.000477 J		
	RW-9	Jun-20		0.00428	0.0370			<0.00149		<0.0489	<0.00249	**0.354**			<0.000657		
	RW-9	Apr-21		0.00464	0.0342			<0.00124		<0.0281	<0.000849	**0.327**			<0.000300		
	RW-9	Apr-22		0.00487	0.0310			<0.00124		<0.0281	<0.000849	**0.311**			0.000330 J		
	RW-10	Apr-18		0.00191 J	0.0220			<0.000540		<0.0150	0.000521 J	0.181			<0.000380		
	RW-10	Apr-19		0.00140 J	0.0176			<0.000540		<0.0150	<0.000240	0.175			<0.000380		
	RW-10	Jun-20		0.00387	0.0192 J			<0.00149		<0.0489	<0.00249	0.175			<0.000657		
	RW-10	Apr-21		0.00529	0.0208			<0.00124		<0.0281	<0.000849	0.142			<0.000300		
	RW-16B	Apr-17		**0.0133**	0.0126			0.000989 J		<0.0150	<0.000240	**0.264**			0.00535		
	RW-16B	Apr-18		0.00858	0.0130			0.000761 JB		<0.0150	<0.000240	0.194			0.00691		
	RW-16B	Apr-19		**0.0126**	0.0153			<0.000540		<0.0150	0.000673 JB	**0.458**			0.00910		
	RW-16B	Jun-20		**0.0242**	0.0195 J			<0.00149		0.100	<0.00249	0.0546			**0.0777**		
	RW-17A	Apr-17		**0.0109**	0.0213			<0.000540		<0.0150	0.00763	**0.711**			0.00945		
	RW-17A	Apr-18		**0.0102**	0.0217			0.000940 J		<0.0150	0.00688	**0.748**			0.00305		
	RW-17A	Apr-19		**0.0150**	0.0225			0.00152 J		<0.0150	0.00301	**0.810**			<0.000380		
	RW-17A	Jun-20		**0.0156**	0.0199 J			0.00187 J		<0.0489	0.00270 J	0.118			0.0157		
North RO Field	MW-117	Jun-20		0.00262	0.00934 J			<0.00149		<0.0489	<0.00249	0.00162 J			0.00942		
	MW-117	Oct-20															
	MW-117	Apr-21		0.00263	0.0105 J			0.00129 J		<0.0281	<0.000849	0.00408 J			0.0142		
	MW-117	Sep-21															
	MW-117	Apr-22		0.00353	0.00961			<0.00124		<0.0281	<0.000849	0.00305 J			0.00676		
	MW-117	Oct-22															
	MW-118	Jun-20		0.00796	0.0116 J			<0.00149		<0.0489	<0.00249	<0.00132			0.0125		
	MW-118	Oct-20															
	MW-118	Apr-21		0.00732	0.0103 J			<0.00124		<0.0281	<0.000849	<0.000704			0.0133		
	MW-118	Sep-21															
	MW-118	Apr-22		0.00614	0.00971			<0.00124		0.0339 J	<0.000849	<0.000704			0.0137		
	MW-118	Oct-22															
	MW-119	Jun-20		0.00370	0.00958 J			<0.00149		<0.0489	<0.00249	0.00646			0.00484		
	MW-119	Oct-20															
	MW-119	Apr-21		0.00435	0.00901 J			<0.00124		<0.0281	<0.000849	0.00426 J			0.00488		
	MW-119	Sep-21															
	MW-119	Apr-22		0.00393	0.00896			<0.00124		<0.0281	<0.000849	0.00231 J			0.00532		
	MW-119	Oct-22															
South Refinery	KWB-2R	Apr-17		0.00326	0.0234			<0.000540		0.517	0.000733 J	**0.665**			<0.000380		
	KWB-2R	Oct-17															
	KWB-2R	Apr-19		0.00135 J	0.0293			<0.000540		<0.0150	0.000322 J	**0.593**			0.000416 J		
	KWB-2R	Oct-19															
	KWB-5	Oct-17															
	KWB-5	Apr-18		**0.0152**	**3.15**			0.00359		**1.89**	<0.000240	**1.14**			<0.000380		
	KWB-5	Oct-18															
	KWB-5	Apr-19		**0.0197**	**3.24**			<0.000540		0.0820 J	0.00106 J	**1.57**			<0.000380		
	KWB-6	Apr-17		0.00449	0.140			<0.000540		<0.0150	<0.000240	**1.98**			0.000450 J		
	KWB-6	Oct-17															
	KWB-6	Apr-18		0.00437	0.0911			<0.000540		0.103	0.000429 J	**1.51**			<0.000380		
	KWB-6	Oct-18															

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCClrr	WQCClrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCClrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
South Refinery	MW-28	Apr-19		0.00520	0.0488	**1.43**	<0.000160	<0.000540	<0.000260	<0.0150	0.00181 J	0.0672	<0.0000490	0.00359	0.000720 J	<0.000330	0.00104 J
	MW-28	Oct-19															
	MW-28	Jun-20		0.00684	0.0421	**1.35**	<0.000478	<0.00149	<0.000477	0.0711 J	<0.00249	**0.743**	<0.000100	0.00559	<0.000657	<0.00754	0.00388 J
	MW-28	Oct-20															
	MW-48	Apr-18		0.00747	1.97			<0.000540		<0.0150	0.000847 J	0.154			0.000669 J		
	MW-48	Oct-18															
	MW-48	Apr-19		0.00380	1.04			<0.000540		<0.0150	0.000304 J	**0.407**			0.000451 J		
	MW-48	Oct-19															
	MW-50	Jun-20		0.00399	0.0125 J			<0.00149		0.253	<0.00249	**0.621**			0.0354		
	MW-50	Oct-20															
	MW-50	Apr-21		0.00582	0.0143 J			0.0376		0.182	<0.000849	**0.903**			0.000453 J		
	MW-50	Sep-21															
	MW-50	Apr-22		0.00327	0.0111			<0.00124		0.101	<0.000849	**0.516**			0.0135		
	MW-50	Oct-22															
	MW-52	Jun-20		0.00379	0.0136 J	**0.792**	<0.000478	<0.00149	0.000478 J	<0.0489	<0.00249	0.0738	<0.000100	0.0252	0.00633	0.0123 J	0.0251
	MW-52	Oct-20															
	MW-52	Apr-21		0.00400	0.0117 J	**0.776**	<0.000150	<0.00124	0.000656 J	<0.0281	<0.000849	0.0239	<0.000100	0.0329	0.00352	0.0119 J	0.0262
	MW-52	Sep-21															
	MW-52	Apr-22		0.00365	0.0110	**0.771**	<0.000150	<0.00124	0.000885 J	<0.0281	<0.000849	0.0703	<0.000100	0.0444	0.00316	0.00941	0.0280
	MW-52	Oct-22															
	MW-64	Jun-20		**0.0247**	**2.27 O1V**			<0.00149		<0.0489	<0.00249	0.0932			<0.000657 J5		
	MW-64	Oct-20															
	MW-64	Apr-21		**0.0247**	1.98			<0.00124		0.0507 J	<0.000849	0.119			<0.000300		
	MW-64	Sep-21															
	MW-64	Apr-22		**0.0252**	**2.29**			<0.00124		<0.0281	0.000880 J	0.0616			<0.000300		
	MW-64	Oct-22															
	MW-65	Apr-18		**0.0108**	**2.75**			0.00329		**1.52**	0.000368 J	**0.559**			<0.000380		
	MW-65	Oct-18															
	MW-65	Apr-19		0.00653	1.71			<0.000540		0.0315 J	<0.000240	**0.456**			<0.000380		
	MW-65	Oct-19															
	MW-66	Oct-19															
	MW-66	Jun-20		0.00213	1.92	0.263	<0.000478	<0.00149	<0.000477	0.615	<0.00249	**0.303**	<0.000100	0.00624	<0.000657	<0.00754	0.00117 J
	MW-66	Oct-20															
	MW-66	Apr-21		0.00298	**2.09**	0.306	<0.000150	<0.00124	0.000148 J	0.0670 J	0.00119 JB	**0.361**	<0.000100	0.0115	<0.000300	<0.0000700	0.000757 J
	MW-99	Oct-18															
	MW-99	Apr-19		0.00720	0.375 V			<0.000540		<0.0150	<0.000240	**0.219 V**			<0.000380		
	MW-99	Oct-19															
	MW-99	Jun-20		0.00295	0.207			0.00258		0.169	<0.00249	**0.227**			0.000815 J		
	MW-101	Jun-20		**0.0487**	0.0614			<0.00149		0.623	<0.00249	**1.18**			<0.000657		
	MW-101	Oct-20															
	MW-101	Apr-21		0.00275	0.164			<0.00124		0.0411 J	<0.000849	**0.687**			<0.000300		
	MW-101	Sep-21															
	MW-101	Apr-22		0.00357	0.120			<0.00124		0.0855 JB	<0.000849	**0.634**			<0.000300		
	MW-101	Oct-22															
	MW-102	Jun-20		**0.0122**	**8.83**			<0.00149		0.0939 J	0.00325 J	0.0371			<0.000657		
	MW-102	Oct-20															
	MW-102	Apr-21		**0.0164**	**7.45**			<0.00124		0.0542 J	0.00246 B	0.0432			<0.000300		
	MW-102	Sep-21															
	MW-102	Sep-21	FD														
	MW-102	Apr-22		**0.0164**	**2.52**			0.00157 J		0.0893 J	0.00360	0.0464			<0.000300		
	MW-102	Apr-22	FD	**0.0159**	**2.52**			<0.00124		<0.0281	0.00372	0.0447			<0.000300		
	MW-102	Oct-22															
	MW-102	Oct-22	FD														
	MW-103	Apr-19		0.00608	1.25			<0.000540		<0.0150	0.000544 JB	0.00173 J			<0.000380		
	MW-103	Jun-20		0.00189 J	**2.37**			<0.00149		<0.0489	<0.00249	0.00496 J			<0.000657		
	MW-103	Apr-21		0.00115 J	1.32			<0.00124		0.0758 J	0.00104 J	0.0273 B			<0.000300		
	MW-103	Apr-22		0.00218	1.67			0.00143 J		0.0343 J	0.000864 J	0.00373 J			<0.000300		
	MW-104	Jun-20		0.00145 J	0.0231			<0.00149		<0.0489	<0.00249	0.0171			<0.000657		
	MW-104	Jun-20	FD	0.00162 J	0.0224			<0.00149		<0.0489	<0.00249	0.0173			0.000700 J		
	MW-104	Oct-20															
	MW-104	Oct-20	FD														
	MW-104	Apr-21		0.00149 J	0.0215			<0.00124		<0.0281	<0.000849	0.0338			<0.000300		
	MW-104	Apr-21	FD	0.00150 J	0.0225			<0.00124		<0.0281	<0.000849	0.0360			<0.000300		
	MW-104	Sep-21															
	MW-104	Apr-22		0.00208	0.0192			0.00191 J		0.0289 J	<0.000849	0.0180			<0.000300		
	MW-104	Oct-22															
	MW-105	Jun-20		0.00881	0.923			0.00163 J		<0.0489	<0.00249	0.0799			<0.000657		
	MW-105	Oct-20															
	MW-105	Apr-21		0.00629	0.160			0.00214 B		**1.16**	<0.000849	**0.597**			0.000310 J		
	MW-105	Apr-22		**0.0132**	0.0731			0.00291		0.0611 JB	<0.000849	0.0530			<0.000300		
	MW-105	Oct-22															
	MW-106	Oct-19															
	MW-106	Jun-20		**0.0209**	0.0344			0.00176 J		<0.0489	<0.00249	0.00784			<0.000657		
	MW-106	Oct-20															
	MW-106	Apr-21		**0.0240**	0.0276			0.00156 J		<0.0281	0.00206	0.0301			0.000577 J		
	MW-107	Oct-16															
	MW-107	Apr-17		0.00128 J	**2.01**			<0.000540		0.0388 J	<0.000240	0.107			<0.000380		
	MW-107	Apr-18		0.00157 J	**2.34**			<0.000540		**4.47**	0.000418 JB	0.152			0.000426 J		
	MW-107	Apr-19		0.00139 J	**2.23**			<0.000540		0.0278 J	0.000378 J	0.163			<0.000380		
	MW-109	Jun-20		0.00310	0.0437			<0.00149		<0.0489	<0.00249	0.0675			<0.000657		
	MW-109	Oct-20															
	MW-109	Apr-21		0.00281	0.179			<0.00124		<0.0281	<0.000849	0.0688			<0.000300		
	MW-109	Sep-21															
	MW-109	Apr-22		0.00179 J	0.0793			0.00174 J		0.0300 J	0.00116 J	0.0647			<0.000300		
	MW-109	Oct-22															
	MW-110	Jun-20		**0.0355**	0.0516			<0.00149		0.876	<0.00249	**2.03**			<0.000657		
	MW-110	Oct-20															
	MW-110	Apr-21		**0.0344**	0.0465			<0.00124		<0.0281	<0.000849	**2.03**			<0.000300		
	MW-110	Sep-21															
	MW-110	Apr-22		0.00189 J	0.0610			<0.00124		0.0948 J	0.000872 J	**0.594**			<0.000300		
	MW-110	Oct-22															
	MW-139	Jun-20		0.00601	0.0349			<0.00149		0.574	<0.00249	**1.90**			<0.000657		
	MW-139	Oct-20															
	MW-139	Apr-21		0.00983	0.0329			<0.00124		0.177	0.00924	**2.27**			0.000314 J		
	MW-139	Sep-21															
	MW-139	Apr-22		0.00756	0.0278			<0.00124		0.566	<0.000849	**1.70**			<0.000300		
	MW-139	Oct-22															
	RA-313	Apr-19															
	RA-313	Jun-20															
	RA-313	Apr-21															
	RA-313	Apr-22															
	RW-4	Apr-18		0.00301	0.0675			<0.000540		<0.0150	0.000410 JB	0.0535			<0.000380		
	RW-4	Apr-19		0.00355	0.135			<0.000540		<0.0150	0.000712 J	0.0375			<0.000380		
	RW-4	Jun-20		0.00328	0.0680			<0.00149		<0.0489	<0.00249	0.124			<0.000657		
	RW-4	Apr-22		0.00546	0.0788			0.00358		0.0596 J	0.00174 J	0.195			<0.000300		

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	Well ID	Date	Dup															
South Refinery	RW-5R	Apr-15		0.00136 J	0.0275			<0.000540		0.0247 J	<0.000240	0.0167			<0.000380		
	RW-5R	Apr-16		0.00182 J	0.0307			<0.00270		0.146 J	<0.00120	0.0193 J			0.00542 J		
	RW-6	Apr-15		**0.0354**	0.857			0.000677 J		**17.5**	0.00129 J	**0.284**			<0.000380		
	RW-6R	Apr-16		**0.0615**	0.384			<0.00270		**3.37**	<0.00120	**0.537**			0.00213 J		
	RW-6	Apr-18		**0.0141**	1.90			<0.000540		**1.32**	0.000568 JB	**0.279**			0.000513 J		
	RW-6	Apr-19		0.00656	**6.17 V**			<0.000540		0.0878 J	0.000368 JP1	0.161			0.000690 J		
	RW-15C	Apr-17		**0.0306**	0.896			<0.000540		0.137	0.000501 J	**0.376**			<0.000380		
	RW-15C	Apr-18		**0.0264**	1.27 V			<0.000540		0.197	0.000585 J	**0.399**			0.000675 J		
	RW-15C	Apr-19		**0.0128**	1.61			0.00263		0.216	0.000416 J	**0.463**			0.000987 J		
South RO Field	MW-114	Jun-20		0.00334	0.0138 J			<0.00149		<0.0489	<0.00249	**0.997**			0.00352		
	MW-114	Oct-20															
	MW-114	Apr-21		0.00460	0.0131 J			<0.00124		<0.0281	<0.000849	**0.889**			0.00325		
	MW-114	Sep-21															
	MW-114	Apr-22		0.00388	0.0130			<0.00124		<0.0281	<0.000849	**0.746**			0.000549 J		
	MW-114	Oct-22															
	MW-115	Jun-20		0.00415	0.00879 J			<0.00149		<0.0489	<0.00249	0.109			0.00556		
	MW-115	Oct-20															
	MW-115	Apr-21		0.00407	0.00866 J			<0.00124		<0.0281	<0.000849	0.0444			0.00927		
	MW-115	Sep-21															
	MW-115	Apr-22		0.00458	0.00859			<0.00124		<0.0281	<0.000849	0.0405			0.00620		
	MW-115	Oct-22															
	MW-116	Jun-20		0.00285	0.00796 J			<0.00149		<0.0489	<0.00249	0.00841			0.00674		
	MW-116	Oct-20															
	MW-116	Apr-21		0.00311	0.00975 J			<0.00124		<0.0281	<0.000849	0.0105			0.00608		
	MW-116	Sep-21															
	MW-116	Apr-22		0.00283	0.00882			0.00160 JB		<0.0281	<0.000849	0.0308			0.00557		
	MW-116	Oct-22															
TEL	MW-49	Jun-20		0.00575	0.0545	0.664	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.185	<0.000100	0.00770	<0.000657	<0.00754	<0.000986
	MW-49	Oct-20															
	MW-49	Apr-21		0.00551	0.0465	0.695	<0.000150	<0.00124	0.000177 J	0.0660 J	0.000955 J	**0.279**	<0.000100	0.0104	<0.000300	<0.0000700	<0.000664
	MW-49	Sep-21															
	MW-49	Apr-22		0.00463	0.0480	0.714	<0.000150	0.00247	<0.0000596	0.0644 JB	<0.000849	0.189	<0.000100	0.00954 B	<0.000300	<0.0000789	0.00165 JB
	MW-49	Oct-22															
	TEL-1	Oct-18															
	TEL-1	Apr-19		**0.0128**	0.0196			0.00285		0.0400 JB	<0.000240	0.0405			<0.000380		
	TEL-1	Oct-19															
	TEL-1	Jun-20		**0.0134**	0.0162 J			0.00317		0.113	<0.00249	0.0390			<0.000657		
	TEL-2	Oct-18															
	TEL-2	Apr-19		0.00309	0.0191			0.00660		0.0268 JB	<0.000240	0.0153			<0.000380		
	TEL-2	Oct-19															
	TEL-2	Jun-20		0.00940	0.0307			<0.00149		<0.0489	<0.00249	0.0377			<0.000657		
	TEL-3	Apr-18		0.00964	0.0219			0.0263		0.0526 J	0.000337 J	0.00609			0.000457 J		
	TEL-3	Apr-19		0.00129 J	0.0138			0.00225		0.0489 JB	<0.000240	**1.09**			<0.000380		
	TEL-3	Oct-19															
	TEL-3	Oct-20															
	TEL-4	Jun-20		0.00668	0.0183 J			0.00662		0.151	<0.00249	**1.35**			<0.000657		
	TEL-4	Jun-20	FD	0.00635	0.0173 J			0.00568		0.157	<0.00249	**1.24 V**			<0.000657		
	TEL-4	Oct-20															
	TEL-4	Oct-20	FD														
	TEL-4	Apr-21		**0.0112**	0.0163 J			0.0402		<0.0281	<0.000849	**1.49**			0.000523 J		
	TEL-4	Apr-21	FD	**0.0113**	0.0174 J			0.0372		0.0401 J	<0.000849	**1.49**			0.000460 J		
	TEL-4	Sep-21															
	TEL-4	Sep-21	FD														
	TEL-4	Apr-22		0.00460	0.0121			0.0149		0.0545 J	<0.000849	**0.776**			<0.000300		
	TEL-4	Apr-22	FD	0.00437	0.0129			0.0157		0.0544 J	<0.000849	**0.776**			<0.000300		
	TEL-4	Oct-22															
	TEL-4	Oct-22	FD														
Three Mile Ditch	MW-8	Apr-19		0.00632	0.0131			0.00102 J		<0.0150	0.000287 JB	**0.654**			0.0198		
	MW-8	Jun-20		0.00646	0.0155 J			<0.00149		<0.0489	<0.00249	**0.730**			**0.0566**		
	MW-8	Apr-21		0.00567	0.0158 J			<0.00124		<0.0281	<0.000849	**0.350**			**0.0537**		
	MW-8	Apr-22		0.00541	0.0129			<0.00124		<0.0281	<0.000849	**0.318**			**0.0742**		
	MW-16	Apr-19		0.00510	0.0128			0.000722 J		<0.0150	<0.000240	0.00101 J			0.00748		
	MW-16	Jun-20		0.00518	0.0137 J			<0.00149		<0.0489	<0.00249	0.0223			0.0120		
	MW-16	Apr-21		0.00499	0.0138 J			<0.00124		<0.0281	<0.000849	0.00771 B			0.00741		
	MW-16	Apr-22		0.00466	0.0140			<0.00124		<0.0281	<0.000849	0.00868			0.00805		
	MW-20	Apr-19		0.00551	0.0107			<0.000540		<0.0150	0.000540 JB	0.00500			0.00934		
	MW-20	Jun-20		0.00553	0.00949 J			<0.00149		<0.0489	<0.00249	<0.00132			0.00424		
	MW-20	Apr-21		0.00525	0.0110 J			<0.00124		<0.0281	<0.000849	0.00620			0.00663		
	MW-20	Apr-22		0.00507	0.0106			0.0106		0.0305 J	<0.000849	<0.000704			0.0105		
	MW-21	Jun-20		0.00539	0.00862 J			<0.00149		<0.0489	<0.00249	**0.245**			0.0497		
	MW-21	Oct-20															
	MW-21	Apr-21		0.00562	0.0108 J			<0.00124		<0.0281	<0.000849	0.0402			0.0346		
	MW-21	Sep-21															
	MW-21	Apr-22		0.00488	0.00851			<0.00124		<0.0281	<0.000849	0.0524			0.0478		
	MW-21	Oct-22															
	MW-25	Apr-19		0.00182 J	0.0123			<0.000540		<0.0150	0.000631 J	0.188			0.00255		
	MW-25	Jun-20		0.00200 J	0.0111 J			<0.00149		<0.0489	<0.00249	0.183			0.00208		
	MW-25	Apr-21		0.00178 J	0.0127 J			<0.00124		<0.0281	<0.000849	0.167			0.00213		
	MW-25	Apr-22		0.00356	0.0309			<0.00124		<0.0281	<0.000849	**0.870**			<0.000300		
	MW-26	Apr-19		0.00363	0.00856			0.000948 J		<0.0150	<0.000240	**0.423**			0.0233		
	MW-26	Jun-20		0.00316	0.00792 J			<0.00149		<0.0489	<0.00249	**0.255**			0.0171		
	MW-26	Apr-21		0.00271	0.0101 J			<0.00124		<0.0281	<0.000849	0.0340			0.0187		
	MW-26	Apr-22		0.00283	0.00829			<0.00124		<0.0281	<0.000849	**0.205**			0.0159		
	MW-27	Apr-19		0.00243	0.0160			<0.000540		<0.0150	<0.000240	0.0175			0.0146		
	MW-27	Jun-20		0.00219	0.0157 J			<0.00149		<0.0489	<0.00249	0.00198 J			0.0154		
	MW-27	Apr-21		0.00215	0.0170 J			<0.00124		<0.0281	<0.000849	<0.000704			0.0167		
	MW-27	Apr-22		0.00202	0.0179			<0.00124		<0.0281	<0.000849	0.00377 J			0.0160		
	MW-46R	Jun-20		0.00266	0.0102 J			<0.00149		<0.0489	<0.00249	0.0447			<0.000657		
	MW-46R	Oct-20															
	MW-46R	Apr-21		0.00203	0.0101 J			<0.00124		<0.0281	<0.000849	0.0514			0.000559 J		
	MW-46R	Sep-21															
	MW-46R	Apr-22		0.00237	0.0109			<0.00124		0.116	0.000900 J	0.0453			0.0349		
	MW-46R	Oct-22															
	MW-68	Apr-19		0.00247	0.0116			0.00161 J		<0.0150	<0.000240	0.00110 J			0.0154		
	MW-68	Jun-20		0.00243	0.0159 J			<0.00149		<0.0489	<0.00249	<0.00132			0.0319		
	MW-68	Apr-21		0.00263	0.0138 J			<0.00124		<0.0281	<0.000849	<0.000704			0.0210		
	MW-68	Apr-22		0.00226	0.0119			<0.00124		<0.0281	<0.000849	<0.000704			0.0229		
	MW-71	Apr-19		0.00354	0.00909	0.216	<0.000160	0.000984 J	<0.000260	<0.0150	0.000281 JB	0.00267 J	<0.0000490 J6	0.00401	0.0315	**0.0626**	0.0235
	MW-71	Jun-20		0.00372	0.00839 J	0.620	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	<0.00132	<0.000100	0.00119 J	0.0300	**0.0673**	0.0247
	MW-71	Apr-21		0.00349	0.00977 J	0.659	<0.000150	<0.00124	0.000130 J	<0.0281	<0.000849	0.00289 J	0.000100 J	0.00180 J	0.0259	**0.0629**	0.0232
	MW-71	Apr-22		0.00326	0.00808	0.643	<0.000150	<0.00124	0.0000942 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00130 J	0.0241	**0.0647**	0.0229
	MW-89	Apr-19		0.00690	0.0122			<0.000540		<0.0150	<0.000240	**0.432**			0.0314		
	MW-89	Jun-20		0.00880	0.0117 J			0.00153 J		<0.0489	<0.00249	**0.567**			0.00409		
	MW-89	Apr-21		0.00997	0.0127 J			<0.00124		<0.0281	<0.000849	**0.678**			0.00176 J		
	MW-89	Apr-22		0.00959	0.0132			<0.00124		<0.0281	<0.000849	0.197			0.00407		

Appendix B, Table B.3 - Summary of Groundwater Analytical Data - Dissolved Metals

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Dissolved Metals													
				Analyte:	Arsenic	Barium	Boron	Cadmium	Cobalt	Chromium	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Uranium	Vanadium
				CAS:	7440-38-2	7440-39-3	7440-42-8	7440-43-9	7440-48-4	7440-47-3	7439-89-6	7439-92-1	7439-96-5	7439-97-6	7440-02-0	7782-49-2	7440-61-1	7440-62-2
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0100	2.00	0.750	0.00500	0.0500	0.0500	1.00	0.0150	0.200	0.00200	0.200	0.0500	0.0300	0.0631
				CGWSL Source:	WQCC HH	WQCC HH	WQCCIrr	WQCCIrr	WQCC HH	WQCC HH	WQCC Dom	WQCC HH	WQCC Dom	WQCC HH	WQCCIrr	WQCC HH	WQCC HH	NMED TW
Area	**Well ID**	**Date**	**Dup**															
Three Mile Ditch	NP-1	Jun-20																
	NP-1	Oct-20																
	NP-1	Apr-21																
	NP-1	Sep-21																
	NP-1	Apr-22																
	NP-1	Oct-22																
	NP-6	Apr-15																
	NP-6	Apr-17																
	NP-6	Apr-19																
	NP-6	Apr-21																
Upgradient	UG-1	Apr-19		0.00123 J	0.0149	**0.794**	<0.000160	<0.000540	0.000404 J	<0.0150	0.000301 JB	0.00124 J	<0.0000490	0.00167 J	0.0125	**0.0324**	0.0133
	UG-1	Jun-20		0.00113 J	0.0141 J	0.718	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00154 J	<0.000100	0.00119 J	0.0153	**0.0390**	0.0139
	UG-1	Apr-21		0.00143 J	0.0130 J	**0.791**	<0.000150	0.00150 JB	0.000180 J	<0.0281	0.00193 J	0.00523	<0.000100	0.00323 B	0.0177	**0.0377**	0.0149
	UG-1	Apr-22		0.00151 J	0.0136	0.718	<0.000150	<0.00124	0.000110 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00135 J	0.0130	**0.0442**	0.0148
	UG-2	Apr-19		0.00200	0.0156	0.280	<0.000160	<0.000540	<0.000260	<0.0150	<0.000240	0.000681 J	<0.0000490	0.00302	0.00626	0.0147	0.0152
	UG-2	Jun-20		0.00241	0.0140 J	0.296	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00441 J	<0.000100	0.00278	0.00842	0.0166 J	0.0188
	UG-2	Apr-21		0.00215	0.0147 J	0.301	<0.000150	<0.00124	0.0000955 J	0.0679 J	0.00170 J	0.0105	<0.000100	0.00440 B	0.00700	0.0157 J	0.0196
	UG-2	Apr-22		0.00253	0.0156	0.267	<0.000150	<0.00124	0.0000840 J	<0.0281	<0.000849	0.00188 J	<0.000100	0.00272	0.00581	0.0158	0.0200
	UG-3R	Apr-19		0.00143 J	0.0165	0.332	<0.000160	<0.000540	<0.000260	<0.0150	<0.000240	0.000430 J	<0.0000490	0.000953 J	0.00264	0.0149	0.00850
	UG-3R	Jun-20		0.00132 J	0.0200	0.184 J	<0.000478	0.00240	<0.000477	<0.0489	<0.00249	0.00488 J	<0.000100	0.00177 J	0.00421	0.0166 J	0.00878
	UG-3R	Apr-21		0.00138 J	0.0236	0.187 J	<0.000150	<0.00124	0.000116 J	0.0311 J	0.00106 J	0.00707	<0.000100	0.00278 B	0.00450	0.0175 J	0.00934
	UG-3R	Apr-22		0.00145 J	0.0197	0.182 J	<0.000150	<0.00124	0.000106 J	<0.0281	<0.000849	0.00149 J	<0.000100	0.00235	0.00448	0.0278	0.00995
	UG-4	Apr-19		0.000962 J	0.0165	**1.14**	<0.000160	<0.000540	<0.000260	<0.0150	<0.000240	0.000298 J	<0.0000490	0.00109 J	0.0169	**0.0361**	0.00723
	UG-4	Jun-20		0.00112 J	0.0156 J	**1.07**	<0.000478	<0.00149	<0.000477	<0.0489	<0.00249	0.00149 J	<0.000100	0.00108 J	0.0104	**0.0359**	0.00739
	UG-4	Apr-21		0.00130 J	0.0140 J	**1.06**	<0.000150	<0.00124	0.000211 J	<0.0281	<0.000849	0.000787 J	<0.000100	0.000829 J	0.00987	**0.0358**	0.00765
	UG-4	Apr-22		0.00137 J	0.0188	0.738	<0.000150	<0.00124	0.000263 J	0.0356 J	<0.000849	0.00322 J	<0.000100	0.00137 J	0.0134	**0.0324**	0.00878

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
CGWSL Source	Source for CGWSL value (see Table 3)
Dup	Duplicate sample
FD	Field duplicate sample
mg/L	Milligrams per Liter
NMED TW	NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022, Table A-1, Tap Water Screening Level
WQCC Dom	NMED Groundwater standard for domestic exposure, 20.6.2.3103.B NMAC
WQCC HH	NMED Groundwater standard for human health exposure, 20.6.2.3103.A NMAC
WQCC Irr	NMED Groundwater standard for irrigation exposure, 20.6.2.3103.C NMAC

Lab Footnote

B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Cross-Gradient	KWB-13	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00191		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-13	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-13	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-13	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-136	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NP-5	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	0.000804 J	**<0.000380**		<0.000360	<0.000310	<0.000390
	NP-5	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	NP-5	Apr-19		<0.000385 J4	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381** J4	<0.000361	<0.000306	<0.000387
	NP-5	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-3156	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RA-3156	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-3156	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-3156	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
Evaporation Ponds	MW-1R	Apr-19		<0.000385	<0.000319 J4	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-1R	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-1R	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-1R	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-2A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-2A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-2A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-2A	Sep-21													
	MW-2A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-2A	Oct-22													
	MW-3	Jun-20		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-3	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Apr-21		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-3	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Sep-21													
	MW-3	Sep-21	FD												
	MW-3	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-3	Oct-22													
	MW-3	Oct-22	FD												
	MW-4A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-4A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000437 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-4A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000560 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-4A	Sep-21													
	MW-4A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000345 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-4A	Oct-22													
	MW-4B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-4B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-4B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-4B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5A	Sep-21													
	MW-5A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5A	Oct-22													
	MW-5B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	0.000976 J	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-5B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000499 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-5B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000414 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-5B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-5C	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-5C	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-5C	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-5C	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000433 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-6A	Apr-19		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	<0.00186		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-6A	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-6A	Apr-21		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-6A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-6B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-6B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-6B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-6B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7A	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-7B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-7B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-7B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-7B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-10	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-10	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-10	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-10	Sep-21													
	MW-10	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-10	Oct-22													
	MW-11A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-11A	Oct-20													
	MW-11A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-11A	Sep-21													
	MW-11A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-11A	Oct-22													

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

		Analyte Group:		Volatile Organic Compounds												
			Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
			CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup												
Evaporation Ponds	MW-11B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-11B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-11B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-11B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-15	Apr-19		<0.000385	<0.000319 J4	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-15	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-15	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-15	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18A	Sep-21													
	MW-18A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	0.000327 J
	MW-18A	Oct-22													
	MW-18B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-18B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-18B	Apr-19		<0.000385	<0.000319 J4	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-18B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Jun-20		<0.000147	<0.000149	0.000145 J	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000411 J		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-22A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Sep-21													
	MW-22A	Sep-21	FD												
	MW-22A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-22A	Oct-22													
	MW-22A	Oct-22	FD												
	MW-22A	Oct-22													
	MW-22A	Oct-22	FD												
	MW-22B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-22B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-22B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-22B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-70	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-70	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-70	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-70	Sep-21													
	MW-70	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-70	Oct-22													
	MW-72	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-72	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-72	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-72	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-73	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-73	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000589 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-73	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000447 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-73	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000695 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-74	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000772 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-74	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00157		**<0.000126**	<0.0000819	<0.000149	0.000124 J
	MW-74	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000857 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-74	Sep-21													
	MW-74	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00188		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-74	Oct-22													
	MW-75	Jun-20		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-75	Oct-20		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-75	Apr-21		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-75	Sep-21													
	MW-75	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-75	Oct-22													
	MW-76	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-76	Oct-20		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	0.000376 J		**<0.000126**	<0.0000819	<0.000149	0.000320 J
	MW-76	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-76	Sep-21													
	MW-76	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-76	Oct-22													
	MW-77	Apr-19		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	<0.00373		**<0.00381**	<0.00361	<0.00306	<0.00387
	MW-77	Jun-20		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-77	Apr-21		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-77	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-78	Apr-19		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	<0.00373		**<0.00381**	<0.00361	<0.00306	<0.00387
	MW-78	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-78	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-78	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-79	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-79	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-79	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-79	Sep-21													
	MW-79	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-79	Oct-22													
	MW-80	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-80	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-80	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-80	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-81	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-81	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-81	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-81	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-82	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-82	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-82	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-82	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-83	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-83	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-83	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-83	Sep-21													
	MW-83	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-83	Oct-22													
	MW-84	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-84	Oct-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-84	Apr-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-84	Sep-21													
	MW-84	Apr-22		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	0.00721 J
	MW-84	Oct-22													

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Evaporation Ponds	MW-86	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	0.0200		**<0.00252**	<0.00164	<0.00298	0.00605 J
	MW-86	Oct-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	0.0223		**<0.00252**	<0.00164	<0.00298	0.00604 J
	MW-87	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-87	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-87	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-87	Sep-21													
	MW-87	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-87	Oct-22													
	MW-88	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-88	Oct-20		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-88	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-88	Sep-21													
	MW-88	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-88	Oct-22													
	MW-120	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-120	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-120	Apr-21		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-120	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-120	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-120	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-121	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-121	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-121	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-121	Sep-21													
	MW-121	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-121	Oct-22													
	MW-122	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-122	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-122	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-122	Sep-21													
	MW-122	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-122	Oct-22													
	MW-123	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	MW-123	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-123	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-123	Sep-21													
	MW-123	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-123	Oct-22													
	MW-124	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-124	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-124	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-124	Sep-21													
	MW-124	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-124	Oct-22													
	OCD-1R	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	OCD-1R	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-1R	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-1R	Sep-21													
	OCD-1R	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-1R	Oct-22													
	OCD-2A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	OCD-2A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-2A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-2A	Sep-21													
	OCD-2A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-2A	Oct-22													
	OCD-3	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	OCD-3	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-3	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-3	Sep-21													
	OCD-3	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-3	Oct-22													
	OCD-4	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	OCD-4	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-4	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-4	Sep-21													
	OCD-4	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-4	Oct-22													
	OCD-5	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104 J4
	OCD-5	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-5	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-5	Sep-21													
	OCD-5	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-5	Oct-22													
	OCD-6	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-6	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-6	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-6	Sep-21													
	OCD-6	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-6	Oct-22													
	OCD-7AR	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000452 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-7AR	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000917 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-7AR	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000378 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-7AR	Sep-21													
	OCD-7AR	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000840 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-7AR	Oct-22													
	OCD-7B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	OCD-7B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	OCD-7B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	OCD-7B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-8A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000366 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-8A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000474 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-8A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000418 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-8A	Sep-21													
	OCD-8A	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	OCD-8A	Oct-22													
	OCD-8B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	OCD-8B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	OCD-8B	Apr-19		<0.000385	<0.000319 J4	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	OCD-8B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
Field East of Refinery	KWB-1A	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-1A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-1A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-1A	Oct-22		<0.000147	0.000158 J	<0.000133	0.000438 J	0.000275 J	<0.000188	0.0286		**<0.000126**	<0.0000819	<0.000149	0.00404
	KWB-1C	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	KWB-1C	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-1C	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-1C	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
Field East of Refinery	KWB-7	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.0876**		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-7	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00287		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-7	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.212**		**<0.000126**	<0.0000819	<0.000149	0.00556
	KWB-7	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.200**		**<0.000126**	<0.0000819	<0.000149	0.000709 J
	KWB-7	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00243		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-7	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00146		**<0.000126**	<0.0000819	<0.000149	0.000299 JB
	KWB-8	Oct-16		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.170 J**		**<0.0762**	**<0.0722**	**<0.0612**	**<0.0774**
	KWB-8	Apr-17		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	**0.380**		**<0.0381**	**<0.0361**	**<0.0306**	**0.0863 J**
	KWB-8	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.114**		**<0.000381**	<0.000361	<0.000306	0.0225
	KWB-8	Oct-20		<0.0294	<0.0298	**<0.0266**	**<0.0316**	<0.0200	**<0.0376**	**0.833**		**<0.0252**	**<0.0164**	**<0.0298**	**0.191 J**
	KWB-10R	Apr-17		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.360**		**<0.0190**	**<0.0180**	**<0.0153**	**0.0907**
	KWB-10R	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.302**		**<0.000381**	<0.000361	<0.000306	**0.0759**
	KWB-10R	Apr-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.214 J**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	KWB-10R	Oct-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.215 J**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	KWB-11A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0486		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00151		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11A	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0190	<0.00000536	**<0.000126**	<0.0000819	<0.000149	0.000835 J
	KWB-11A	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000699 J	<0.00000547	**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11B	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000210 J	<0.000149	<0.000104
	KWB-11B	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11B	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11B	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000547	**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-11B	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000270 J	<0.000149	<0.000104
	KWB-12A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12A	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000476 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12A	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-12B	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	KWB-P4	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	KWB-P4	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-P4	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-P4	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-57	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-57	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-57	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-57	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-57	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-58	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.166**		**<0.000381**	<0.000361	<0.000306	0.00130
	MW-58	Apr-18		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.574**		**<0.0190**	**<0.0180**	**<0.0153**	<0.0194
	MW-58	Oct-18		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	0.0235 J		**<0.0190**	**<0.0180**	**<0.0153**	<0.0194
	MW-58	Oct-19		<0.00385	<0.00319	<0.00130	<0.00383 J4	<0.00259	<0.00398	**0.272**		**<0.00381** J4	<0.00361	<0.00306	0.0123
	MW-111	Oct-18		<0.00962	<0.00798	<0.00325	**<0.00958**	<0.00648	**<0.00995**	<0.00932		**<0.00952**	**<0.00902**	**<0.00765**	<0.00968
	MW-111	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00243	<0.00000240	**<0.000381**	0.000871 J	<0.000306	<0.000387
	MW-111	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00437		**<0.000381**	<0.000361	<0.000306	0.000852 J
	MW-111	Jun-20		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	0.0135 J		**<0.00315**	<0.00205	<0.00373	0.00436 J
	MW-112	Nov-14		<0.00960	<0.00800	<0.00320	**<0.00960**	<0.00650	**<0.0100**	**0.350**	**<0.00950**		**<0.00900**	**<0.00760**	**0.0900**
	MW-113	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0357		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-113	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0278		**<0.000126**	0.000410 J	<0.000149	0.000589 J
	MW-113	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	**0.102**		**<0.000630**	<0.000409	<0.000745	0.00118 J
	MW-113	Oct-20	FD	<0.000147	0.000154 J	<0.000133	<0.000158	<0.000100	<0.000188	**0.114**		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-113	Apr-21		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0410		**<0.000630**	<0.000409	<0.000745	0.00273 J
	MW-113	Apr-21	FD	<0.000147 J4	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0519		**<0.000126**	<0.0000819	<0.000149	0.00345
	MW-113	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.564**	<0.00000536	**<0.00630**	<0.00409	**<0.00745**	<0.00520
	MW-113	Sep-21	FD	<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	**0.627**	<0.00000536	**<0.00315**	<0.00205	<0.00373	0.00833 J
	MW-113	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.0570**	<0.00000547	**<0.000126**	<0.0000819	<0.000149	0.000763 J
	MW-113	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0542	<0.00000552	**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-113	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.654**		**<0.000126**	<0.0000819	<0.000149	0.0131
	MW-113	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.706**		**<0.000126**	<0.0000819	<0.000149	0.0140
	MW-125	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-125	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-125	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-125	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-125	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-125	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126A	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-126A	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	0.00162
	MW-126A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126B	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126B	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000123 J	<0.000149	<0.000104
	MW-126B	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-126B	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000541	**<0.000126**	0.0000820 J	<0.000149	<0.000104
	MW-126B	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-127	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0327		**<0.000381**	<0.000361	<0.000306	0.00452
	MW-127	Apr-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	0.0375		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-127	Oct-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	0.0272		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-127	Apr-19		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	0.0399	<0.00000240	**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-128	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00233		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-128	Apr-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	<0.00746		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-128	Oct-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	<0.00746		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-128	Apr-19		<0.00770	<0.00638	<0.00260	**<0.00766** J4	<0.00518	**<0.00796**	<0.00746		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-129	Apr-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00382		**<0.000381**	<0.000361	<0.000306	0.000880 J
	MW-129	Oct-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00143		**<0.000381**	<0.000361	<0.000306	0.000479 J
	MW-129	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00101		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-129	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000452 J		**<0.000381**	<0.000361	<0.000306	<0.000387

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
Field East of Refinery	MW-130	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-130	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-130	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-130	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-130	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-130	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-131	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0137		**<0.000381**	<0.000361	<0.000306	0.00348
	MW-131	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**<0.0932**		**<0.000381**	<0.000361	<0.000306	0.00174
	MW-131	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.167**		**<0.000381**	<0.000361	<0.000306	0.0432
	MW-131	Jun-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.110**		**<0.00630**	<0.00409	**<0.00745**	0.0408 J
	MW-133	Nov-14		<0.0380	<0.0320	<0.0130	**<0.0380**	**<0.0260**	**<0.0400**	**0.280**	**<0.0380**		**<0.0360**	**<0.0310**	0.0530 J
	MW-133	Apr-15		<0.0380	<0.0319	<0.0130	**<0.0380**	**<0.0260**	**<0.0400**	**0.138**	**<0.0380**		**<0.0360**	**<0.0310**	<0.0390
	MW-134	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Apr-21	FD	<0.000147 J4	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-134	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-135	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-145	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158 J4	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Apr-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-146	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-147	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-147	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-147	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-147	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-147	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-148	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-148	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158 J4	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-148	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-148	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-148	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-4196	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RA-4196	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RA-4196	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-4196	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000876 J	<0.000149	<0.000104
	RA-4798	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.00228	<0.000149	<0.000104
	RA-4798	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000877 J	<0.000149	<0.000104
	RA-4798	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.00128	<0.000149	<0.000104
	RA-4798	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	0.00209	<0.000149	<0.000104
	RA-4798	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	0.000128 J	<0.000149	<0.000104
	RW-12R	Apr-17		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.0338		**<0.00190**	<0.00180	<0.00153	<0.00194
	RW-12R	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00448		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-12R	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	0.0102		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-12R	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00494		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RW-13R	Apr-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0443		**<0.000381**	0.000758 J	<0.000306	0.00539
	RW-13R	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0443		**<0.000381**	0.000655 J	<0.000306	0.000443 J
	RW-18A	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-18A	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-18A	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-18A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RW-20	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	**0.539**	**<0.00380**		<0.00360	<0.00310	**0.113**
	RW-22	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	**0.575**	**<0.00380**		<0.00360	<0.00310	**0.0853**
NCL	MW-18	Apr-19		<0.000385	<0.000319 J4	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-18	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-18	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-45	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-53	Apr-16		<0.000385	<0.000319	<0.000130 J4	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-53	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-53	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-53	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-53R	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-53R	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-53R	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54A	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-54B	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380**		<0.000360	<0.000310	<0.000390
	MW-54B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-54B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-54B	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-55	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-55	Oct-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-55	Apr-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-55	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-55	Apr-22		<0.00147	<0.00149 J4	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-55	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
NCL	MW-56	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-56	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-56	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-56	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-108	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0128		**<0.000630**	<0.000409	<0.000745	0.00213 J
	MW-108	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.00527		**<0.000630**	<0.000409	<0.000745	0.000782 J
	MW-108	Apr-21		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.00750		**<0.000630**	<0.000409	<0.000745	0.000774 J
	MW-108	Sep-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.00684 J	<0.00000536	**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-108	Apr-22		<0.000147	<0.000149	0.000143 J	<0.000158	<0.000100	<0.000188	0.00119	<0.00000541	**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-108	Oct-22		<0.000147	<0.000149	<0.000133	0.000652 J	0.000152 J	<0.000188	0.000811 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-31	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000542 J		**<0.000126**	<0.0000819	<0.000149	0.000195 J
	NCL-31	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000771 J		**<0.000126**	<0.0000819	<0.000149	0.000160 J
	NCL-31	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00249		**<0.000126**	<0.0000819	<0.000149	0.000458 J
	NCL-31	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000439 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-31	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	0.000623 J		**<0.000126**	<0.0000819	<0.000149	0.000135 J
	NCL-31	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000386 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-32	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000461 J		**<0.000126**	<0.0000819	<0.000149	0.000111 J
	NCL-33	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-33	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-33	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-33	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-33	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-33	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-34A	Oct-18		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	0.00612 J		**<0.00381**	<0.00361	<0.00306	<0.00387
	NCL-34A	Apr-19		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	<0.00746		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	NCL-34A	Oct-19		<0.00193	<0.00159	<0.000650 J4	<0.00192	<0.00130	<0.00199	0.00369 J		**<0.00191**	<0.00181	<0.00153	0.00207 J
	NCL-34A	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	0.0113 J		**<0.00252**	<0.00164	<0.00298	0.00286 J
	NCL-44	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-44	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-44	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-44	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-44	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-44	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Apr-22		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Apr-22	FD	<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NCL-49	Oct-22	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
North Refinery	MW-23	Apr-19		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	<0.0373		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-23	Oct-19		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	<0.00373		**<0.00381**	<0.00361	<0.00306	<0.00387
	MW-23	Jun-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-23	Oct-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-29	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-29	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-29	Apr-21		<0.000147 J4	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-29	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000151 J	<0.000149	<0.000104
	MW-29	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-29	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000205 J	0.000511 J	<0.000104
	MW-39	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0144		**<0.000381**	<0.000361	<0.000306	0.00508
	MW-39	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	0.00573		**<0.000381** J4	<0.000361	<0.000306	0.00237
	MW-39	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00959		**<0.000126**	<0.0000819	<0.000149	0.00206
	MW-39	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00377		**<0.000126**	<0.0000819	<0.000149	0.00119
	MW-40	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000538 J		**<0.000381**	<0.000361	0.000706 J	<0.000387
	MW-40	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-40	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-40	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-41	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	0.00152	<0.000387
	MW-41	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	0.00195	<0.000387
	MW-41	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	0.00389	<0.000104
	MW-41	Apr-21		<0.000147 J4	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	0.00281	<0.000104
	MW-42	Apr-19		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.0148		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-42	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0163		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-42	Apr-21		<0.000735 J4	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.00322 J		**<0.000630**	<0.000409	0.00220 J	<0.000520
	MW-42	Apr-22		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.00908		**<0.000630**	0.000571 J	<0.000745	0.00238 J
	MW-43	Apr-19		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.450**		**<0.0762**	**<0.0722**	**<0.0612**	**0.0997 J**
	MW-43	Oct-19		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.423**		**<0.0762**	**<0.0722**	**0.0867 J**	**0.128 J**
	MW-43	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.284**		**<0.00252**	<0.00164	<0.00298	0.00304 J
	MW-43	Oct-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.302**		**<0.00630**	<0.00409	**<0.00745**	<0.00520
	MW-59	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-59	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-59	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-59	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-60	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-60	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000401 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-60	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-60	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-61	Jun-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.222**		**<0.00630**	<0.00409	**<0.00745**	<0.00520
	MW-61	Oct-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.241**		**<0.00630**	<0.00409	**<0.00745**	0.0191 J
	MW-61	Apr-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.224**		**<0.00630**	<0.00409	**<0.00745**	0.0237 J
	MW-61	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.261**		**<0.00630**	<0.00409	**<0.00745**	0.0325 J
	MW-61	Apr-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.260**		**<0.00630**	<0.00409	**<0.00745**	0.0348 J
	MW-61	Oct-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.372**		**<0.00630**	<0.00409	**<0.00745**	0.0448 J
	MW-62	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.382**		**<0.00252**	<0.00164	<0.00298	**0.0782**
	MW-62	Oct-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.347**		**<0.00252**	<0.00164	<0.00298	**0.0783**
	MW-62	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**1.20**	<0.00000536	**<0.00630**	<0.00409	**<0.00745**	**0.204**
	MW-62	Apr-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**1.12**	<0.00000536	**<0.00630**	<0.00409	**<0.00745**	**0.219**
	MW-62	Oct-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.520**		**<0.00630**	<0.00409	**<0.00745**	**0.0668**

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
North Refinery	MW-62R	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.0775**		**<0.000126**	<0.0000819	<0.000149	0.0117
	MW-62R	Apr-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	0.0469 J		**<0.00630**	<0.00409	**<0.00745**	<0.00520
	MW-62R	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.0196		**<0.00126**	<0.000819	<0.00149	0.00482 J
	MW-67	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00119		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-67	Apr-18		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.00206 J		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-67	Oct-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000557 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-67	Apr-19		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	<0.00186		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-90	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-90	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-90	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-90	Sep-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-90	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-90	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-91	Oct-18		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	**0.182**		**<0.0381**	**<0.0361**	**<0.0306**	0.0510 J
	MW-91	Apr-19		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	**0.216**		**<0.0381**	**<0.0361**	**<0.0306**	0.0571 J
	MW-91	Oct-19		<0.0385	<0.0319	<0.0130	**<0.0383** J4	**<0.0259**	**<0.0398**	**0.239**		**<0.0381** J4	**<0.0361**	**<0.0306**	**0.0675 J**
	MW-91	Jun-20		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.234**		**<0.0126**	**<0.00819**	**<0.0149**	**0.0671 J**
	MW-92	Apr-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.0588**		**<0.000381**	<0.000361	<0.000306	0.0174
	MW-92	Oct-16		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	0.0308		**<0.00762**	**<0.00722**	**<0.00612**	0.00835 J
	MW-93	Apr-17		<0.00962	<0.00798	<0.00325	**<0.00958**	<0.00648	**<0.00995**	**0.148**		**<0.00952**	**<0.00902**	**<0.00765**	0.0236 J
	MW-93	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.116**		**<0.000381**	<0.000361	0.00116	0.0260
	MW-93	Apr-19		<0.000385	<0.000319	<0.000130	0.000927 J	<0.000259	<0.000398	**0.187**		**<0.000381**	<0.000361	<0.000306	0.0356
	MW-93	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.111**		**<0.00252**	<0.00164	<0.00298	0.0243
	MW-94	Oct-15		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	**0.432**	**<0.00381**		<0.00361	<0.00306	**0.0857**
	MW-94	Apr-16		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.489**		**<0.0190**	**<0.0180**	**<0.0153**	**0.100**
	MW-94	Oct-16		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	**0.458**		**<0.00190**	<0.00180	<0.00153	**0.0917**
	MW-94	Apr-17		<0.00962	<0.00798	<0.00325	**<0.00958**	<0.00648	**<0.00995**	**0.398**		**<0.00952**	**<0.00902**	**<0.00765**	**0.0785**
	MW-95	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-95	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-95	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-95	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-96	Jun-20		<0.0368	<0.0373	**<0.0333**	**<0.0395**	<0.0250	**<0.0470**	**<0.0805**		**<0.0315**	**<0.0205**	**<0.0373**	<0.0260
	MW-96	Oct-20		<0.0368	<0.0373	**<0.0333**	**<0.0395**	<0.0250	**<0.0470**	**<0.0805**		**<0.0315**	**<0.0205**	**<0.0373**	<0.0260
	MW-96	Sep-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.0116		**<0.00126**	<0.000819	<0.00149	0.00109 J
	MW-96	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.00475 J		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-96	Oct-22		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	<0.00208
	MW-98	Jun-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.646**		**<0.00630**	<0.00409	**<0.00745**	**0.110**
	MW-98	Oct-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.371**		**<0.00630**	<0.00409	**<0.00745**	**0.0820**
	MW-98	Apr-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.431**		**<0.00630**	<0.00409	**<0.00745**	**0.0924**
	MW-98	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.392**		**<0.00630**	<0.00409	**<0.00745**	**0.0923**
	MW-98	Apr-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.437**		**<0.00630**	<0.00409	**<0.00745**	**0.109**
	MW-98	Oct-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.469**		**<0.00630**	<0.00409	**<0.00745**	**0.102**
	MW-137	Oct-17		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.559**		**<0.0762**	**<0.0722**	**<0.0612**	**0.137 J**
	MW-137	Apr-18		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.531**		**<0.0762**	**<0.0722**	**<0.0612**	**0.125 J**
	MW-137	Oct-18		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.342**		**<0.0762**	**<0.0722**	**<0.0612**	**<0.0774**
	MW-137	Apr-19		<0.0770	<0.0638	**<0.0260**	**<0.0766**	**<0.0518**	**<0.0796**	**0.426**		**<0.0762**	**<0.0722**	**<0.0612**	**0.0946 J**
	MW-138	Oct-17		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.00547		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-138	Apr-18		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.0413		**<0.00190**	<0.00180	<0.00153	0.00633
	MW-138	Oct-18		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	**0.0799**		**<0.00190**	<0.00180	<0.00153	0.0121
	MW-138	Apr-19		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	**0.126**		**<0.00190**	<0.00180	<0.00153	0.0214
	RW-1R	Apr-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	0.000763 J	0.00369		**<0.000381**	<0.000361	<0.000306	0.000516 J
	RW-1	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.00373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-1	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	0.00110	0.0303		**<0.000381**	<0.000361	<0.000306	0.00550
	RW-1	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	0.00107	0.0348		**<0.000381**	<0.000361	<0.000306	0.00566
	RW-2	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	**0.330**	**<0.00380** UJ		<0.00360 UJ	<0.00310	**0.0772**
	RW-2R	Apr-16		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.188**		**<0.0190**	**<0.0180**	**<0.0153**	0.0419 J
	RW-2	Apr-17		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.271**		**<0.0190**	**<0.0180**	**<0.0153**	**0.0664**
	RW-2	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	0.00122	**0.329**		**<0.000381**	<0.000361	0.000959 J	**0.0783**
	RW-7	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-7	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00502		**<0.000381**	<0.000361	<0.000306	0.000415 J
	RW-7	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00114		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-7	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000639 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RW-8	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	0.00710 J	**<0.00380**		<0.00360	<0.00310	<0.00390
	RW-8	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.0928**		**<0.000381**	0.00343	<0.000306	0.0249
	RW-9	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-9	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000722 J		**<0.000126**	0.000218 J	0.00115	0.000313 J
	RW-9	Apr-21		<0.000147 J4	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00294		**<0.000126**	<0.0000819	0.00106	0.000584 J
	RW-9	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322	<0.00000557	**<0.00126**	<0.000819	<0.00149	<0.00104
	RW-10	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000631 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-10	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000377 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-10	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000959 J		**<0.000126**	<0.0000819	<0.000149	0.000180 J
	RW-10	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00429		**<0.000126**	<0.0000819	<0.000149	0.000850 J
	RW-16B	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-16B	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-16B	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-16B	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000398 J		**<0.000126**	<0.0000819	<0.000149	0.000156 J
	RW-17A	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-17A	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-17A	Apr-19		<0.000385 J4	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381** J4	<0.000361	<0.000306	<0.000387
	RW-17A	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
North RO Field	MW-117	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-117	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-117	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-117	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-117	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-117	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-118	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-119	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
South Refinery	KWB-2R	Apr-17		<0.000385	<0.000319	0.000160 J	<0.000383	<0.000259	<0.000398	0.0341		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-2R	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.150**		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-2R	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.148**		**<0.000381**	<0.000361	<0.000306	0.00172
	KWB-2R	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	**0.139**		**<0.000381** J4	<0.000361	<0.000306	0.00233
	KWB-5	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**<0.0932**		**<0.000381**	<0.000361	<0.000306	<0.000387
	KWB-5	Apr-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**<0.0932**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	KWB-5	Oct-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**<0.0932**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	KWB-5	Apr-19		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**<0.0932**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	KWB-6	Apr-17		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	**0.399**		**<0.00190**	0.00451 J	<0.00153	0.0517
	KWB-6	Oct-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**0.206**		**<0.000381**	<0.000361	<0.000306	0.0302
	KWB-6	Apr-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	**0.164**		**<0.00762**	**<0.00722**	**<0.00612**	0.0557
	KWB-6	Oct-18		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	**0.122**		**<0.00762**	**<0.00722**	**<0.00612**	**0.0611**
	MW-28	Apr-19		<0.0192	<0.0160	<0.00650	**<0.0192** J4	<0.0130	**<0.0199**	**0.107**		**<0.0190**	**<0.0180**	**<0.0153**	<0.0194
	MW-28	Oct-19		<0.0193	<0.0159	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.213**		**<0.0191**	**<0.0181**	**<0.0153**	0.0243 J
	MW-28	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0527		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-28	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	0.0430		**<0.000630**	<0.000409	<0.000745	0.00133 J
	MW-48	Apr-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.381**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	MW-48	Oct-18		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.377**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	MW-48	Apr-19		<0.0962	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.564**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**
	MW-48	Oct-19		<0.0963	<0.0798	**<0.0325**	**<0.0958**	**<0.0648**	**<0.0995**	**0.240 J**		**<0.0953**	**<0.0903**	**<0.0765**	**<0.0967**
	MW-50	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-50	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-50	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000114 J	<0.000149	<0.000104
	MW-50	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000688 J	<0.00000536	**<0.000126**	<0.0000819	<0.000149	0.000143 J
	MW-50	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000435 J	<0.00000584	**<0.000126**	<0.0000819	<0.000149	0.000404 J
	MW-50	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000450 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-52	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-64	Jun-20		<0.0735	<0.0745	**<0.0665**	**<0.0790**	**<0.0500**	**<0.0940**	**0.453 J**		**<0.0630**	**<0.0409**	**<0.0745**	**0.0760 J**
	MW-64	Oct-20		<0.0735	<0.0745	**<0.0665**	**<0.0790**	**<0.0500**	**<0.0940**	**0.252 J**		**<0.0630**	**<0.0409**	**<0.0745**	<0.0520
	MW-64	Apr-21		<0.0735	<0.0745	**<0.0665**	**<0.0790**	**<0.0500**	**<0.0940**	**0.436 J**		**<0.0630**	**<0.0409**	**<0.0745**	**0.0967 J**
	MW-64	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.315**		**<0.00630**	<0.00409	**<0.00745**	**0.0602**
	MW-64	Apr-22		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	**0.483**		**<0.00315**	<0.00205	<0.00373	**0.0957**
	MW-64	Oct-22		<0.0368	<0.0373	**<0.0333**	**<0.0395**	<0.0250	**<0.0470**	**0.438**		**<0.0315**	**<0.0205**	**<0.0373**	**0.0964 J**
	MW-65	Apr-18		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	<0.0373		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-65	Oct-18		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	<0.0373		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-65	Apr-19		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	<0.0373		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-65	Oct-19		<0.0385	<0.0319	<0.0130	**<0.0383** J4	**<0.0259**	**<0.0398**	<0.0373		**<0.0381** J4	**<0.0361**	**<0.0306**	<0.0387
	MW-66	Oct-19		<0.00963	<0.00797	<0.00325	**<0.00958**	<0.00648	**<0.00995**	<0.00933		**<0.00953**	**<0.00903**	**<0.00765**	<0.00968
	MW-66	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000705 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-66	Oct-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-66	Apr-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.00570 J		**<0.00126**	<0.000819	<0.00149	0.00114 J
	MW-99	Oct-18		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	**0.284**		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-99	Apr-19		<0.0385	<0.0319	<0.0130	**<0.0383** J4	**<0.0259**	**<0.0398**	**0.352**		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-99	Oct-19		<0.0385	<0.0319	<0.0130	**<0.0383**	**<0.0259**	**<0.0398**	**0.234**		**<0.0381**	**<0.0361**	**<0.0306**	<0.0387
	MW-99	Jun-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	**0.149**		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-101	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-101	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0254		**<0.000126**	<0.0000819	<0.000149	0.00284
	MW-101	Apr-21		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	<0.00208
	MW-101	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00172		**<0.000126**	<0.0000819	<0.000149	0.000333 J
	MW-101	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000845 J		**<0.000126**	<0.0000819	<0.000149	0.000556 J
	MW-101	Oct-22		<0.000147	<0.000149	0.000509 J	0.00134	<0.000100	<0.000188	0.00640		**<0.000126**	<0.0000819	0.000235 J	0.000484 J
	MW-102	Jun-20		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.0927 J**		**<0.0126**	**<0.00819**	**<0.0149**	<0.0104
	MW-102	Oct-20		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.0910 J**		**<0.0126**	**<0.00819**	**<0.0149**	0.0117 J
	MW-102	Apr-21		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.114**		**<0.0126**	**<0.00819**	**<0.0149**	<0.0104
	MW-102	Sep-21		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.131**	<0.00000536	**<0.00630**	<0.00409	**<0.00745**	0.00901 J
	MW-102	Sep-21	FD	<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.139**	<0.00000536	**<0.00630**	<0.00409	**<0.00745**	0.0110 J
	MW-102	Apr-22		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.119**	<0.00000552	**<0.00630**	<0.00409	**<0.00745**	0.0326 JB
	MW-102	Apr-22	FD	<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	**0.123**	<0.00000557	**<0.00315**	<0.00205	<0.00373	0.0192 J
	MW-102	Oct-22		<0.0368	<0.0373	**<0.0333**	**<0.0395**	<0.0250	**<0.0470**	**0.171 J**		**<0.0315**	**<0.0205**	**<0.0373**	0.0398 J
	MW-102	Oct-22	FD	<0.0368	<0.0373	**<0.0333**	**<0.0395**	<0.0250	**<0.0470**	**0.171 J**		**<0.0315**	**<0.0205**	**<0.0373**	0.0402 J
	MW-103	Apr-19		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	<0.00746		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	MW-103	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	<0.00208
	MW-103	Apr-21		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	<0.00208
	MW-103	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-104	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000486 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158 J4	<0.000100	<0.000188	0.000368 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000351 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Sep-21		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161 J4		**<0.000630**	<0.000409	<0.000745	<0.000520 J4
	MW-104	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-104	Oct-22		<0.000147	<0.000149	0.000258 J	0.00474	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-105	Jun-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	0.0443 J		**<0.00630**	<0.00409	**<0.00745**	0.0247 J
	MW-105	Oct-20		<0.00735	<0.00745	<0.00665	**<0.00790**	<0.00500	**<0.00940**	**0.0572**		**<0.00630**	<0.00409	**<0.00745**	0.0202 J
	MW-105	Apr-21		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.0594 J**		**<0.0126**	**<0.00819**	**<0.0149**	<0.0104
	MW-105	Apr-22		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	0.0444		**<0.00315**	<0.00205	<0.00373	0.00611 J
	MW-105	Oct-22		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	0.0428 J		**<0.0126**	**<0.00819**	**<0.0149**	<0.0104
	MW-106	Oct-19		<0.0193	<0.0159	<0.00650	**<0.0192**	<0.0130	**<0.0199**	**0.0848**		**<0.0191**	**<0.0181**	**<0.0153**	<0.0194
	MW-106	Jun-20		<0.0147	<0.0149	<0.0133	**<0.0158**	<0.0100	**<0.0188**	**0.0861 J**		**<0.0126**	**<0.00819**	**<0.0149**	0.0146 J
	MW-106	Oct-20		<0.0294	<0.0298	**<0.0266**	**<0.0316**	<0.0200	**<0.0376**	**0.0943 J**		**<0.0252**	**<0.0164**	**<0.0298**	<0.0208
	MW-106	Apr-21		<0.0294	<0.0298	**<0.0266**	**<0.0316**	<0.0200	**<0.0376**	**0.116 J**		**<0.0252**	**<0.0164**	**<0.0298**	<0.0208
	MW-107	Oct-16		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	0.00205 J		**<0.00190**	<0.00180	<0.00153	<0.00194
	MW-107	Apr-17		<0.0192	<0.0160	<0.00650	**<0.0192**	<0.0130	**<0.0199**	<0.0186		**<0.0190**	**<0.0180**	**<0.0153**	<0.0194
	MW-107	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00228		**<0.000381**	<0.000361	<0.000306	0.00425
	MW-107	Apr-19		<0.0962	<0.0798	**<0.0325**	**<0.0958** J4	**<0.0648**	**<0.0995**	**<0.0932**		**<0.0952**	**<0.0902**	**<0.0765**	**<0.0968**

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
South Refinery	MW-109	Jun-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-109	Oct-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-109	Apr-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-109	Sep-21		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-109	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00292		**<0.000126**	<0.0000819	<0.000149	0.00130
	MW-109	Oct-22		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	<0.00805		**<0.00315**	<0.00205	<0.00373	<0.00260
	MW-110	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00293		**<0.000126**	<0.0000819	<0.000149	0.000744 J
	MW-110	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-110	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	0.000127 J
	MW-110	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-110	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.0316		**<0.000126**	<0.0000819	<0.000149	0.00428
	MW-110	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00107		**<0.000126**	<0.0000819	<0.000149	0.000243 J
	MW-139	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-139	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-139	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-139	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-139	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-139	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-313	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	RA-313	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-313	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RA-313	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	RW-4	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.000659 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	RW-4	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	0.00105		**<0.000381**	<0.000361	<0.000306	0.000400 J
	RW-4	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000958 J		**<0.000126**	<0.0000819	<0.000149	0.000329 J
	RW-4	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00184		**<0.000126**	<0.0000819	<0.000149	0.000602 JB
	RW-5R	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	**0.298**	**<0.00380**		<0.00360	<0.00310	0.0558
	RW-5R	Apr-16		<0.00770	<0.00638	<0.00260	**<0.00766**	<0.00518	**<0.00796**	**0.437**		**<0.00762**	**<0.00722**	**<0.00612**	**0.100**
	RW-6	Apr-15		<0.00380	<0.00319	<0.00130	<0.00380	<0.00260	<0.00400	**0.134**	**<0.00380**		<0.00360	<0.00310	0.0280
	RW-6R	Apr-16		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00555		**<0.000381**	<0.000361	<0.000306	0.00111
	RW-6	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0143		**<0.000381**	<0.000361	<0.000306	0.00259
	RW-6	Apr-19		<0.00770	<0.00638	<0.00260	**<0.00766** J4	<0.00518	**<0.00796**	0.0110 J		**<0.00762**	**<0.00722**	**<0.00612**	<0.00774
	RW-15C	Apr-17		<0.00962	<0.00798	<0.00325	**<0.00958**	<0.00648	**<0.00995**	**1.46**		**<0.00952**	**<0.00902**	**<0.00765**	**0.231**
	RW-15C	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	**1.06**		**<0.000381**	<0.000361	<0.000306	**0.138**
	RW-15C	Apr-19		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	**0.728**		**<0.00381**	<0.00361	<0.00306	0.0476
South RO Field	MW-114	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-114	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-114	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000160 J	<0.000149	<0.000104
	MW-114	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	<0.0000819	<0.000149	0.000276 J
	MW-114	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000568	**<0.000126**	<0.0000819	<0.000149	0.000358 JB
	MW-114	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-115	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-115	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-115	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-115	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-115	Apr-22		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	<0.00322		**<0.00126**	<0.000819	<0.00149	<0.00104
	MW-115	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-116	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
TEL	MW-49	Jun-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.115**		**<0.00252**	<0.00164	<0.00298	0.0214
	MW-49	Oct-20		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	**0.0763**		**<0.00252**	<0.00164	<0.00298	0.0154 J
	MW-49	Apr-21		<0.00368	<0.00373	<0.00333	<0.00395	<0.00250	<0.00470	0.0527		**<0.00315**	<0.00205	<0.00373	0.0105 J
	MW-49	Sep-21		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.0403		**<0.00126**	<0.000819	<0.00149	0.00713 J
	MW-49	Apr-22		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	**0.0603**		**<0.000630**	<0.000409	<0.000745	0.00959
	MW-49	Oct-22		<0.000147	<0.000149	0.00138	0.00140	0.00191	<0.000188	**0.0719**		**<0.000126**	0.000105 J	0.000364 J	0.00818
	TEL-1	Oct-18		<0.00192	<0.00160	<0.000650	<0.00192	<0.00130	<0.00199	<0.00186		**<0.00190**	<0.00180	<0.00153	<0.00194
	TEL-1	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	0.000820 J		**<0.000381**	<0.000361	<0.000306	<0.000387
	TEL-1	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.00140		**<0.000381**	<0.000361	<0.000306	<0.000387
	TEL-1	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00114		**<0.000126**	<0.0000819	<0.000149	0.000302 J
	TEL-2	Oct-18		<0.00962	<0.00798	<0.00325	**<0.00958**	<0.00648	**<0.00995**	**0.115**		**<0.00952**	**<0.00902**	**<0.00765**	0.0165 J
	TEL-2	Apr-19		<0.00385	<0.00319	<0.00130	<0.00383 J4	<0.00259	<0.00398	**0.0639**		**<0.00381**	<0.00361	<0.00306	0.00655 J
	TEL-2	Oct-19		<0.00385	<0.00319	<0.00130	<0.00383	<0.00259	<0.00398	**0.0603**		**<0.00381**	<0.00361	<0.00306	0.00551 J
	TEL-2	Jun-20		<0.00147	<0.00149	<0.00133	<0.00158	<0.00100	<0.00188	0.0402		**<0.00126**	<0.000819	<0.00149	0.00377 J
	TEL-3	Apr-18		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0200		**<0.000381**	<0.000361	<0.000306	0.000983 J
	TEL-3	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	0.0226		**<0.000381**	<0.000361	<0.000306	<0.000387
	TEL-3	Oct-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	0.0379		**<0.000381**	<0.000361	<0.000306	<0.000387
	TEL-3	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	**0.0659**		**<0.000126**	<0.0000819	<0.000149	0.00147
	TEL-4	Jun-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	TEL-4	Jun-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000866 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	TEL-4	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	TEL-4	Oct-20	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	TEL-4	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00286		**<0.000126**	<0.0000819	<0.000149	0.000486 J
	TEL-4	Apr-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00291		**<0.000126**	<0.0000819	<0.000149	0.000488 J
	TEL-4	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00135		**<0.000126**	<0.0000819	<0.000149	<0.000104
	TEL-4	Sep-21	FD	<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.00128		**<0.000126**	<0.0000819	<0.000149	0.000193 J
	TEL-4	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000892 J		**<0.000126**	<0.0000819	<0.000149	<0.000104
	TEL-4	Apr-22	FD	<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	TEL-4	Oct-22		<0.000147	<0.000149	0.000934 J	0.00277	<0.000100	<0.000188	0.00131		**<0.000126**	<0.0000819	<0.000149	0.000124 J
	TEL-4	Oct-22	FD	<0.000147	<0.000149	0.00102	0.00244	<0.000100	<0.000188	0.00141		**<0.000126**	<0.0000819	<0.000149	0.000120 J
Three Mile Ditch	MW-8	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-8	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-8	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-8	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-16	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387 J4
	MW-16	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-16	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-16	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-20	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-20	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-20	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-20	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-21	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-21	Oct-20		<0.000735	<0.000745	<0.000665	<0.000790	<0.000500	<0.000940	<0.00161		**<0.000630**	<0.000409	<0.000745	<0.000520
	MW-21	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-21	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-21	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-21	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	1,1,1,2-Tetra-chloroethane	1,1,1-Tri-chloroethane	1,1,2,2-Tetra-chloroethane	1,1,2-Tri-chloroethane	1,1-Di-chloroethane	1,1-Di-chloroethene	1,2,4-Trimethyl-benzene	1,2-Dibromoethane (Ethylene dibromide) - 8011	1,2-Dibromoethane (Ethylene dibromide) - 8260	1,2-Di-chloroethane	1,2-Di-chloropropane	1,3,5-Trimethyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	---	0.200	0.0200	0.00500	0.0250	0.00700	0.0560	0.0000500	0.0000500	0.00500	0.00500	0.0600
				CGWSL Source:	---	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Three Mile Ditch	MW-25	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-25	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-25	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-25	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-26	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-26	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-26	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-26	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-27	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-27	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-27	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-27	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-46R	Oct-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-68	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-68	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-68	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-68	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-71	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-71	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000171 J	<0.000149	<0.000104
	MW-71	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000156 J	<0.000149	<0.000104
	MW-71	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000536	**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-89	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383 J4	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	MW-89	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-89	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	MW-89	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NP-1	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	0.000187 J	<0.000149	<0.000104
	NP-1	Oct-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	0.000430 J		**<0.000126**	<0.0000819	<0.000149	0.000104 J
	NP-1	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	NP-1	Sep-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.00805	<0.00000536	**<0.000126**	<0.0000819	<0.000149	0.000215 J
	NP-1	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322	<0.00000568	**<0.000126**	<0.0000819	<0.000149	<0.000104
	NP-1	Oct-22		<0.00294	<0.00298	<0.00266	<0.00316	<0.00200	<0.00376	<0.00644		**<0.00252**	<0.00164	<0.00298	<0.00208
	NP-6	Apr-15		<0.000380	<0.000319	<0.000130	<0.000380	<0.000260	<0.000400	<0.000370	**<0.000380** UJ		<0.000360 UJ	<0.000310	<0.000390
	NP-6	Apr-17		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	NP-6	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	NP-6	Apr-21		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
Upgradient	UG-1	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	UG-1	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-1	Apr-21		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-1	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-2	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	UG-2	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-2	Apr-21		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-2	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-3R	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	UG-3R	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-3R	Apr-21		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-3R	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-4	Apr-19		<0.000385	<0.000319	<0.000130	<0.000383	<0.000259	<0.000398	<0.000373		**<0.000381**	<0.000361	<0.000306	<0.000387
	UG-4	Jun-20		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-4	Apr-21		<0.000147	<0.000149 J4	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104
	UG-4	Apr-22		<0.000147	<0.000149	<0.000133	<0.000158	<0.000100	<0.000188	<0.000322		**<0.000126**	<0.0000819	<0.000149	<0.000104

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Cross-Gradient	KWB-13	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-13	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000205 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	KWB-13	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000162 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-13	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-136	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000273 JB	<0.000128	<0.000116	<0.000192
	MW-136	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-136	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-136	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-136	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-136	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-5	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	NP-5	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	NP-5	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	NP-5	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-3156	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	RA-3156	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000520 JB	<0.000128	<0.000116	<0.000192
	RA-3156	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-3156	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000329 J	<0.000128	<0.000116	<0.000192
Evaporation Ponds	MW-1R	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-1R	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-1R	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-1R	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-2A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-2A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-2A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-2A	Sep-21															
	MW-2A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-2A	Oct-22															
	MW-3	Jun-20			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-3	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J3	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-3	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000107 J	<0.000128	<0.000116	<0.000192
	MW-3	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-3	Apr-21			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-3	Apr-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-3	Sep-21															
	MW-3	Sep-21	FD														
	MW-3	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000360 JB	<0.000128	<0.000116	<0.000192
	MW-3	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J3	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962 J4	<0.000128	<0.000116	<0.000192
	MW-3	Oct-22															
	MW-3	Oct-22	FD														
	MW-4A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-4A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-4A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-4A	Sep-21															
	MW-4A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-4A	Oct-22															
	MW-4B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	0.00183	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-4B	Apr-17			<0.00393	<0.00382 J3J4	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-4B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	0.000393 J	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-4B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5A	Sep-21															
	MW-5A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5A	Oct-22															
	MW-5B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-5B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-5B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-5B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-5C	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-5C	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-5C	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-5C	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-6A	Apr-19			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	0.00190 J	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-6A	Jun-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-6A	Apr-21			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-6A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-6B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-6B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-6B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-6B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Apr-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Sep-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7A	Oct-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-7B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-7B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-7B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-7B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-10	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-10	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-10	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-10	Sep-21															
	MW-10	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-10	Oct-22															
	MW-11A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-11A	Oct-20															
	MW-11A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-11A	Sep-21															
	MW-11A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-11A	Oct-22															

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Evaporation Ponds	MW-11B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-11B	Apr-17			<0.00393	<0.00382 J3J4	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-11B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-11B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-15	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-15	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-15	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-15	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18A	Sep-21															
	MW-18A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000179 J	<0.000136	<0.000129	<0.000605	0.000567 JB	<0.000128	<0.000116	<0.000192
	MW-18A	Oct-22															
	MW-18B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-18B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-18B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-18B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Apr-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Sep-21															
	MW-22A	Sep-21	FD														
	MW-22A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-22A	Oct-22															
	MW-22A	Oct-22	FD														
	MW-22A	Oct-22															
	MW-22A	Oct-22	FD														
	MW-22B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-22B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-22B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-22B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-70	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-70	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000277 JB	<0.000128	<0.000116	<0.000192
	MW-70	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-70	Sep-21															
	MW-70	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-70	Oct-22															
	MW-72	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-72	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-72	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-72	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-73	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-73	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-73	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-73	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-74	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-74	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-74	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-74	Sep-21															
	MW-74	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-74	Oct-22															
	MW-75	Jun-20			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-75	Oct-20			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-75	Apr-21			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-75	Sep-21															
	MW-75	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-75	Oct-22															
	MW-76	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-76	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128 J4	<0.000116	<0.000192
	MW-76	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-76	Sep-21															
	MW-76	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-76	Oct-22															
	MW-77	Apr-19			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	<0.00331	<0.00380	<0.00469	**<0.00866**	<0.00275	<0.00379	<0.00348	<0.00453
	MW-77	Jun-20			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-77	Apr-21			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	<0.00235	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-77	Apr-22			0.00144 J	<0.000787	<0.000120	<0.000478	0.0152 J	0.000174 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-78	Apr-19			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	<0.00331	<0.00380	<0.00469	**<0.00866**	<0.00275	<0.00379	<0.00348	<0.00453
	MW-78	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-78	Apr-21			0.00270 J	<0.000787	<0.000120	<0.000478	0.0140 J	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-78	Apr-22			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	0.00661 JB	<0.00128	<0.00116	<0.00192
	MW-79	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-79	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-79	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-79	Sep-21															
	MW-79	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-79	Oct-22															
	MW-80	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-80	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-80	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-80	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-81	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-81	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-81	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-81	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-82	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-82	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-82	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-82	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-83	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-83	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000236 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-83	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-83	Sep-21															
	MW-83	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000380 JB	<0.000128	<0.000116	<0.000192
	MW-83	Oct-22															
	MW-84	Jun-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580 J4	<0.000960
	MW-84	Oct-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-84	Apr-21			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-84	Sep-21															
	MW-84	Apr-22			<0.0238	<0.0157	0.00689 J	<0.00956	<0.226	0.00441 J	<0.00272	<0.00258	**<0.0121**	0.0160 JB	<0.00256	<0.00232	<0.00384
	MW-84	Oct-22															

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds												
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Evaporation Ponds	MW-86	Jun-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**0.0242**	<0.00272	<0.00258	**<0.0121**	0.00254 J	<0.00256	<0.00232 J4	<0.00384
	MW-86	Oct-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**0.0313**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-87	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-87	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-87	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-87	Sep-21															
	MW-87	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-87	Oct-22															
	MW-88	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-88	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128 J4	<0.000116	<0.000192
	MW-88	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-88	Sep-21															
	MW-88	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-88	Oct-22															
	MW-120	Jun-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-120	Oct-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-120	Apr-21			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-120	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-120	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-120	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-121	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-121	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-121	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-121	Sep-21															
	MW-121	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000159 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-121	Oct-22															
	MW-122	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-122	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-122	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-122	Sep-21															
	MW-122	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-122	Oct-22															
	MW-123	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-123	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-123	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-123	Sep-21															
	MW-123	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-123	Oct-22															
	MW-124	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-124	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-124	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-124	Sep-21															
	MW-124	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-124	Oct-22															
	OCD-1R	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-1R	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-1R	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-1R	Sep-21															
	OCD-1R	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-1R	Oct-22															
	OCD-2A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-2A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-2A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-2A	Sep-21															
	OCD-2A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-2A	Oct-22															
	OCD-3	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-3	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-3	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-3	Sep-21															
	OCD-3	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-3	Oct-22															
	OCD-4	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-4	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-4	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-4	Sep-21															
	OCD-4	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-4	Oct-22															
	OCD-5	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-5	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-5	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-5	Sep-21															
	OCD-5	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-5	Oct-22															
	OCD-6	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-6	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-6	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-6	Sep-21															
	OCD-6	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-6	Oct-22															
	OCD-7AR	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-7AR	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-7AR	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-7AR	Sep-21															
	OCD-7AR	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-7AR	Oct-22															
	OCD-7B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	0.000420 J	<0.000380	<0.000350	<0.000450
	OCD-7B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	OCD-7B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	OCD-7B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-8A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-8A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-8A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-8A	Sep-21															
	OCD-8A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	OCD-8A	Oct-22															
	OCD-8B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	OCD-8B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	OCD-8B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	OCD-8B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
Field East of Refinery	KWB-1A	Oct-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-1A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000300 JB	<0.000128	<0.000116	<0.000192
	KWB-1A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-1A	Oct-22			0.00289 J	<0.000787	0.000827 J	<0.000478	<0.0113	0.000348 J	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-1C	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	KWB-1C	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-1C	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-1C	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Field East of Refinery	KWB-7	Jun-20		0.160	<0.000787	0.00161	<0.000478	<0.0113	**0.0545**	<0.000136	<0.000129	<0.000605	0.00118	<0.000128	<0.000116	<0.000192
	KWB-7	Oct-20		<0.00119	<0.000787	0.000201 J	<0.000478	<0.0113	**0.00789**	<0.000136	<0.000129	<0.000605	0.000319 JB	<0.000128	<0.000116	<0.000192
	KWB-7	Apr-21		<0.00119	<0.000787	0.00285	<0.000478	<0.0113	**1.01**	<0.000136	<0.000129	<0.000605	0.000668 J	<0.000128	<0.000116	<0.000192
	KWB-7	Sep-21		<0.00119	<0.000787	0.00284	<0.000478	<0.0113	**0.0131**	<0.000136	<0.000129	<0.000605	0.000243 J	<0.000128	<0.000116	<0.000192
	KWB-7	Apr-22		<0.00119	<0.000787	<0.000120	0.000866 J	<0.0113	**0.190**	<0.000136	<0.000129	<0.000605	0.000662 J	<0.000128	<0.000116	<0.000192
	KWB-7	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00172	<0.000136	<0.000129	<0.000605	0.000156 JB	<0.000128	<0.000116	<0.000192
	KWB-8	Oct-16		<0.786	<0.764	<0.0700	<0.428	<2.00	**11.5**	<0.0760	<0.0938	**<0.173**	<0.0550	**<0.0758**	<0.0696	<0.0906
	KWB-8	Apr-17		<0.393	<0.382	<0.0350	<0.214	<1.00	**5.62**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	KWB-8	Oct-17		0.0885 V3	0.00515 J	0.00112	<0.00214	0.0801 V3	**12.5**	<0.000380	<0.000469	<0.000866	0.00427 V3	<0.000379	<0.000348	<0.000453
	KWB-8	Oct-20		<0.238	<0.157	<0.0240	<0.0956	<2.26	**17.8**	<0.0272	<0.0258	**<0.121**	0.0664 JB	**<0.0256**	<0.0232	<0.0384
	KWB-10R	Apr-17		<0.196	<0.191	<0.0175	<0.107	<0.500	**4.95**	<0.0190	<0.0234	**<0.0433**	<0.0138	**<0.0190**	<0.0174	<0.0226
	KWB-10R	Oct-17		<0.00393	<0.00382	0.0184	<0.00214	<0.0100	**7.06**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-10R	Apr-18		<0.982	<0.955	<0.0875	<0.535	<2.50	**3.06**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113
	KWB-10R	Oct-18		<0.982	<0.955	<0.0875	<0.535	<2.50	**3.81**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113 J4
	KWB-11A	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000492 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-11A	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00234	<0.000136	<0.000129	<0.000605	0.000169 JB	<0.000128	<0.000116	<0.000192
	KWB-11A	Sep-21		<0.00119	<0.000787	0.00102	<0.000478	<0.0113	**0.0512**	<0.000136	<0.000129	<0.000605	0.000121 J	<0.000128	<0.000116	<0.000192
	KWB-11A	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0129**	<0.000136	<0.000129 J4	<0.000605	0.000151 J	<0.000128	<0.000116	<0.000192
	KWB-11B	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-11B	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00192	<0.000136	<0.000129	<0.000605	0.000191 JB	<0.000128	<0.000116	<0.000192
	KWB-11B	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-11B	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.0000957 J	<0.000136	<0.000129	<0.000605	0.000126 J	<0.000128	<0.000116	<0.000192
	KWB-11B	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000353 J	<0.000128	<0.000116	<0.000192
	KWB-11B	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000106 J	<0.000136	<0.000129 J4	<0.000605	0.000119 J	<0.000128	<0.000116	<0.000192
	KWB-12A	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	KWB-12A	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12A	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000531 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12A	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	KWB-12B	Jun-20	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	KWB-12B	Jun-20	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Oct-20	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Apr-21	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Sep-21	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Apr-22	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-12B	Oct-22	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	KWB-P4	Apr-15		<0.00390	<0.00380	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	KWB-P4	Apr-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-P4	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-P4	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-57	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-57	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-57	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-57	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-57	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000183 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-58	Oct-17		<0.00393	<0.00382	0.00399	<0.00214	<0.0100	**4.08**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-58	Apr-18		<0.196	<0.191	<0.0175	<0.107	<0.500	**4.12**	<0.0190	<0.0234	**<0.0433**	<0.0138	**<0.0190**	<0.0174	<0.0226
	MW-58	Oct-18		<0.196 J3J4	<0.191	<0.0175	<0.107	<0.500 J3	**7.11**	<0.0190	<0.0234	**<0.0433**	<0.0138	**<0.0190**	<0.0174	<0.0226
	MW-58	Oct-19		<0.0393	<0.0382	0.00466 J	<0.0214	<0.100	**3.78**	<0.00380	<0.00469	**<0.00866**	<0.00275	<0.00379	<0.00348	<0.00453
	MW-111	Oct-18		<0.0982	<0.0955	<0.00875	<0.0535	<0.250	**0.0268**	<0.00950	<0.0117	**<0.0216**	<0.00688	**<0.00948**	<0.00870	<0.0113 J4
	MW-111	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.115**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-111	Oct-19		<0.00393	<0.00382	<0.000350	<0.00214	0.0116 J	**0.167**	<0.000380	<0.000469	<0.000866	<0.00688	<0.000379	<0.000348	<0.000453
	MW-111	Jun-20		<0.0298	<0.0197	<0.00300	<0.0120	<0.282	**0.439**	<0.00340	<0.00322	**<0.0151**	0.00625 JB	<0.00320	<0.00290	<0.00480
	MW-112	Nov-14		<0.0980	<0.0960	<0.00880	<0.0540	<0.250	**8.50**	<0.00950	<0.0120	**<0.0220**	<0.00690	**<0.00950**	<0.00870	<0.0110
	MW-113	Jun-20		<0.00595	<0.00394	0.00138 J	<0.00239	<0.0565	**0.0306**	<0.000680	<0.000645	<0.00303	0.00281 JB	<0.000640	<0.000580	<0.000960
	MW-113	Jun-20	FD	<0.00119	<0.000787	0.00157	0.000770 J	0.0396 J	**0.0248**	<0.000136	<0.000129	<0.000605	0.000181 J	<0.000128	<0.000116 J4	<0.000192
	MW-113	Oct-20		<0.00595	<0.00394	0.00147 J	<0.00239	<0.0565	**0.368**	<0.000680	<0.000645	<0.00303	0.00185 JB	<0.000640	<0.000580	<0.000960
	MW-113	Oct-20	FD	<0.00119	<0.000787	0.00191	<0.000478	<0.0113	**0.428**	<0.000136	<0.000129	<0.000605	0.000234 JB	<0.000128	<0.000116	<0.000192
	MW-113	Apr-21		<0.00595	<0.00394	0.00120 J	<0.00239	<0.0565	**0.0272**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-113	Apr-21	FD	<0.00119	<0.000787 J4	0.00382	<0.000478	<0.0113	**0.0417**	<0.000136	<0.000129 J4	<0.000605	0.000140 J	<0.000128	<0.000116	<0.000192 J4
	MW-113	Sep-21		<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**3.43**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-113	Sep-21	FD	<0.0298	<0.0197	0.00630 J	<0.0120	<0.282	**3.68**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-113	Apr-22		<0.00119	<0.000787	0.000514 J	<0.000478	<0.0113	**0.0436**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-113	Apr-22	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0524**	<0.000136	<0.000129	<0.000605	0.000473 J	<0.000128	<0.000116	<0.000192
	MW-113	Oct-22		<0.00119	<0.000787	0.0120	<0.000478	<0.0113	**8.50**	<0.000136	<0.000129 J4	<0.000605	0.000537 J	<0.000128	<0.000116	<0.000192
	MW-113	Oct-22	FD	<0.00119	<0.000787	0.0127	<0.000478	<0.0113	**8.52**	<0.000136	<0.000129	<0.000605	0.000787 J	<0.000128	<0.000116	<0.000192
	MW-125	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-125	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-125	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-125	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000102 J	<0.000128	<0.000116	<0.000192
	MW-125	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000347 J	<0.000128	<0.000116	<0.000192
	MW-125	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126A	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	MW-126A	Oct-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.170**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-126A	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-126A	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126B	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-126B	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126B	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126B	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126B	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-126B	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-127	Oct-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.462**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-127	Apr-18		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**1.18**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-127	Oct-18		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**1.15**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906 J4
	MW-127	Apr-19		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**1.65**	<0.00760	<0.00938	**<0.0173** J3	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-128	Oct-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.0701**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-128	Apr-18		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**0.122**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-128	Oct-18		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**0.729**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-128	Apr-19		<0.0786	<0.0764	<0.00700	<0.0428	<0.200 J4	**0.643**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-129	Apr-16		<0.00393 J4	<0.00382	<0.000350	<0.00214	<0.0100	**<0.0166**	<0.000380	<0.000469	<0.000866	0.000295 J	<0.000379	<0.000348	<0.000453
	MW-129	Oct-16		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.00791**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-129	Apr-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	0.00299	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-129	Apr-18		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.00731**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Field East of Refinery	MW-130	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000332 JB	<0.000128	<0.000116	<0.000192
	MW-130	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-130	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-130	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-130	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-130	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-131	Apr-17			<0.00393	<0.00382	0.000554 J	<0.00214	<0.0100	**3.09**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-131	Oct-17			<0.00393	<0.00382	0.000701 J	<0.00214	<0.0100	**1.39**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-131	Oct-19			<0.00393	<0.00382	0.00141	<0.00214	<0.0100	**0.796**	<0.000380	<0.000469	<0.000866	<0.0138	<0.000379	<0.000348	<0.000453
	MW-131	Jun-20			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**0.907**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-133	Nov-14			<0.390	<0.380	<0.0350	<0.210	<1.00	**0.620**	<0.0380	<0.0470	**<0.0870**	<0.0280	**<0.0380**	<0.0350	<0.0450
	MW-133	Apr-15			<0.390	<0.380	<0.0350	<0.210	<1.00	**0.788**	<0.0380	<0.0470	**<0.0870**	<0.0280	**<0.0380**	<0.0350	<0.0450
	MW-134	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000449 JB	<0.000128	<0.000116	<0.000192
	MW-134	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Apr-21	FD		<0.00119	<0.000787 J4	<0.000120	<0.000478	<0.0113	0.000102 J	<0.000136	<0.000129 J4	<0.000605	0.000147 J	<0.000128	<0.000116	<0.000192 J4
	MW-134	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Sep-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-134	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000380 J	<0.000128	<0.000116	<0.000192
	MW-134	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000395 J	<0.000128	<0.000116	<0.000192
	MW-134	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00235	<0.000136	<0.000129 J4	<0.000605	0.000329 J	<0.000128	<0.000116	<0.000192
	MW-134	Oct-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00117	<0.000136	<0.000129	<0.000605	0.000146 J	<0.000128	<0.000116	<0.000192
	MW-135	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000301 JB	<0.000128	<0.000116	<0.000192
	MW-135	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00250	<0.000136	<0.000129	<0.000605	0.000188 JB	<0.000128	<0.000116	<0.000192
	MW-135	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-135	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000131 J	<0.000128	<0.000116	<0.000192
	MW-135	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-135	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000185 J	<0.000128	<0.000116	<0.000192
	MW-135	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-135	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000185 J	<0.000128	<0.000116	<0.000192
	MW-145	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-145	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-145	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-145	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-145	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-145	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.0000964 J	<0.000128	<0.000116	<0.000192
	MW-146	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Sep-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-146	Oct-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-147	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-147	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-147	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-147	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-147	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.0000964 J	<0.000128	<0.000116	<0.000192
	MW-148	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-148	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-148	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-148	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-148	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-4196	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RA-4196	Oct-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RA-4196	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000840 JB	<0.000128	<0.000116	<0.000192
	RA-4196	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941 Q	<0.000136	<0.000129	<0.000605	0.000179 JB	<0.000128	<0.000116	<0.000192
	RA-4798	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000356 JB	<0.000128	<0.000116	<0.000192
	RA-4798	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941 Q	<0.000136	<0.000129	<0.000605	0.000185 JB	<0.000128	<0.000116	<0.000192
	RA-4798	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-4798	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-4798	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000347 J	<0.000128	<0.000116	<0.000192
	RW-12R	Apr-17			<0.0196	<0.0191	0.00214 J	<0.0107	<0.0500	**0.335**	<0.00190	<0.00234	<0.00433	0.00142 J	<0.00190	<0.00174	<0.00226
	RW-12R	Apr-18			<0.00393	<0.00382	0.000372 J	<0.00214	0.0352 J	**0.0358**	<0.000380	<0.000469	<0.000866	0.00104	<0.000379	<0.000348	<0.000453
	RW-12R	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	**0.0764**	<0.000380	<0.000469	<0.000866	0.00155	<0.000379	<0.000348	<0.000453
	RW-12R	Jun-20			<0.00119	<0.000787	0.000352 J	0.00567 J	<0.0113	**0.154**	<0.000136	<0.000129	<0.000605	0.00118 B	<0.000128	<0.000116	<0.000192
	RW-13R	Apr-16			<0.00393	<0.00382	0.000561 J	<0.00214	<0.0100	**0.878**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-13R	Apr-18			<0.00393	<0.00382	0.00134	<0.00214	0.0281 J	**0.0770**	<0.000380	<0.000469	<0.000866	0.000455 J	<0.000379	<0.000348	<0.000453
	RW-18A	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-18A	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-18A	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	RW-18A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RW-20	Apr-15			<0.0390	<0.0380	0.00401 J	<0.0210	<0.100	**1.87**	<0.00380	<0.00470	**<0.00870**	<0.00280	<0.00380	<0.00350	<0.00450
	RW-22	Apr-15			<0.0390	<0.0380	0.00521 J	<0.0210	<0.100	**4.07**	<0.00380	<0.00470	**<0.00870**	<0.00280	<0.00380	<0.00350	<0.00450
NCL	MW-18	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-18	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-18	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Oct-20			<0.00119 J3	<0.000787	<0.000120	<0.000478	<0.0113 J3	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000219 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-45	Oct-22			<0.00119	<0.000787	<0.000120	0.00483 J	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000142 J	<0.000128	<0.000116	<0.000192
	MW-53	Apr-16			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-53	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-53	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-53	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-53R	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-53R	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-53R	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000171 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-54A	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000161 J	<0.000128	<0.000116	<0.000192
	MW-54B	Apr-15			<0.00390	<0.00380	<0.000350	<0.00210	0.0128 J	<0.000330	<0.000380	<0.000470	<0.000870	<0.000280	<0.000380	<0.000350	<0.000450
	MW-54B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-54B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-54B	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-55	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-55	Oct-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-55	Apr-21			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-55	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-55	Apr-22			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-55	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
NCL	MW-56	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-56	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-56	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-56	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-108	Jun-20			<0.00595	<0.00394	0.00115 J	<0.00239	<0.0565	**0.235**	<0.000680	<0.000645	<0.00303	0.000980 JB	<0.000640	<0.000580	<0.000960
	MW-108	Oct-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	**0.100**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-108	Apr-21			<0.00595	<0.00394	0.000781 J	<0.00239	<0.0565	**0.200**	<0.000680	<0.000645	<0.00303	0.000748 J	<0.000640	<0.000580	<0.000960
	MW-108	Sep-21			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.141**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-108	Apr-22			<0.00119	<0.000787	0.000246 J	<0.000478	<0.0113	**0.0819**	<0.000136	<0.000129	<0.000605	0.000327 J	<0.000128	<0.000116	<0.000192
	MW-108	Oct-22			0.00218 J	<0.000787	0.000182 J	0.000683 J	<0.0113	**0.0702**	<0.000136	<0.000129 J4	<0.000605	0.000607 J	<0.000128	<0.000116	<0.000192
	NCL-31	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-31	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-31	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-31	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-31	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-31	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000168 J	<0.000128	<0.000116	<0.000192
	NCL-32	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-32	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-32	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-32	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-32	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-32	Oct-22			0.00242 J	<0.000787	<0.000120	<0.000478	0.0159 J	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000123 J	<0.000128	<0.000116	<0.000192
	NCL-33	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-33	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-33	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-33	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-33	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-33	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000111 J	<0.000128	<0.000116	<0.000192
	NCL-34A	Oct-18			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	**1.11**	<0.00380	<0.00469	**<0.00866**	0.0105 B	<0.00379	<0.00348	<0.00453
	NCL-34A	Apr-19			<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**0.479**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	NCL-34A	Oct-19			<0.0197	<0.0191	0.00219 J	<0.0107	<0.0500	**0.562**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00227
	NCL-34A	Jun-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**1.10**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	NCL-44	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-44	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-44	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-44	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-44	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-44	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000324 J	<0.000128	<0.000116	<0.000192
	NCL-49	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Apr-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Sep-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Apr-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NCL-49	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000151 J	<0.000128	<0.000116	<0.000192
	NCL-49	Oct-22	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000110 J	<0.000128	<0.000116	<0.000192
North Refinery	MW-23	Apr-19			<0.393	<0.382	<0.0350	<0.214	<1.00	**5.52**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-23	Oct-19			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	**1.42**	<0.00380	<0.00469	**<0.00866**	<0.00275	<0.00379	<0.00348	<0.00453
	MW-23	Jun-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**2.68**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-23	Oct-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.915**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-29	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000212 J	<0.000128	<0.000116	<0.000192
	MW-29	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00158	<0.000136	<0.000129	<0.000605	0.000298 JB	<0.000128	<0.000116	<0.000192
	MW-29	Apr-21			<0.00119	<0.000787 J4	<0.000120	<0.000478	<0.0113	0.0000994 J	<0.000136	<0.000129 J4	<0.000605	0.000267 J	<0.000128	<0.000116	<0.000192 J4
	MW-29	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000196 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-29	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-29	Oct-22			<0.00119	<0.000787	<0.000120	0.00136 J	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000178 J	<0.000128	<0.000116	<0.000192
	MW-39	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.0314**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-39	Oct-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.0271**	<0.000380	<0.000469	<0.000866	0.000700 J	<0.000379	<0.000348	<0.000453
	MW-39	Jun-20			<0.00119	0.00100 J	0.000516 J	<0.000478	<0.0113	**0.0289**	<0.000136	<0.000129	<0.000605	0.000474 J	<0.000128	<0.000116 J4	<0.000192
	MW-39	Oct-20			<0.00119	<0.000787	0.000315 J	<0.000478	<0.0113	0.00397	<0.000136	<0.000129	<0.000605 J4	0.000500 J	<0.000128	<0.000116	<0.000192
	MW-40	Apr-17			<0.00393	<0.00382	0.000356 J	<0.00214	<0.0100	**0.00857**	<0.000380	<0.000469	<0.000866	0.00128	<0.000379	<0.000348	<0.000453
	MW-40	Apr-18			<0.00393	<0.00382	0.000376 J	0.00447 J	0.0269 J	0.000769 J	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-40	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.0192**	<0.000380	<0.000469	<0.000866	0.00113	<0.000379	<0.000348	<0.000453
	MW-40	Jun-20			<0.00119	<0.000787	0.000184 J	<0.000478	<0.0113	0.000284 J	<0.000136	<0.000129	<0.000605	0.000625 J	<0.000128	<0.000116	<0.000192
	MW-41	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	0.000311 J	<0.000379	<0.000348	<0.000453
	MW-41	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.00758**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-41	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0173**	<0.000136	<0.000129	<0.000605	0.000737 J	<0.000128	<0.000116	<0.000192
	MW-41	Apr-21			<0.00119	<0.000787 J4	<0.000120	<0.000478	<0.0113	**0.00922**	<0.000136	<0.000129 J4	<0.000605	0.000170 J	<0.000128	<0.000116	<0.000192 J4
	MW-42	Apr-19			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	**0.164**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-42	Jun-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	**0.109**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-42	Apr-21			<0.00595	<0.00394 J4	<0.000600	<0.00239	<0.0565	**0.00740**	<0.000680	<0.000645 J4	<0.00303	0.00127 J	<0.000640	<0.000580	<0.000960 J4
	MW-42	Apr-22			<0.00595	<0.00394	0.00190 J	<0.00239	<0.0565	**0.00757**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-43	Apr-19			<0.786	<0.764	<0.0700	<0.428	<2.00	**6.22**	<0.0760	<0.0938	**<0.173**	<0.0550	**<0.0758**	<0.0696	<0.0906
	MW-43	Oct-19			<0.786	<0.764	<0.0700	<0.428	<2.00	**5.74**	<0.0760	<0.0938	**<0.173**	<0.0550	**<0.0758**	<0.0696	<0.0906
	MW-43	Jun-20			<0.0238	<0.0157	0.00337 J	<0.00956	<0.226	**3.09**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232 J4	<0.00384
	MW-43	Oct-20			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**9.06**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-59	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	0.00218	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-59	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	0.00105	<0.000380	<0.000469	<0.000866	0.000371 J	<0.000379	<0.000348	<0.000453
	MW-59	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	0.000519 J	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-59	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00112	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-60	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00187	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-60	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00390	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-60	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00231	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-60	Oct-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00279 B	<0.000136	<0.000129	<0.000605	0.000755 JB	<0.000128	<0.000116	<0.000192
	MW-61	Jun-20			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.60**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-61	Oct-20			<0.0595	<0.0394	0.00659 J	<0.0239	<0.565	**1.60**	<0.00680	<0.00645	**<0.0303**	0.00858 J	**<0.00640**	<0.00580	<0.00960
	MW-61	Apr-21			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.29**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-61	Sep-21			<0.0595	<0.0394	0.00703 J	<0.0239	<0.565	**1.62**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-61	Apr-22			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.45**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-61	Oct-22			<0.0595	<0.0394	0.0123 J	<0.0239	<0.565	**1.46**	<0.00680	<0.00645 J4	**<0.0303**	0.0153 J	**<0.00640**	<0.00580	<0.00960
	MW-62	Jun-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**1.09**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-62	Oct-20			<0.0238	<0.0157	0.00397 J	<0.00956	<0.226	**1.24**	<0.00272	<0.00258	**<0.0121**	0.00520 J	<0.00256	<0.00232	<0.00384
	MW-62	Sep-21			<0.0595	<0.0394	0.0371 J	<0.0239	<0.565	**2.11**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-62	Apr-22			<0.0595	<0.0394	0.0465 J	<0.0239	<0.565	**2.19**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-62	Oct-22			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.80**	<0.00680	<0.00645 J4	**<0.0303**	0.00990 J	**<0.00640**	<0.00580	<0.00960

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
North Refinery	MW-62R	Oct-20			<0.00119	<0.000787	0.00274	<0.000478	<0.0113	**1.92**	<0.000136	<0.000129	<0.000605	0.00126	<0.000128	<0.000116	<0.000192
	MW-62R	Apr-21			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**0.451**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-62R	Apr-22			<0.0119	<0.00787	0.00697 J	<0.00478	<0.113	**3.20**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-67	Oct-17			<0.00393	<0.00382	0.000487 J	<0.00214	<0.0100	**0.130**	<0.000380	<0.000469	<0.000866	0.000547 J	<0.000379	<0.000348	<0.000453
	MW-67	Apr-18			<0.0196	<0.0191	0.00191 J	<0.0107	<0.0500	**0.147**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-67	Oct-18			<0.00393	<0.00382	0.000513 J	<0.00214	<0.0100	0.00480	<0.000380	<0.000469	<0.000866	0.000465 J	<0.000379	<0.000348	<0.000453
	MW-67	Apr-19			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	**0.122**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-90	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00305	<0.000136	<0.000129	<0.000605	0.000600 J	<0.000128	<0.000116	<0.000192
	MW-90	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00334	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-90	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00164	<0.000136	<0.000129	<0.000605	0.000200 J	<0.000128	<0.000116	<0.000192
	MW-90	Sep-21			<0.0119 J3	<0.00787	<0.00120	<0.00478	<0.113	**0.00730 J**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-90	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00495	<0.000136	<0.000129	<0.000605	0.000627 J	<0.000128	<0.000116	<0.000192
	MW-90	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00213	<0.000136	<0.000129	<0.000605	0.000338 J	<0.000128	<0.000116	<0.000192
	MW-91	Oct-18			<0.393	<0.382	<0.0350	<0.214	<1.00	**2.86**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-91	Apr-19			<0.393	<0.382	<0.0350	<0.214	<1.00	**2.89**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-91	Oct-19			<0.393	<0.382	<0.0350	<0.214	<1.00	**4.07**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-91	Jun-20			<0.119	<0.0787	<0.0120	<0.0478	<1.13	**4.12**	<0.0136	<0.0129	**<0.0605**	0.0254 J	**<0.0128**	<0.0116	<0.0192
	MW-92	Apr-16			<0.00393	<0.00382	0.00344	<0.00214	<0.0100	**2.87**	<0.000380	<0.000469	<0.000866	0.000589 J	<0.000379	<0.000348	<0.000453
	MW-92	Oct-16			<0.0786	<0.0764	<0.00700	<0.0428	<0.200 J3	**2.05**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-93	Apr-17			<0.0982	<0.0955	<0.00875	<0.0535	<0.250	**0.633**	<0.00950	<0.0117	**<0.0216** J4	<0.00688	**<0.00948**	<0.00870	<0.0113
	MW-93	Apr-18			<0.00393	<0.00382	0.00268	<0.00214	<0.0100	**0.857**	<0.000380	<0.000469	<0.000866	0.00180	<0.000379	<0.000348	<0.000453
	MW-93	Apr-19			<0.00393	<0.00382	0.00345	<0.00214	<0.0100	**0.673**	<0.000380	<0.000469	<0.000866	0.00136	<0.000379	<0.000348	<0.000453
	MW-93	Jun-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**1.21**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-94	Oct-15			<0.0393	<0.0382	0.0301	<0.0214	<0.100	**0.339**	<0.00380	<0.00469	**<0.00866**	0.00445 J	<0.00379	<0.00348	<0.00453
	MW-94	Apr-16			<0.196 J4	<0.191	<0.0175	<0.107	<0.500	**0.417**	<0.0190	<0.0234	**<0.0433**	0.0155 J	**<0.0190**	<0.0174	<0.0226
	MW-94	Oct-16			<0.0196	<0.0191	0.0163	<0.0107	<0.0500 J3	**0.297**	<0.00190	<0.00234	<0.00433	0.00479 J	<0.00190	<0.00174	<0.00226
	MW-94	Apr-17			<0.0982	<0.0955	0.0477	<0.0535	<0.250	**0.284**	<0.00950	<0.0117	**<0.0216** J4	0.0101 J	**<0.00948**	<0.00870	<0.0113
	MW-95	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-95	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453 J4
	MW-95	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-95	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000603 J	<0.000136	<0.000129	<0.000605	0.000192 J	<0.000128	<0.000116	<0.000192
	MW-96	Jun-20			<0.298	<0.197	<0.0300	<0.120	<2.82	**<0.0235**	<0.0340	<0.0323	**<0.151**	<0.0241	**<0.0320**	<0.0290	<0.0480
	MW-96	Oct-20			<0.298	<0.197	<0.0300	<0.120	<2.82	**0.0424 J**	<0.0340	<0.0323	**<0.151**	<0.0241	**<0.0320**	<0.0290	<0.0480
	MW-96	Sep-21			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	0.00122 J	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-96	Apr-22			<0.0119	<0.00787	0.00462 J	<0.00478	<0.113	0.000995 J	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-96	Oct-22			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	<0.00188	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-98	Jun-20			<0.0595	0.0414 J	0.00660 J	<0.0239	<0.565	**1.74**	<0.00680	<0.00645	**<0.0303**	0.0181 J	**<0.00640**	<0.00580 J4	<0.00960
	MW-98	Oct-20			<0.0595	<0.0394	0.0145 J	<0.0239	<0.565	**1.73**	<0.00680	<0.00645	**<0.0303**	0.0133 J	**<0.00640**	<0.00580	<0.00960
	MW-98	Apr-21			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.12**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-98	Sep-21			<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**1.20**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-98	Apr-22			<0.0595	<0.0394	0.0312 J	<0.0239	<0.565	**0.910**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-98	Oct-22			<0.0595	<0.0394	0.0194 J	<0.0239	<0.565	**0.674**	<0.00680	<0.00645 J4	**<0.0303**	0.0221 J	**<0.00640**	<0.00580	<0.00960
	MW-137	Oct-17			<0.786	<0.764	<0.0700	<0.428	<2.00	**12.5**	<0.0760	<0.0938	**<0.173**	0.0615 J	**<0.0758**	<0.0696	<0.0906
	MW-137	Apr-18			<0.786	<0.764	<0.0700	<0.428	<2.00	**9.63**	<0.0760	<0.0938	**<0.173**	0.0554 J	**<0.0758**	<0.0696	<0.0906
	MW-137	Oct-18			<0.786	<0.764	<0.0700	<0.428	<2.00	**10.6**	<0.0760	<0.0938	**<0.173**	<0.0550	**<0.0758**	<0.0696	<0.0906
	MW-137	Apr-19			<0.786	<0.764	<0.0700	<0.428	<2.00	**7.93**	<0.0760	<0.0938	**<0.173**	<0.0550	**<0.0758**	<0.0696	<0.0906
	MW-138	Oct-17			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	**0.701**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-138	Apr-18			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	**0.741**	<0.00190	<0.00234	<0.00433	0.00176 J	<0.00190	<0.00174	<0.00226
	MW-138	Oct-18			<0.0196	<0.0191	0.00303 J	<0.0107	<0.0500	**0.628**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-138	Apr-19			<0.0196	<0.0191	0.00509	<0.0107	<0.0500	**0.663**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	RW-1R	Apr-16			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.426**	<0.000380	<0.000469	<0.000866	0.000422 J	<0.000379	<0.000348	<0.000453
	RW-1	Apr-17			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	**0.696**	<0.00380	<0.00469	**<0.00866**	0.00277 J	<0.00379	<0.00348	<0.00453
	RW-1	Apr-18			<0.00393	<0.00382	0.00204	<0.00214	<0.0100	**1.52**	<0.000380	<0.000469	<0.000866	0.00134	<0.000379	<0.000348	<0.000453
	RW-1	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	0.00151	<0.000379	<0.000348	<0.000453
	RW-2	Apr-15			<0.0390 UJ	<0.0380 UJ	0.00554 J	<0.0210	0.334 J	**5.34**	<0.00380	<0.00470 UJ	**<0.00870**	0.00899 J	<0.00380	<0.00350	<0.00450
	RW-2R	Apr-16			<0.196	<0.191	<0.0175	<0.107	<0.500	**5.86**	<0.0190	<0.0234	**<0.0433**	0.0186 J	**<0.0190**	<0.0174	<0.0226
	RW-2	Apr-17			<0.196	<0.191	<0.0175	<0.107	<0.500	**7.78**	<0.0190	<0.0234	**<0.0433** J4	<0.0138	**<0.0190**	<0.0174	<0.0226
	RW-2	Apr-18			<0.00393	<0.00382	0.00776	<0.00214	<0.0100	**4.68**	<0.000380	<0.000469	<0.000866	0.00224	<0.000379	<0.000348	<0.000453
	RW-7	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	0.0100 J	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-7	Apr-18			<0.00393	<0.00382	0.000872 J	<0.00214	<0.0100	**0.0319**	<0.000380	<0.000469	<0.000866	0.000556 J	<0.000379	<0.000348	<0.000453 J4
	RW-7	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.0114**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-7	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00487	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RW-8	Apr-15			<0.0390	<0.0380	<0.00350	<0.0210	<0.100	**0.0412**	<0.00380	<0.00470	**<0.00870**	<0.00280	<0.00380	<0.00350	<0.00450
	RW-8	Apr-17			<0.00393	<0.00382	0.00735	<0.00214	<0.0100	**0.0718**	<0.000380	<0.000469	<0.000866	0.00138	<0.000379	<0.000348	<0.000453
	RW-9	Apr-19			<0.00393	<0.00382	0.000940 J	<0.00214	<0.0100	**0.0968**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-9	Jun-20			<0.00119	<0.000787	0.000410 J	<0.000478	<0.0113	0.000141 J	<0.000136	<0.000129	<0.000605	0.000553 J	<0.000128	<0.000116	<0.000192
	RW-9	Apr-21			<0.00119	<0.000787 J4	<0.000120	<0.000478	<0.0113	0.000352 J	<0.000136	<0.000129 J4	<0.000605	0.000609 J	<0.000128	<0.000116	<0.000192 J4
	RW-9	Apr-22			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	0.00298 J	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	RW-10	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-10	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-10	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000205 J	<0.000136	<0.000129	<0.000605	0.000318 J	<0.000128	<0.000116 J4	<0.000192
	RW-10	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000378 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RW-16B	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J4	<0.000275	<0.000379	<0.000348	<0.000453
	RW-16B	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453 J4
	RW-16B	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-16B	Jun-20			0.0142	0.00117 J	<0.000120	<0.000478	0.0228 J	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RW-17A	Apr-17			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-17A	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-17A	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	0.000850 J	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-17A	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
North RO Field	MW-117	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-117	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-117	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-117	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-117	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-117	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-118	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-119	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-119	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-119	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-119	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000102 J	<0.000128	<0.000116	<0.000192
	MW-119	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-119	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	Well ID	Date	Dup														
South Refinery	KWB-2R	Apr-17		0.0164	<0.00382	<0.000350	<0.00214	<0.0100	**0.0260**	<0.000380	<0.000469	<0.000866	0.000332 J	<0.000379	<0.000348	<0.000453
	KWB-2R	Oct-17		<0.00393	<0.00382	0.00198	<0.00214	<0.0100	**1.12**	<0.000380	<0.000469	<0.000866	0.000367 J	<0.000379	<0.000348	<0.000453
	KWB-2R	Apr-19		<0.00393	<0.00382	0.00160	<0.00214	<0.0100	**0.177**	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-2R	Oct-19		<0.00393	<0.00382	0.00115	<0.00214	<0.0100	**0.920**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-5	Oct-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.336**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-5	Apr-18		<0.982	<0.955	<0.0875	<0.535	<2.50	**0.411**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113
	KWB-5	Oct-18		<0.982	<0.955	<0.0875	<0.535	<2.50	**0.278**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113 J4
	KWB-5	Apr-19		<0.982	<0.955	<0.0875	<0.535	<2.50	**0.425**	**<0.0950**	<0.117	**<0.216** J3	<0.0688	**<0.0948**	<0.0870	<0.113
	KWB-6	Apr-17		<0.0196	<0.0191	0.00450 J	<0.0107	<0.0500	**4.67**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	KWB-6	Oct-17		<0.00393	<0.00382	0.00825	<0.00214	<0.0100	**3.22**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	KWB-6	Apr-18		<0.0786	<0.0764	0.00807 J	<0.0428	<0.200	**3.88**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	KWB-6	Oct-18		<0.0786 J3J4	<0.0764	0.00755 J	<0.0428	<0.200 J3	**2.64**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-28	Apr-19		<0.196	<0.191	<0.0175	<0.107	<0.500 J4	**1.43**	<0.0190	<0.0234	**<0.0433**	<0.0138	**<0.0190**	<0.0174	<0.0226
	MW-28	Oct-19		<0.197	<0.191	<0.0175	<0.107	<0.500	**1.51**	<0.0190	<0.0235	**<0.0433**	0.0372 J	**<0.0190**	<0.0174	<0.0227
	MW-28	Jun-20		<0.00595	<0.00394	0.00154 J	<0.00239	<0.0565	**0.397**	<0.000680	<0.000645	<0.00303	0.000607 J	<0.000640	<0.000580 J4	<0.000960
	MW-28	Oct-20		<0.00595	<0.00394	0.00110 J	<0.00239	<0.0565	**0.362**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-48	Apr-18		<0.982	<0.955	<0.0875	<0.535	<2.50	**14.9**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113
	MW-48	Oct-18		<0.982 J3J4	<0.955	<0.0875	<0.535	<2.50 J3	**7.97**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113
	MW-48	Apr-19		<0.982	<0.955	<0.0875	<0.535	<2.50	**4.87**	**<0.0950**	<0.117	**<0.216** J3	<0.0688	**<0.0948**	<0.0870	<0.113
	MW-48	Oct-19		<0.983	<0.955	<0.0875	<0.535	<2.50	**5.04**	**<0.0950**	<0.117	**<0.217**	<0.0688	**<0.0948**	<0.0870	<0.113
	MW-50	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-50	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605 J4	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-50	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000515 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-50	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-50	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-50	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-52	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000318 JB	<0.000128	<0.000116	<0.000192
	MW-52	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-52	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-52	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-52	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-52	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-64	Jun-20		<0.595	<0.394	<0.0600	<0.239	<5.65	**27.5**	<0.0680	<0.0645	**<0.303**	<0.0481	**<0.0640**	<0.0580 J4	<0.0960
	MW-64	Oct-20		<0.595	<0.394	<0.0600	<0.239	<5.65	**27.2**	<0.0680	<0.0645	**<0.303**	<0.0481	**<0.0640**	<0.0580	<0.0960
	MW-64	Apr-21		<0.595	<0.394	<0.0600	<0.239	<5.65	**27.1**	<0.0680	<0.0645	**<0.303**	<0.0481	**<0.0640**	<0.0580	<0.0960
	MW-64	Sep-21		<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**25.1**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-64	Apr-22		<0.0298	<0.0197	<0.00300	<0.0120	<0.282	**23.8**	<0.00340	<0.00322	**<0.0151**	0.0101 J	<0.00320	<0.00290	<0.00480
	MW-64	Oct-22		<0.298	<0.197	<0.0300	<0.120	<2.82	**28.9**	<0.0340	<0.0323 J4	**<0.151**	<0.0241	**<0.0320**	<0.0290	<0.0480
	MW-65	Apr-18		<0.393	<0.382	<0.0350	<0.214	<1.00	**4.39**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-65	Oct-18		<0.393	<0.382	<0.0350	<0.214	<1.00	**2.84**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453 J4
	MW-65	Apr-19		<0.393	<0.382	<0.0350	<0.214	<1.00	**5.45**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-65	Oct-19		<0.393	<0.382	<0.0350	<0.214	<1.00	**6.07**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-66	Oct-19		<0.0983	<0.0955	<0.00875	<0.0535	<0.250	**1.24**	<0.00950	<0.0117	**<0.0217**	<0.00688	**<0.00948**	<0.00870	<0.0113
	MW-66	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**1.18**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-66	Oct-20		<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.965**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-66	Apr-21		<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.701**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-99	Oct-18		<0.393 J3J4	<0.382	<0.0350	<0.214	<1.00 J3	**2.54**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-99	Apr-19		<0.393	<0.382	<0.0350	<0.214	<1.00 J4	**1.67**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-99	Oct-19		<0.393	<0.382	<0.0350	<0.214	<1.00	**0.233**	<0.0380	<0.0469	**<0.0866**	<0.0275	**<0.0379**	<0.0348	<0.0453
	MW-99	Jun-20		<0.0119	<0.00787	0.00193 J	<0.00478	<0.113	**0.414**	<0.00136	<0.00129	<0.00605	0.0193	<0.00128	<0.00116	<0.00192
	MW-101	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00438	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	MW-101	Oct-20		<0.00119	<0.000787	0.000621 J	<0.000478	<0.0113	**2.32**	<0.000136	<0.000129	<0.000605 J4	0.000718 J	<0.000128	<0.000116	<0.000192
	MW-101	Apr-21		<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**0.810**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-101	Sep-21		<0.00119	<0.000787	0.000597 J	<0.000478	<0.0113	**0.687**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-101	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.173**	<0.000136	<0.000129	<0.000605	0.000487 JB	<0.000128	<0.000116	<0.000192
	MW-101	Oct-22		<0.00119	<0.000787	0.000540 J	0.00283 J	0.0396 J	**0.467**	<0.000136	<0.000129 J4	<0.000605	0.000295 J	<0.000128	<0.000116	<0.000192
	MW-102	Jun-20		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**7.10**	<0.0136	<0.0129	**<0.0605**	<0.00962	**<0.0128**	<0.0116	<0.0192
	MW-102	Oct-20		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**8.72**	<0.0136	<0.0129	**<0.0605**	<0.00962	**<0.0128**	<0.0116	<0.0192
	MW-102	Apr-21		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**7.61**	<0.0136	<0.0129	**<0.0605**	<0.00962	**<0.0128**	<0.0116	<0.0192
	MW-102	Sep-21		<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**10.7**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-102	Sep-21	FD	<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**10.8**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-102	Apr-22		<0.0595	<0.0394	0.0218 JB	<0.0239	<0.565	**11.8**	<0.00680	<0.00645	**<0.0303**	0.0230 J	**<0.00640**	<0.00580	<0.00960
	MW-102	Apr-22	FD	<0.0298	<0.0197	0.00668 J	<0.0120	<0.282	**14.4**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-102	Oct-22		<0.298	<0.197	<0.0300	<0.120	<2.82	**15.8**	<0.0340	<0.0323	**<0.151**	<0.0241	**<0.0320**	<0.0290	<0.0480
	MW-102	Oct-22	FD	<0.298	<0.197	<0.0300	<0.120	<2.82	**14.7**	<0.0340	<0.0323	**<0.151**	<0.0241	**<0.0320**	<0.0290	<0.0480
	MW-103	Apr-19		<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**1.39**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	MW-103	Jun-20		<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**1.14**	<0.00272	<0.00258	**<0.0121**	0.00218 J	<0.00256	<0.00232 J4	<0.00384
	MW-103	Apr-21		<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**1.09**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-103	Apr-22		<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**1.23**	<0.00136	<0.00129	<0.00605	0.00474 J	<0.00128	<0.00116	<0.00192
	MW-104	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0720**	<0.000136	<0.000129	<0.000605	0.000648 J	<0.000128	<0.000116 J4	<0.000192
	MW-104	Jun-20	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0660**	<0.000136	<0.000129	<0.000605	0.000403 J	<0.000128	<0.000116 J4	<0.000192
	MW-104	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00473	<0.000136	<0.000129	<0.000605 J4	0.00229	<0.000128	<0.000116	<0.000192
	MW-104	Oct-20	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.00631**	<0.000136	<0.000129	<0.000605	0.000721 J	<0.000128	<0.000116	<0.000192
	MW-104	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0163**	<0.000136	<0.000129	<0.000605	0.000232 J	<0.000128	<0.000116	<0.000192
	MW-104	Apr-21	FD	<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0169**	<0.000136	<0.000129	<0.000605	0.000289 J	<0.000128	<0.000116	<0.000192
	MW-104	Sep-21		<0.00595	<0.00394	<0.000600 J4	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	0.000742 J	<0.000640	<0.000580	<0.000960
	MW-104	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0135**	<0.000136	<0.000129	<0.000605	0.000579 J	<0.000128	<0.000116	<0.000192
	MW-104	Oct-22		0.0239	<0.000787	<0.000120	<0.000478	<0.0113	0.0000963 J	0.000422 J	<0.000129 J4	<0.000605	0.000653 J	<0.000128	<0.000116	<0.000192
	MW-105	Jun-20		<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**7.41**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-105	Oct-20		<0.0595	<0.0394	<0.00600	<0.0239	<0.565	**11.5**	<0.00680	<0.00645	**<0.0303**	<0.00481	**<0.00640**	<0.00580	<0.00960
	MW-105	Apr-21		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**7.07**	<0.0136	<0.0129	**<0.0605**	<0.00962	**<0.0128**	<0.0116	<0.0192
	MW-105	Apr-22		<0.0298	<0.0197	0.00333 J	<0.0120	<0.282	**5.34**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-105	Oct-22		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**0.904**	<0.0136	<0.0129 J4	**<0.0605**	0.0126 J	**<0.0128**	<0.0116	<0.0192
	MW-106	Oct-19		<0.197	<0.191	<0.0175	<0.107	<0.500	**9.61**	<0.0190	<0.0235	**<0.0433**	0.0343 J	**<0.0190**	<0.0174	<0.0227
	MW-106	Jun-20		<0.119	<0.0787	<0.0120	<0.0478	<1.13	**9.39**	<0.0136	<0.0129	**<0.0605**	<0.00962	**<0.0128**	<0.0116	<0.0192
	MW-106	Oct-20		<0.238	<0.157	<0.0240	<0.0956	<2.26	**14.9**	<0.0272	<0.0258	**<0.121**	<0.0192	**<0.0256**	<0.0232	<0.0384
	MW-106	Apr-21		<0.238	<0.157	<0.0240	<0.0956	<2.26	**9.39**	<0.0272	<0.0258	**<0.121**	<0.0192	**<0.0256**	<0.0232	<0.0384
	MW-107	Oct-16		<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	**6.35**	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	MW-107	Apr-17		<0.196	<0.191	<0.0175	<0.107	<0.500	**3.37**	<0.0190	<0.0234	**<0.0433** J4	<0.0138	**<0.0190**	<0.0174	<0.0226
	MW-107	Apr-18		<0.00393	<0.00382	0.000710 J	0.00375 J	<0.0100	**6.55**	<0.000380	<0.000469	<0.000866	0.000332 J	<0.000379	<0.000348	<0.000453
	MW-107	Apr-19		<0.982	<0.955	<0.0875	<0.535	<2.50 J4	**6.43**	**<0.0950**	<0.117	**<0.216**	<0.0688	**<0.0948**	<0.0870	<0.113

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
South Refinery	MW-109	Jun-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**1.78**	<0.00136	<0.00129	<0.00605	0.00454 JB	<0.00128	<0.00116	<0.00192
	MW-109	Oct-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**1.11**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-109	Apr-21			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.690**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-109	Sep-21			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	**2.18**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-109	Apr-22			<0.00119	<0.000787	0.000727 J	<0.000478	<0.0113	**1.55**	<0.000136	<0.000129	<0.000605	0.000655 J	<0.000128	<0.000116	<0.000192
	MW-109	Oct-22			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	**1.22**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-110	Jun-20			<0.00119	<0.000787	0.00103	<0.000478	<0.0113	0.00152	<0.000136	<0.000129	<0.000605	0.000346 JB	<0.000128	<0.000116	<0.000192
	MW-110	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000146 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-110	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.0581**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-110	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00427	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-110	Apr-22			<0.00119	<0.000787	0.000460 J	<0.000478	0.0141 J	**0.120**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-110	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000221 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-139	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000275 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	0.000626 J	<0.000192
	MW-139	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000206 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-139	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	0.000847 J	<0.000192
	MW-139	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-139	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	0.000537 J	<0.000192
	MW-139	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-313	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866 J3	<0.000275	<0.000379	<0.000348	<0.000453
	RA-313	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000433 JB	<0.000128	<0.000116	<0.000192
	RA-313	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	RA-313	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000322 J	<0.000128	<0.000116	<0.000192
	RW-4	Apr-18			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	**0.00821**	<0.000380	<0.000469	<0.000866	0.000447 J	<0.000379	<0.000348	<0.000453
	RW-4	Apr-19			<0.00393	<0.00382	0.000386 J	<0.00214	<0.0100 J4	**0.0854**	<0.000380	<0.000469	<0.000866	0.00131	<0.000379	<0.000348	<0.000453
	RW-4	Jun-20			<0.00119	<0.000787	0.000341 J	<0.000478	<0.0113	**0.0184**	<0.000136	<0.000129	<0.000605	0.00108 B	<0.000128	<0.000116	<0.000192
	RW-4	Apr-22			<0.00119	<0.000787	0.00108 B	<0.000478	<0.0113	**0.0198**	<0.000136	<0.000129	<0.000605	0.000676 J	<0.000128	<0.000116	<0.000192
	RW-5R	Apr-15			<0.0390	<0.0380	<0.00350	<0.0210	<0.100	**2.92**	<0.00380	<0.00470	**<0.00870**	<0.00280	<0.00380	<0.00350	<0.00450
	RW-5R	Apr-16			<0.0786	<0.0764	<0.00700	<0.0428	<0.200	**3.48**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	RW-6	Apr-15			<0.0390	<0.0380	<0.00350	<0.0210	<0.100	**0.636**	<0.00380	<0.00470	**<0.00870**	0.00771 J	<0.00380	<0.00350	<0.00450
	RW-6R	Apr-16			<0.00393	<0.00382	0.000401 J	<0.00214	<0.0100	**0.218**	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	RW-6	Apr-18			<0.00393	<0.00382	0.000996 J	<0.00214	<0.0100	**2.67**	<0.000380	<0.000469	<0.000866	0.000533 J	<0.000379	<0.000348	<0.000453
	RW-6	Apr-19			<0.0786	<0.0764	<0.00700	<0.0428	<0.200 J4	**1.18**	<0.00760	<0.00938	**<0.0173**	<0.00550	**<0.00758**	<0.00696	<0.00906
	RW-15C	Apr-17			<0.0982	<0.0955	<0.00875	<0.0535	<0.250	**19.1**	<0.00950	<0.0117	**<0.0216**	<0.00688	**<0.00948**	<0.00870	<0.0113
	RW-15C	Apr-18			<0.00393	<0.00382	0.00545	<0.00214	<0.0100	**21.9**	<0.000380	<0.000469	<0.000866	0.000650 JV3	<0.000379	<0.000348	<0.000453
	RW-15C	Apr-19			<0.0393	<0.0382	0.00722 J	<0.0214	<0.100	<0.00331	<0.00380	<0.00469	**<0.00866** J3	<0.00275	<0.00379	<0.00348	<0.00453
South RO Field	MW-114	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-114	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-114	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-114	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000102 J	<0.000128	<0.000116	<0.000192
	MW-114	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000362 J	<0.000128	<0.000116	<0.000192
	MW-114	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-115	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-115	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-115	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-115	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.0000992 J	<0.000128	<0.000116	<0.000192
	MW-115	Apr-22			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	<0.000941	<0.00136	<0.00129	<0.00605	0.00364 J	<0.00128	<0.00116	<0.00192
	MW-115	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Oct-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-116	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	0.000152 J	<0.000128	<0.000116	<0.000192
TEL	MW-49	Jun-20			<0.0238	<0.0157	0.00264 J	<0.00956	<0.226	**0.600**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-49	Oct-20			<0.0238	<0.0157	<0.00240	<0.00956	<0.226	**0.404**	<0.00272	<0.00258	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	MW-49	Apr-21			<0.0298	<0.0197	<0.00300	<0.0120	<0.282	**0.280**	<0.00340	<0.00322	**<0.0151**	<0.00241	<0.00320	<0.00290	<0.00480
	MW-49	Sep-21			<0.0119	<0.00787	0.00125 J	<0.00478	<0.113	**0.280**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	MW-49	Apr-22			<0.00595	<0.00394	0.00341 J	<0.00239	<0.0565	**0.236**	<0.000680	<0.000645	<0.00303	0.00337 JB	<0.000640	<0.000580	<0.000960
	MW-49	Oct-22			0.00693 J	<0.000787	0.00251	0.00252 J	0.0728	**0.278**	<0.000136	<0.000129 J4	<0.000605	0.00227	<0.000128	<0.000116	<0.000192
	TEL-1	Oct-18			<0.0196	<0.0191	<0.00175	<0.0107	<0.0500	<0.00166	<0.00190	<0.00234	<0.00433	<0.00138	<0.00190	<0.00174	<0.00226
	TEL-1	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	0.00214	<0.000379	<0.000348	<0.000453
	TEL-1	Oct-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	0.00114 B	<0.000379	<0.000348	<0.000453
	TEL-1	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-2	Oct-18			<0.0982	<0.0955	<0.00875	<0.0535	<0.250	**0.936**	<0.00950	<0.0117	**<0.0216**	<0.00688	**<0.00948**	<0.00870	<0.0113
	TEL-2	Apr-19			<0.0393	<0.0382	<0.00350	<0.0214	<0.100 J4	**1.08**	<0.00380	<0.00469	**<0.00866**	0.0474	<0.00379	<0.00348	<0.00453
	TEL-2	Oct-19			<0.0393	<0.0382	<0.00350	<0.0214	<0.100	**0.618**	<0.00380	<0.00469	**<0.00866**	<0.00275	<0.00379 J4	<0.00348	<0.00453
	TEL-2	Jun-20			<0.0119	<0.00787	<0.00120	<0.00478	<0.113	**0.362**	<0.00136	<0.00129	<0.00605	<0.000962	<0.00128	<0.00116	<0.00192
	TEL-3	Apr-18			<0.00393	<0.00382	0.000823 J	<0.00214	<0.0100	**0.392**	<0.000380	<0.000469	<0.000866	0.00114	<0.000379	<0.000348	<0.000453
	TEL-3	Apr-19			<0.00393	<0.00382	0.000906 J	<0.00214	<0.0100 J4	**0.162**	<0.000380	<0.000469	<0.000866	0.00181	<0.000379	<0.000348	<0.000453
	TEL-3	Oct-19			<0.00393	<0.00382	0.000861 J	<0.00214	<0.0100	**0.0573**	<0.000380	<0.000469	<0.000866	0.00279 B	<0.000379	<0.000348	<0.000453
	TEL-3	Oct-20			<0.00119	<0.000787	0.00180	<0.000478	<0.0113	**0.182**	<0.000136	<0.000129	<0.000605 J4	0.00307	<0.000128	<0.000116	<0.000192
	TEL-4	Jun-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	**0.00721**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	TEL-4	Jun-20	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.00759**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-4	Oct-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	0.00154 J	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	TEL-4	Oct-20	FD		<0.00119 J3	<0.000787	<0.000120	<0.000478	<0.0113 J3	0.00133	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-4	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000588 J	<0.000136	<0.000129	<0.000605	0.000163 J	<0.000128	<0.000116	<0.000192
	TEL-4	Apr-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000602 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-4	Sep-21			<0.00119	<0.000787	0.000135 J	<0.000478	<0.0113	**0.116**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-4	Sep-21	FD		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.133**	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	TEL-4	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	**0.00899**	<0.000136	<0.000129	<0.000605	0.000915 J	<0.000128	<0.000116	<0.000192
	TEL-4	Apr-22	FD		<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	**0.0102**	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	TEL-4	Oct-22			0.0143	<0.000787	0.000121 J	0.00806 J	0.0170 J	0.000469 J	0.000146 J	<0.000129 J4	<0.000605	0.000652 J	<0.000128	<0.000116	<0.000192
	TEL-4	Oct-22	FD		0.0132	<0.000787	0.000163 J	0.00752 J	0.0150 J	0.000541 J	<0.000136	<0.000129 J4	<0.000605	0.000399 J	<0.000128	<0.000116	<0.000192
Three Mile Ditch	MW-8	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-8	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-8	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-8	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-16	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-16	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-16	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-16	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-20	Apr-19			<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-20	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-20	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-20	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000364 J	<0.000128	<0.000116	<0.000192
	MW-21	Jun-20			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-21	Oct-20			<0.00595	<0.00394	<0.000600	<0.00239	<0.0565	<0.000471	<0.000680	<0.000645	<0.00303	<0.000481	<0.000640	<0.000580	<0.000960
	MW-21	Apr-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J3J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-21	Sep-21			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000129 J	<0.000128	<0.000116	<0.000192
	MW-21	Apr-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-21	Oct-22			<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.00332 J	<0.000136	<0.000129 J4	<0.000605	0.000135 J	<0.000128	<0.000116	<0.000192

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds													
				Analyte:	2-Butanone (MEK)	2-Hexanone (Methyl N-Butyl Ketone)	4-Isopropyl-toluene (p-Cymene)	4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform (Tribromo-methane)	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloroethane
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	5.56	---	---	1.24	14.1	0.00500	0.0800	---	0.00754	0.810	0.00500	0.100	20.9
				CGWSL Source:	NMED TW	---	---	NMED TW	TMED TW	WQCC HH	USEPA MCL	---	NMED TW	NMED TW	WQCC HH	USEPA MCL	NMED TW
Area	**Well ID**	**Date**	**Dup**														
Three Mile Ditch	MW-25	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-25	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-25	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-25	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-26	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-26	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-26	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-26	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-27	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-27	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-27	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-27	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-46R	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000120 J	<0.000128	<0.000116	<0.000192
	MW-46R	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-46R	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J3J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-46R	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-46R	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-46R	Oct-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000118 J	<0.000136	<0.000129 J4	<0.000605	0.000104 J	<0.000128	<0.000116	<0.000192
	MW-68	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-68	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-68	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J3J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-68	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-71	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-71	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-71	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113 J3J4	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-71	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-89	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100 J4	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	MW-89	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-89	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	MW-89	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-1	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-1	Oct-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-1	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-1	Sep-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	0.000154 J	<0.000128	<0.000116	<0.000192
	NP-1	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	0.000161 J	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	NP-1	Oct-22		<0.0238	<0.0157	<0.00240	<0.00956	<0.226	<0.00188	<0.00272	<0.00258 J4	**<0.0121**	<0.00192	<0.00256	<0.00232	<0.00384
	NP-6	Apr-15		<0.00390 UJ	<0.00380 UJ	<0.000350	<0.00210	<0.0100	<0.000330	<0.000380	<0.000470 UJ	<0.000870	0.00376	<0.000380	<0.000350	<0.000450
	NP-6	Apr-17		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	NP-6	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	NP-6	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
Upgradient	UG-1	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	UG-1	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	UG-1	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136 J4	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-1	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-2	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	UG-2	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	UG-2	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136 J4	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-2	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-3R	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	UG-3R	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	UG-3R	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136 J4	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-3R	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-4	Apr-19		<0.00393	<0.00382	<0.000350	<0.00214	<0.0100	<0.000331	<0.000380	<0.000469	<0.000866	<0.000275	<0.000379	<0.000348	<0.000453
	UG-4	Jun-20		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116 J4	<0.000192
	UG-4	Apr-21		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136 J4	<0.000129	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192
	UG-4	Apr-22		<0.00119	<0.000787	<0.000120	<0.000478	<0.0113	<0.0000941	<0.000136	<0.000129 J4	<0.000605	<0.0000962	<0.000128	<0.000116	<0.000192

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Cross-Gradient	KWB-13	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.000387 J	0.000789 J	<0.000367	<0.00100	0.00236 JJ4	<0.000361
	KWB-13	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000234 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-13	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000210 J	<0.000105	0.000438 J	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-13	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-136	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-136	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000122 J	<0.000430	<0.00100	<0.000157
	MW-136	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000430 J	<0.000430	<0.00100	<0.000157
	MW-136	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000624 J	<0.000430	<0.00100	<0.000157
	MW-136	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000602 J	<0.000430	<0.00100	<0.000157
	MW-136	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000291 J	<0.000430	<0.00100	<0.000157
	NP-5	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	NP-5	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	NP-5	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327 J4	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	NP-5	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	RA-3156	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	RA-3156	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	RA-3156	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000124 J	<0.000430	<0.00100	<0.000157
	RA-3156	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
Evaporation Ponds	MW-1R	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-1R	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-1R	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-1R	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-2A	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-2A	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-2A	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-2A	Sep-21													
	MW-2A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-2A	Oct-22													
	MW-3	Jun-20		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	<0.00263	<0.0107	<0.00253	**0.0181 J**	<0.0250	<0.00393
	MW-3	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000341 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000139 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000169 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Apr-21		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	<0.00263	<0.0107	<0.00253	**<0.0107**	<0.0250	<0.00393
	MW-3	Apr-21	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000291 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Sep-21													
	MW-3	Sep-21	FD												
	MW-3	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000208 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Apr-22	FD	0.000139 J	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-3	Oct-22													
	MW-3	Oct-22	FD												
	MW-4A	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00134	0.000627 J	0.000195 J	<0.000430	<0.00100	<0.000157
	MW-4A	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00191	0.00214	0.000244 J	<0.000430	<0.00100	<0.000157
	MW-4A	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	0.00208	0.000907 J	0.000252 J	<0.000430	<0.00100 J4	<0.000157
	MW-4A	Sep-21													
	MW-4A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00107	0.000882 J	0.000221 J	<0.000430	<0.00100 J4	<0.000157
	MW-4A	Oct-22													
	MW-4B	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	0.000462 J	0.000845 J	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-4B	Apr-17		<0.000324	<0.000276 J4	<0.000260	<0.000418 J4	<0.000327	<0.000384	0.000727 J	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	MW-4B	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.000395 J	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	MW-4B	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	0.000184 J	<0.000430	0.000158 J	<0.000430	<0.00100 J4	<0.000157
	MW-5A	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000800 J	<0.000430	0.000812 J	<0.000430	<0.00100	<0.000157
	MW-5A	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000616 J	<0.000430	0.00142	<0.000430	<0.00100	<0.000157
	MW-5A	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	0.000416 J	<0.000430	0.00156	<0.000430	<0.00100 J4	<0.000157
	MW-5A	Sep-21													
	MW-5A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000288 J	<0.000430	0.00111	<0.000430	<0.00100 J4	<0.000157
	MW-5A	Oct-22													
	MW-5B	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	0.00148	<0.00100	<0.00100	<0.000360
	MW-5B	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00140	<0.00100	<0.00100	<0.000361
	MW-5B	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.000981 J	<0.00100	<0.00100 J3	<0.000361
	MW-5B	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000335 J	<0.000430	<0.00100 J4	<0.000157
	MW-5C	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	0.000507 J	<0.00100	<0.00100	<0.000360
	MW-5C	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.000369 J	<0.00100	<0.00100	<0.000361
	MW-5C	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	MW-5C	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000861 J	<0.000430	<0.00100	<0.000157
	MW-6A	Apr-19		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.00197 J	<0.00163	0.00413 J	<0.00184	<0.00500	<0.00500 J3	<0.00180
	MW-6A	Jun-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.000927 J	<0.000525	<0.00215	<0.000505	**0.0101 J**	<0.00500	<0.000785
	MW-6A	Apr-21		<0.000555	<0.00480 J4	<0.000630	<0.000555	<0.000700	0.00142 J	<0.000525	0.00298 J	<0.000505	<0.00215	<0.00500 J4	<0.000785
	MW-6A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00107	0.000339 J	0.00270	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-6B	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-6B	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-6B	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	MW-6B	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-7A	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000858 J	<0.000430	<0.00100	<0.000157
	MW-7A	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00113	<0.000430	<0.00100	<0.000157
	MW-7A	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000957 J	<0.000430	<0.00100	<0.000157
	MW-7A	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000984 J	<0.000430	<0.00100	<0.000157
	MW-7A	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000747 J	<0.000430	<0.00100	<0.000157
	MW-7A	Apr-21	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000765 J	<0.000430	<0.00100	<0.000157
	MW-7A	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000870 J	<0.000430	0.00164 J	<0.000157
	MW-7A	Sep-21	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000863 J	<0.000430	0.00164 J	<0.000157
	MW-7A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000867 J	<0.000430	<0.00100 J4	<0.000157
	MW-7A	Apr-22	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000830 J	<0.000430	<0.00100 J4	<0.000157
	MW-7A	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000830 J	<0.000430	<0.00100	<0.000157
	MW-7A	Oct-22	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000831 J	<0.000430	<0.00100	<0.000157
	MW-7B	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-7B	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-7B	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	MW-7B	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-10	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00136	<0.000430	<0.00100	<0.000157 J4
	MW-10	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00136	<0.000430	<0.00100	<0.000157
	MW-10	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00124	<0.000430	<0.00100 J4	<0.000157
	MW-10	Sep-21													
	MW-10	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00103	<0.000430	<0.00100 J4	<0.000157
	MW-10	Oct-22													
	MW-11A	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-11A	Oct-20													
	MW-11A	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-11A	Sep-21													
	MW-11A	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-11A	Oct-22													

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
Evaporation Ponds	MW-11B	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-11B	Apr-17			<0.000324	<0.000276 J4	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	MW-11B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-11B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-15	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.000549 J	<0.00100	<0.00100	<0.000361
	MW-15	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-15	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-15	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-18A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000734 J	<0.000430	<0.00100	<0.000157
	MW-18A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000678 J	<0.000430	<0.00100	<0.000157
	MW-18A	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000522 J	<0.000430	<0.00100	<0.000157
	MW-18A	Sep-21														
	MW-18A	Apr-22			0.000115 J	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000636 J	<0.000430	<0.00100	0.000420 JB
	MW-18A	Oct-22														
	MW-18B	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-18B	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-18B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-18B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-22A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00242	<0.000430	<0.00100	0.000199 J
	MW-22A	Jun-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00254	<0.000430	<0.00100	<0.000157 J4
	MW-22A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00286	<0.000430	<0.00100	<0.000157
	MW-22A	Oct-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00273	<0.000430	<0.00100	<0.000157
	MW-22A	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00245	<0.000430	<0.00100	<0.000157
	MW-22A	Apr-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00245	<0.000430	<0.00100	<0.000157
	MW-22A	Sep-21														
	MW-22A	Sep-21	FD													
	MW-22A	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00239	<0.000430	<0.00100 J4	<0.000157
	MW-22A	Apr-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00231	<0.000430	<0.00100 J4	<0.000157
	MW-22A	Oct-22														
	MW-22A	Oct-22	FD													
	MW-22A	Oct-22														
	MW-22A	Oct-22	FD													
	MW-22B	Apr-15			<0.000320 UJ	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	0.00634	<0.00100	<0.00100	<0.000360
	MW-22B	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00564	<0.00100	<0.00100	<0.000361
	MW-22B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	0.00582	<0.00100	<0.00100	<0.000361
	MW-22B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00462	<0.000430	<0.00100	<0.000157
	MW-70	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000119 J	<0.000430	<0.00100	<0.000157
	MW-70	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000124 J	<0.000430	<0.00100	<0.000157
	MW-70	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-70	Sep-21														
	MW-70	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-70	Oct-22														
	MW-72	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	MW-72	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-72	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-72	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-73	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	0.000992 J	<0.00100	<0.00100	<0.000361
	MW-73	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00105	<0.000430	<0.00100	<0.000157
	MW-73	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00102	<0.000430	<0.00100 J4	<0.000157
	MW-73	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000576 J	<0.000430	<0.00100	<0.000157
	MW-74	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000294 J	<0.000430	<0.00100	<0.000157
	MW-74	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000761 J	<0.000430	<0.00100	<0.000157
	MW-74	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000577 J	<0.000430	<0.00100 J4	<0.000157
	MW-74	Sep-21														
	MW-74	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000482 J	<0.000430	<0.00100	<0.000157
	MW-74	Oct-22														
	MW-75	Jun-20			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	0.00352 J	<0.0107	0.00263 J	**<0.0107**	<0.0250	<0.00393
	MW-75	Oct-20			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	0.00529 J	<0.0107	0.00583 J	**<0.0107**	<0.0250	<0.00393
	MW-75	Apr-21			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	<0.00263	<0.0107	<0.00253	**<0.0107**	<0.0250	<0.00393
	MW-75	Sep-21														
	MW-75	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000970 J	<0.000430	0.00471	<0.000430	<0.00100 J4	<0.000157
	MW-75	Oct-22														
	MW-76	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00915	0.000628 J	0.0111	<0.000430	<0.00100	<0.000157 J4
	MW-76	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00944	<0.000430	0.00743	<0.000430	<0.00100	<0.000157
	MW-76	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00467	<0.000430	0.00437	<0.000430	<0.00100	<0.000157
	MW-76	Sep-21														
	MW-76	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00127	<0.000430	0.00418	<0.000430	<0.00100 J4	<0.000157
	MW-76	Oct-22														
	MW-77	Apr-19			<0.00324	<0.00276	<0.00260	<0.00418 J4	<0.00327	<0.00384	0.0145	<0.00719	0.00392 J	**<0.0100**	<0.0100	<0.00361
	MW-77	Jun-20			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	0.0226 J	<0.0107	<0.00253	**<0.0107**	<0.0250	<0.00393
	MW-77	Apr-21			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	<0.00343	<0.00263	<0.0107	<0.00253	**<0.0107**	<0.0250	<0.00393
	MW-77	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000224 J	<0.000430	0.000672 J	<0.000430	<0.00100 J4	<0.000157
	MW-78	Apr-19			<0.00324	<0.00276	<0.00260	<0.00418 J4	<0.00327	<0.00384	<0.00326	<0.00719	<0.00367	**<0.0100**	<0.0100	<0.00361
	MW-78	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-78	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-78	Apr-22			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	<0.00101	<0.00430	<0.0100	<0.00157
	MW-79	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-79	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-79	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-79	Sep-21														
	MW-79	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-79	Oct-22														
	MW-80	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-80	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-80	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-80	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-81	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-81	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-81	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-81	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-82	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418 J4	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-82	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-82	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-82	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-83	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00144	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-83	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00263	0.00127 J	0.000649 J	<0.000430	<0.00100	<0.000157
	MW-83	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-83	Sep-21														
	MW-83	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000238 J	<0.000430	0.000199 J	<0.000430	<0.00100	<0.000157
	MW-83	Oct-22														
	MW-84	Jun-20			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.000576 J	<0.00215	0.00112 J	<0.00215	<0.00500	<0.000785
	MW-84	Oct-20			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	0.00104 J	<0.00430	<0.0100	<0.00157
	MW-84	Apr-21			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	<0.00101	<0.00430	<0.0100	<0.00157
	MW-84	Sep-21														
	MW-84	Apr-22			<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	<0.00274	<0.00210	<0.00860	<0.00202	**<0.00860**	<0.0200	<0.00314
	MW-84	Oct-22														

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
Evaporation Ponds	MW-86	Jun-20			<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0199 J	0.00509 J	0.0267 J	<0.00202	**<0.00860**	<0.0200	<0.00314
	MW-86	Oct-20			<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0228	0.00405 J	0.0295 J	<0.00202	**<0.00860**	<0.0200	<0.00314
	MW-87	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000725 J	<0.000430	<0.00100	<0.000157
	MW-87	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000777 J	<0.000430	<0.00100	<0.000157
	MW-87	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000558 J	<0.000430	<0.00100	<0.000157
	MW-87	Sep-21														
	MW-87	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000586 J	<0.000430	<0.00100	<0.000157
	MW-87	Oct-22														
	MW-88	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-88	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-88	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-88	Sep-21														
	MW-88	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-88	Oct-22														
	MW-120	Jun-20			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	<0.000525	<0.00215	<0.000505	<0.00215	<0.00500	<0.000785
	MW-120	Oct-20			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	<0.000525	<0.00215	<0.000505	<0.00215	<0.00500	<0.000785
	MW-120	Apr-21			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	<0.000525	<0.00215	<0.000505	<0.00215	<0.00500	<0.000785
	MW-120	Sep-21			<0.000111	<0.000960	0.000173 JB	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-120	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-120	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-121	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-121	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-121	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-121	Sep-21														
	MW-121	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-121	Oct-22														
	MW-122	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-122	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-122	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-122	Sep-21														
	MW-122	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-122	Oct-22														
	MW-123	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00149	<0.000430	<0.00100	<0.000157 J4
	MW-123	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00174	<0.000430	<0.00100	<0.000157
	MW-123	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00153	<0.000430	<0.00100	<0.000157
	MW-123	Sep-21														
	MW-123	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00164	<0.000430	<0.00100 J4	<0.000157
	MW-123	Oct-22														
	MW-124	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-124	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-124	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-124	Sep-21														
	MW-124	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-124	Oct-22														
	OCD-1R	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	OCD-1R	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-1R	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-1R	Sep-21														
	OCD-1R	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-1R	Oct-22														
	OCD-2A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	OCD-2A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-2A	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-2A	Sep-21														
	OCD-2A	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-2A	Oct-22														
	OCD-3	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	OCD-3	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-3	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-3	Sep-21														
	OCD-3	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-3	Oct-22														
	OCD-4	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	OCD-4	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-4	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-4	Sep-21														
	OCD-4	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-4	Oct-22														
	OCD-5	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	OCD-5	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-5	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-5	Sep-21														
	OCD-5	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-5	Oct-22														
	OCD-6	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-6	Oct-20			<0.000111	<0.000960	0.000170 JB	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-6	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	OCD-6	Sep-21														
	OCD-6	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	OCD-6	Oct-22														
	OCD-7AR	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000944 J	<0.000430	<0.00100	<0.000157
	OCD-7AR	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00157	<0.000430	<0.00100	<0.000157
	OCD-7AR	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00129	<0.000430	<0.00100 J4	<0.000157
	OCD-7AR	Sep-21														
	OCD-7AR	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00130	<0.000430	<0.00100	<0.000157
	OCD-7AR	Oct-22														
	OCD-7B	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	OCD-7B	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	OCD-7B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3	<0.000361
	OCD-7B	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	OCD-8A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00275	<0.000430	<0.00100	<0.000157
	OCD-8A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00342	<0.000430	<0.00100	<0.000157
	OCD-8A	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00345	<0.000430	<0.00100	<0.000157
	OCD-8A	Sep-21														
	OCD-8A	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00228	<0.000430	<0.00100 J4	<0.000157
	OCD-8A	Oct-22														
	OCD-8B	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	0.00155	<0.00100	<0.00100	<0.000360
	OCD-8B	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.000919 J	<0.00100	<0.00100	<0.000361
	OCD-8B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.000876 J	<0.00100	<0.00100	<0.000361
	OCD-8B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000606 J	<0.000430	<0.00100	<0.000157
Field East of Refinery	KWB-1A	Oct-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	KWB-1A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-1A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-1A	Oct-22			0.00225 J	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	0.00519	0.00428	0.0334	<0.000101	<0.000430	0.00274 J	0.000659 J
	KWB-1C	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	KWB-1C	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	KWB-1C	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	KWB-1C	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
Field East of Refinery	KWB-7	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00936	0.0409	0.0390	0.00932	<0.000430	0.00822	0.000580 J
	KWB-7	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00262	0.0188	0.00249	0.00365	<0.000430	<0.00100	0.000270 J
	KWB-7	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.459	0.0554	0.167	0.00489	<0.000430	**0.0306**	0.00170
	KWB-7	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.331	0.105	0.0764	0.00580	<0.000430	0.0108	0.00291
	KWB-7	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00103	0.0405	0.00103 J	0.00646	<0.000430	0.00138 J	<0.000157
	KWB-7	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00122	0.0705	<0.000430	0.00469	<0.000430	0.00143 JB	0.000891 JB
	KWB-8	Oct-16			<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	**0.828**	<0.0652	1.01	<0.0734	**<0.200**	**<0.200** J4	<0.0722
	KWB-8	Apr-17			<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	**1.24**	0.0467 J	1.92	**0.129**	**<0.100**	**0.141 J**	<0.0361
	KWB-8	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.617	0.0182	0.782	**0.134 V3**	<0.00100	**0.0519**	0.00209
	KWB-8	Oct-20			<0.0222	**<0.192**	<0.0252	**<0.0222**	<0.0280	**2.89**	0.0937 J	4.05	0.0230 J	**<0.0860**	**0.539 J**	<0.0314
	KWB-10R	Apr-17			0.0172 J	<0.0138	<0.0130	**<0.0209**	<0.0164	0.505	0.0486 J	0.716	**3.65**	**<0.0500**	**0.156 J**	<0.0180
	KWB-10R	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.530	0.0494	0.655	**5.41**	<0.00100	**0.152**	<0.000361
	KWB-10R	Apr-18			**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	0.354	<0.0815	0.457 J	**2.74**	**<0.250**	**<0.250**	<0.0902
	KWB-10R	Oct-18			**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	0.238 J	<0.0815	0.217 J	**4.12**	**<0.250**	**<0.250**	<0.0902
	KWB-11A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000576 J	0.00360	<0.000430	0.00359	<0.000430	<0.00100	<0.000157
	KWB-11A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000380 J	<0.000430	0.00307	<0.000430	<0.00100	<0.000157
	KWB-11A	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0382	0.0169	0.0209	0.00221	<0.000430	0.00154 J	0.00117
	KWB-11A	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	0.000721 J	0.00320	<0.000430	0.00158	<0.000430	<0.00100	0.000449 J
	KWB-11B	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00140	<0.000430	<0.00100	<0.000157
	KWB-11B	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00156	<0.000430	<0.00100	<0.000157
	KWB-11B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00105	<0.000430	<0.00100	<0.000157
	KWB-11B	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000419 J	0.000232 J	<0.000430	0.00152	<0.000430	<0.00100	<0.000157
	KWB-11B	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000121 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-11B	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	<0.000137	<0.000105	<0.000430	0.00145	<0.000430	<0.00100	<0.000157
	KWB-12A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12A	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000527 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12A	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Jun-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Oct-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Apr-21	FD		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Sep-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Apr-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-12B	Oct-22	FD		<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	KWB-P4	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	KWB-P4	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	KWB-P4	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	KWB-P4	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-57	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-57	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-57	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-57	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-57	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000221 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-58	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0965	0.0456	0.220	0.0987	<0.00100	**0.0469**	0.00529
	MW-58	Apr-18			<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	**0.946**	0.0521	0.268	0.0303 J	**<0.0500**	**0.267**	<0.0180
	MW-58	Oct-18			<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	0.0351 J	0.0461 J	<0.0360	0.0624	**<0.0500**	**<0.0500**	<0.0180
	MW-58	Oct-19			<0.00324	<0.00276	<0.00260	<0.00418	<0.00327 J4	0.634	0.0370	0.395	<0.00367	**<0.0100**	**0.0917**	0.00804 J
	MW-111	Oct-18			<0.00810	<0.00690	<0.00650	**<0.0104**	<0.00818	<0.00960	<0.00815	<0.0180	**1.47**	**<0.0250**	<0.0250	<0.00902
	MW-111	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00258	0.00388	0.00523	**1.46**	<0.00100	0.00408 J	<0.000361
	MW-111	Oct-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0164	0.00148	0.00995	**1.23**	<0.00100	0.00372 J	<0.000361
	MW-111	Jun-20			<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	0.0408	0.00406 J	0.0148 J	**1.30**	**<0.0107**	<0.0250	<0.00393
	MW-112	Nov-14			<0.00810	<0.00690	<0.00650	**<0.0100**	<0.00820	**0.970**	0.0570	1.40	**1.00**	**<0.0250**	**0.200**	<0.00900
	MW-113	Jun-20			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.00355 J	0.00158 J	0.0363	0.0129	<0.00215	<0.00500	<0.000785
	MW-113	Jun-20	FD		0.00490 J	<0.000960	<0.000126	<0.000111	<0.000140	0.00448	0.000915 J	0.0470	0.0104	<0.000430	0.00195 J	<0.000157
	MW-113	Oct-20			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.129	0.0208	0.154	0.0117	<0.00215	0.0101 J	0.000994 J
	MW-113	Oct-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.137	0.0226	0.165	0.0118	<0.000430	0.0104	0.00112
	MW-113	Apr-21			<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.0126	0.00161 J	0.0395	0.00805	<0.00215	<0.00500	<0.000785
	MW-113	Apr-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0183	0.00231	0.0569	0.00823	<0.000430	0.00507	<0.000157
	MW-113	Sep-21			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	**2.14**	0.109	0.877	0.0544	**<0.0215**	**0.158 J**	<0.00785
	MW-113	Sep-21	FD		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	**1.97**	0.111	0.872	0.0630	**<0.0107**	**0.118 J**	0.00723 J
	MW-113	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0217	0.00337	0.0955	0.0147	<0.000430	0.00192 JJ4	0.000267 J
	MW-113	Apr-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0227	0.00334	0.102	0.0136	<0.000430	0.00163 J	<0.000157
	MW-113	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	**2.58**	0.148	1.06	0.0341	<0.000430	**0.329 JB**	0.0130
	MW-113	Oct-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	**2.63**	0.160	1.12	0.0365	<0.000430	**0.301 B**	0.0143
	MW-125	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-125	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000155 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-125	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-125	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-125	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-125	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-126A	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	MW-126A	Oct-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0114	0.0135	0.00569	<0.000367	<0.00100	0.00221 J	<0.000361
	MW-126A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000248 J	<0.000430	<0.00100	<0.000157
	MW-126A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000502 J	<0.000430	<0.00100	<0.000157
	MW-126B	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-126B	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000114 J	<0.000430	<0.00100	<0.000157
	MW-126B	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000152 J	<0.000430	<0.00100	<0.000157
	MW-126B	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000151 J	<0.000430	<0.00100	<0.000157
	MW-126B	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000155 J	<0.000430	<0.00100	<0.000157
	MW-126B	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-127	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0937	0.0130	0.0445	**0.885**	<0.00100	0.00901	<0.000361
	MW-127	Apr-18			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.121	0.0160 J	0.0654	**0.623**	**<0.0200**	<0.0200	<0.00722
	MW-127	Oct-18			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.0797	0.0180 J	0.0458	**0.774**	**<0.0200**	<0.0200	<0.00722
	MW-127	Apr-19			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.138	0.0199 J	0.0933	**0.628**	**<0.0200**	<0.0200 J4	<0.00722
	MW-128	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00128	0.00133	0.00336	**0.785**	<0.00100	0.00142 J	<0.000361
	MW-128	Apr-18			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	<0.00768	<0.00652	<0.0144	**0.961**	**<0.0200**	**0.0422 J**	<0.00722
	MW-128	Oct-18			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.0247	<0.00652	<0.0144	**0.963**	**<0.0200**	<0.0200	<0.00722
	MW-128	Apr-19			<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.0199 J	<0.00652	<0.0144	**0.765**	**<0.0200**	<0.0200	<0.00722
	MW-129	Apr-16			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.0192	0.00172	0.00199	**4.59**	<0.00100	0.00534	0.000444 J
	MW-129	Oct-16			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000985 J	0.00144	0.00124	**4.73**	<0.00100	0.00186 JJ4	<0.000361
	MW-129	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.000976 J	0.000737 J	**4.34**	<0.00100	0.00247 J	<0.000361
	MW-129	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00130	0.000687 J	0.00125 J	**5.40**	<0.00100	0.00124 J	<0.000361

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Field East of Refinery	MW-130	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00424	<0.000430	<0.00100	<0.000157
	MW-130	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00328	<0.000430	<0.00100	<0.000157
	MW-130	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00230	<0.000430	<0.00100	<0.000157
	MW-130	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00205	<0.000430	<0.00100	<0.000157
	MW-130	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00212	<0.000430	<0.00100 J4	<0.000157
	MW-130	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00231	<0.000430	<0.00100	<0.000157
	MW-131	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0532	0.0206	0.0735	**3.99**	<0.00100	0.0295	0.00255
	MW-131	Oct-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.0960	0.0162	<0.180	**5.25**	<0.00100	**0.0303**	0.00185
	MW-131	Oct-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0255	0.00961	0.681	**4.95**	<0.00100	**0.0314**	0.00269
	MW-131	Jun-20			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0171 J	0.00743 J	0.544	**2.91**	**<0.0215**	**<0.0500**	<0.00785
	MW-133	Nov-14			<0.0320	**<0.0280**	<0.0260	**<0.0420**	<0.0330	0.300	0.0570 J	0.180 J	**5.60**	**<0.100**	**<0.100**	<0.0360
	MW-133	Apr-15			<0.0320	**<0.0280**	<0.0260	**<0.0420**	<0.0330	0.199	<0.0330	0.108	**6.67**	**<0.100**	**<0.100**	<0.0360
	MW-134	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Jun-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-134	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Oct-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Apr-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Sep-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Apr-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	0.000544 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-134	Oct-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000280 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00119	0.000707 J	<0.000101	<0.000430	0.00174 J	<0.000157
	MW-135	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-135	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-145	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000496 J	<0.000430	<0.00100	<0.000157
	MW-145	Oct-20	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000507 J	<0.000430	<0.00100	<0.000157
	MW-145	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000546 J	<0.000430	<0.00100	<0.000157
	MW-145	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000998 J	<0.000430	<0.00100	<0.000157
	MW-145	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000832 J	<0.000430	<0.00100	<0.000157
	MW-145	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.00101	<0.000430	<0.00100	<0.000157
	MW-146	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-146	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-146	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000125 J	<0.000430	<0.00100	<0.000157
	MW-146	Sep-21	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000105 J	<0.000430	<0.00100	<0.000157
	MW-146	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-146	Apr-22	FD		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-146	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000213 J	<0.000430	<0.00100	<0.000157
	MW-146	Oct-22	FD		<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000211 J	<0.000430	<0.00100	<0.000157
	MW-147	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-147	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-147	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-147	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-147	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-148	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000183 J	<0.000430	<0.00100	<0.000157
	MW-148	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-148	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-148	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-148	Oct-22			<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	RA-4196	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00594	<0.00100	<0.00100	<0.000361
	RA-4196	Oct-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00709	<0.00100	<0.00100	<0.000361
	RA-4196	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00948	<0.000430	<0.00100	<0.000157
	RA-4196	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00798	<0.000430	<0.00100	<0.000157
	RA-4798	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0170	<0.000430	<0.00100	<0.000157
	RA-4798	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00654	<0.000430	<0.00100	<0.000157
	RA-4798	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0136	<0.000430	<0.00100	<0.000157
	RA-4798	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0166	<0.000430	<0.00100	<0.000157
	RA-4798	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000397 J	<0.000430	<0.00100	<0.000157
	RW-12R	Apr-17			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.00823	0.0591	0.0239	0.00210 J	<0.00500	0.00877 J	<0.00180
	RW-12R	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00269	0.0459	0.00648	0.00315	<0.00100	0.00130 J	0.00125
	RW-12R	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00142	0.0316	0.00595	0.00341	<0.00100	<0.00100	0.000615 J
	RW-12R	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00223	0.0303	0.00553	0.00225	<0.000430	<0.00100	<0.000157
	RW-13R	Apr-16			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0691	0.0117	0.0939	0.0779	<0.00100	0.0148	0.00124
	RW-13R	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00855	0.0177	0.0283	0.0559	<0.00100	0.00114 J	0.00193
	RW-18A	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	RW-18A	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	RW-18A	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361
	RW-18A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	RW-20	Apr-15			<0.00320	<0.00280	<0.00260	<0.00420	<0.00330	**0.973**	0.0456	1.30	**0.209**	**<0.0100**	**0.183**	0.00846 J
	RW-22	Apr-15			<0.00320	<0.00280	<0.00260	<0.00420	<0.00330	**1.09**	0.0525	0.850	**0.178**	**<0.0100**	**0.164**	0.00856 J
NCL	MW-18	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-18	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000340 J	<0.000430	<0.00100 J4	<0.000157
	MW-18	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000338 J	<0.000430	<0.00100	<0.000157
	MW-18	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000299 J	<0.000430	<0.00100	<0.000157
	MW-45	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00634	<0.000430	<0.00100 J4	<0.000157
	MW-45	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0124	<0.000430	<0.00100	<0.000157
	MW-45	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00926	<0.000430	<0.00100	<0.000157
	MW-45	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000162 J	0.000483 J	0.00981	<0.000430	<0.00100	<0.000157
	MW-45	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00829	<0.000430	<0.00100	<0.000157
	MW-45	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.000121 J	<0.000430	0.00549	<0.000430	<0.00100	0.000667 J
	MW-53	Apr-16			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-53	Apr-17			<0.000324	<0.000276	0.000391 J	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-53	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-53	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-53R	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-53R	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-53R	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-54A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-54A	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-54A	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-54A	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	0.00170 J	<0.000157
	MW-54A	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-54A	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000141 J	<0.000430	<0.00100	<0.000157
	MW-54B	Apr-15			<0.000320	<0.000280	<0.000260	<0.000420	<0.000330	<0.000380	<0.000330	<0.000720	<0.000370	<0.00100	<0.00100	<0.000360
	MW-54B	Apr-17			<0.000324	<0.000276	0.000616 J	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-54B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-54B	Apr-21			<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-55	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.228**	<0.000430	<0.00100	<0.000157
	MW-55	Oct-20			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	**0.299**	<0.00430	<0.0100	<0.00157
	MW-55	Apr-21			<0.00111	<0.00960 J4	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	**0.449**	<0.00430	<0.0100	<0.00157
	MW-55	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.318**	<0.000430	<0.00100	<0.000157
	MW-55	Apr-22			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	**0.438**	<0.00430	<0.0100	<0.00157
	MW-55	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0772	<0.000430	<0.00100	<0.000157

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
NCL	MW-56	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00208	<0.00100	<0.00100	<0.000361
	MW-56	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000339 J	<0.000430	<0.00100	<0.000157
	MW-56	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000138 J	<0.000430	<0.00100	<0.000157
	MW-56	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000112 J	<0.000430	<0.00100	<0.000157
	MW-108	Jun-20		0.00126 J	<0.00480	<0.000630	<0.000555	<0.000700	0.00278 J	0.0235	0.0403	<0.000505	<0.00215	<0.00500 J4	0.00177 J
	MW-108	Oct-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.0119	0.0176	<0.000505	<0.00215	<0.00500	<0.000785
	MW-108	Apr-21		<0.000555	<0.00480 J4	<0.000630	<0.000555	<0.000700	0.00278 J	0.0212	0.0313	<0.000505	<0.00215	<0.00500	0.00157 J
	MW-108	Sep-21		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	0.0184	0.0194 J	0.00231 J	<0.00430	<0.0100	<0.00157
	MW-108	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000543 J	0.0259	0.00386	<0.000101	<0.000430	<0.00100 J4	0.00161
	MW-108	Oct-22		0.00115 J	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000558 J	0.0259	0.00266	<0.000101	<0.000430	<0.00100	0.00206
	NCL-31	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000241 J	0.000205 J	0.000667 J	<0.000101	<0.000430	<0.00100 J4	<0.000157
	NCL-31	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000275 J	0.000108 J	0.000833 J	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-31	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	0.000613 J	0.000251 J	0.000927 J	<0.000101	<0.000430	0.00252 J	<0.000157
	NCL-31	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000152 J	<0.000430	<0.000101	<0.000430	0.00185 J	<0.000157
	NCL-31	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-31	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-32	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	NCL-32	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-32	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-32	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-32	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-32	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-33	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000208 J	<0.000430	<0.00100 J4	<0.000157
	NCL-33	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000230 J	<0.000430	<0.00100	<0.000157
	NCL-33	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000449 J	<0.000430	<0.00100	<0.000157
	NCL-33	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000377 J	<0.000430	<0.00100	<0.000157
	NCL-33	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000495 J	<0.000430	<0.00100	<0.000157
	NCL-33	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.000516 J	<0.000430	<0.00100	<0.000157
	NCL-34A	Oct-18		<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	0.00672 J	0.0828	0.0266	<0.00367	**<0.0100**	<0.0100	0.00458 J
	NCL-34A	Apr-19		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	<0.00768	0.0808	<0.0144	<0.00734	**<0.0200**	<0.0200 J3J4	<0.00722
	NCL-34A	Oct-19		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.00677	0.0824	0.0175	<0.00184	<0.00500	<0.00500	0.00587
	NCL-34A	Jun-20		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.00476 J	0.0844	0.0335 J	<0.00202	**<0.00860**	<0.0200 J4	0.00420 J
	NCL-44	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00134	<0.000430	0.000383 J	<0.000430	<0.00100 J4	<0.000157
	NCL-44	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00164	<0.000430	0.000412 J	<0.000430	<0.00100	<0.000157
	NCL-44	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	0.000426 J	<0.000430	0.000426 J	<0.000430	<0.00100	<0.000157
	NCL-44	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000503 J	<0.000430	0.000313 J	<0.000430	<0.00100	<0.000157
	NCL-44	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000827 J	<0.000430	0.000327 J	<0.000430	<0.00100	<0.000157
	NCL-44	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.00122	<0.000430	0.000401 J	<0.000430	<0.00100	0.000847 J
	NCL-49	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Apr-21	FD	<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Sep-21	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Apr-22	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	NCL-49	Oct-22	FD	<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
North Refinery	MW-23	Apr-19		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.0397 J	0.0949 J	<0.0719	<0.0367	**<0.100**	**<0.100**	<0.0361
	MW-23	Oct-19		<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	0.0105	0.0779	0.00719	0.0336	**<0.0100**	**0.0359 J**	0.00955 J
	MW-23	Jun-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00865 J	0.101	<0.00430	0.0407	<0.00430	**0.0380 J**	0.00903 JJ4
	MW-23	Oct-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.0264	0.125	<0.00430	0.0751	<0.00430	**0.0750**	0.00844 J
	MW-29	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000183 J	<0.000430	0.00162	<0.000430	<0.00100	<0.000157
	MW-29	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00251	<0.000430	<0.00100	<0.000157
	MW-29	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000701 J	<0.000430	0.00190	<0.000430	<0.00100	<0.000157
	MW-29	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0238	<0.000430	<0.00100	<0.000157
	MW-29	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000234 J	<0.000430	0.00436	<0.000430	<0.00100	<0.000157
	MW-29	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	0.0587	<0.000430	<0.00100	<0.000157
	MW-39	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00689	0.0181	0.0354	0.000625 J	<0.00100	<0.00100	0.000981 J
	MW-39	Oct-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327 J4	0.00609	0.0225	0.0263	0.00113	<0.00100	<0.00100	<0.000361
	MW-39	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.00317	0.0234	0.0232	0.00120	<0.000430	0.00109 J	<0.000157
	MW-39	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00165	0.0123	0.0115	0.00138	<0.000430	0.00123 J	<0.000157
	MW-40	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000721 J	0.0804	0.0117	<0.000367	<0.00100	<0.00100	<0.000361
	MW-40	Apr-18		0.00196 J	<0.000276	<0.000260	<0.000418	<0.000327	0.000567 J	0.0930	0.00619	<0.000367	<0.00100	<0.00100	0.000605 J
	MW-40	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0799	0.00157 J	<0.000367	<0.00100	<0.00100	<0.000361
	MW-40	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000220 J	0.0484	0.00241	<0.000101	<0.000430	<0.00100	0.000245 J
	MW-41	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.00791	<0.000719	0.00796	<0.00100	<0.00100	<0.000361
	MW-41	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0216	<0.000719	0.0178	<0.00100	<0.00100	<0.000361
	MW-41	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00729	<0.000430	0.0254	<0.000430	<0.00100	<0.000157
	MW-41	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00608	<0.000430	0.0267	<0.000430	<0.00100	<0.000157
	MW-42	Apr-19		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	<0.00192	0.0331	0.0226	0.00655	<0.00500	<0.00500	<0.00180
	MW-42	Jun-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.00108 J	0.0301	0.0535	0.0103	<0.00215	<0.00500	<0.000785 J4
	MW-42	Apr-21		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.0186	0.00852 J	0.0180	<0.00215	<0.00500	<0.000785
	MW-42	Apr-22		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.00241 J	0.0206	0.0187	0.0413	<0.00215	<0.00500	<0.000785
	MW-43	Apr-19		<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	<0.0768	<0.0652	0.744	<0.0734	**<0.200**	**0.307 J**	<0.0722
	MW-43	Oct-19		<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	0.129 J	<0.0652	0.610	<0.0734	**<0.200**	**0.229 J**	<0.0722
	MW-43	Jun-20		0.00489 J	<0.0192	<0.00252	<0.00222	<0.00280	0.0311	0.0437	0.703	0.0347	**<0.00860**	**0.132**	0.00373 J
	MW-43	Oct-20		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.136	0.0453 J	0.852	0.0481 J	**<0.0215**	**0.105 J**	<0.00785
	MW-59	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0175	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-59	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0236	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-59	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0207	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-59	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.0103	<0.000430	0.00350	<0.000430	0.00202 J	<0.000157 J4
	MW-60	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000281 J	0.0145	0.00157 J	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-60	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000296 J	0.0126	0.00194 J	<0.000101	<0.000430	<0.00100	<0.000157 J4
	MW-60	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000461 J	0.0231	0.00238	0.000168 J	<0.000430	<0.00100	<0.000157
	MW-60	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000472 J	0.0231	0.00224	0.000180 J	<0.000430	<0.00100 J4	<0.000157
	MW-61	Jun-20		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0545	0.0906	0.611	<0.00505	**<0.0215**	**0.177 J**	<0.00785 J4
	MW-61	Oct-20		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0519	0.107	0.695	0.0110 J	**<0.0215**	**0.177 J**	<0.00785
	MW-61	Apr-21		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0587	0.0757	0.568	0.00740 J	**<0.0215**	**0.185 J**	<0.00785
	MW-61	Sep-21		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.110	0.102	0.789	0.0286 J	**<0.0215**	**0.190 J**	<0.00785
	MW-61	Apr-22		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0833	0.0861	0.691	0.0105 J	**<0.0215**	**0.148 J**	<0.00785
	MW-61	Oct-22		0.0339 J	**0.0567 J**	<0.00630	**<0.00555** J4	<0.00700	0.0783	0.126	0.918	0.00701 J	**<0.0215**	**0.267**	0.0279 J
	MW-62	Jun-20		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0506	0.0647	0.557	0.0672	**<0.00860**	**0.177**	<0.00314 J4
	MW-62	Oct-20		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.151	0.0974	0.757	0.0836	**<0.00860**	**0.116**	0.00412 J
	MW-62	Sep-21		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	**0.773**	0.152	2.34	**0.120**	**<0.0215**	**0.344**	0.0173 J
	MW-62	Apr-22		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.307	0.138	1.77	0.0590	**<0.0215**	**0.227 J**	0.0384 J
	MW-62	Oct-22		0.00653 J	**<0.0480**	<0.00630	**<0.00555** J4	<0.00700	0.161	0.111	0.968	**0.102**	**<0.0215**	**0.113 J**	0.0286 J

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
North Refinery	MW-62R	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0302	0.162	0.136	0.0107	<0.000430	**0.0790**	0.00319
	MW-62R	Apr-21			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0287 J	0.136	<0.0215	0.00545 J	**<0.0215**	**<0.0500**	<0.00785
	MW-62R	Apr-22			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.0108	0.108	0.0187 J	0.0136	<0.00430	0.0104 J	0.00922 J
	MW-67	Oct-17			<0.000324	<0.000276	0.00275	<0.000418	<0.000327	0.00330	0.0300	0.00245	**0.201**	<0.00100	<0.00100	0.00196
	MW-67	Apr-18			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.00500	0.0470	0.00916 J	**0.219**	<0.00500	<0.00500	0.00588
	MW-67	Oct-18			<0.000324	<0.000276	0.00122	<0.000418	<0.000327	0.000620 J	0.0231	0.00113 J	**0.289**	<0.00100	<0.00100	0.00129
	MW-67	Apr-19			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.00237 J	0.0348	<0.00360	**0.140**	<0.00500	<0.00500	0.00299 J
	MW-90	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000290 J	0.0353	<0.000430	<0.000101	<0.000430	<0.00100	0.000319 J
	MW-90	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000310 J	0.0462	<0.000430	<0.000101	<0.000430	<0.00100	0.000237 J
	MW-90	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000228 J	0.0406	<0.000430	<0.000101	<0.000430	<0.00100	0.000309 J
	MW-90	Sep-21			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	0.0265	<0.00430	<0.00101	<0.00430	<0.0100	<0.00157
	MW-90	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000282 J	0.0370	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-90	Oct-22			0.00139 J	<0.000960	<0.000126	<0.000111	<0.000140	0.000277 J	0.0471	<0.000430	<0.000101	<0.000430	<0.00100	0.000384 J
	MW-91	Oct-18			<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.210	0.0813 J	0.552	<0.0367	**<0.100**	**<0.100**	<0.0361
	MW-91	Apr-19			<0.0324	**<0.0276**	**0.0926 J**	**<0.0418**	<0.0327	0.481	0.0850 J	0.612	<0.0367	**<0.100**	**<0.100**	<0.0361
	MW-91	Oct-19			<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327 J4	**1.48**	0.115	1.57	<0.0367	**<0.100**	**<0.100**	<0.0361
	MW-91	Jun-20			<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	**1.85**	0.105	1.85	<0.0101	**<0.0430**	**<0.100**	<0.0157
	MW-92	Apr-16			<0.000324	<0.000276	0.0640	<0.000418	<0.000327	0.462	0.0373	0.161	**0.113**	<0.00100	**0.224 J**	0.00634
	MW-92	Oct-16			<0.00648	<0.00552	**0.0968**	**<0.00836**	<0.00654	0.400	0.0242	0.0947	**0.134**	**<0.0200**	**0.174**	<0.00722
	MW-93	Apr-17			<0.00810	<0.00690	<0.00650	**<0.0104**	<0.00818	<0.00960	0.0355	0.326	<0.00918	**<0.0250**	**0.0422 J**	<0.00902
	MW-93	Apr-18			<0.000324	<0.000276	0.000281 J	<0.000418	<0.000327	0.00738	0.0359	0.332	<0.000367	<0.00100	0.0256	0.00367
	MW-93	Apr-19			<0.000324	<0.000276	0.000267 J	<0.000418	<0.000327	0.00962	0.0340	0.299	<0.000367	<0.00100	**0.0482**	0.00447
	MW-93	Jun-20			<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.00622 J	0.0262	0.296	<0.00202	**<0.00860**	**0.0519 J**	<0.00314 J4
	MW-94	Oct-15			<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	0.509	0.0646	0.214	**0.798**	**<0.0100**	**0.202**	0.0219
	MW-94	Apr-16			<0.0162	<0.0138	0.0149 J	**<0.0209**	<0.0164	0.553	0.0776	0.228	**0.621**	**<0.0500**	**0.228 J**	0.0379 J
	MW-94	Oct-16			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.564	0.0705	0.202	**2.01**	<0.00500	**0.128**	0.0207
	MW-94	Apr-17			<0.00810	<0.00690	<0.00650	**<0.0104**	<0.00818	0.432	0.0621	0.168	**0.958**	**<0.0250**	**0.174**	0.0553
	MW-95	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0114	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-95	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.0122	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-95	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.00797	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-95	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000196 J	0.00904	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-96	Jun-20			<0.0278	**<0.240**	<0.0315	**<0.0278**	<0.0350	<0.0343	0.0848 J	<0.108	**37.6**	**<0.108**	**<0.250**	<0.0393
	MW-96	Oct-20			<0.0278	**<0.240**	<0.0315	**<0.0278**	<0.0350	<0.0343	0.0931 J	<0.108	**40.5**	**<0.108**	**<0.250**	<0.0393
	MW-96	Sep-21			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00320 J	0.0683	<0.00430	**29.5**	<0.00430	0.0248 J	0.00493 JB
	MW-96	Apr-22			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00147 J	0.0624	<0.00430	**28.0**	<0.00430	<0.0100	0.00785 J
	MW-96	Oct-22			<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	<0.00274	0.0839	<0.00860	**32.3**	**<0.00860**	<0.0200	0.0104 J
	MW-98	Jun-20			<0.00555	**<0.0480**	<0.00630	**<0.00555** J4	<0.00700	**0.711**	0.120	2.14	<0.00505	**<0.0215**	**0.255**	0.00835 J
	MW-98	Oct-20			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	**0.788**	0.0840	1.85	<0.00505	**<0.0215**	**0.207 J**	<0.00785
	MW-98	Apr-21			<0.00555	**<0.0480**	<0.00630	**<0.00555** J4	<0.00700	**0.938**	0.0818	1.81	<0.00505	**<0.0215**	**0.294**	<0.00785
	MW-98	Sep-21			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.629	0.0816	1.73	<0.00505	**<0.0215**	**0.223 J**	<0.00785
	MW-98	Apr-22			<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.660	0.0897	1.66	<0.00505	**<0.0215**	**0.238 J**	0.0253 J
	MW-98	Oct-22			0.0285 J	**<0.0480**	<0.00630	**<0.00555** J4	<0.00700	0.510	0.0859	1.42	<0.00505	**<0.0215**	**0.271**	0.0240 J
	MW-137	Oct-17			<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	**1.53**	0.113 J	0.891	0.0754 J	**<0.200**	**0.317 J**	<0.0722
	MW-137	Apr-18			<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	**1.86**	0.117 J	0.905	0.0758 J	**<0.200**	**0.373 J**	<0.0722
	MW-137	Oct-18			<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	**1.09**	0.0812 J	0.523	0.0876 J	**<0.200**	**0.237 J**	<0.0722
	MW-137	Apr-19			<0.0648	**<0.0552**	<0.0520	**<0.0836**	<0.0654	**1.21**	0.0714 J	0.547	<0.0734	**<0.200**	**<0.200**	<0.0722
	MW-138	Oct-17			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.0244	0.0579	0.00565 J	**0.163**	<0.00500	**0.0635**	0.00606
	MW-138	Apr-18			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.222	0.0572	0.0438	**0.188**	<0.00500	**0.0667**	0.00518
	MW-138	Oct-18			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.423	0.0543	0.109	**0.269**	**0.00504 J**	**0.0379**	<0.00180
	MW-138	Apr-19			<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.389	0.0611	0.0968	**0.171**	<0.00500	**0.0377**	0.00737
	RW-1R	Apr-16			<0.000324	<0.000276	**2.14**	<0.000418	<0.000327	0.0214	<0.000326	0.0111	0.0133	<0.00100	0.00762	0.000511 J
	RW-1	Apr-17			<0.0324	<0.00276	**0.624**	<0.00418	<0.00327	0.0169	0.00424 J	0.00743 J	0.0441	**<0.0100**	<0.0100	0.00401 J
	RW-1	Apr-18			<0.000324	<0.000276	**0.681**	<0.000418	<0.000327	0.0964	0.0316	0.0827	0.0292	<0.00100	0.0132	0.00339
	RW-1	Apr-19			<0.000324	<0.000276	**0.980**	<0.000418	<0.000327	0.102	0.0222	0.0803	0.0218	<0.00100	0.00849	0.00257
	RW-2	Apr-15			<0.00320	<0.00280	**0.619**	<0.00420	<0.00330 UJ	**1.02**	0.0551	0.445	<0.00370	**<0.0100** UJ	**0.157 J**	0.0106
	RW-2R	Apr-16			<0.0162	<0.0138	**0.555**	**<0.0209**	<0.0164	0.591	0.0332 J	0.253	0.0226 J	**<0.0500**	**0.145 J**	<0.0180
	RW-2	Apr-17			<0.0162	<0.0138	**0.828**	**<0.0209**	<0.0164	**0.837**	0.0533	0.413	<0.0184	**<0.0500**	**0.145 J**	<0.0180
	RW-2	Apr-18			<0.000324	<0.000276	**0.543**	<0.000418	<0.000327	0.672	0.0769	0.440	0.0120	<0.00100	**0.190**	0.0139
	RW-7	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.0325	<0.00100	<0.00100	<0.000361
	RW-7	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00132	0.00650	0.00431	0.0378	<0.00100	0.00204 J	0.00102
	RW-7	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.00312	0.000961 J	0.0229	<0.00100	<0.00100	<0.000361
	RW-7	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000204 J	0.00809	0.00209	0.00825	<0.000430	<0.00100	<0.000157 J4
	RW-8	Apr-15			<0.00320	<0.00280	<0.00260	<0.00420	<0.00330	0.00801 J	0.0204	<0.00720	**2.41**	**0.0113 J**	<0.0100	<0.00360
	RW-8	Apr-17			<0.000324	<0.000276	0.000478 J	<0.000418	<0.000327	0.0198	0.0193	0.0386	**1.94**	<0.00100	**0.0320**	0.00837
	RW-9	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00108	0.0952	0.00929	0.00439	<0.00100	<0.00100	0.00128
	RW-9	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000448 J	0.0791	0.000974 J	0.0674	<0.000430	<0.00100	0.000462 J
	RW-9	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000652 J	0.0758	0.00127 J	**0.219**	<0.000430	0.00212 J	<0.000157
	RW-9	Apr-22			<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	0.0902	<0.00430	**0.417**	<0.00430	<0.0100	<0.00157
	RW-10	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000727 J	0.00307	0.00126 J	<0.000367	<0.00100	<0.00100	0.00108
	RW-10	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000633 J	0.00242	0.000967 J	<0.000367	<0.00100	<0.00100	<0.000361
	RW-10	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000865 J	0.00269	0.00152 J	0.000418 J	<0.000430	<0.00100	<0.000157
	RW-10	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.00500	0.00387	0.00301	0.00268	<0.000430	0.00196 J	<0.000157
	RW-16B	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.0152	<0.00100	<0.00100	<0.000361
	RW-16B	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00172	<0.00100	<0.00100	<0.000361
	RW-16B	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.00166	<0.00100	<0.00100	<0.000361
	RW-16B	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000328 J	<0.000105	0.000872 J	0.00482	<0.000430	<0.00100	<0.000157
	RW-17A	Apr-17			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	**0.189**	<0.00100	<0.00100	<0.000361
	RW-17A	Apr-18			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	**0.107**	<0.00100	<0.00100	<0.000361
	RW-17A	Apr-19			<0.000324	<0.000276	<0.000260	<0.000418	<0.000327 J4	<0.000384	<0.000326	<0.000719	0.0434	<0.00100	<0.00100	<0.000361
	RW-17A	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157 J4
North RO Field	MW-117	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000222 J	<0.000430	<0.00100	<0.000157
	MW-117	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00195	<0.000430	<0.00100	<0.000157
	MW-117	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00284	<0.000430	<0.00100	<0.000157
	MW-117	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0580	<0.000430	<0.00100	<0.000157
	MW-117	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0384	<0.000430	<0.00100 J4	<0.000157
	MW-117	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0166	<0.000430	<0.00100	<0.000157
	MW-118	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-118	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000149 J	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-118	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-118	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000139 J	<0.000430	<0.00100	<0.000157
	MW-118	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-118	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Jun-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Oct-20			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Apr-21			<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Sep-21			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Apr-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-119	Oct-22			<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	Well ID	Date	Dup													
South Refinery	KWB-2R	Apr-17		0.00360 J	<0.000276	<0.000260	<0.000418	<0.000327	0.00543	0.00816	0.0273	0.0192	<0.00100	0.00609	<0.000361
	KWB-2R	Oct-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.325	0.0635	0.183	0.0202	<0.00100	**0.0675**	0.00453
	KWB-2R	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.686	0.0403	0.175	0.0235	<0.00100	0.00993 J4	0.00147
	KWB-2R	Oct-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327 J4	0.264	0.0724	0.109	0.0216	<0.00100	**0.0323**	0.00315
	KWB-5	Oct-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.0960	0.00852	<0.180	**12.4**	<0.00100	0.0131	0.00118
	KWB-5	Apr-18		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	<0.0960	<0.0815	<0.180	**10.3**	**<0.250**	**<0.250**	<0.0902
	KWB-5	Oct-18		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	<0.0960	<0.0815	<0.180	**10.8**	**<0.250**	**<0.250**	<0.0902
	KWB-5	Apr-19		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	<0.0960	<0.0815	<0.180	**9.94**	**<0.250**	**<0.250** J4	<0.0902
	KWB-6	Apr-17		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.346	0.0344	0.373	**0.154**	<0.00500	**0.0563**	0.00434 J
	KWB-6	Oct-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.183	0.0199	0.275	**0.102**	<0.00100	**0.0436**	<0.000361
	KWB-6	Apr-18		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.156	0.0252	0.223	**0.122**	**<0.0200**	**0.0587 J**	<0.00722
	KWB-6	Oct-18		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.102	0.0133 J	0.356	**0.120**	**<0.0200**	**0.0469 J**	<0.00722
	MW-28	Apr-19		<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	0.0274 J	0.0436 J	0.140	**0.268**	**<0.0500**	**0.0736 J**	<0.0180
	MW-28	Oct-19		<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	0.0375 J	0.0755	0.264	**0.692**	**<0.0500**	**0.137 J**	<0.0181
	MW-28	Jun-20		0.00390 J	<0.00480	<0.000630	<0.000555	<0.000700	0.0201	0.0246	0.0901	**0.194**	<0.00215	0.0157 J	0.00113 J
	MW-28	Oct-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.0136	0.0192	0.0609	**0.214**	<0.00215	0.00638 J	<0.000785
	MW-48	Apr-18		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	**1.36**	<0.0815	0.954	**0.171 J**	**<0.250**	**<0.250**	<0.0902
	MW-48	Oct-18		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	0.479	0.0962 J	0.358 J	**0.611**	**<0.250**	**<0.250**	<0.0902
	MW-48	Apr-19		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	0.603	0.122 J	0.498 J	**0.372**	**<0.250**	**1.20 JJ4**	<0.0902
	MW-48	Oct-19		**<0.0810**	**<0.0690**	<0.0650	**<0.105**	**<0.0817**	0.118 J	<0.0815	0.290 J	**0.517**	**<0.250**	**<0.250**	<0.0903
	MW-50	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000106 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-50	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000110 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-50	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.000135 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-50	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000722 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-50	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-50	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	0.00114 J	<0.000157
	MW-52	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-52	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-52	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-52	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-52	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-52	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-64	Jun-20		<0.0555	**<0.480**	<0.0630	**<0.0555** J4	<0.0700	**1.76**	0.0605 J	3.26	**0.461 J**	**<0.215**	**<0.500**	<0.0785
	MW-64	Oct-20		<0.0555	**<0.480**	<0.0630	**<0.0555**	<0.0700	**1.55**	0.0640 J	2.31	**0.560**	**<0.215**	**<0.500**	<0.0785
	MW-64	Apr-21		<0.0555	**<0.480**	<0.0630	**<0.0555**	<0.0700	**1.80**	0.0599 J	3.22	**0.431 J**	**<0.215**	**<0.500**	<0.0785
	MW-64	Sep-21		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	**1.03**	0.0278 J	2.24	**0.491**	**<0.0215**	**0.105 J**	<0.00785
	MW-64	Apr-22		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	**1.65**	0.0451	3.58	**0.505**	**<0.0107**	**0.141**	<0.00393
	MW-64	Oct-22		<0.0278	**<0.240** J3	<0.0315	**<0.0278** J4	<0.0350	**1.60**	0.0463 J	3.12	**0.500**	**<0.108**	**<0.250**	<0.0393
	MW-65	Apr-18		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.0528 J	0.0594 J	<0.0719	**1.73**	**<0.100**	**0.253 J**	<0.0361
	MW-65	Oct-18		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	<0.0384	0.0545 J	<0.0719	**2.38**	**<0.100**	**<0.100**	<0.0361
	MW-65	Apr-19		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.0628 J	0.0535 J	<0.0719	**2.35**	**<0.100**	**0.152 J**	<0.0361
	MW-65	Oct-19		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327 J4	0.0565 J	0.0608 J	<0.0719	**1.82**	**<0.100**	**0.148 J**	<0.0361
	MW-66	Oct-19		<0.00810	<0.00690	<0.00650	**<0.0105**	<0.00818	<0.00960	0.0446	<0.0180	**1.69**	**<0.0250**	**0.0758 J**	<0.00903
	MW-66	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00717	0.0552	0.0121	**1.62**	<0.000430	**0.167**	0.00824 J4
	MW-66	Oct-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00643 J	0.0424	0.00604 J	**1.90**	<0.00430	**0.0737**	0.00483 J
	MW-66	Apr-21		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.0185	0.0296	0.0223	**3.15**	<0.00430	**0.0620**	0.00627 J
	MW-99	Oct-18		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.201	0.0672 J	0.358	**3.10**	**<0.100**	**<0.100**	<0.0361
	MW-99	Apr-19		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.491	0.0480 J	0.379	**2.24**	**<0.100**	**<0.100**	<0.0361
	MW-99	Oct-19		<0.0324	**<0.0276**	<0.0260	**<0.0418**	<0.0327	0.241	<0.0326	0.218	**0.533**	**<0.100**	**<0.100**	<0.0361
	MW-99	Jun-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.0866	0.0139	0.0721	**0.379**	<0.00430	<0.0100	0.00233 J
	MW-101	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000302 J	0.00538	<0.000430	0.0502	<0.000430	<0.00100	<0.000157
	MW-101	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0180	0.0205	0.0771	0.0532	<0.000430	0.0180	0.000929 J
	MW-101	Apr-21		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0141 J	0.0155 J	<0.00860	0.0567	**<0.00860**	<0.0200	<0.00314
	MW-101	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00801	0.0149	0.00348	0.0635	<0.000430	0.00215 J	0.00109
	MW-101	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00323	0.00977	0.00122 J	0.0629	<0.000430	0.00141 J	<0.000157
	MW-101	Oct-22		0.00500 J	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.00483	0.0141	0.0164	0.0657	<0.000430	0.00368 J	0.00118
	MW-102	Jun-20		<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	0.477	0.0273 J	0.188 J	**0.719**	**<0.0430**	**0.142 J**	<0.0157
	MW-102	Oct-20		<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	0.537	0.0289 J	0.227	**1.20**	**<0.0430**	**0.127 J**	<0.0157
	MW-102	Apr-21		<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	0.418	0.0336 J	0.165 J	**1.23**	**<0.0430**	**0.156 J**	<0.0157
	MW-102	Sep-21		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.645	0.0373 J	0.248	**1.22**	**<0.0215**	**0.172 J**	<0.00785
	MW-102	Sep-21	FD	<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.654	0.0368 J	0.253	**1.22**	**<0.0215**	**0.186 J**	<0.00785
	MW-102	Apr-22		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	**0.737**	0.0373 J	0.413	**0.670**	**<0.0215**	**0.168 J**	0.0366 JB
	MW-102	Apr-22	FD	<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	**0.751**	0.0364	0.397	**0.706**	**<0.0107**	**0.112 J**	0.00601 J
	MW-102	Oct-22		<0.0278	**<0.240**	<0.0315	**<0.0278**	<0.0350	**0.735**	0.0353 J	0.692	**0.150 J**	**<0.108**	**<0.250**	<0.0393
	MW-102	Oct-22	FD	<0.0278	**<0.240**	<0.0315	**<0.0278**	<0.0350	**0.710**	0.0357 J	0.643	**0.152 J**	**<0.108**	**<0.250**	<0.0393
	MW-103	Apr-19		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.0573	0.0247	<0.0144	<0.00734	**<0.0200**	0.0256 J	<0.00722
	MW-103	Jun-20		<0.00222	<0.0192	<0.00252	<0.00222 J4	<0.00280	0.00844 J	0.0295	<0.00860	<0.00202	**<0.00860**	<0.0200	<0.00314
	MW-103	Apr-21		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.00314 J	0.0276	<0.00860	<0.00202	**<0.00860**	<0.0200	0.00341 J
	MW-103	Apr-22		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00309 J	0.0251	<0.00430	<0.00101	<0.00430	<0.0100	0.00722 JB
	MW-104	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.0324	<0.000430	0.000680 J	<0.000430	<0.00100	0.000349 J
	MW-104	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000161 J	0.0263	<0.000430	0.000790 J	<0.000430	<0.00100	0.000293 J
	MW-104	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.0256	<0.000430	0.000402 J	<0.000430	<0.00100	0.000360 J
	MW-104	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.0221	<0.000430	0.000506 J	<0.000430	<0.00100	0.000164 J
	MW-104	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.0228	<0.000430	0.000406 J	<0.000430	<0.00100	0.000347 J
	MW-104	Apr-21	FD	<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.0229	<0.000430	0.000417 J	<0.000430	<0.00100	0.000375 J
	MW-104	Sep-21		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.0202	<0.00215	<0.000505	<0.00215	<0.00500 J3	<0.000785
	MW-104	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000232 J	0.0173	<0.000430	0.000592 J	<0.000430	<0.00100	<0.000157
	MW-104	Oct-22		0.000648 J	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	0.000144 J	0.0170	<0.000430	<0.000101	<0.000430	<0.00100	0.000702 J
	MW-105	Jun-20		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.0282 J	0.0329 J	0.237	0.0234 J	**<0.0215**	**<0.0500**	<0.00785 J4
	MW-105	Oct-20		<0.00555	**<0.0480**	<0.00630	**<0.00555**	<0.00700	0.584	0.0432 J	0.371	0.0230 J	**<0.0215**	**0.0778 J**	<0.00785
	MW-105	Apr-21		<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	0.0453 J	0.0498 J	0.215	0.0296 J	**<0.0430**	**<0.100**	<0.0157
	MW-105	Apr-22		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	0.0368	0.0326	0.191	0.00840 J	**<0.0107**	<0.0250	<0.00393
	MW-105	Oct-22		0.0315 J	**<0.0960**	<0.0126	**<0.0111** J4	<0.0140	0.0553 J	0.0358 J	0.148 J	<0.0101	**<0.0430**	**<0.100**	0.0404 J
	MW-106	Oct-19		<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	0.0301 J	0.0336 J	0.196	0.0757	**<0.0500**	**0.148 J**	<0.0181
	MW-106	Jun-20		<0.0111	**<0.0960**	<0.0126	**<0.0111**	<0.0140	0.0662 J	0.0273 J	0.173 J	0.0672 J	**<0.0430**	**<0.100**	<0.0157
	MW-106	Oct-20		<0.0222	**<0.192**	<0.0252	**<0.0222**	<0.0280	0.161 J	0.0376 J	0.253 J	**0.105 J**	**<0.0860**	**<0.200**	<0.0314
	MW-106	Apr-21		<0.0222	**<0.192**	<0.0252	**<0.0222** J4	<0.0280	0.101 J	0.0374 J	0.245 J	0.0746 J	**<0.0860**	**<0.200**	<0.0314
	MW-107	Oct-16		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	0.0192	0.0457	0.00857 J	**3.05**	<0.00500	**0.0614**	0.00182 J
	MW-107	Apr-17		<0.0162	<0.0138	<0.0130	**<0.0209**	<0.0164	<0.0192	0.0334 J	<0.0360	**2.78**	**<0.0500**	**0.0788 J**	<0.0180
	MW-107	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0382	0.0576	0.0130	**3.02**	<0.00100	**0.143**	0.00377
	MW-107	Apr-19		**<0.0810**	**<0.0690**	<0.0650	**<0.104**	**<0.0818**	<0.0960	<0.0815	<0.180	**3.39**	**<0.250**	**<0.250**	<0.0902

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
South Refinery	MW-109	Jun-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00892 J	0.0746	0.0238	<0.00101	<0.00430	<0.0100	<0.00157	
	MW-109	Oct-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00637 J	0.0619	0.0114 J	<0.00101	<0.00430	<0.0100	0.00220 J	
	MW-109	Apr-21		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00539 J	0.0482	0.00555 J	<0.00101	<0.00430	<0.0100	0.00228 J	
	MW-109	Sep-21		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	0.00952 J	0.0741	0.0145 J	<0.00253	**<0.0107**	<0.0250	<0.00393	
	MW-109	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00711	0.0673	0.0173	<0.000101	<0.000430	0.00103 JJ4	0.00291	
	MW-109	Oct-22		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	0.00403 J	0.0544	<0.0107	<0.00253	**<0.0107**	<0.0250	<0.00393	
	MW-110	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000357 J	0.00747	0.00123 J	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-110	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000175 J	0.00157	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-110	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000193 J	0.0104	0.000578 J	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-110	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00737	0.00315	<0.000101	<0.000430	0.00207 J	<0.000157	
	MW-110	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.0394	0.0208	0.0699	<0.000101	<0.000430	0.0200 J4	0.000515 J	
	MW-110	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000388 J	0.00240	0.00132 J	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-139	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.0102	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-139	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00832	<0.000430	<0.000101	<0.000430	0.00410 J	<0.000157	
	MW-139	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	0.00437	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-139	Sep-21		<0.000111	<0.000960	0.000128 JB	<0.000111	<0.000140	<0.000137	0.0163	<0.000430	<0.000101	<0.000430	<0.00100	0.000167 JB	
	MW-139	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00280	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-139	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00687	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	RA-313	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J4	<0.000361	
	RA-313	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	RA-313	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	RA-313	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	RW-4	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	0.00618	<0.000719	0.0583	<0.00100	0.00103 J	<0.000361	
	RW-4	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00198	0.0159	0.00147 J	0.0933	<0.00100	0.0266	0.00127	
	RW-4	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00185	0.0254	0.00270	0.0727	<0.000430	<0.00100	<0.000157	
	RW-4	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00396	0.0229	0.00398	0.0295	<0.000430	0.00193 J	0.00559	
	RW-5R	Apr-15		<0.00320	<0.00280	<0.00260	<0.00420	<0.00330	**1.03**	0.0398	1.39	**2.15**	**<0.0100**	**0.174**	0.00606 J	
	RW-5R	Apr-16		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	**1.20**	0.0643	1.68	**1.64**	**<0.0200**	**0.205**	0.0117 J	
	RW-6	Apr-15		<0.00320	<0.00280	<0.00260	<0.00420	<0.00330	0.0476	0.0173	0.102	**2.27**	**<0.0100**	**0.0602**	0.00738 J	
	RW-6R	Apr-16		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00474	0.00797	0.00472	**2.68**	<0.00100	0.00574	0.00138	
	RW-6	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.0838	0.0299	0.0926	<0.000367	<0.00100	0.0290	0.00631	
	RW-6	Apr-19		<0.00648	<0.00552	<0.00520	**<0.00836**	<0.00654	0.0487	0.0327	0.0224 J	**0.792**	**<0.0200**	**0.0678 J**	<0.00722	
	RW-15C	Apr-17		<0.00810	<0.00690	<0.00650	**<0.0104**	<0.00818	**4.19**	0.143	4.92	**4.25**	**<0.0250**	**0.383**	0.0168 J	
	RW-15C	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	**3.93**	0.114	2.98	**3.02**	<0.00100	**<0.500**	0.00683	
	RW-15C	Apr-19		<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	**3.03**	0.134	1.04	**3.66**	**<0.0100**	**0.173 J4**	0.0134	
South RO Field	MW-114	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00475	<0.000430	<0.00100	<0.000157	
	MW-114	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0112	<0.000430	<0.00100	<0.000157	
	MW-114	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0101	<0.000430	<0.00100	<0.000157	
	MW-114	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.00159	<0.000430	0.0120	<0.000430	<0.00100	0.000677 J	
	MW-114	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000137 J	<0.000430	0.00308	<0.000430	<0.00100	0.000654 JB	
	MW-114	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0674	<0.000430	<0.00100	<0.000157	
	MW-115	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00126	<0.000430	<0.00100	<0.000157	
	MW-115	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00364	<0.000430	<0.00100	<0.000157	
	MW-115	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0113	<0.000430	<0.00100	<0.000157	
	MW-115	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0228	<0.000430	<0.00100	<0.000157	
	MW-115	Apr-22		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	<0.00137	<0.00105	<0.00430	0.0198	<0.00430	<0.0100	<0.00157	
	MW-115	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0205	<0.000430	<0.00100	<0.000157	
	MW-116	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-116	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-116	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-116	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-116	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-116	Oct-22		<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
TEL	MW-49	Jun-20		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0249	0.0470	0.179	**0.148**	**<0.00860**	0.0241 J	0.00395 J	
	MW-49	Oct-20		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280	0.0121 J	0.0329	0.113	**0.196**	**<0.00860**	<0.0200	<0.00314	
	MW-49	Apr-21		<0.00278	**<0.0240**	<0.00315	<0.00278	<0.00350	0.00827 J	0.0291	0.0793	**0.257**	**<0.0107**	<0.0250	<0.00393	
	MW-49	Sep-21		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00787 J	0.0240	0.0675	**0.210**	<0.00430	0.0201 J	0.00213 J	
	MW-49	Apr-22		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	0.00809	0.0311	0.0869	**0.183**	<0.00215	0.00626 J	0.00636 B	
	MW-49	Oct-22		0.0131	0.00302	<0.000126	<0.000111 J4	<0.000140	0.00844	0.0378	0.107	**0.168**	<0.000430	0.00786	0.00363	
	TEL-1	Oct-18		<0.00162	<0.00138	<0.00130	<0.00209	<0.00164	<0.00192	<0.00163	<0.00360	0.00255 J	<0.00500	<0.00500	<0.00180	
	TEL-1	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000481 J	0.000923 J	<0.000719	0.00297	<0.00100	<0.00100	<0.000361	
	TEL-1	Oct-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000750 J	0.00128	0.000880 J	0.00310	<0.00100	<0.00100	<0.000361	
	TEL-1	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000831 J	0.00123	0.00139 J	0.00230	<0.000430	<0.00100	<0.000157	
	TEL-2	Oct-18		<0.00810	<0.00690	<0.00650	**<0.0104**	<0.00818	0.0121 J	0.0354	0.123	<0.00918	**<0.0250**	<0.0250	<0.00902	
	TEL-2	Apr-19		<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	0.00401 J	0.0254	0.0843	0.00752 J	**<0.0100**	<0.0100	<0.00361	
	TEL-2	Oct-19		<0.00324	<0.00276	<0.00260	<0.00418	<0.00327	0.00384 J	0.0202	0.0638	0.00496 J	**<0.0100** J4	<0.0100	<0.00361	
	TEL-2	Jun-20		<0.00111	<0.00960	<0.00126	<0.00111	<0.00140	0.00152 J	0.0178	0.0489	0.00459 J	<0.00430	<0.0100	<0.00157	
	TEL-3	Apr-18		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.00162	0.0556	0.0188	0.0637	<0.00100	<0.00100	0.00174	
	TEL-3	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000779 J	0.0519	0.00717	0.00433	<0.00100	<0.00100	0.00189	
	TEL-3	Oct-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	0.000766 J	0.0368	0.0123	0.00175	<0.00100	0.00119 J	0.00152	
	TEL-3	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.00262	0.0541	0.0441	0.00419	<0.000430	0.00365 J	0.00244	
	TEL-4	Jun-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.0148	<0.00215	0.0431	<0.00215	<0.00500	<0.000785	
	TEL-4	Jun-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000453 J	0.0168	0.00183 J	0.0438	<0.000430	<0.00100	0.000859 J	
	TEL-4	Oct-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.00919	<0.00215	0.0898	<0.00215	<0.00500	<0.000785	
	TEL-4	Oct-20	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000370 J	0.0114	0.000965 J	0.0891	<0.000430	<0.00100	0.000616 J	
	TEL-4	Apr-21		<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	0.000952 J	0.0120	0.00151 J	0.0969	<0.000430	0.00240 J	0.000428 J	
	TEL-4	Apr-21	FD	<0.000111	<0.000960 J4	<0.000126	<0.000111	<0.000140	0.00106	0.0112	0.00150 J	0.0942	<0.000430	0.00236 J	0.000541 J	
	TEL-4	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000365 J	0.0121	0.00113 J	0.0369	<0.000430	0.00140 J	0.000327 J	
	TEL-4	Sep-21	FD	<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000393 J	0.0137	0.00107 J	0.0393	<0.000430	0.00150 J	0.000337 J	
	TEL-4	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000161 J	0.0173	0.000995 J	0.00398	<0.000430	<0.00100	<0.000157	
	TEL-4	Apr-22	FD	<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	0.0183	<0.00215	0.00415 J	<0.00215	<0.00500	<0.000785	
	TEL-4	Oct-22		0.000308 J	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000244 J	0.0132	0.00171 J	0.00541	<0.000430	<0.00100	0.000644 J	
	TEL-4	Oct-22	FD	0.000339 J	<0.000960	<0.000126	<0.000111 J4	<0.000140	0.000224 J	0.0129	0.00188 J	0.00515	<0.000430	0.00107 J	0.000678 J	
Three Mile Ditch	MW-8	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.0750	<0.00100	<0.00100 J3J4	<0.000361	
	MW-8	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.149**	<0.000430	<0.00100 J4	<0.000157	
	MW-8	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.104**	<0.000430	<0.00100	<0.000157	
	MW-8	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.124**	<0.000430	<0.00100 J4	<0.000157	
	MW-16	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361	
	MW-16	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157	
	MW-16	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-16	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157	
	MW-20	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100 J3J4	<0.000361	
	MW-20	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157	
	MW-20	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-20	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	0.000287 J	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157	
	MW-21	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.128**	<0.000430	<0.00100 J4	<0.000157	
	MW-21	Oct-20		<0.000555	<0.00480	<0.000630	<0.000555	<0.000700	<0.000685	<0.000525	<0.00215	**0.243**	<0.00215	<0.00500	<0.000785	
	MW-21	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0948	<0.000430	<0.00100	<0.000157	
	MW-21	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.191**	<0.000430	<0.00100	<0.000157	
	MW-21	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0685	<0.000430	<0.00100 J4	<0.000157	
	MW-21	Oct-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140 J4	0.00429 J	<0.000105	<0.000430	**0.222**	<0.000430	<0.00100	<0.000157	

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromo-chloromethane	Ethyl-benzene	Isopropyl-benzene (Cumene)	m,p-Xylene	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Butyl-benzene
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0800	0.0203	0.0700	0.00471	0.0800	0.700	0.447	---	0.100	0.00500	0.0300	1.00
				CGWSL Source:	USEPA MCL	NMED TW	WQCC HH	USEPA TW	USEPA MCL	WQCC HH	WQCC TW	---	WQCC Dom	WQCC HH	WQCC HH	USEPA TW
Area	**Well ID**	**Date**	**Dup**													
Three Mile Ditch	MW-25	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-25	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-25	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-25	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-26	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-26	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-26	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-26	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-27	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-27	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-27	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-27	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-46R	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-46R	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-46R	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-46R	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-46R	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-46R	Oct-22		<0.000111	<0.000960 J3	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-68	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-68	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-68	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-68	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-71	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-71	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00152	<0.000430	<0.00100 J4	<0.000157
	MW-71	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.00706	<0.000430	<0.00100	<0.000157
	MW-71	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.000567 J	<0.000430	<0.00100 J4	<0.000157
	MW-89	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	MW-89	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-89	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-89	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	MW-89	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	MW-89	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100 J4	<0.000157
	NP-1	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.216**	<0.000430	<0.00100 J4	<0.000157
	NP-1	Oct-20		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	0.000245 J	<0.000105	0.000456 J	**0.217**	<0.000430	<0.00100	<0.000157
	NP-1	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.101**	<0.000430	<0.00100	<0.000157
	NP-1	Sep-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.00343	0.000159 J	<0.000430	**0.503**	<0.000430	0.00145 J	<0.000157
	NP-1	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	**0.623**	<0.000430	<0.00100 J4	<0.000157
	NP-1	Oct-22		<0.00222	<0.0192	<0.00252	<0.00222	<0.00280 J4	<0.00274	<0.00210	<0.00860	**0.554**	**<0.00860**	<0.0200	<0.00314
	NP-6	Apr-15		<0.000320	<0.000280	<0.000260	<0.000420	<0.000330 UJ	<0.000380	<0.000330	<0.000720	0.00878	<0.00100 UJ	<0.00100 UJ	<0.000360
	NP-6	Apr-17		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.0353	<0.00100	<0.00100	<0.000361
	NP-6	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	0.0729	<0.00100	<0.00100 J3J4	<0.000361
	NP-6	Apr-21		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	0.0407	<0.000430	<0.00100	<0.000157
Upgradient	UG-1	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	UG-1	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-1	Apr-21		<0.000111 J4	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-1	Apr-22		0.000149 J	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-2	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	UG-2	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-2	Apr-21		<0.000111 J4	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-2	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-3R	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	UG-3R	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-3R	Apr-21		<0.000111 J4	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-3R	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-4	Apr-19		<0.000324	<0.000276	<0.000260	<0.000418	<0.000327	<0.000384	<0.000326	<0.000719	<0.000367	<0.00100	<0.00100	<0.000361
	UG-4	Jun-20		<0.000111	<0.000960	<0.000126	<0.000111 J4	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-4	Apr-21		<0.000111 J4	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157
	UG-4	Apr-22		<0.000111	<0.000960	<0.000126	<0.000111	<0.000140	<0.000137	<0.000105	<0.000430	<0.000101	<0.000430	<0.00100	<0.000157

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

		Analyte Group:	Volatile Organic Compounds											
		Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
		Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
		CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
		CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup											
Cross-Gradient	KWB-13	Apr-19		0.000683 J	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-13	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-13	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	0.000438 J	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-13	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-136	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-136	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-136	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-136	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-136	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-136	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NP-5	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	NP-5	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	NP-5	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	NP-5	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-3156	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RA-3156	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-3156	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-3156	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
Evaporation Ponds	MW-1R	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-1R	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-1R	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-1R	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-2A	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-2A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-2A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-2A	Sep-21													
	MW-2A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-2A	Oct-22													
	MW-3	Jun-20		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-3	Jun-20	FD	<0.0000993	<0.000174	0.000130 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-3	Oct-20		<0.0000993	<0.000174	0.000140 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	0.000491 J	<0.000234
	MW-3	Oct-20	FD	<0.0000993	<0.000174	0.000160 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-3	Apr-21		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-3	Apr-21	FD	<0.0000993	<0.000174	0.000188 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-3	Sep-21													
	MW-3	Sep-21	FD												
	MW-3	Apr-22		<0.0000993	<0.000174	0.000330 J	<0.000118	0.00964	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-3	Apr-22	FD	<0.0000993	<0.000174	0.000207 J	<0.000118	0.0140	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-3	Oct-22													
	MW-3	Oct-22	FD												
	MW-4A	Jun-20		<0.0000993	<0.000174	0.000326 J	<0.000118		<0.000300	<0.000278	0.000627 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-4A	Oct-20		0.000126 J	0.000202 J	0.000339 J	<0.000118		<0.000300	<0.000278	0.00234 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-4A	Apr-21		0.000114 J	<0.000174	0.000355 J	<0.000118		<0.000300	<0.000278	0.000907 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-4A	Sep-21													
	MW-4A	Apr-22		<0.0000993	<0.000174	0.000281 J	<0.000118	0.0281	<0.000300	<0.000278	0.000882 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-4A	Oct-22													
	MW-4B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-4B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-4B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-4B	Apr-21		<0.0000993	<0.000174	0.000204 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5A	Sep-21													
	MW-5A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0241	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5A	Oct-22													
	MW-5B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-5B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-5B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-5B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-5C	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-5C	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-5C	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-5C	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-6A	Apr-19		<0.00174	0.00291 J	<0.00182	<0.00154		<0.00186	0.00289 J	0.00704 J	<0.00198	<0.00210	<0.00199	<0.00130
	MW-6A	Jun-20		<0.000497	0.00171 J	<0.000625	<0.000590		<0.00150	<0.00139	0.00171 J	<0.000745	<0.000590	**0.0217**	<0.00117
	MW-6A	Apr-21		<0.000497	0.00304 J	<0.000625	<0.000590		<0.00150	0.00219 J	0.00602 J	<0.000745	<0.000590	<0.000950	<0.00117
	MW-6A	Apr-22		0.000163 J	0.00284	<0.000125	<0.000118	0.130	<0.000300	0.00186	0.00554	<0.000149	<0.000118	<0.000190	<0.000234
	MW-6B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-6B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-6B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-6B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Jun-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Oct-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Apr-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	0.00432 J	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Sep-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00700	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	0.00563	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7A	Oct-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-7B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-7B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-7B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-7B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-10	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-10	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-10	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-10	Sep-21													
	MW-10	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-10	Oct-22													
	MW-11A	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-11A	Oct-20													
	MW-11A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-11A	Sep-21													
	MW-11A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-11A	Oct-22													

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
Evaporation Ponds	MW-11B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-11B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-11B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-11B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-15	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-15	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-15	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-15	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18A	Sep-21													
	MW-18A	Apr-22		<0.0000993	<0.000174	0.000154 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18A	Oct-22													
	MW-18B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-18B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-18B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-18B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Jun-20		<0.0000993	<0.000174	0.000265 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Jun-20	FD	<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Oct-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Apr-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Sep-21													
	MW-22A	Sep-21	FD												
	MW-22A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00473 J	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-22A	Oct-22													
	MW-22A	Oct-22	FD												
	MW-22A	Oct-22													
	MW-22A	Oct-22	FD												
	MW-22B	Apr-15		<0.000350	<0.000340	0.000381 J	<0.000310 UJ		<0.000370	<0.000780 UJ	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-22B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-22B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-22B	Apr-21		<0.0000993	<0.000174	0.000545 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-70	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-70	Oct-20		0.000146 J	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-70	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-70	Sep-21													
	MW-70	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-70	Oct-22													
	MW-72	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-72	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-72	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-72	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-73	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-73	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-73	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-73	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00677	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-74	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-74	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-74	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-74	Sep-21													
	MW-74	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0310	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-74	Oct-22													
	MW-75	Jun-20		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-75	Oct-20		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-75	Apr-21		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-75	Sep-21													
	MW-75	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0122	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-75	Oct-22													
	MW-76	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	0.000628 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-76	Oct-20		0.000372 J	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-76	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-76	Sep-21													
	MW-76	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0448	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-76	Oct-22													
	MW-77	Apr-19		<0.00349	<0.00341	<0.00365	<0.00307		<0.00372	<0.00412	<0.0106	<0.00396	<0.00419	<0.00398	**<0.00259**
	MW-77	Jun-20		0.00360 J	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-77	Apr-21		<0.00248	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-77	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0128	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-78	Apr-19		<0.00349	<0.00341	<0.00365	<0.00307		<0.00372	<0.00412	<0.0106	<0.00396	<0.00419	<0.00398	**<0.00259**
	MW-78	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-78	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-78	Apr-22		<0.000993	<0.00174	<0.00125	<0.00118	<0.0406	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-79	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-79	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-79	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-79	Sep-21													
	MW-79	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-79	Oct-22													
	MW-80	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-80	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-80	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-80	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-81	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-81	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-81	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-81	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-82	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-82	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-82	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-82	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-83	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-83	Oct-20		0.000165 J	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	0.00127 J	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-83	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-83	Sep-21													
	MW-83	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-83	Oct-22													
	MW-84	Jun-20		<0.000497	<0.000870	<0.000625	<0.000590		<0.00150 J4	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	MW-84	Oct-20		<0.000993	<0.00174	<0.00125	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-84	Apr-21		<0.000993	<0.00174	<0.00125	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-84	Sep-21													
	MW-84	Apr-22		0.00910 J	<0.00348	0.00348 J	0.00688 J	<0.0812	**<0.00600**	<0.00556	<0.00348	<0.00298	<0.00236	0.00423 J	**<0.00468**
	MW-84	Oct-22													

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
Evaporation Ponds	MW-86	Jun-20		0.00566 J	0.0216	<0.00250	<0.00236		**<0.00600** J4	0.0345	0.0483 J	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-86	Oct-20		0.00471 J	0.0288	<0.00250	<0.00236		**<0.00600**	0.0435	0.0583 J	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-87	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-87	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-87	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-87	Sep-21													
	MW-87	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-87	Oct-22													
	MW-88	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-88	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-88	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-88	Sep-21													
	MW-88	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-88	Oct-22													
	MW-120	Jun-20		<0.000497	<0.000870	<0.000625	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	0.00169 J	<0.00117
	MW-120	Oct-20		<0.000497	<0.000870	<0.000625	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	MW-120	Apr-21		<0.000497	<0.000870	<0.000625	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	MW-120	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-120	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-120	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-121	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-121	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-121	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-121	Sep-21													
	MW-121	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00915	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-121	Oct-22													
	MW-122	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-122	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-122	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-122	Sep-21													
	MW-122	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-122	Oct-22													
	MW-123	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-123	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-123	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-123	Sep-21													
	MW-123	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-123	Oct-22													
	MW-124	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-124	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-124	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-124	Sep-21													
	MW-124	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-124	Oct-22													
	OCD-1R	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-1R	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	OCD-1R	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-1R	Sep-21													
	OCD-1R	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-1R	Oct-22													
	OCD-2A	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-2A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	OCD-2A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-2A	Sep-21													
	OCD-2A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-2A	Oct-22													
	OCD-3	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		0.000862 JBJ4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-3	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-3	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-3	Sep-21													
	OCD-3	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-3	Oct-22													
	OCD-4	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-4	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-4	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-4	Sep-21													
	OCD-4	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-4	Oct-22													
	OCD-5	Jun-20		<0.0000993	<0.000174	<0.000125 J4	<0.000118		<0.000300 J4	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-5	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-5	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-5	Sep-21													
	OCD-5	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-5	Oct-22													
	OCD-6	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-6	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-6	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-6	Sep-21													
	OCD-6	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-6	Oct-22													
	OCD-7AR	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-7AR	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-7AR	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-7AR	Sep-21													
	OCD-7AR	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0569	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-7AR	Oct-22													
	OCD-7B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	OCD-7B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	OCD-7B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	OCD-7B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-8A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-8A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-8A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-8A	Sep-21													
	OCD-8A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.0147	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	OCD-8A	Oct-22													
	OCD-8B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	OCD-8B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	OCD-8B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	OCD-8B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
Field East of Refinery	KWB-1A	Oct-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-1A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-1A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-1A	Oct-22		0.00575	0.000412 J	0.00124	<0.000118	<0.00406	<0.000300	<0.000278	0.0338	<0.000149	<0.000118 J4	<0.000190	<0.000234
	KWB-1C	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	KWB-1C	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-1C	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-1C	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
Field East of Refinery	KWB-7	Jun-20		0.0205	0.00226	0.00879	<0.000118		<0.000300	0.000536 J	0.0413	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-7	Oct-20		0.0140	0.000402 J	0.00555	<0.000118		<0.000300	<0.000278	0.00289 J	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-7	Apr-21		0.0659	0.0116	0.00793	<0.000118		<0.000300	0.0255	0.179	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-7	Sep-21		0.119	0.00582	0.0155	<0.000118	0.0287	<0.000300	0.00322	0.0822	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-7	Apr-22		0.0236	0.000254 J	0.00947	<0.000118	0.0191	<0.000300	0.000657 J	0.00128 J	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-7	Oct-22		0.0404	<0.000174	0.0170	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-8	Oct-16		<0.0698	0.150 J	<0.0730	<0.0614		**<0.0744**	**1.48**	**1.16**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	KWB-8	Apr-17		0.0852 J	0.145	<0.0365	<0.0307		**<0.0372**	0.747	**2.07**	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	KWB-8	Oct-17		0.0217	0.0133	<0.000365	<0.000307		<0.000372	0.336	**0.795**	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-8	Oct-20		0.168 J	0.139 J	<0.0250	<0.0236		**<0.0600**	**1.08**	**4.19**	<0.0298	<0.0236	**<0.0380**	**<0.0468**
	KWB-10R	Apr-17		0.0714	**0.198**	<0.0182	<0.0154		**<0.0186**	0.0605	**0.914**	<0.0198	<0.0210	**<0.0199**	**<0.0130**
	KWB-10R	Oct-17		0.0748	0.112 J	0.0126	<0.000307		<0.000372	0.0588	**0.767**	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-10R	Apr-18		<0.0872	0.0922 J	<0.0912	<0.0768		**<0.0930**	<0.103	0.549 J	<0.0990	<0.105	**<0.0995**	**<0.0648**
	KWB-10R	Oct-18		<0.0872	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	<0.265	<0.0990	<0.105	**<0.0995**	**<0.0648**
	KWB-11A	Jun-20		0.00125	<0.000174	0.00210	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11A	Oct-20		<0.0000993	<0.000174	0.00279	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11A	Sep-21		0.0253	0.000426 J	0.00401	<0.000118	0.0932	<0.000300	0.000984 J	0.0213	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11A	Oct-22		0.00227	<0.000174	0.00170	<0.000118	0.0114	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Sep-21		0.000380 J	<0.000174	0.000132 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Apr-22		0.000441 J	<0.000174	0.000169 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-11B	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12A	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12A	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	KWB-12B	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12B	Jun-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12B	Jun-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12B	Oct-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	KWB-12B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Apr-21	FD	<0.0000993	<0.000174	0.000261 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Sep-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	KWB-12B	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	KWB-12B	Oct-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	KWB-P4	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	KWB-P4	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-P4	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-P4	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-57	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-57	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-57	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-57	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-57	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-58	Oct-17		0.0842	0.00179	0.00872	<0.000307		<0.000372	0.0101	0.222	<0.000396	<0.000419	<0.000398	<0.000259
	MW-58	Apr-18		0.0965	<0.0170	<0.0182	<0.0154		**<0.0186**	<0.0206	0.268	<0.0198	<0.0210	**<0.0199**	**<0.0130**
	MW-58	Oct-18		0.0900	<0.0170	<0.0182	<0.0154		**<0.0186**	<0.0206	<0.0530	<0.0198	<0.0210	**<0.0199**	**<0.0130** J3
	MW-58	Oct-19		0.0676	0.0119	0.0105	<0.00307		<0.00372	0.0141 J4	0.407	<0.00396	<0.00419	<0.00398	**<0.00259**
	MW-111	Oct-18		<0.00872	<0.00852	<0.00912	<0.00768		**<0.00930**	<0.0103	<0.0265	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	MW-111	Apr-19		0.00424	<0.000341	0.000668 J	<0.000307		<0.000372	0.000523 J	0.00523	<0.000396	<0.000419	<0.000398	<0.000259
	MW-111	Oct-19		<0.000349	0.000929 J	<0.000365	<0.000307		<0.000372	<0.0103	0.0109	<0.000396	<0.000419	<0.000398	<0.000259
	MW-111	Jun-20		0.00411 J	<0.00435	<0.00313	<0.00295		**<0.00750**	<0.00695	0.0148 J	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-112	Nov-14		0.100	**0.600**	0.00910 J	<0.00770		**<0.00930**	0.730	**2.00**	<0.00990	<0.0100	**<0.0100**	**<0.00650**
	MW-113	Jun-20		0.00199 J	<0.000870	<0.000625	<0.000590		<0.00150	<0.00139	0.0363	<0.000745	<0.000590	<0.000950	<0.00117
	MW-113	Jun-20	FD	0.000600 J	0.000359 J	0.000611 J	<0.000118		0.000582 JJ4	0.000490 J	0.0474	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Oct-20		0.0265	<0.000870	0.00271 J	<0.000590		<0.00150	0.00446 J	0.154	<0.000745	<0.000590	<0.000950	<0.00117
	MW-113	Oct-20	FD	0.0295	0.000755 J	0.00332	<0.000118		<0.000300	0.00403	0.166	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Apr-21		0.00198 J	0.00172 J	0.000965 J	<0.000590		<0.00150	<0.00139	0.0412	<0.000745	<0.000590	<0.000950	<0.00117
	MW-113	Apr-21	FD	0.00273	0.00222	0.00148	<0.000118		<0.000300	0.00120	0.0591	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Sep-21		0.153	<0.00870	<0.00625	<0.00590	**<0.203**	**<0.0150**	0.0330 J	**0.877**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-113	Sep-21	FD	0.165	<0.00435	0.0150 J	<0.00295	<0.102	**<0.00750**	0.0305	**0.872**	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-113	Apr-22		0.00414	0.000466 J	0.00117	<0.000118	<0.00406	<0.000300	0.00128	0.0960	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Apr-22	FD	0.00367	0.000520 J	0.00107	<0.000118	<0.00406	<0.000300	0.00121	0.103	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Oct-22		0.232	<0.0174	0.0208	<0.000118	0.00870	<0.000300	0.0870	**1.06**	<0.000149	<0.000118	<0.000190	<0.000234
	MW-113	Oct-22	FD	0.245	0.0772	0.0228	<0.000118	<0.00406	<0.000300	0.0964	**1.20**	<0.000149	<0.000118	<0.000190	<0.000234
	MW-125	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-125	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-125	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-125	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-125	Apr-22		<0.0000993	<0.000174	0.000199 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-125	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-126A	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-126A	Oct-19		0.00532	<0.000341	0.00286	<0.000307		<0.000372	0.00168	0.00569	<0.000396	<0.000419	<0.000398	<0.000259
	MW-126A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-126A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-126B	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-126B	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-126B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-126B	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-126B	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-126B	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-127	Oct-17		0.0185	0.00373	0.00319	<0.000307		<0.000372	0.0396	0.0482	<0.000396	<0.000419	<0.000398	<0.000259
	MW-127	Apr-18		0.0255	<0.00682	<0.00730	<0.00614		**<0.00744**	0.0424	0.0654	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-127	Oct-18		0.0258	<0.00682	<0.00730	<0.00614		**<0.00744**	0.0397	0.0458 J	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-127	Apr-19		0.0261	<0.00682	<0.00730	<0.00614		**<0.00744**	0.0261	0.0933	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-128	Oct-17		0.00170	<0.000341	0.000380 J	<0.000307		<0.000372	0.000781 J	0.00336	<0.000396	<0.000419	<0.000398	<0.000259
	MW-128	Apr-18		<0.00698	<0.00682	<0.00730	<0.00614		**<0.00744**	<0.00824	<0.0212	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-128	Oct-18		0.00759 J	<0.00682	<0.00730	<0.00614		**<0.00744**	<0.00824	<0.0212	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-128	Apr-19		<0.00698	<0.00682	<0.00730	<0.00614		**<0.00744**	<0.00824	<0.0212	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-129	Apr-16		0.000863 J	0.000796 J	0.00103	<0.000307		<0.000372	<0.0390	0.00278 J	<0.000396	<0.000419 J4	<0.000398	<0.000259
	MW-129	Oct-16		0.000383 J	<0.000341	0.00105	<0.000307		<0.000372	0.000920 J	0.00124 J	<0.000396	<0.000419	<0.000398	<0.000259
	MW-129	Apr-17		<0.000349	<0.000341	0.000928 J	<0.000307		<0.000372	0.000543 J	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-129	Apr-18		<0.000349	<0.000341	0.000419 J	<0.000307		<0.000372	0.000816 J	0.00125 J	<0.000396	<0.000419	<0.000398	<0.000259

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
Field East of Refinery	MW-130	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-130	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-130	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-130	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-130	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-130	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-131	Apr-17		0.0338	0.0406	0.00331	<0.000307		<0.000372	0.153	0.114	<0.000396	<0.000419	<0.000398	<0.000259
	MW-131	Oct-17		0.0262	<0.0852	0.00286	<0.000307		<0.000372	0.0627	<0.265	<0.000396	<0.000419	<0.000398	<0.000259
	MW-131	Oct-19		0.0141	**0.312**	0.00315	<0.000307		<0.000372	0.232	**0.993**	<0.000396	<0.000419	<0.000398	<0.000259
	MW-131	Jun-20		0.0121 J	**0.242**	<0.00625	<0.00590		**<0.0150**	0.150	**0.786**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-133	Nov-14		0.0840 J	0.0380 J	<0.0360	<0.0310		**<0.0370**	0.100 J	0.220 J	<0.0400	<0.0420	**<0.0400**	**<0.0260**
	MW-133	Apr-15		0.0451 J	<0.0340	<0.0360	<0.0310		**<0.0370**	<0.0780	<0.110	<0.0400	<0.0420	**<0.0400**	**<0.0260**
	MW-134	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Jun-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-134	Oct-20	FD	<0.0000993	<0.000174	0.000176 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-134	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Apr-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Sep-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-134	Oct-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Sep-21		<0.0000993	<0.000174	0.000393 J	<0.000118	<0.00406	<0.000300	<0.000278	0.000707 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Oct-22		0.00119	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-135	Oct-22		0.00119	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Oct-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-145	Oct-22		<0.0000993	<0.000174	0.000328 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-146	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Sep-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-146	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-146	Oct-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-147	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-147	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-147	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-147	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-147	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-148	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-148	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-148	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-148	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-148	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	RA-4196	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RA-4196	Oct-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RA-4196	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4196	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4798	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4798	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4798	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4798	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-4798	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RW-12R	Apr-17		0.0809	0.00177 J	0.0104	<0.00154		<0.00186	0.00354 J	0.0257	<0.00198	<0.00210	<0.00199	<0.00130
	RW-12R	Apr-18		0.0634	<0.000341	0.00564	<0.000307		<0.000372	0.00157	0.00648	<0.000396	<0.000419	<0.000398	<0.000259
	RW-12R	Apr-19		0.0279	0.000476 J	0.00360	<0.000307		<0.000372	0.000866 J	0.00643	<0.000396	<0.000419	<0.000398	<0.000259
	RW-12R	Jun-20		0.0304	0.000522 J	0.00414	<0.000118		<0.000300	0.000997 J	0.00605	<0.000149	<0.000118	<0.000190	<0.000234
	RW-13R	Apr-16		0.0183	0.0139	0.00270	<0.000307		<0.000372	0.0175	0.108	<0.000396	<0.000419	<0.000398	<0.000259
	RW-13R	Apr-18		0.0319	0.00159	0.00378	<0.000307		<0.000372	0.00322	0.0299	<0.000396	<0.000419	<0.000398	<0.000259
	RW-18A	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-18A	Apr-18		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-18A	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-18A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RW-20	Apr-15		0.0980	0.0590	0.00931 J	<0.00310		<0.00370	0.211	**1.35**	<0.00400	<0.00420	<0.00400	**<0.00260**
	RW-22	Apr-15		0.103	0.0952	0.00967 J	<0.00310		<0.00370	0.216	**0.945**	<0.00400	<0.00420	<0.00400	**<0.00260**
NCL	MW-18	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-18	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-18	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-45	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-45	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-45	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-45	Sep-21		0.000138 J	<0.000174	<0.000125	<0.000118	0.00888	<0.000300	<0.000278	0.000483 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-45	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00568	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-45	Oct-22		<0.0000993	<0.000174	0.000450 J	<0.000118	0.0176	<0.000300	<0.000278	<0.000174	<0.000149	0.000268 JJ4	<0.000190	<0.000234 J3
	MW-53	Apr-16		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000780	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-53	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-53	Apr-18		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-53	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-53R	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-53R	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-53R	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-54A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-54A	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-54A	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-54A	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-54A	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-54A	Oct-22		<0.0000993	<0.000174	0.000380 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	MW-54B	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	MW-54B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-54B	Apr-19		<0.000349 J4	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-54B	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-55	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-55	Oct-20		<0.000993	<0.00174	<0.00125	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-55	Apr-21		<0.000993	<0.00174	0.00158 J	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-55	Sep-21		<0.0000993	<0.000174	0.000184 JB	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-55	Apr-22		<0.000993	<0.00174	<0.00125	<0.00118	<0.0406	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190 J4	**<0.00234**
	MW-55	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
NCL	MW-56	Apr-19		<0.000349 J4	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-56	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-56	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-56	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-108	Jun-20		0.0205	0.00120 J	0.00388 J	<0.000590		<0.00150	0.00293 J	0.0415	<0.000745	<0.000590	<0.000950	<0.00117
	MW-108	Oct-20		0.00864	<0.000870	0.00187 J	<0.000590		<0.00150	0.00141 J	0.0176	<0.000745	<0.000590	<0.000950	<0.00117
	MW-108	Apr-21		0.0174	<0.000870	0.00355 J	<0.000590		<0.00150	0.00286 J	0.0313	<0.000745	<0.000590	<0.000950	<0.00117
	MW-108	Sep-21		0.0141	<0.00174	0.00291 J	<0.00118	<0.0406	<0.00300	<0.00278	0.0194 J	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-108	Apr-22		0.0187	0.000211 J	0.00558	<0.000118	<0.00406	<0.000300	0.000503 J	0.00407	<0.000149	<0.000118	<0.000190	<0.000234
	MW-108	Oct-22		0.0177	0.000415 J	0.00542	<0.000118	<0.00406	<0.000300	0.000557 J	0.00308	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-31	Jun-20		0.000144 J	0.000287 J	<0.000125	<0.000118		<0.000300	<0.000278	0.000954 J	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-31	Oct-20		<0.0000993	0.000396 J	<0.000125	<0.000118		<0.000300	<0.000278	0.00123 J	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-31	Apr-21		0.000273 J	0.000352 J	0.000280 J	<0.000118		<0.000300	<0.000278	0.00128 J	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-31	Sep-21		<0.0000993	<0.000174	0.000231 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-31	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-31	Oct-22		<0.0000993	<0.000174	0.000405 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-32	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-32	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-32	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-32	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-32	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-32	Oct-22		<0.0000993	<0.000174	0.000342 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-33	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-33	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-33	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-33	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-33	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-33	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-34A	Oct-18		0.0768	<0.00341	0.0136	<0.00307		<0.00372	<0.00412	0.0266 J	<0.00396	<0.00419	<0.00398	**<0.00259**
	NCL-34A	Apr-19		0.0780	<0.00682	0.0159 J	<0.00614		**<0.00744**	<0.00824	<0.0212	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	NCL-34A	Oct-19		0.0953	<0.00170	0.0158	<0.00154		<0.00186	<0.00206	0.0175	<0.00198	<0.00209	<0.00199	<0.00130
	NCL-34A	Jun-20		0.0686	<0.00348	0.0164 J	<0.00236		**<0.00600**	<0.00556	0.0335 J	<0.00298	<0.00236	<0.00380	**<0.00468**
	NCL-44	Jun-20		<0.0000993	<0.000174	0.000413 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-44	Oct-20		<0.0000993	<0.000174	0.000615 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-44	Apr-21		<0.0000993	<0.000174	0.000280 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-44	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-44	Apr-22		<0.0000993	<0.000174	0.000157 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-44	Oct-22		<0.0000993	<0.000174	0.000550 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-49	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Jun-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Oct-20	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Apr-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Sep-21	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NCL-49	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-49	Apr-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	NCL-49	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	NCL-49	Oct-22	FD	<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
North Refinery	MW-23	Apr-19		0.251 J4	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	<0.106	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-23	Oct-19		0.123	<0.00341	0.0129	<0.00307		<0.00372	<0.00412	<0.0106	<0.00396	<0.00419	<0.00398	**<0.00259**
	MW-23	Jun-20		0.165	<0.00174	0.0132	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-23	Oct-20		0.153	<0.00174	0.0128	<0.00118		<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190 J4	**<0.00234**
	MW-29	Jun-20		<0.0000993	<0.000174	0.000143 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-29	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-29	Apr-21		<0.0000993	<0.000174	0.000398 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-29	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	0.0109	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-29	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00480 J	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-29	Oct-22		<0.0000993	<0.000174	0.000347 J	<0.000118	0.0155	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234 J3
	MW-39	Apr-19		0.0162 J4	0.0196	0.00441	<0.000307		<0.000372	0.00189	0.0550	<0.000396	<0.000419	<0.000398	<0.000259
	MW-39	Oct-19		0.00902	0.0149	0.00293	<0.000307		<0.000372	0.00336 J4	0.0412	<0.000396	<0.000419	<0.000398	<0.000259
	MW-39	Jun-20		0.00630	0.00886	0.00293	<0.000118		<0.000300	0.00195	0.0321	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-39	Oct-20		0.00123	0.00588	0.00199	<0.000118		<0.000300	0.000978 J	0.0174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-40	Apr-17		0.00806	<0.000341	0.0167	<0.000307		<0.000372	0.000732 J	0.0117	<0.000396	<0.000419	<0.000398	<0.000259
	MW-40	Apr-18		0.00369	<0.000341	0.0182	<0.000307		<0.000372	0.000543 J	0.00619	<0.000396	<0.000419	<0.000398	<0.000259
	MW-40	Apr-19		0.00305	<0.000341	0.0150	<0.000307		<0.000372	<0.000412	0.00157 J	<0.000396	<0.000419	<0.000398	<0.000259
	MW-40	Jun-20		0.00210	<0.000174	0.0121	<0.000118		<0.000300	0.000363 J	0.00241 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-41	Apr-18		<0.000349	<0.000341	0.00191	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-41	Apr-19		0.000966 J	<0.000341	0.00451	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-41	Jun-20		0.00135	<0.000174	0.00196	<0.000118		<0.000300	0.000350 J	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-41	Apr-21		0.00170	<0.000174	0.00140	<0.000118		<0.000300	0.000301 J	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-42	Apr-19		0.00884	<0.00170	0.00496 J	<0.00154		<0.00186	<0.00206	0.0226	<0.00198	<0.00210	<0.00199	<0.00130
	MW-42	Jun-20		0.0107	<0.000870	0.00446 J	<0.000590		<0.00150	0.00172 J	0.0535	<0.000745	<0.000590	<0.000950	<0.00117
	MW-42	Apr-21		0.00361 J	<0.000870	0.00389 J	<0.000590		<0.00150	<0.00139	0.00852 J	<0.000745	<0.000590	<0.000950	<0.00117
	MW-42	Apr-22		0.00796	<0.000870	0.00467 J	<0.000590	0.0669	<0.00150	<0.00139	0.0187	<0.000745	<0.000590	<0.000950	<0.00117
	MW-43	Apr-19		0.102 JJ4	<0.0682	<0.0730	<0.0614		**<0.0744**	<0.0824	**0.744**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-43	Oct-19		<0.0698	<0.0682	<0.0730	<0.0614		**<0.0744**	<0.0824	0.610	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-43	Jun-20		0.0569	0.00925 J	0.00578 J	<0.00236		**<0.00600** J4	0.0224	**0.712**	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-43	Oct-20		0.0559	0.0510	<0.00625	<0.00590		**<0.0150**	0.0676	**0.903**	<0.00745	<0.00590	**<0.00950** J4	**<0.0117**
	MW-59	Apr-17		0.000538 J	<0.000341	0.00297	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-59	Apr-18		0.00246	<0.000341	0.00348	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-59	Apr-19		0.000636 J	<0.000341	0.00301	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-59	Jun-20		0.000566 J	<0.000174	0.00133	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-60	Jun-20		0.000862 J	<0.000174	0.00171	<0.000118		<0.000300	<0.000278	0.00157 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-60	Jun-20	FD	0.000948 J	<0.000174	0.00163	<0.000118		<0.000300	<0.000278	0.00194 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-60	Oct-20		0.00120	<0.000174	0.00254	<0.000118		<0.000300	<0.000278	0.00238 J	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-60	Oct-20	FD	0.00136	<0.000174	0.00303	<0.000118		<0.000300	<0.000278	0.00224 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-61	Jun-20		0.119	<0.00870	<0.00625	<0.00590		**<0.0150**	0.153	0.611	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-61	Oct-20		0.110	<0.00870	0.00816 J	<0.00590		**<0.0150**	0.161	**0.695**	<0.00745	<0.00590	**<0.00950** J4	**<0.0117**
	MW-61	Apr-21		0.0999	<0.00870	0.00975 J	<0.00590		**<0.0150**	0.140	0.568	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-61	Sep-21		0.115	<0.00870	0.0138 J	<0.00590	**<0.203**	**<0.0150**	0.180	**0.789**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-61	Apr-22		0.126	<0.00870	0.0136 J	<0.00590	**<0.203**	**<0.0150**	0.165	**0.691**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-61	Oct-22		0.174	<0.00870	0.0294 J	<0.00590	**<0.203**	**<0.0150**	0.201	**0.918**	<0.00745	<0.00590 J4	**<0.00950**	**<0.0117** J3
	MW-62	Jun-20		0.105	<0.00348	<0.00250	<0.00236		**<0.00600**	<0.00556	0.557	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-62	Oct-20		0.114	0.00538 J	0.00881 J	<0.00236		**<0.00600**	<0.00556	**0.762**	<0.00298	<0.00236	<0.00380 J4	**<0.00468**
	MW-62	Sep-21		0.327	0.0261 J	0.0353 J	<0.00590	**<0.203**	**<0.0150**	0.0236 J	**2.37**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-62	Apr-22		0.311	0.0196 J	0.0422 J	<0.00590	**<0.203**	**<0.0150**	0.0155 J	**1.79**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-62	Oct-22		0.192	0.00957 J	0.0326 J	<0.00590	**<0.203**	**<0.0150**	<0.0139	**0.978**	<0.00745	<0.00590 J4	**<0.00950**	**<0.0117** J3

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
North Refinery	MW-62R	Oct-20		0.160	0.00103	0.0194	<0.000118		<0.000300	0.000571 J	0.137	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-62R	Apr-21		0.186	<0.00870	0.0215 J	<0.00590		**<0.0150**	<0.0139	<0.00870	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-62R	Apr-22		0.187	<0.00174	0.0209	<0.00118	0.0510	<0.00300	<0.00278	0.0187 J	<0.00149	<0.00118	**0.00996 J**	**<0.00234**
	MW-67	Oct-17		0.00976	<0.000341	0.00570	<0.000307		<0.000372	0.00140	0.00245 J	<0.000396	<0.000419	0.000515 J	<0.000259
	MW-67	Apr-18		0.0323	<0.00170	0.00834	<0.00154		<0.00186	0.00261 J	0.00916 J	<0.00198	<0.00210	<0.00199	<0.00130
	MW-67	Oct-18		0.00387	<0.000341	0.00450	<0.000307		<0.000372	<0.000412	0.00113 J	<0.000396	<0.000419	0.000424 J	<0.000259
	MW-67	Apr-19		0.0188 J4	<0.00170	0.00779	<0.00154		<0.00186	<0.00206	<0.00530	<0.00198	<0.00210	<0.00199	<0.00130
	MW-90	Jun-20		0.00509	0.000299 J	0.00725	<0.000118		<0.000300	0.000350 J	0.000299 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-90	Oct-20		0.00349	0.000349 J	0.00644	<0.000118		<0.000300	0.000323 J	0.000349 J	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-90	Apr-21		0.00254	0.000225 J	0.00824	<0.000118		<0.000300	<0.000278	0.000225 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-90	Sep-21		0.00903 J	<0.00174	0.00498 J	<0.00118	<0.0406 J3	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-90	Apr-22		0.00441	0.000381 J	0.00663	<0.000118	<0.00406	<0.000300	0.000359 J	0.000381 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-90	Oct-22		0.00269	0.000280 J	0.00923	<0.000118	<0.00406	<0.000300	0.000385 J	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-91	Oct-18		0.0792 J	0.164	<0.0365	<0.0307		**<0.0372**	**1.24**	**0.716**	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-91	Apr-19		0.104 J4	0.187	<0.0365	<0.0307		**<0.0372**	**1.94**	**0.799**	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-91	Oct-19		0.112	**0.548**	<0.0365	<0.0307		**<0.0372**	**7.07 J4**	**2.12**	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-91	Jun-20		0.114	**0.649**	<0.0125	<0.0118		**<0.0300**	**6.95**	**2.50**	<0.0149	<0.0118	**<0.0190**	**<0.0234**
	MW-92	Apr-16		0.0510	0.0268	0.00699	<0.000307		0.000488 J	0.0173	0.188	0.000917 J	<0.000419	<0.000398	0.000399 J
	MW-92	Oct-16		0.0329	0.0151 J	<0.00730	<0.00614		**<0.00744**	<0.0156	0.110	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-93	Apr-17		0.0491	<0.00852	<0.00912	<0.00768		**<0.00930**	<0.0103	0.326	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	MW-93	Apr-18		0.0492	0.00452	0.00564	<0.000307		<0.000372	0.00797	0.336	<0.000396	<0.000419	<0.000398	<0.000259
	MW-93	Apr-19		0.0695 J4	0.00409	0.00716	<0.000307		<0.000372	0.00748	0.303	<0.000396	<0.000419	<0.000398	<0.000259
	MW-93	Jun-20		0.0394	<0.00348	<0.00250	<0.00236		**<0.00600**	0.0123 J	0.296	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-94	Oct-15		0.0923	**0.360**	0.0283	<0.00307		<0.00372	0.553	0.574	<0.00396	<0.00419	<0.00398	**<0.00259**
	MW-94	Apr-16		0.120	**0.387**	0.0403 J	<0.0154		**<0.0186**	0.687	0.615	<0.0198	<0.0210 J4	**<0.0199**	**<0.0130**
	MW-94	Oct-16		0.104	**0.390**	0.0303	<0.00154		<0.00186	0.468	0.592	<0.00198	<0.00210	<0.00199	<0.00130
	MW-94	Apr-17		0.0909	**0.292**	0.0317	<0.00768		**<0.00930**	0.435	0.460	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	MW-95	Apr-17		<0.000349	<0.000341	0.00240	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-95	Apr-18		0.000352 J	<0.000341	0.00305	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-95	Apr-19		<0.000349 J4	<0.000341	0.00239	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-95	Jun-20		0.000158 J	<0.000174	0.00247	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-96	Jun-20		0.0797 J	<0.0435	<0.0313	<0.0295		**<0.0750**	<0.0695	<0.0435	<0.0373	<0.0295	**<0.0475**	**<0.0585**
	MW-96	Oct-20		0.0692 J	<0.0435	<0.0313	<0.0295		**<0.0750**	<0.0695	<0.0435	<0.0373	<0.0295	**<0.0475** J4	**<0.0585**
	MW-96	Sep-21		0.0591	0.00179 J	0.0111 B	<0.00118	<0.0406	<0.00300	<0.00278	0.00179 J	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-96	Apr-22		0.0610	<0.00174	0.0104	<0.00118	**4.13**	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-96	Oct-22		0.0718	<0.00348	0.0126 J	<0.00236	**3.30**	**<0.00600**	<0.00556	<0.00348	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-98	Jun-20		0.140	0.0256 J	0.0139 J	<0.00590		**<0.0150**	0.202	**2.17**	<0.00745	<0.00590	**<0.00950** J4	**<0.0117**
	MW-98	Oct-20		0.0916	0.0254 J	<0.00625	<0.00590		**<0.0150**	0.236	**1.88**	<0.00745	<0.00590	**<0.00950** J4	**<0.0117**
	MW-98	Apr-21		0.106	0.0253 J	0.00820 J	<0.00590		**<0.0150**	0.227	**1.84**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-98	Sep-21		0.0900	0.0253 J	0.0122 J	<0.00590	**<0.203**	**<0.0150**	0.204	**1.76**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-98	Apr-22		0.139	0.0282 J	0.0218 J	<0.00590	**<0.203**	**<0.0150**	0.194	**1.69**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-98	Oct-22		0.117	0.0261 J	0.0245 J	<0.00590	**<0.203**	**<0.0150**	0.181	**1.45**	<0.00745	<0.00590 J4	**<0.00950**	**<0.0117** J3
	MW-137	Oct-17		0.180 J	**0.265**	<0.0730	<0.0614		**<0.0744**	**1.54**	**1.16**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-137	Apr-18		0.162 J	**0.398**	<0.0730	<0.0614		**<0.0744**	**1.83**	**1.30**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-137	Oct-18		0.101 J	0.165 J	<0.0730	<0.0614		**<0.0744**	0.977	**0.688**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-137	Apr-19		0.127 JJ4	**0.274**	<0.0730	<0.0614		**<0.0744**	**1.28**	**0.821**	<0.0792	<0.0838	**<0.0796**	**<0.0518**
	MW-138	Oct-17		0.0697	<0.00170	0.0119	<0.00154		<0.00186	0.00577	0.00565 J	<0.00198	<0.00210	<0.00199	<0.00130
	MW-138	Apr-18		0.0680	0.00541	0.0111	<0.00154		<0.00186	0.0128	0.0492	<0.00198	<0.00210	<0.00199	<0.00130
	MW-138	Oct-18		0.0724	0.00635	0.00906	<0.00154		<0.00186	0.00806	0.115	<0.00198	<0.00210	<0.00199	<0.00130
	MW-138	Apr-19		0.108 J4	0.00315 J	0.0155	<0.00154		<0.00186	0.00480 J	0.100	<0.00198	<0.00210	<0.00199	<0.00130
	RW-1R	Apr-16		0.00513	0.00110	0.000968 J	<0.000307		0.00258	0.00542	0.0122	0.0250	<0.000419	**0.00959**	0.00116
	RW-1	Apr-17		0.00361 J	<0.00341	0.00414 J	<0.00307		<0.00372	0.0102	<0.0106	0.0108	<0.00419	**0.00896 J**	**<0.00259**
	RW-1	Apr-18		0.0336	0.00282	0.00486	<0.000307		0.00413	0.0176	0.0855	0.0173	<0.000419	**0.0169**	0.00131
	RW-1	Apr-19		0.0296 J4	0.00412	0.00418	<0.000307		0.00384	0.0221	0.0844	0.0226	<0.000419	**0.0237**	<0.000259
	RW-2	Apr-15		0.0813	0.0853	0.0120	<0.00310		**<0.0930**	0.115	0.530	<0.00400	<0.00420	**0.0326**	**<0.00260**
	RW-2R	Apr-16		0.0412 J	0.0461 J	<0.0182	<0.0154		**<0.0186**	0.0569 J	0.299	<0.0198	<0.0210	**0.0285 J**	**<0.0130**
	RW-2	Apr-17		0.0816	0.0183 J	<0.0182	<0.0154		**0.0218 J**	0.0430 J	0.431	<0.0198	<0.0210	**0.0249 J**	**<0.0130**
	RW-2	Apr-18		0.104	0.00601	0.0148	<0.000307		0.00335	0.0312	0.446	0.00825	<0.000419	**0.00521**	<0.000259
	RW-7	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-7	Apr-18		0.00280	0.00114	0.00386	<0.000307		<0.000372	0.00106	0.00545	<0.000396	<0.000419	<0.000398	<0.000259
	RW-7	Apr-19		0.000916 JJ4	<0.000341	0.00256	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-7	Jun-20		0.00235	0.000305 J	0.00389	<0.000118		<0.000300	0.000397 J	0.00240 J	<0.000149	<0.000118	<0.000190	<0.000234
	RW-8	Apr-15		0.00788 J	<0.00340	0.00942 J	<0.00310		<0.00370	<0.00780	<0.0110	<0.00400	<0.00420	<0.00400	**<0.00260**
	RW-8	Apr-17		0.0191	0.0112	0.0117	<0.000307		<0.000372	0.00213	0.0498	<0.000396	<0.000419	0.00110	<0.000259
	RW-9	Apr-19		0.0105 J4	<0.000341	0.0247	<0.000307		<0.000372	0.00179	0.00929	<0.000396	<0.000419	<0.000398	<0.000259
	RW-9	Jun-20		0.00201	0.000387 J	0.0152	<0.000118		<0.000300	0.00108	0.00136 J	<0.000149	<0.000118	<0.000190	<0.000234
	RW-9	Apr-21		0.00142	0.000732 J	0.0142	<0.000118		<0.000300	0.000442 J	0.00200 J	<0.000149	<0.000118	<0.000190	<0.000234
	RW-9	Apr-22		0.00540 J	<0.00174	0.0218	<0.00118	<0.0406	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	RW-10	Apr-18		<0.000349	0.00346	0.000567 J	<0.000307		<0.000372	0.00163	0.00474	<0.000396	<0.000419	<0.000398	<0.000259
	RW-10	Apr-19		<0.000349	0.00272	<0.000365	<0.000307		<0.000372	0.00135	0.00369	<0.000396	<0.000419	<0.000398	<0.000259
	RW-10	Jun-20		0.000158 J	0.00235	0.000279 J	<0.000118		<0.000300	0.00150	0.00387	<0.000149	<0.000118	<0.000190 J4	<0.000234
	RW-10	Apr-21		0.000395 J	0.0170	0.000615 J	<0.000118		<0.000300	0.0104	0.0200	<0.000149	<0.000118	<0.000190	<0.000234
	RW-16B	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-16B	Apr-18		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-16B	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-16B	Jun-20		<0.0000993	0.000377 J	<0.000125	<0.000118		<0.000300	0.000428 J	0.00125 J	<0.000149	<0.000118	<0.000190	<0.000234
	RW-17A	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-17A	Apr-18		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-17A	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-17A	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
North RO Field	MW-117	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-117	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-117	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-117	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-117	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-117	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-118	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-118	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-118	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-118	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-118	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-118	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-119	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-119	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-119	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-119	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-119	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-119	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup													
South Refinery	KWB-2R	Apr-17		0.0121	0.000772 J	0.00279	<0.000307		<0.000372	<0.000412	0.0281	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-2R	Oct-17		0.111	0.00977	0.00996	<0.000307		<0.000372	0.0161	0.193	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-2R	Apr-19		0.0548	0.00500	0.00453	0.000710 J		<0.000372	0.00820	0.180	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-2R	Oct-19		0.101	0.00608	0.00857	0.00348		<0.000372	0.0140 J4	0.115	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-5	Oct-17		0.0134	<0.0852	0.00202	<0.000307		<0.000372	0.00156	<0.265	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-5	Apr-18		<0.0872	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	<0.265	<0.0990	<0.105	**<0.0995**	**<0.0648**
	KWB-5	Oct-18		<0.0872	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	<0.265	<0.0990	<0.105	**<0.0995**	**<0.0648**
	KWB-5	Apr-19		<0.0872	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	<0.265	<0.0990	<0.105	**<0.0995**	**<0.0648**
	KWB-6	Apr-17		0.0737	0.0179	0.00695	<0.00154		<0.00186	0.0205	0.391	<0.00198	<0.00210	<0.00199	<0.00130
	KWB-6	Oct-17		0.0386	0.00804	0.00483	<0.000307		<0.000372	0.0122	0.283	<0.000396	<0.000419	<0.000398	<0.000259
	KWB-6	Apr-18		0.0486	0.0350	<0.00730	<0.00614		**<0.00744**	0.00879 J	0.258	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	KWB-6	Oct-18		0.0234	0.0234	<0.00730	<0.00614		**<0.00744**	0.0126 J	0.379	<0.00792	<0.00838	**<0.00796**	**<0.00518** J3
	MW-28	Apr-19		0.0457 J	<0.0170	<0.0182	<0.0154		**<0.0186**	0.0272 J	0.140 J	<0.0198	<0.0210	**<0.0199**	**<0.0130**
	MW-28	Oct-19		0.0947	<0.0170	<0.0183	<0.0154		**<0.0186**	0.0384 J	0.264	<0.0198	<0.0209	**<0.0199**	**<0.0130**
	MW-28	Jun-20		0.0241	0.00154 J	0.00221 J	<0.000590		<0.00150 J4	0.0126	0.0916	<0.000745	<0.000590	<0.000950	<0.00117
	MW-28	Oct-20		0.0182	0.00171 J	0.00171 J	<0.000590		<0.00150	0.00882	0.0626	<0.000745	<0.000590 J4	<0.000950	<0.00117
	MW-48	Apr-18		0.118 J	<0.0852	<0.0912	<0.0768		**<0.0930**	**1.02**	**0.955**	<0.0990	<0.105	**<0.0995**	**<0.0648**
	MW-48	Oct-18		0.145 J	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	0.358 J	<0.0990	<0.105	**<0.0995**	**<0.0648** J3
	MW-48	Apr-19		0.177 J	<0.0852	<0.0912	<0.0768		**<0.0930**	0.152 J	0.498 J	<0.0990	<0.105	**<0.0995**	**<0.0648**
	MW-48	Oct-19		0.0908 J	<0.0852	<0.0913	<0.0768		**<0.0930**	0.138 J	0.290 J	<0.0990	<0.105	**<0.0995**	**<0.0648**
	MW-50	Jun-20		<0.0000993	<0.000174	0.000485 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-50	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-50	Apr-21		<0.0000993	<0.000174	0.000629 J	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-50	Sep-21		0.000219 J	<0.000174	0.000621 JB	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-50	Apr-22		<0.0000993	<0.000174	0.000288 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-50	Oct-22		<0.0000993	<0.000174	0.000129 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-52	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-52	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-52	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-52	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-52	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-52	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-64	Jun-20		0.0725 J	**1.03**	<0.0625	<0.0590		**<0.150**	**9.93**	**4.29**	<0.0745	<0.0590	**<0.0950** J4	**<0.117**
	MW-64	Oct-20		0.0626 J	**0.794**	<0.0625	<0.0590		**<0.150**	**8.09**	**3.10**	<0.0745	<0.0590 J4	**<0.0950**	**<0.117**
	MW-64	Apr-21		0.0953 J	**0.928**	<0.0625	<0.0590		**<0.150**	**8.88**	**4.15**	<0.0745	<0.0590	**<0.0950**	**<0.117**
	MW-64	Sep-21		0.0392 J	**0.822**	<0.00625	<0.00590	**2.48**	**<0.0150**	**9.03**	**3.06**	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-64	Apr-22		0.0663	**1.43**	<0.00313	<0.00295	**3.09**	**<0.00750**	**12.4**	**5.01**	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-64	Oct-22		0.0745 J	**1.05**	0.0916 J	0.0392 J	**2.90**	**<0.0750**	**9.56**	**4.17**	<0.0373	<0.0295 J4	**<0.0475**	**<0.0585**
	MW-65	Apr-18		0.0716 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	<0.106	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-65	Oct-18		0.0881 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0206	<0.106	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-65	Apr-19		0.0831 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	<0.106	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-65	Oct-19		0.0971 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	<0.106	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-66	Oct-19		0.0693	<0.00852	0.00932 J	<0.00768		**<0.00930**	<0.0103	<0.0265	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	MW-66	Jun-20		0.0851	0.00239	0.00857	<0.000118		<0.000300	0.00581	0.0145	<0.000149	<0.000118	<0.000190	<0.000234
	MW-66	Oct-20		0.0513	0.00183 J	0.00634 J	<0.00118		<0.00300	0.00445 J	0.00787 J	<0.00149	<0.00118 J4	<0.00190	**<0.00234**
	MW-66	Apr-21		0.0447	0.00451 J	0.00711 J	<0.00118		<0.00300	0.0129	0.0268 J	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-99	Oct-18		0.101	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	0.358	<0.0396	<0.0419	**<0.0398**	**<0.0259** J3
	MW-99	Apr-19		0.0620 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	0.379	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-99	Oct-19		0.0512 J	<0.0341	<0.0365	<0.0307		**<0.0372**	<0.0412	0.218 J	<0.0396	<0.0419	**<0.0398**	**<0.0259**
	MW-99	Jun-20		0.0249	0.00630 J	0.00426 J	<0.00118		<0.00300	0.00330 J	0.0784	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-101	Jun-20		0.000369 J	<0.000174	0.00174	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-101	Oct-20		0.0157	0.000814 J	0.00403	<0.000118		<0.000300	0.00858	0.0779	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-101	Apr-21		0.0142 J	<0.00348	0.00320 J	<0.00236		**<0.00600**	<0.00556	<0.00348	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-101	Sep-21		0.0140	0.000274 J	0.00356	<0.000118	0.108	<0.000300	0.00279	0.00375	<0.000149	<0.000118	<0.000190	<0.000234
	MW-101	Apr-22		0.00481	<0.000174	0.00269	<0.000118	0.114	<0.000300	0.00114	0.00122 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-101	Oct-22		0.0159	0.000380 J	0.00372	<0.000118	0.108	<0.000300	0.00260	0.0168	<0.000149	0.000229 JJ4	<0.000190	<0.000234 J3
	MW-102	Jun-20		0.0356 J	<0.0174	<0.0125	<0.0118		**<0.0300**	0.0484 J	0.188 J	<0.0149	<0.0118	**<0.0190**	**<0.0234**
	MW-102	Oct-20		0.0310 J	0.0274 J	<0.0125	<0.0118		**<0.0300**	0.0746 J	0.254 J	<0.0149	<0.0118 J4	**<0.0190**	**<0.0234**
	MW-102	Apr-21		0.0481 J	<0.0174	<0.0125	<0.0118		**<0.0300**	0.0385 J	0.165 J	<0.0149	<0.0118	**<0.0190**	**<0.0234**
	MW-102	Sep-21		0.0525	0.0149 J	0.0126 J	<0.00590	**0.588**	**<0.0150**	0.0990	0.263	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-102	Sep-21	FD	0.0523	0.0196 J	0.0120 J	<0.00590	**0.502**	**<0.0150**	0.0893	0.273	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-102	Apr-22		0.0680	0.0672	0.0160 J	<0.00590	**<0.203**	**<0.0150**	0.338 J	0.480	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-102	Apr-22	FD	0.0600	0.0565	0.0117 J	<0.00295	**0.316**	**<0.00750**	0.407	0.454	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-102	Oct-22		0.0654 J	<0.0435	<0.0313	<0.0295	**<1.02**	**<0.0750**	0.404	**0.692 J**	<0.0373	<0.0295	**<0.0475**	**<0.0585**
	MW-102	Oct-22	FD	0.0635 J	<0.0435	<0.0313	<0.0295	**<1.02**	**<0.0750**	0.405	**0.643 J**	<0.0373	<0.0295	**<0.0475**	**<0.0585**
	MW-103	Apr-19		0.0303	<0.00682	<0.00730	<0.00614		**<0.00744**	0.0347	<0.0212	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	MW-103	Jun-20		0.0304	<0.00348	0.00370 J	<0.00236		**<0.00600**	0.0121 J	<0.00348	<0.00298	<0.00236	<0.00380 J4	**<0.00468**
	MW-103	Apr-21		0.0356	0.00571 J	0.00417 J	<0.00236		**<0.00600**	0.0113 J	0.00571 J	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-103	Apr-22		0.0318	<0.00174	0.00549 J	<0.00118	**0.192**	<0.00300	0.00847 J	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-104	Jun-20		0.00223	<0.000174	0.0437	<0.000118		<0.000300	0.000324 J	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-104	Jun-20	FD	0.00216	<0.000174	0.0367	<0.000118		<0.000300 J4	0.000403 J	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-104	Oct-20		0.00184	0.000239 J	0.0385	<0.000118		<0.000300	<0.000278	0.000239 J	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-104	Oct-20	FD	0.00195	0.000193 J	0.0389	<0.000118		<0.000300	<0.000278	0.000193 J	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-104	Apr-21		0.00217	<0.000174	0.0403	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-104	Apr-21	FD	0.00210	<0.000174	0.0404	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-104	Sep-21		0.00316 J	<0.000870	0.0397	<0.000590	<0.0203	<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	MW-104	Apr-22		0.00230	<0.000174	0.0389	<0.000118	0.00515	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-104	Oct-22		0.00304	<0.000174	0.0464	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-105	Jun-20		0.0301 J	<0.00870	0.00775 J	<0.00590		**<0.0150**	0.0150 J	0.237	<0.00745	<0.00590	**<0.00950**	**<0.0117**
	MW-105	Oct-20		0.0302 J	<0.00870	<0.00625	<0.00590		**<0.0150**	0.0187 J	0.371	<0.00745	<0.00590 J4	**<0.00950**	**<0.0117**
	MW-105	Apr-21		0.0476 J	<0.0174	<0.0125	<0.0118		**<0.0300**	<0.0278	0.215 J	<0.0149	<0.0118	**<0.0190**	**<0.0234**
	MW-105	Apr-22		0.0346	<0.00435	0.00747 J	<0.00295	<0.102	**<0.00750**	0.0125 J	0.191	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-105	Oct-22		0.0409 J	<0.0174	0.0426 J	<0.0118	**<0.406**	**<0.0300**	<0.0278	0.148 J	<0.0149	<0.0118 J4	**<0.0190**	**<0.0234** J3
	MW-106	Oct-19		0.0444 J	<0.0170	<0.0183	<0.0154		**<0.0186**	0.158	0.196	<0.0198	<0.0209	**<0.0199**	**<0.0130**
	MW-106	Jun-20		0.0380 J	<0.0174	<0.0125	<0.0118		**<0.0300**	0.313	0.173 J	<0.0149	<0.0118	**<0.0190**	**<0.0234**
	MW-106	Oct-20		0.0426 J	0.0359 J	<0.0250	<0.0236		**<0.0600**	0.295	0.289 J	<0.0298	<0.0236	**<0.0380** J4	**<0.0468**
	MW-106	Apr-21		0.0498 J	<0.0348	<0.0250	<0.0236		**<0.0600**	0.289	0.245 J	<0.0298	<0.0236	**<0.0380**	**<0.0468**
	MW-107	Oct-16		0.0693	0.00265 J	0.00592	<0.00154		<0.00186	0.00800 J	0.0112 J	<0.00198	<0.00210	<0.00199	<0.00130
	MW-107	Apr-17		0.0528	<0.0170	<0.0182	<0.0154		**<0.0186**	<0.0206	<0.0530	<0.0198	<0.0210	**<0.0199**	**<0.0130**
	MW-107	Apr-18		0.0857	0.00279	0.00830	<0.000307		<0.000372	0.0142	0.0159	<0.000396	<0.000419	<0.000398	<0.000259
	MW-107	Apr-19		<0.0872	<0.0852	<0.0912	<0.0768		**<0.0930**	<0.103	<0.265	<0.0990	<0.105	**<0.0995**	**<0.0648**

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

		Analyte Group:		Volatile Organic Compounds												
			Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
			CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	Well ID	Date	Dup												
South Refinery	MW-109	Jun-20		0.0596	<0.00174	0.00604 J	<0.00118		<0.00300	0.0221	0.0238 J	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-109	Oct-20		0.0463	<0.00174	0.00621 J	<0.00118		<0.00300	0.0123	0.0114 J	<0.00149	<0.00118 J4	<0.00190	**<0.00234**
	MW-109	Apr-21		0.0470	<0.00174	0.00638 J	<0.00118		<0.00300	0.00829 J	0.00555 J	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-109	Sep-21		0.0640	<0.00435	0.00752 J	<0.00295	<0.102	**<0.00750**	0.0250 J	0.0145 J	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-109	Apr-22		0.0682	0.000388 J	0.00843	<0.000118	0.0281	<0.000300	0.0203	0.0177	<0.000149	<0.000118	<0.000190	<0.000234
	MW-109	Oct-22		0.0600	<0.00435	0.00747 J	<0.00295	<0.102	**<0.00750**	0.0124 J	<0.00435	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-110	Jun-20		0.00560	<0.000174	0.00314	<0.000118		<0.000300	<0.000278	0.00123 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-110	Oct-20		0.000270 J	<0.000174	0.00114	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-110	Apr-21		0.00139	<0.000174	0.00298	<0.000118		<0.000300	0.000418 J	0.000578 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-110	Sep-21		0.000228 J	<0.000174	0.00525	<0.000118	<0.00406	<0.000300	<0.000278	0.00315	<0.000149	<0.000118	<0.000190	<0.000234
	MW-110	Apr-22		0.0169	0.000570 J	0.00337	<0.000118	0.0168	<0.000300	0.00337	0.0705	<0.000149	<0.000118	<0.000190	<0.000234
	MW-110	Oct-22		0.000809 J	<0.000174	0.00566	<0.000118	0.00650	<0.000300	<0.000278	0.00132 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-139	Jun-20		0.000176 J	<0.000174	0.00734	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-139	Oct-20		<0.0000993	<0.000174	0.00597	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	MW-139	Apr-21		0.000343 J	<0.000174	0.00455	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-139	Sep-21		0.00309	<0.000174	0.00810	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-139	Apr-22		0.000454 J	<0.000174	0.00299	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-139	Oct-22		0.000192 J	<0.000174	0.00521	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-313	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RA-313	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-313	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RA-313	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	RW-4	Apr-18		0.00113	<0.000341	0.00254	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	RW-4	Apr-19		0.0120	0.000454 J	0.00403	<0.000307		<0.000372	0.000772 J	0.00192 J	<0.000396	<0.000419	<0.000398	<0.000259
	RW-4	Jun-20		0.00881	0.00105	0.00611	<0.000118		<0.000300	0.00557	0.00375	<0.000149	<0.000118	<0.000190	<0.000234
	RW-4	Apr-22		0.0331	0.000508 J	0.00942	<0.000118	0.0142	<0.000300	0.00223	0.00449	<0.000149	<0.000118	<0.000190	<0.000234
	RW-5R	Apr-15		0.0598	**0.522**	0.00691 J	<0.00310		<0.00370	**2.26**	**1.91**	<0.00400	<0.00420	<0.00400	**<0.00260**
	RW-5R	Apr-16		0.110	**0.570**	0.0130 J	<0.00614		**<0.00744**	**2.51**	**2.25**	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	RW-6	Apr-15		0.0237	0.0558	0.00944 J	<0.00310		<0.00370	0.0126 J	0.158	<0.00400	<0.00420	<0.00400	**<0.00260**
	RW-6R	Apr-16		0.00731	0.00275	0.00590	<0.000307		<0.000372	0.00683	0.00747	<0.000396	<0.000419	<0.000398	<0.000259
	RW-6	Apr-18		0.0329	0.0570	0.0148	<0.000307		<0.000372	0.448	0.150	<0.000396	<0.000419	<0.000398	<0.000259
	RW-6	Apr-19		0.0308	0.00804 J	0.0141 J	<0.00614		**<0.00744**	0.0211	0.0304 J	<0.00792	<0.00838	**<0.00796**	**<0.00518**
	RW-15C	Apr-17		0.296	**0.472**	0.0194 J	<0.00768		**<0.00930**	0.172	**5.39**	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	RW-15C	Apr-18		0.190	0.0285	0.0114	<0.000307		<0.000372	0.111	**3.01**	<0.000396	<0.000419	<0.000398	<0.000259
	RW-15C	Apr-19		0.215	0.00812 J	0.0148	<0.00307		<0.00372	0.0871	**1.05**	<0.00396	<0.00419	<0.00398	**<0.00259**
South RO Field	MW-114	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-114	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-114	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-114	Sep-21		0.000457 J	<0.000174	0.00339	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-114	Apr-22		0.000414 J	<0.000174	0.00423	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-114	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-115	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-115	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-115	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-115	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-115	Apr-22		<0.000993	<0.00174	<0.00125	<0.00118	<0.0406	<0.00300	<0.00278	<0.00174	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-115	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-116	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-116	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-116	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-116	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-116	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-116	Oct-22		<0.0000993	<0.000174	0.000475 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
TEL	MW-49	Jun-20		0.0462	<0.00348	0.00708 J	<0.00236		**<0.00600**	0.00895 J	0.179	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-49	Oct-20		0.0359	<0.00348	0.00550 J	<0.00236		**<0.00600**	<0.00556	0.113	<0.00298	<0.00236	<0.00380	**<0.00468**
	MW-49	Apr-21		0.0268	<0.00435	0.00546 J	<0.00295		**<0.00750**	<0.00695	0.0793	<0.00373	<0.00295	<0.00475	**<0.00585**
	MW-49	Sep-21		0.0210	<0.00174	0.00491 J	<0.00118	<0.0406	<0.00300	0.00473 J	0.0675	<0.00149	<0.00118	<0.00190	**<0.00234**
	MW-49	Apr-22		0.0381	0.00125 J	0.00610	<0.000590	0.0466	<0.00150	0.00334 J	0.0882	<0.000745	<0.000590	<0.000950	<0.00117
	MW-49	Oct-22		0.0451	0.00131	0.00621	<0.000118	0.0443	<0.000300	0.00564	0.108	<0.000149	<0.000118 J4	<0.000190	**0.00213 J3**
	TEL-1	Oct-18		<0.00174	<0.00170	<0.00182	<0.00154		<0.00186	<0.00206	<0.00530	<0.00198	<0.00210	<0.00199	<0.00130
	TEL-1	Apr-19		<0.000349	0.00126	0.000516 J	<0.000307		<0.000372	0.000600 J	0.00126 J	<0.000396	<0.000419	<0.000398	<0.000259
	TEL-1	Oct-19		<0.000349	0.00196	0.000685 J	<0.000307		<0.000372	0.000961 J	0.00284 J	<0.000396	<0.000419	<0.000398	<0.000259
	TEL-1	Jun-20		0.000241 J	0.00155	0.000692 J	<0.000118		<0.000300	0.000961 J	0.00294 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-2	Oct-18		0.0429	<0.00852	<0.00912	<0.00768		**<0.00930**	0.0209 J	0.123	<0.00990	<0.0105	**<0.00995**	**<0.00648**
	TEL-2	Apr-19		0.0223	<0.00341	0.00395 J	<0.00307		<0.00372	0.0113	0.0843	<0.00396	<0.00419	<0.00398	**<0.00259**
	TEL-2	Oct-19		0.0242	<0.00341	<0.00365	<0.00307		<0.00372	0.00920 J	0.0638	<0.00396	<0.00419	<0.00398	**<0.00259**
	TEL-2	Jun-20		0.0150	<0.00174	0.00313 J	<0.00118		<0.00300	0.00510 J	0.0489	<0.00149	<0.00118	<0.00190	**<0.00234**
	TEL-3	Apr-18		0.00998	0.00313	0.0117	<0.000307		<0.000372	0.00394	0.0219	<0.000396	<0.000419	<0.000398	<0.000259
	TEL-3	Apr-19		0.0115	0.00165	0.00962	<0.000307		<0.000372	0.00166	0.00882	<0.000396	<0.000419	<0.000398	<0.000259
	TEL-3	Oct-19		0.0154	0.00191	0.00654	<0.000307		<0.000372	0.00150	0.0142	<0.000396	<0.000419	<0.000398	<0.000259
	TEL-3	Oct-20		0.0255	0.00640	0.00749	<0.000118		<0.000300	0.00449	0.0505	<0.000149	<0.000118	<0.000190 J4	<0.000234
	TEL-4	Jun-20		0.00519	<0.000870	0.00914	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	TEL-4	Jun-20	FD	0.00690	0.000275 J	0.0111	<0.000118		<0.000300	0.000640 J	0.00211 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Oct-20		0.00405 J	<0.000870	0.00754	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	TEL-4	Oct-20	FD	0.00460	0.000209 J	0.00930	<0.000118		<0.000300	0.000395 J	0.00117 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Apr-21		0.00243	0.000599 J	0.0112	<0.000118		<0.000300	0.000798 J	0.00211 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Apr-21	FD	0.00328	0.000592 J	0.0107	<0.000118		<0.000300	0.000757 J	0.00209 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Sep-21		0.00478	0.000229 J	0.00798	<0.000118	0.130	<0.000300	0.00113	0.00136 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Sep-21	FD	0.00513	0.000254 J	0.00921	<0.000118	0.147	<0.000300	0.00129	0.00132 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Apr-22		0.00171	0.000260 J	0.00826	<0.000118	0.0366	<0.000300	0.000648 J	0.00126 J	<0.000149	<0.000118	<0.000190	<0.000234
	TEL-4	Apr-22	FD	0.00361 J	<0.000870	0.00813	<0.000590	0.0496	<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	TEL-4	Oct-22		0.00232	0.000188 J	0.00928	<0.000118	0.0702	<0.000300	0.000573 J	0.00190 J	<0.000149	0.000393 JJ4	<0.000190	<0.000234 J3
	TEL-4	Oct-22	FD	0.00235	0.000178 J	0.00930	<0.000118	0.0579	<0.000300	0.000466 J	0.00206 J	<0.000149	0.000446 JJ4	<0.000190	<0.000234 J3
Three Mile Ditch	MW-8	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-8	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-8	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-8	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-16	Apr-19		<0.000349 J4	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-16	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-16	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-16	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-20	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-20	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-20	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-20	Apr-22		0.000568 J	<0.000174	0.000268 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-21	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-21	Oct-20		<0.000497	<0.000870	<0.000625	<0.000590		<0.00150	<0.00139	<0.000870	<0.000745	<0.000590	<0.000950	<0.00117
	MW-21	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-21	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-21	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-21	Oct-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234

Appendix B, Table B.4 - Summary of Groundwater Analytical Data - Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Volatile Organic Compounds											
				Analyte:	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene (2-Phenyl-butane)	Styrene	tert-Butyl alcohol (tert-Butanol)	Tetra-chloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Tri-chloroethene	Vinyl Chloride
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.660	0.193	2.00	0.100	0.150	0.00500	1.00	0.620	0.100	---	0.00500	0.00200
				CGWSL Source:	USEPA TW	WQCC TW	USEPA TW	WQCC HH	USEPA TW	WQCC HH	WQCC HH	WQCC HH	WQCC HH	---	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**													
Three Mile Ditch	MW-25	Apr-19		<0.000349 J4	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-25	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-25	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-25	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-26	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-26	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-26	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-26	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-27	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-27	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-27	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-27	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Sep-21		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-46R	Oct-22		<0.0000993	<0.000174	0.000347 J	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118 J4	<0.000190	<0.000234
	MW-68	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-68	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-68	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-68	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-71	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-71	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-71	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-71	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	MW-89	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	MW-89	Jun-20		<0.0000993	0.000664 J	<0.000125	<0.000118		<0.000300	<0.000278	0.000664 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-89	Apr-21		<0.0000993	0.000241 J	<0.000125	<0.000118		<0.000300	<0.000278	0.000241 J	<0.000149	<0.000118	<0.000190	<0.000234
	MW-89	Apr-22		<0.0000993	0.000579 J	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	0.000579 J	<0.000149	<0.000118	<0.000190	<0.000234
	NP-1	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NP-1	Oct-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	0.000456 J	<0.000149	<0.000118	<0.000950	<0.000234
	NP-1	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NP-1	Sep-21		<0.00248	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NP-1	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	0.00750	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	NP-1	Oct-22		<0.00199	<0.00348	<0.00250	<0.00236	<0.0812	**<0.00600**	<0.00556	<0.00348	<0.00298	<0.00236	<0.00380	**<0.00468**
	NP-6	Apr-15		<0.000350	<0.000340	<0.000360	<0.000310		<0.000370	<0.000780	<0.00110	<0.000400	<0.000420	<0.000400	<0.000260
	NP-6	Apr-17		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	NP-6	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	NP-6	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
Upgradient	UG-1	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	UG-1	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	UG-1	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-1	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-2	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	UG-2	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	UG-2	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-2	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-3R	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	UG-3R	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	UG-3R	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-3R	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-4	Apr-19		<0.000349	<0.000341	<0.000365	<0.000307		<0.000372	<0.000412	<0.00106	<0.000396	<0.000419	<0.000398	<0.000259
	UG-4	Jun-20		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190 J4	<0.000234
	UG-4	Apr-21		<0.0000993	<0.000174	<0.000125	<0.000118		<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234
	UG-4	Apr-22		<0.0000993	<0.000174	<0.000125	<0.000118	<0.00406	<0.000300	<0.000278	<0.000174	<0.000149	<0.000118	<0.000190	<0.000234

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.
---	No applicable CGWSL.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
CGWSL Source	Source for CGWSL value (see Table 3)
Dup	Duplicate sample
FD	Field duplicate sample
mg/L	Milligrams per Liter
NMED TW	NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022, Table A-1, Tap Water Screening Level
USEPA TW	United States Environmental Protection Agency Tap Water Screening Level, "Regional Screening Levels (RSL) Summary Table", November 2022
USEPA MCL	United States Environmental Protection Agency Maximum Contaminant Level, "Regional Screening Levels (RSL) Summary Table", November 2022
WQCC Dom	NMED Groundwater standard for domestic exposure, 20.6.2.3103.B NMAC
WQCC HH	NMED Groundwater standard for human health exposure, 20.6.2.3103.A NMAC

Lab Footnote	
B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
Q	Sample was prepared and/or analyzed past recommended holding time.
V3	Internal standard exhibited poor recovery due to sample matrix interference; analytical result biased high.

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
Cross-Gradient	KWB-13	Apr-19		630	125	0.605	1.69	220	**2470**	**3580**	**14.0**	<0.00180
	KWB-13	Jun-20		598	121	0.791	2.10	169	**2430**	**3710**	**14.9**	<0.00180
	KWB-13	Apr-21		660	128	0.689	3.54	181	**2090**	**3610**	**16.1 V**	<0.00180
	KWB-13	Apr-22		493	133	1.15 J	1.06 J	179	**2350**	**3540**	**15.7**	<0.00180
	MW-136	Jun-20		631	**300**	**1.62**	2.53	139	**2370**	**4290**	**13.2**	<0.00180
	MW-136	Oct-20		640	**290**	1.54	2.55	148	**2150**	**4180**	**14.4**	<0.00180
	MW-136	Apr-21		580	**272**	1.57	2.25	128	**2020**	**3640**	**13.8**	<0.00180
	MW-136	Sep-21		542	**268 B**	1.53	2.42	115 V	**1700**	**3360**	**12.2**	<0.00180
	MW-136	Apr-22		528	**337**	**1.86**	2.33	108	**1940**	**3560**	**12.0**	<0.00180
	MW-136	Oct-22		549	**319**	1.36	2.12	102	**1650**	**2630**	**10.8**	<0.00180
	NP-5	Apr-15		448	**993**	**2.13**	0.484 J	209	**3030**	**6060 J**	1.38	
	NP-5	Apr-17		514	**444**	**1.63**	0.422 J	212	**3770**	**4810**	2.22	
	NP-5	Apr-19		529	**310**	**2.16**	0.320 J	206	**3370**	**5240**	1.06	
	NP-5	Apr-21		529	**253**	**2.49**	0.258 J	226	**3320**	**5410**	0.721	
	RA-3156	Apr-19		83.5	**807**	0.751	0.679 J	87.0	**1650**	**3240**	1.50	
	RA-3156	Jun-20		180	**280**	0.313	2.62	97.8	**603**	**1250**	<0.0500	
	RA-3156	Apr-21		338	**533**	0.587	2.49	268	**1340**	**2970**	0.0923 J	
	RA-3156	Apr-22		457	**1110**	0.716	3.40	643	**1590**	**4080**	0.0633 J	
Evaporation Ponds	MW-1R	Apr-19		407	**1160**	0.710	3.80	1050	**2000**	**4980**	<0.0197	
	MW-1R	Jun-20		540	**1430**	0.732	4.01	831	**2060**	**3200**	<0.0500	
	MW-1R	Apr-21		418	**1000**	0.706	3.48	704	**1430**	**3030**	1.88	
	MW-1R	Apr-22		473	**1160**	0.835	3.80	662	**1730**	**4250**	0.0763 J	
	MW-2A	Jun-20		487	**879**	**2.70**	3.28	610	**1730**	**3960**	<0.0500	
	MW-2A	Oct-20		292	**1240**	**2.96**	3.46	908	**1860**	**4770**	0.0609 J	
	MW-2A	Apr-21		533	**2660**	**2.58**	3.74	2380	**3770**	**9880**	0.930	
	MW-2A	Sep-21		637	**3360**	**1.93**	4.43	3220	**4730**	**13100**	<0.0500	
	MW-2A	Apr-22		534	**3530**	1.18	4.11	2440	**4710**	**11900 Q**	0.0701 J	
	MW-2A	Oct-22		606	**3480**	**2.49**	4.99 J	2620	**4050**	**10900**	0.111	
	MW-3	Jun-20		553	**1280**	**2.40**	7.64	818	**2140**	**5200**	0.0662 JB	
	MW-3	Jun-20	FD	553	**1290**	**2.52**	7.54	827	**2260**	**4970 J4**	<0.0500	
	MW-3	Oct-20		514	**1250**	**1.97**	5.94	822	**1980**	**5250**	0.210	
	MW-3	Oct-20	FD	506	**939**	**1.69**	5.85	812	**1440**	**5090**	0.245 J6	
	MW-3	Apr-21		479	**1060**	**1.93**	5.09	785	**1690**	**3990**	0.214	
	MW-3	Apr-21	FD	493	**1110**	1.55	5.16 J	889	**1850**	**3790**	0.171	
	MW-3	Sep-21		680	**1510**	**1.80**	5.14	897	**2300**	**6070**	1.45	
	MW-3	Sep-21	FD		**1470**	**1.90**			**2400**	**6060**	1.46	
	MW-3	Apr-22		532	**1360**	**1.92**	5.29	879	**2140**	**5100 Q**	<0.0500	
	MW-3	Apr-22	FD	497	**1380**	**1.92**	5.00	814	**2190**	**4730 Q**	<0.0500	
	MW-3	Oct-22		602	**1480**	**2.01**	6.35 J	908	**2340**	**3970**	0.266	
	MW-3	Oct-22	FD	603	**1500**	**1.99**	6.25 J	889	**2350**	**4720**	0.288	
	MW-4A	Jun-20		403	**1440**	**1.98**	4.72	962	**1890**	**4870**	<0.0500	
	MW-4A	Oct-20		415	**1350**	**2.31**	5.63	921	**1640**	**5000**	<0.0500	
	MW-4A	Apr-21		414	**1280**	**2.04**	6.03	914	**1630**	**3210**	<0.0500	
	MW-4A	Sep-21		505	**1390**	**1.90**	5.14	924	**2060**	**5680**	1.35	
	MW-4A	Apr-22		394	**1410**	**2.40**	4.95	883	**1830**	**4810 Q**	<0.0500	
	MW-4A	Oct-22		391	**1350 V**	**2.23**	6.02 J	888	**1840 V**	**3890**	<0.0500	
	MW-4B	Apr-15		367	**1110**	0.963	2.32	696	**1340**	**3410 J**	<0.0200	
	MW-4B	Apr-17		360	**1330**	0.985	2.55	758	**1410**	**3690**	<0.0197	
	MW-4B	Apr-19		442	**1320**	0.775	2.50	703	**1430**	**4370**	<0.0197	
	MW-4B	Apr-21		406	**1130**	0.835	2.51	748	**1300**	**3310**	<0.0500	
	MW-5A	Jun-20		286	**1810**	**3.40**	5.65	2040	**3550**	**7460**	<0.0500	
	MW-5A	Oct-20		374	**2110**	**3.84**	8.27	2280	**4220**	**9910**	<0.0500	
	MW-5A	Apr-21		419	**2540**	**3.07**	7.69	2480	**5140**	**11700**	<0.0500	
	MW-5A	Sep-21		549	**3210**	**3.45**	7.37	3540	**7090**	**15400**	<0.0500	
	MW-5A	Apr-22		396	**2850**	**4.06**	7.53	2980	**5440**	**11000 Q**	<0.0500	
	MW-5A	Oct-22		490	**2890**	**3.92**	4.87 J	3120	**7580**	**12800**	<0.0500	
	MW-5B	Apr-15		482	**1590**	1.41	9.01	1580	**3510**	**5980**	<0.0200	
	MW-5B	Apr-17		420	**1560**	**1.73**	9.18	1650	**2590**	**6290**	0.0210 J	
	MW-5B	Apr-19		389	**1530**	**1.70**	9.69	1490	**2660**	**6370**	<0.0197	
	MW-5B	Apr-21		359	**524**	1.05	3.74	431	**1370**	**2930**	<0.0500	
	MW-5C	Apr-15		427	**585**	0.910	3.97 J	485	**2020**	**3290**	<0.0200	
	MW-5C	Apr-17		383	**576**	0.971	3.90	500	**1740**	**3110**	<0.0197	
	MW-5C	Apr-19		390	**591**	0.896	4.11	450	**1540**	**3200**	<0.0197	
	MW-5C	Apr-21		379	**1360**	**2.06**	10.5	1420	**2380**	**5050**	<0.0500	
	MW-6A	Apr-19		340	**803**	1.38	1.38	696	**1700**	**3520**	<0.0197	
	MW-6A	Jun-20		290	**669**	1.55	1.18 J	670	**1670**	**3640**	<0.0500	
	MW-6A	Apr-21		297	**647**	**1.67**	1.24 J	697	**1450**	**3070**	0.0885 J	
	MW-6A	Apr-22		301	**710**	**2.13**	1.35 J	673	**1730**	**3660**	<0.0500	
	MW-6B	Apr-15		568	**1740**	0.669 J	5.09	873	**2280**	**4760**	<0.0200	
	MW-6B	Apr-17		418	**1250**	0.694	3.97	738	**1730**	**4150**	<0.197	
	MW-6B	Apr-19		462	**1140**	0.519	4.45 O1	682	**1460**	**4190**	<0.0197	
	MW-6B	Apr-21		462	**970**	0.614	4.71	651	**1330**	**6950**	0.289	
	MW-7A	Jun-20		345	**2000**	1.20	3.28	1560	**2670**	**6630**	<0.0500	
	MW-7A	Jun-20	FD	370	**1950**	1.18	3.54 J	1550	**2600**	**6580**	0.0594 J	
	MW-7A	Oct-20		327	**1770**	1.42	3.83	1470	**2130**	**6330**	<0.0500 J6	
	MW-7A	Oct-20	FD	315	**1550**	1.29	3.71 B	1550	**1870**	**6260**	<0.0500	
	MW-7A	Apr-21		334	**1690**	1.21	3.68	1360	**2100**	**4800**	0.0648 J	
	MW-7A	Apr-21	FD	341	**2870**	1.15	3.93	1430	**3460**	**6460**	<0.0500	
	MW-7A	Sep-21		484	**2190**	1.16	3.92	1750	**3060**	**8170**	<0.0500	
	MW-7A	Sep-21	FD	495	**2260**	1.14	3.83	1740	**3160**	**8250**	<0.0500	
	MW-7A	Apr-22		335 V	**2010**	**1.71**	3.58	1340	**2470**	**6060 Q**	0.0793 J	
	MW-7A	Apr-22	FD	339	**2000**	**1.72**	3.71	1610	**2450**	**4820 Q**	0.0694 J	
	MW-7A	Oct-22		425	**2450**	1.40 J	3.07 J	1680	**3160**	**4020**	0.170	
	MW-7A	Oct-22	FD	405	**2530**	1.45 J	4.07 J	1620	**3270**	**3680**	0.141	
	MW-7B	Apr-15		556	**1060**	0.795	6.27	672	**2200**	**4640**	<0.0200	
	MW-7B	Apr-17		530	**1060**	0.966	6.71	652	**1750**	**4720**	0.0670 J	
	MW-7B	Apr-19		581	**1100**	0.823	6.70	581	**1910**	**4760**	<0.0197	
	MW-7B	Apr-21		562	**1030**	0.881	6.66	561	**1800**	**3430**	<0.0500	
	MW-10	Jun-20		445	**1300**	0.933	3.25	982 V	**1930**	**4970**	<0.0500	
	MW-10	Oct-20		435	**1250**	0.903	3.30	949	**1710**	**5080**	<0.0500	
	MW-10	Apr-21		431	**1170**	0.804	3.51	964	**1650**	**3620**	<0.0500 J6	
	MW-10	Sep-21		612	**1640**	1.11	3.22	1330	**2270**	**6630**	<0.0500	
	MW-10	Apr-22		442	**1380**	1.27 J	3.40	971	**1890**	**4630 Q**	<0.0500	
	MW-10	Oct-22		651	**2320**	1.35 J	2.54 J	1410	**2950**	**6340**	<0.0500	
	MW-11A	Jun-20		1110	**8800**	0.806	19.9	4410	**3210**	**18400 J3J4**	<0.0500	
	MW-11A	Oct-20		1180	**8020**	0.454	20.2	5080	**2720**	**20200**	<0.0500	
	MW-11A	Apr-21		1130	**8110**	0.794	20.6	5040	**3180**	**16200**	1.10	
	MW-11A	Sep-21		1230	**8880**	0.114 J	22.2	5180	**3290**	**18600**	<0.0500	
	MW-11A	Apr-22		1050	**8990**	<0.0640	18.1	4570	**3480**	**19000 Q**	0.693	
	MW-11A	Oct-22		956	**8600**	0.882 J	18.2 J	4330	**3560**	**15000**	<0.0500	
	MW-11B	Apr-15		1070	**6000**	0.562	36.6	4040	**3860**	**12700**	<0.0200	
	MW-11B	Apr-17		979	**6050**	0.825	35.2	3660	**2890**	**14000**	<0.197	
	MW-11B	Apr-19		935	**6410**	0.899	32.2	3410	**3340**	**11600**	<0.197	
	MW-11B	Apr-21		966	**6020**	0.829	34.1	3850	**3110**	**12800**	<0.0500	

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
Evaporation Ponds	MW-15	Apr-19		614	**1670**	1.44	5.73	667	**2770**	**4720**	1.58	
	MW-15	Jun-20		480	**1200**	0.610	5.52	563	**1440**	**3830**	<0.0500	
	MW-15	Apr-21		581	**1220**	1.39	5.39	738	**1660**	**3490**	5.18	
	MW-15	Apr-22		650	**1500**	**3.53**	6.09	841	**2190**	**5410**	2.91	
	MW-18A	Jun-20		574	**5140**	**2.52**	33.6 O1	3030 O1V	**5780**	**15500**	<0.0500	<0.00180
	MW-18A	Oct-20		616	**4600**	**2.72**	39.3	3380	**4820**	**16800**	<0.0500	<0.00180
	MW-18A	Apr-21		661	**5540**	**2.60**	39.9	3700	**5570**	**15600**	<0.0500	<0.00180
	MW-18A	Sep-21		696	**5350**	**2.30**	38.0	3880	**5780**	**16500**	<0.0500	<0.00180
	MW-18A	Apr-22		618	**5400**	1.20	36.1	3100	**5730**	**16500 Q**	<0.0500	<0.00180
	MW-18A	Oct-22		646	**5580**	**2.73**	36.9	3410	**5700**	**13800**	<0.0500	<0.00180
	MW-18B	Apr-15		581	**763**	0.931	5.91	460	**1840**	**4410**	0.0280 J	
	MW-18B	Apr-17		576	**860**	0.797	5.91	481	**2070**	**4080**	<0.0197	
	MW-18B	Apr-19		807	**919**	0.727	8.43	506	**2030**	**4690**	<0.0197	
	MW-18B	Apr-21		612	**821**	0.802	6.66	534	**1790**	**4350**	<0.0500	
	MW-22A	Jun-20		575	**4500**	0.900	4.36	2610	**3310**	**11900**	0.0816 JB	
	MW-22A	Jun-20	FD	566	**4450**	1.02	4.20	2270	**3330**	**11300 J4**	<0.0500	
	MW-22A	Oct-20		458	**2770**	0.821	3.75	1920	**2450**	**7820**	0.0711 J	
	MW-22A	Oct-20	FD	453	**2290**	0.795	3.71 B	2240	**2060**	**8210**	<0.0500	
	MW-22A	Apr-21		383	**1490**	0.682	3.08	1280	**1750**	**4840**	<0.0500	
	MW-22A	Apr-21	FD	399	**1550**	0.712	3.14 J	1370	**1910**	**4940**	<0.0500	
	MW-22A	Sep-21		947	**12200**	0.447	8.27	7360	**6680**	**29300**	1.76	
	MW-22A	Sep-21	FD	976	**12600**	0.542	8.60	7080	**7100**	**28400**	1.71	
	MW-22A	Apr-22		488	**3570**	**1.62**	4.15	2190	**3380**	**9440 Q**	<0.0500	
	MW-22A	Apr-22	FD	452	**3590**	1.58	4.01	2710	**3400**	**9980 Q**	<0.0500	
	MW-22A	Oct-22		769	**13400**	**2.48**	6.19 J	7210	**8620**	**25900**	1.55	
	MW-22A	Oct-22	FD	767	**13600**	**2.49**	7.17 J	7270	**8740**	**25800**	1.55	
	MW-22B	Apr-15		477	**1400**	0.823	4.02 J	1150	**2170**	**5590**	<0.0200	
	MW-22B	Apr-17		396	**1400**	0.771	4.15	1150	**2080**	**5670**	0.408 J	
	MW-22B	Apr-19		414	**1300**	0.818	4.30	985	**2170**	**5480**	<0.197	
	MW-22B	Apr-21		420	**1190**	0.677	3.99	1080	**1830**	**4760**	<0.0500	
	MW-70	Jun-20		764	**1400**	0.577	5.22	764	**2510**	**5360 J3**	<0.0500	
	MW-70	Oct-20										
	MW-70	Apr-21		740	**1200**	0.595	5.52	832	**2060**	**5790**	<0.0500	
	MW-70	Sep-21										
	MW-70	Apr-22		668	**1440**	1.08 J	4.92	753	**2500**	**5830 Q**	<0.0500	
	MW-70	Oct-22										
	MW-72	Apr-19		645	**2880**	**5.61**	7.71	1850	**2740**	**8500**	2.67	
	MW-72	Jun-20		627	**2830**	**5.71**	6.56	1730	**2810**	**8060**	0.645	
	MW-72	Apr-21		651	**2490**	**5.61**	6.98	1740	**2360**	**5940**	4.22	
	MW-72	Apr-22		663	**2830**	**4.88**	6.55	1470	**2610**	**8200 Q**	2.70	
	MW-73	Apr-19		600	**2590**	**2.95**	2.60	2330	**3350**	**9180**	4.66	
	MW-73	Jun-20		561	**2540**	**1.67**	2.29	2410	**3990**	**8860**	<0.0500	
	MW-73	Apr-21		609	**3100**	**1.83**	2.46	2590	**4570**	**9400**	0.371	
	MW-73	Apr-22		575	**2660**	1.30	2.46	2110	**3800**	**9780 Q**	0.374	
	MW-74	Jun-20		507	**1540**	**7.75**	32.7	2260	**4190**	**7180**	**48.4**	
	MW-74	Oct-20		554	**1800**	**8.34**	35.8	2000	**3610**	**8370**	7.45	
	MW-74	Apr-21		562	**1850**	**7.50**	30.5	2120	**3400**	**6560**	4.80	
	MW-74	Sep-21		607	**1780**	**6.32**	29.6	2100	**3190**	**8640**	<0.0500	
	MW-74	Apr-22		563	**2000**	**6.38**	26.6	1740	**3660**	**8120 Q**	2.90	
	MW-74	Oct-22		543	**1960**	**7.82**	28.1	1870	**3220**	**4200**		
	MW-75	Jun-20		366	**1470**	**7.22**	16.6	1340	**2080**	**6110**	<0.0500	
	MW-75	Oct-20		362	**1520**	**7.66**	17.9	1470	**2010**	**5680**	<0.0500	
	MW-75	Apr-21		370	**1350**	**6.71**	17.6	1370	**1770**	**4730**	2.16	
	MW-75	Sep-21		381	**1400**	**7.43**	18.2	1460	**1910**	**5720**	<0.0500	
	MW-75	Apr-22		384	**1570**	**7.45**	18.3	1290	**2100**	**5560 Q**	1.87	
	MW-75	Oct-22		364	**1390**	**7.02**	15.4 J	1360	**2070**	**3580**	<0.0500	
	MW-76	Jun-20		454	**1150**	**2.89**	26.2	975	**2270**	**5620**	<0.0500	
	MW-76	Oct-20		426	**1220**	**3.14**	25.7	975	**2090**	**5330**	<0.0500	
	MW-76	Apr-21		425	**1090**	**3.00**	25.3	914	**1800**	**4300**	<0.0500	
	MW-76	Sep-21		490	**1130**	**2.94**	26.4	940	**1940**	**5420**	<0.0500	
	MW-76	Apr-22		438	**1260**	**3.19**	25.4	954	**2130**	**4870 Q**	0.0893 J	
	MW-76	Oct-22		464	**1240**	**3.71**	26.0	926	**2040**	**5050**	<0.0500	
	MW-77	Apr-19		491	**335**	**3.20**	66.0	1230	**4370**	**7850**	<0.0197	
	MW-77	Jun-20		488	**428**	**2.53**	64.2	1070	**3950**	**7430**	<0.0500	
	MW-77	Apr-21		495	**514**	**3.61**	65.9	1060	**3200**	**5240**	<0.0500	
	MW-77	Apr-22		505	**353**	**10.3**	52.2	876	**4350**	**6030**	1.17	
	MW-78	Apr-19		343	20.4	**17.2**	13.4	81.7	**1580**	**3150**	5.82	
	MW-78	Jun-20		584	51.7	**13.9**	16.6	184	**2580**	**4460**	<0.0500	
	MW-78	Apr-21		319	**317**	**14.8**	17.8	365	**1410**	**3480**	8.33	
	MW-78	Apr-22		321	183	**17.0**	15.6	208	**1700**	**2500 J3**	2.68	
	MW-79	Jun-20		768	**2150**	**5.09**	6.82	1160	**2540**	**7550**	<0.0500	
	MW-79	Oct-20		726	**2180**	**5.58**	7.03	1200	**2600**	**6470**	<0.0500	
	MW-79	Apr-21		647	**1700**	**5.90**	6.84	1110	**2120**	**5550**	2.35	
	MW-79	Sep-21		615	**1500**	**5.24**	5.86	1180	**2070**	**6100**	0.708	
	MW-79	Apr-22		590 O1V	**1680**	**5.68**	6.52	1000	**2160**	**5910 Q**	2.25	
	MW-79	Oct-22		514	**1430**	**5.25**	5.88 J	966	**1830**	**3910**	0.902	
	MW-80	Apr-19		559	**1180**	**3.03**	2.72	768	**2260**	**5120**	0.355	
	MW-80	Jun-20		620	**1210**	**2.19**	2.99	680	**1980**	**4990**	<0.0500	
	MW-80	Apr-21		592	**980**	**2.46**	2.77	684	**1750**	**3780**	2.02	
	MW-80	Apr-22		542	**983**	**2.57**	2.61	720	**1940**	**4700 Q**	0.371	
	MW-81	Apr-19		527 O1V	**1210**	**6.81**	7.33	969 V	**2190**	**5740**	**14.7**	
	MW-81	Jun-20		441	**1050**	**5.73**	5.49	908	**1990**	**4750**	3.54	
	MW-81	Apr-21		456	**987**	**6.61**	6.52	962 V	**1840**	**4940**	1.65	
	MW-81	Apr-22		449	**1010**	**6.19**	6.31	1070	**2010**	**4930 Q**	8.37	
	MW-82	Apr-19		395	**1360**	**11.4**	8.60	1300	**2250**	**5730**	3.50	
	MW-82	Jun-20		422	**1430**	**9.31 J**	8.75	1150	**2180**	**5560**	<0.0500	
	MW-82	Apr-21		520	**1410**	**8.40**	9.31	1080	**1870**	**5810**	1.40	
	MW-82	Apr-22		531	**1540**	**9.26**	9.50	1110	**2380**	**5620 Q**	1.12	
	MW-83	Jun-20		544	**314**	**4.63**	48.9	319	**4190**	**6810**	1.31	
	MW-83	Oct-20		349	**957**	**4.48**	31.8	659	**2380**	**5040**	<0.0500	
	MW-83	Apr-21		324	**992**	**3.94**	18.5	810	**1270**	**3430**	8.03	
	MW-83	Sep-21		552	126	**5.11**	94.1	220	**4840**	**8160**	**21.4**	
	MW-83	Apr-22		504	**633**	**5.18**	39.4	544	**3040**	**5250 Q**	3.16	
	MW-83	Oct-22		555	98.3	**5.54**	62.5	284	**4410**	**6220**	**12.4**	
	MW-84	Jun-20		568	**1480**	**6.24**	7.06	1400	**4710**	**9700**	<0.0500	
	MW-84	Oct-20		579	**1670**	**6.29**	6.23	1350	**4910**	**10800**	<0.0500	
	MW-84	Apr-21		592	**1320**	**5.81**	6.44	1370	**3930**	**9040**	<0.0500	
	MW-84	Sep-21		602	**1360**	**5.54**	8.18	1660	**5100**	**10600**	<0.0500	
	MW-84	Apr-22		616	**1490**	**5.97**	6.94	1500	**5120**	**9140**	<0.250	
	MW-84	Oct-22		559	**1370**	**5.68**	5.84 J	1440	**4120**	**5980**	<0.250	
	MW-86	Jun-20		544	**555**	**8.20**	8.40	806	**4170**	**8130**	<1.00	<0.0900
	MW-86	Oct-20		535	**671**	**6.03**	6.70	947	**3100**	**7830**	<0.0500	0.00261 J

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
Evaporation Ponds	MW-87	Jun-20		596	**4070**	1.41	20.7	2690	**4840**	**12500**	<0.0500	
	MW-87	Oct-20										
	MW-87	Apr-21		649	**3420**	1.32	22.1	2640	**3780**	**13500**	<0.0500	
	MW-87	Sep-21										
	MW-87	Apr-22		602	**4040**	1.02	20.2	2430	**4760**	**12300 Q**	<0.0500	
	MW-87	Oct-22										
	MW-88	Jun-20		406	**1510**	0.951	2.83	997	**2040**	**5240**	<0.0500	
	MW-88	Oct-20										
	MW-88	Apr-21		428	**1640**	1.16	3.22	1290	**2340**	**6300**	<0.0500	
	MW-88	Sep-21										
	MW-88	Apr-22		431	**1840**	**1.69**	3.17	1210	**2530**	**6020 Q**	<0.0500	
	MW-88	Oct-22										
	MW-120	Jun-20		455	**1260**	**2.90**	2.23	992	**2530**	**5500**	<0.0500	
	MW-120	Oct-20		608	**1540**	**3.81**	2.67	1200	**2870**	**7000**	<0.0500	
	MW-120	Apr-21		592	**1410**	**3.64**	2.28	1080	**2850**	**5450**	<0.0500	
	MW-120	Sep-21		607	**1330**	**3.75**	2.23	1300	**3010**	**7220**	0.276	
	MW-120	Apr-22		603	**1750**	**3.64**	2.93	1190	**3080**	**6880**	0.0655 J	
	MW-120	Oct-22		662 V	**2310**	**3.76**	3.17 J	1450 V	**2830**	**6060**	0.166	
	MW-121	Jun-20		560	**752**	**5.05**	2.71	613	**2790**	**4890**	0.0855 J	
	MW-121	Oct-20		595	**690**	**4.87**	3.34	665	**2400**	**5180**	<0.0500	
	MW-121	Apr-21		657	**1070**	**4.52**	3.31	636	**2300**	**4360 J3**	0.0576 J	
	MW-121	Sep-21		671	**987**	**4.75**	3.06	617	**2290**	**5430**	0.638	
	MW-121	Apr-22		651	**1030**	**5.18**	3.27	633	**2600**	**5160 Q**	0.221	
	MW-121	Oct-22		676	**1350**	**4.47**	3.80	680	**2200**	**4660**	0.536	
	MW-122	Jun-20		413	**1470**	**2.58**	4.03	1080	**2450**	**6070**	<0.0500	
	MW-122	Oct-20		353	**940**	**2.54**	3.78	737	**1590**	**4220**	<0.0500	
	MW-122	Apr-21		357	**895**	**2.61**	3.60	750	**1600**	**3300**	0.0894 J	
	MW-122	Sep-21		395	**1450**	**1.74**	3.32	673	**2250**	**4240**	<0.0500	
	MW-122	Apr-22		350	**940**	**2.28**	3.57	714	**1520**	**4090 Q**	0.0631 JP1	
	MW-122	Oct-22		357	**980**	**1.89**	3.81	637	**1450**	**2830**	<0.0500	
	MW-123	Jun-20		513	**1420**	1.04	3.54	984	**2140**	**5380**	<0.0500	
	MW-123	Oct-20		524	**1390**	1.07	3.55	1100	**1920**	**5460**	<0.0500	
	MW-123	Apr-21		519	**1270**	0.938	3.54	970	**1780**	**3770**	<0.0500	
	MW-123	Sep-21		554	**1350**	0.968	3.16	981	**1820**	**5540**	<0.0500	
	MW-123	Apr-22		540	**1350 V**	0.897	3.68	1020	**1960 V**	**4990 Q**	<0.0500	
	MW-123	Oct-22		507 V	**1460**	1.01 J	2.87 J	1040 V	**2100**	**1810**	<0.0500	
	MW-124	Jun-20		785	**3510**	1.01	6.50 J	1700	**4500**	**7780**	<0.0500	
	MW-124	Oct-20		758	**2490**	1.03	6.57	1840	**3030**	**9940**	<0.0500	
	MW-124	Apr-21		792	**3080**	0.949	6.88	1750	**3580**	**10500**	0.0985 J	
	MW-124	Sep-21		799	**3280**	0.817	7.25	1740	**3890**	**10600**	<0.0500	
	MW-124	Apr-22		781	**3470**	1.58	6.60	1520	**4020**	**10600 Q**	0.147	
	MW-124	Oct-22		730	**3410**	1.26 J	6.02 J	1720	**3850**	**5340**	<0.0500	
	OCD-1R	Jun-20		599	**1640**	**2.60**	3.82	986	**2350**	**5850**	0.0815 JB	
	OCD-1R	Oct-20		500	**1070**	**2.78**	3.50	1070	**2020**	**5560**	0.0603 J	
	OCD-1R	Apr-21		474	**1010**	**2.77**	2.92	834	**1800**	**4340**	0.335	
	OCD-1R	Sep-21		547	**1740**	**2.54**	3.15	1480	**4480**	**7020**	<0.0500	
	OCD-1R	Apr-22		471	**1190**	**2.52**	2.40	869	**2340**	**5500 Q**	<0.0500	
	OCD-1R	Oct-22		707	**2360**	**2.64**	4.08 J	1830	**3970**	**4400**	<0.0500	
	OCD-2A	Jun-20		609	**1290**	0.853	4.93	755	**2240**	**5020**	<0.0500	
	OCD-2A	Oct-20										
	OCD-2A	Apr-21		592	**1150**	0.706	5.28	656	**1690**	**4070**	0.672	
	OCD-2A	Sep-21										
	OCD-2A	Apr-22		588	**1450**	0.709	5.40	810	**2070**	**5210 Q**	0.177	
	OCD-2A	Oct-22										
	OCD-3	Jun-20		375	**585**	1.10	7.17	446	**1580**	**3150**	0.0713 JB	
	OCD-3	Oct-20										
	OCD-3	Apr-21		398	**573**	0.887	7.28	447	**1480**	**2950**	0.149	
	OCD-3	Sep-21										
	OCD-3	Apr-22		402	**595**	0.809	7.11	420	**1500**	**3310 Q**	0.113	
	OCD-3	Oct-22										
	OCD-4	Jun-20		840	**5000**	0.990	33.5	2580	**3300**	**12700**	<0.0500	
	OCD-4	Oct-20										
	OCD-4	Apr-21		858	**4670**	0.815	36.1	2980	**3100**	**11600**	0.0991 J	
	OCD-4	Sep-21										
	OCD-4	Apr-22		769	**4590**	0.390	29.2	2430	**3260**	**11600 Q**	0.0754 J	
	OCD-4	Oct-22										
	OCD-5	Jun-20		824	**4770**	0.950	37.3	2660	**3490**	**10700 J4**	<0.0500	
	OCD-5	Oct-20		850	**4120**	0.702	35.8	3010	**2690**	**12100**	<0.0500	
	OCD-5	Apr-21		851	**4420**	0.837	41.2	2980	**3030**	**11500**	<0.0500	
	OCD-5	Sep-21		898	**5170**	0.745	36.0	3550	**3300**	**13100**	<0.0500	
	OCD-5	Apr-22		787	**4820**	0.348	36.5	2530	**3320**	**12200 Q**	<0.0500	
	OCD-5	Oct-22		819 V	**5300**	0.885 J	31.7	3010 V	**3330**	**11000**	<0.0500	
	OCD-6	Jun-20		918	**4880**	**2.04**	15.0	2710	**3160**	**10800**	<0.0500	
	OCD-6	Oct-20		922	**4850**	**2.27**	15.8	2720	**2870**	**11400**	<0.0500	
	OCD-6	Apr-21		925	**4320**	**2.19**	15.6	2770	**2650**	**7740**	3.58	
	OCD-6	Sep-21		979	**4590**	**2.06**	15.8	2910	**2720**	**12000**	<0.0500	
	OCD-6	Apr-22		890	**4860**	1.08	14.7	2220	**2920**	**11800 Q**	0.795	
	OCD-6	Oct-22		788 V	**4150**	**<6.40**	12.9	2360	**3240**	**9740**	<0.0500	
	OCD-7AR	Jun-20		619	**2990**	**2.13**	6.10	2520	**3990**	**9740**	<0.0500	
	OCD-7AR	Oct-20		643	**2680**	**2.75**	6.37	2590	**3640**	**10800**	<0.0500	
	OCD-7AR	Apr-21		635	**2660**	**2.99**	6.42	2530	**3780**	**9800**	1.95	
	OCD-7AR	Sep-21		639	**2650**	**2.70**	5.57	2650	**3700**	**10600**	<0.0500	
	OCD-7AR	Apr-22		662	**2930**	**1.79**	6.09	2200	**4010**	**10400 Q**	0.242	
	OCD-7AR	Oct-22		662	**2970**	**<6.40**	6.81	2430	**4050**	**9300**	<0.0500	
	OCD-7B	Apr-15		641	**910**	0.852	11.9	685	**2580**	**4520**	<0.0200	
	OCD-7B	Apr-17		564	**960**	1.05	11.0	629	**2100**	**4540**	<0.0197	
	OCD-7B	Apr-19		590	**874**	0.839	11.7	678	**2260**	**4760**	<0.0197	
	OCD-7B	Apr-21		590	**822**	0.950	11.6	680	**2170**	**4100**	<0.0500	
	OCD-8A	Jun-20		665	**5120**	**2.01**	8.85	3440	**4510**	**12600**	<0.0500	<0.00180
	OCD-8A	Oct-20		758	**5270**	**2.36**	10.8	3710	**4260**	**15600**	<0.0500	<0.00180
	OCD-8A	Apr-21		729	**4880**	**2.20**	9.88	3090	**4270**	**13700**	<0.0500	<0.00180
	OCD-8A	Sep-21		764	**5560**	**2.40**	11.7	3700	**4730**	**15600**	<0.0500	<0.00180
	OCD-8A	Apr-22		686	**5290**	**2.49**	9.59	3660	**4900**	**13800 Q**	0.0587 J	0.00362 J
	OCD-8A	Oct-22		688	**5000**	**2.30**	9.80 J	3060	**4740**	**12100**	<0.0500	<0.00180
	OCD-8B	Apr-15		680	**2020**	0.934	9.51	1520	**2910**	**7110**	0.0233 J	
	OCD-8B	Apr-17		660	**2030**	0.925	9.07	1800	**2620**	**7390**	0.0320 J	
	OCD-8B	Apr-19		715 V	**3230**	0.774	9.61	1490 V	**4950**	**7690**	<0.0197	
	OCD-8B	Apr-21		691	**2200**	0.744	9.76	1500	**2440**	**7480**	<0.0500	
Field East of Refinery	KWB-1A	Oct-19		466	**332**	1.46	0.954 J	258	**2660**	**4240**	0.101	<0.00180
	KWB-1A	Jun-20		465	**271**	1.33	0.854 J	234	**2600**	**4490**	0.142	<0.00180
	KWB-1A	Oct-20		476	**266**	1.33	0.994 JB	245	**2430**	**4320**	0.0862 J	<0.00180
	KWB-1A	Oct-22		474	250	1.59	0.881 J	234	**2170**	**3360**	<0.0500	<0.00180
	KWB-1C	Apr-15		619	**1160**	**25.3**	1.23	210	**2920**	**5340**	0.180	
	KWB-1C	Apr-17		560	**508**	1.25	1.36	267	**2860**	**5000**	0.0350 JP1	
	KWB-1C	Apr-19		533	**317**	1.16	1.39	274	**2550**	**4680**	0.629	
	KWB-1C	Apr-21		488	**275**	1.15	1.24 J	249	**2580**	**4490**	0.0807 J	

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
Field East of Refinery	KWB-7	Jun-20		330	**458**	0.915	<0.534	275	**834**	**2810**	<0.0500	<0.00180	
	KWB-7	Oct-20		371	**330**	0.794	<2.67	263	**1260**	**3180**	0.0590 J	<0.00180 J6	
	KWB-7	Apr-21		251	**369**	0.710	0.376 J	269	349	**2000**	0.109	<0.0450	
	KWB-7	Sep-21		371	**348**	0.736	0.288 J	231	**1340**	**3020**	<0.250	<0.0180	
	KWB-7	Apr-22		239	**397 V**	0.883	0.410 J	250	340 V	**1320**	<0.500	<0.00900	
	KWB-7	Oct-22		386	**404**	1.26 J	0.287 J	265	**1270**	**2720**	<0.250	<0.00180	
	KWB-8	Oct-16		251	**579**	0.467	0.351 J	443	**701**	**3120**	0.0380 JB	<0.00900	
	KWB-8	Apr-17		237	**574**	0.623	0.414 J	320	442	**2400**	0.0510 J	<0.00180	
	KWB-8	Oct-17		273	**913**	0.467	0.411 J	462	417	**3270**	<0.985	<0.00180	
	KWB-8	Oct-20		301	**398**	0.694	<0.534	546	**1660**	**4440**	<1.00	<0.0180	
	KWB-10R	Apr-17		134	230	1.57	0.521 J	131	0.475 J	**1130**	<0.0197		
	KWB-10R	Oct-17		138	186	1.39	0.453 J	123	3.08 J	**1080**	0.440		
	KWB-10R	Apr-18		138	183	1.35	0.430 J	122	<0.0774	**1060**	0.0250 J		
	KWB-10R	Oct-18		130	188	1.33	0.836 JB	110	<0.0774	**1040**	<0.0197		
	KWB-11A	Jun-20		408	**676**	0.753	0.800 J	319	**1180**	**3180**	0.0536 J	<0.00180	
	KWB-11A	Oct-20		396	**541**	0.652	0.676 J	306	**1090**	**2930**	0.414	<0.00180	
	KWB-11A	Sep-21		385	**501**	0.822	0.676 J	270	**1110**	**3080**	<0.0500	<0.00180	
	KWB-11A	Oct-22		410	**388**	1.00 J	0.642 J	266	**1390**	**2860**	<0.0500	<0.00180	
	KWB-11B	Jun-20		515	**369**	0.453	2.24	97.1	**1710**	**2880**	3.34	<0.00180	
	KWB-11B	Oct-20		509	**365**	0.395	<2.67	100	**1380**	**3130**	3.03	<0.00180	
	KWB-11B	Apr-21		519	**313**	0.365	2.24	95.6	**1360**	**2810**	2.93	<0.00180	
	KWB-11B	Sep-21		495	**367**	0.371	2.28	98.2	**1390**	**3000**	2.61	<0.00180 J6	
	KWB-11B	Apr-22		405	**256**	0.365	2.36	78.0	**1420**	**2540**	2.60	<0.00180	
	KWB-11B	Oct-22		499	**349**	0.832 J	2.09	106	**1470**	**2720**	2.08	<0.00180	
	KWB-12A	Jun-20		519	115	0.587	1.46 J	135	**2270**	**3490**	7.15	<0.00180	
	KWB-12A	Oct-20		541	129	0.537	1.07 JB	133	**2020**	**3520**	6.85	<0.00180	
	KWB-12A	Sep-21		544	195 B	0.623	1.07 J	185	**2090**	**3960**	**10.6 V**	<0.00180	
	KWB-12A	Oct-22		547	158	0.993 J	0.950 J	177	**1960**	**1790**	8.00	<0.00180	
	KWB-12B	Jun-20		537	120	0.441	0.673 J	130	**2460**	**3790**	**11.5**	<0.00180	
	KWB-12B	Jun-20	FD	525	114	0.343	0.742 J	126	**2210**	**3600**	8.27	<0.00180	
	KWB-12B	Oct-20		578	130	0.386	0.656 JB	141	**2210**	**3820**	6.35	0.00596	
	KWB-12B	Oct-20	FD	533	126	0.395	0.642 J	141	**2140**	**3760**	7.25	0.0565	
	KWB-12B	Apr-21		562	136	0.374	0.691 J	140	**2350**	**3890**	7.85	<0.00180	
	KWB-12B	Apr-21	FD	556	121	0.394	0.669 J	143	**2070**	**3900**	8.05	<0.00180	
	KWB-12B	Sep-21		553	204 B	0.419	0.653 J	172	**2050**	**4020**	**13.8**	0.00210 J	
	KWB-12B	Sep-21	FD	545	201 B	0.413	0.618 J	165	**2090**	**3970**	**13.2**	<0.00180	
	KWB-12B	Apr-22		550	132	0.825 J	0.695 J	143	**2700**	**3890**	6.75	<0.00180	
	KWB-12B	Apr-22	FD	540	133	0.892 J	0.643 J	137	**2660**	**3930**	6.65		
	KWB-12B	Oct-22		539	174	0.969 J	0.581 J	165	**2030**	**2420**	**11.2**	<0.00180	
	KWB-12B	Oct-22	FD	561	174	0.883 J	0.587 J	166	**2050**	**3590**	**11.3**	<0.00180	
	KWB-P4	Apr-15											
	KWB-P4	Apr-17											
	KWB-P4	Apr-19											
	KWB-P4	Apr-21											
	MW-57	Jun-20		568	131	**2.63**	1.21 J	388	**3190**	**4840**	**13.8**		
	MW-57	Oct-20		529	135	**1.99**	2.97	287	**2140**	**4040**	4.83		
	MW-57	Apr-21		460	210	**1.88**	1.50 J	265	**1910**	**3730**	7.90		
	MW-57	Sep-21		652	**496**	**3.42**	3.11	455	**3310**	**3170**	**34.2**		
	MW-57	Apr-22		436	**321**	**2.80**	2.13	319	**2270**	**3950**	3.10		
	MW-58	Oct-17		235	249	1.26	0.553 J	116	13.1	**1340**	<0.0197	<0.00180	
	MW-58	Apr-18		215	207	1.37	0.290 J	98.5	2.59 J	**1250**	<0.0985	<0.00180	
	MW-58	Oct-18		176	151	1.06	1.20	74.3	56.9	**1040**	<0.394	<0.00180 J3J6	
	MW-58	Oct-19		229	**294**	1.33	2.06	70.3	1.49 JB	**1140**	<0.0197	<0.00180	
	MW-111	Oct-18		203	**412**	1.46	0.588 JB	221	331	**1810**	<0.0197		
	MW-111	Apr-19		340	**375**	0.957	1.83	209	322	**2000**	<0.0197		
	MW-111	Oct-19		212	**429**	1.38	0.214 J	239	317	**2070**	<0.0197		
	MW-111	Jun-20		251	**409**	1.08	1.11 J	206	372	**1970**	<0.0500		
	MW-112	Nov-14		190	230	1.00	0.310 J	190	5.40	**1200**	<0.0200		
	MW-113	Jun-20		317	192	0.519	0.598 J	159	**1210**	**2440**	<0.0500		
	MW-113	Jun-20	FD	313	184	0.605 J	<0.534	152	**958**	**2460**	<0.0500		
	MW-113	Oct-20		274	177	0.527	<0.534	158	**773**	**2200**	0.199		
	MW-113	Oct-20	FD	280	185	0.536	<2.67	177	**786**	**2210**	0.128		
	MW-113	Apr-21		331	169 B	0.480	0.602 J	170	**956**	**2480**	0.121		
	MW-113	Apr-21	FD	318	185	0.554	0.519 J	155	**1130**	**2480**	<0.0500		
	MW-113	Sep-21		202	**348**	0.539	0.385 J	208	55.2	**1710**	<0.0500		
	MW-113	Sep-21	FD	200	**317 B**	0.537	0.390 J	208	61.0	**1720**	<0.500		
	MW-113	Apr-22		294	188	0.564	0.562 J	154	**996**	**2320**	<0.0500		
	MW-113	Apr-22	FD	278	177	0.511	0.471 J	149	**975**	**2370**	<0.0500		
	MW-113	Oct-22		231	**371**	0.630	0.295 J	328	284	**2160**	<2.50		
	MW-113	Oct-22	FD	225	**370**	0.616	0.231 J	318	370	**2090**	**17.7**		
	MW-125	Jun-20		543	**330**	1.19	1.41 J	221	**2950**	**4500**	0.212 J5		
	MW-125	Oct-20		541	**271**	1.10	1.42 JB	221	**2270**	**4350**	0.0919 J		
	MW-125	Apr-21		549	**261 B**	0.983	1.36 J	224	**2300**	**4440**	0.155		
	MW-125	Sep-21		519	**271 B**	1.06	1.32 J	213	**2210**	**4370**	0.0618 J		
	MW-125	Apr-22		473	**273**	1.07	1.19 J	189	**2360**	**3330 Q**	<0.0500		
	MW-125	Oct-22		486	**261**	1.42 J	1.06 J	206	**2100**	**7840**	<0.0500		
	MW-126A	Apr-19		382	191	0.757	0.547 JB	138	**1350**	**2540**	<0.0197		
	MW-126A	Oct-19		325	136	0.937	0.670 J	152	**1330**	**2330**	<0.0197 J5		
	MW-126A	Jun-20		357	198	0.869	<0.534	152	**1590**	**2680**	<0.0500		
	MW-126A	Oct-20		396	210	0.706	<0.534	189	**1510**	**3150**	<0.0500		
	MW-126B	Jun-20		539	**272**	0.784	2.27	210	**2440**	**4010**	0.414		
	MW-126B	Oct-20		562	**256**	0.705	2.36	195	**2140**	**3990**	0.429		
	MW-126B	Apr-21		552	243	0.739	2.31	202	**2210**	**4080**	0.509		
	MW-126B	Sep-21		539	249 B	0.712	2.28	198	**2010**	**4020**	0.399		
	MW-126B	Apr-22		516	**275**	1.19 J	2.25	201	**2410**	**3980**	0.423		
	MW-126B	Oct-22		532	**260**	1.24 J	2.17	207	**1950**	**3970**	0.371		
	MW-127	Oct-17		262	231	0.993	1.46	142	**776**	**1970**	0.146		
	MW-127	Apr-18		245	225	0.997	0.279 J	148	**677**	**2010**	<0.0985		
	MW-127	Oct-18		240	219	0.979	1.29 JB	135	**670**	**1940**	<0.0197		
	MW-127	Apr-19		267	208	0.855	0.438 JB	163	**612**	**1990**	<0.0197		
	MW-128	Oct-17		186	200	1.29	0.354 JB	107	248	**1370**	<0.0197		
	MW-128	Apr-18		181	175	1.23	0.764 J	115	207	**1280**	<0.0197		
	MW-128	Oct-18		161 V	170	1.13	0.412 J	97.3 O1V	147	**1650**	0.0230 JJ6		
	MW-128	Apr-19		181	173	1.06	0.725 J	115	126	**1300**	<0.0197		
	MW-129	Apr-16		170	**300**	1.10	0.331 J	210	44.1	**1520**	<0.197		
	MW-129	Oct-16		162	**293**	1.13	0.270 J	198	44.1	**1340**	0.0770 JB		
	MW-129	Apr-17		163	**300**	1.02	0.334 J	199	44.1	**1250**	<0.197 J5		
	MW-129	Apr-18		162	**282**	1.04	0.251 J	201	52.6	**1270**	<0.0197		
	MW-130	Jun-20		247	208	0.828	0.656 J	285	**972**	**2390**	0.861		
	MW-130	Oct-20		242	188	0.758	0.648 JB	285	**882**	**2430**	0.959		
	MW-130	Apr-21		423	156 B	0.718	4.08	302	**874**	**2490**	1.24		
	MW-130	Sep-21		278	136	0.710	1.44 J	271	**877**	**2350**	0.813		
	MW-130	Apr-22		236	145	0.768	0.875 J	280	**885 V**	**1780 J3**	0.465		
	MW-130	Oct-22		242	141	0.951	1.14 J	264	**807**	**1800 J3**	0.358		

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
Field East of Refinery	MW-131	Apr-17		151	**285**	0.773	0.275 J	153	10.3	**1230**	<0.197		
	MW-131	Oct-17		149	**284**	0.807	0.200 J	149	15.5	**1290**	<0.0197		
	MW-131	Oct-19		145	**288**	0.845	0.251 J	150	19.7	**1210**	<0.0197		
	MW-131	Jun-20		153	**283**	0.865	<0.534	163	24.7	**1270**	<0.0500		
	MW-133	Nov-14		200	170	1.10	0.460 J	140	140	**1300**	<0.0200		
	MW-133	Apr-15		163	174	1.19	0.323 J	122	116	**1190**	<0.200		
	MW-134	Jun-20		515	**370**	1.16	1.51 J	234 V	**2910**	**4870**	1.73 J5		
	MW-134	Jun-20	FD	516	**363**	1.45 J	1.43 J	239	**2530**	**4960**	<0.0500		
	MW-134	Oct-20		501	**349**	1.01	1.67 JB	243	**2700**	**4950**	1.37		
	MW-134	Oct-20	FD	503	**366**	1.32 J	1.64 J	251	**2530**	**4970**	1.39		
	MW-134	Apr-21		540	**295 B**	0.959	1.77 J	269	**2610**	**4870**	1.17		
	MW-134	Apr-21	FD	513	**335**	1.45 J	1.64 J	241	**2780**	**4820**	1.09		
	MW-134	Sep-21		503	**324**	0.905	1.44 J	248	**2820**	**4900**	5.94		
	MW-134	Sep-21	FD	513	**313 B**	1.06	1.43 J	255	**2620**	**4800**	0.586		
	MW-134	Apr-22		488	**314**	1.11	1.80 J	235	**2700**	**4470**	0.697		
	MW-134	Apr-22	FD	461	**289**	0.935	1.62 J	224	**2610**	**3750**	0.676		
	MW-134	Oct-22		484	**305**	1.42 J	1.39 J	242	**2450**	**4070**	0.504		
	MW-134	Oct-22	FD	500	**302**	1.39 J	1.46 J	247	**2410**	**4380**	0.585		
	MW-135	Jun-20		542	**542**	1.14	0.801 J	594	**2940**	**5600**	**16.0**		
	MW-135	Oct-20		538	**504**	1.13	<2.67	621	**2970**	**5460**	**10.9**		
	MW-135	Apr-21		527	**440**	1.16	0.832 J	606	**3070**	**5550**	7.25		
	MW-135	Sep-21		538	**514**	1.24	0.875 J	560	**2960**	**5640**	**11.9**		
	MW-135	Apr-22		548	**579**	1.14	0.816 J	580	**3410**	**5600**	**12.7**		
	MW-135	Oct-22		538	**570**	1.41 J	0.684 J	621	**2830**	**4790**	**10.1**		
	MW-145	Oct-20											
	MW-145	Oct-20	FD										
	MW-145	Apr-21			**334**	1.20			**2560**	**4920**			
	MW-145	Sep-21			**369**	1.11			**2640**	**4910**			
	MW-145	Apr-22		542	**383 B**	1.19	1.38 J	240	**2990**	**4640**			
	MW-145	Oct-22		574	**377**	1.55	1.17 J	247	**2400**	**4070**			
	MW-146	Oct-20											
	MW-146	Apr-21			**294**	1.21			**2840**	**5130**			
	MW-146	Sep-21			**303**	1.17			**2890**	**5060**			
	MW-146	Sep-21	FD		**311**	1.15			**2990**	**5020**			
	MW-146	Apr-22		498	**300 B**	1.21	1.45 J	235	**3340**	**5010**			
	MW-146	Apr-22	FD	502	**300 B**	1.15	1.34 J	232	**3280**	**5270 Q**			
	MW-146	Oct-22		548	**298**	1.58	1.25 J	262	**2670**	**4630**			
	MW-146	Oct-22	FD	542	**302**	1.59	1.33 J	263	**2660**	**4540**			
	MW-147	Oct-20											
	MW-147	Apr-21			**475**	0.791			**2730**	**5340**			
	MW-147	Sep-21			**484**	**1.80**			**3420**	**6460**			
	MW-147	Apr-22		560	**499**	0.925	0.804 J	460	**3230**	**5170**			
	MW-147	Oct-22		572	**583**	**1.98**	0.726 J	672	**2990**	**4950**			
	MW-148	Oct-20											
	MW-148	Apr-21			**255**	1.06			**2110**	**4190**			
	MW-148	Sep-21			**270**	1.07			**1890**	**3660**			
	MW-148	Apr-22		582	**291 B**	1.55	9.47	211	**2390**	**4100**			
	MW-148	Oct-22		569	243	1.53	4.94	166	**1780**	**3270**			
	RA-4196	Apr-19		370	112	0.309	2.34	90.6	**1060**	**1920**	<0.0197		
	RA-4196	Oct-19		363	131	0.299	1.96	89.2	**1250**	**2160**	<0.0197		
	RA-4196	Jun-20		365	126	0.324	2.17	90.1	**1330**	**2290**	<0.0500		
	RA-4196	Oct-20		382	123	0.348	2.36	98.7	**1250**	**2340**	0.842 J6		
	RA-4798	Jun-20		449	163	0.321	2.30	117	**1620**	**2820**	1.50		
	RA-4798	Oct-20		356	104	0.358	2.36	87.6	**1080**	**2200**	1.18		
	RA-4798	Apr-21		424	122	0.347	2.45	106	**1410**	**2510**	1.49		
	RA-4798	Sep-21		461	171	0.281	2.29	126	**1660**	**2830**	1.05		
	RA-4798	Apr-22		236	65.3	0.386	2.04	41.2	**781**	**1330**	0.811		
	RW-12R	Apr-17		392	189	0.623	0.293 J	152	**1740**	**2420 J3**	<0.197		
	RW-12R	Apr-18		378	155	0.700	0.220 J	171	**1400**	**2400**	<0.0197		
	RW-12R	Apr-19		369 V	154	0.609	0.408 JB	164 V	**1180**	**2450**	<0.0394		
	RW-12R	Jun-20		337	143	0.716	<0.534	158	**1300**	**2750**	<0.0500		
	RW-13R	Apr-16		202	222	0.691	0.346 J	167	341	**1190**	0.0460 J		
	RW-13R	Apr-18		242	207	0.650	0.378 J	183	525	**1700**	0.0260 JP1		
	RW-18A	Apr-17		504	176	**2.51**	1.09	141	**2870**	**4400**	1.90		
	RW-18A	Apr-18		491	206	**1.82**	0.832 J	132	**2750**	**3940**	0.408		
	RW-18A	Apr-19		549	199	**1.94**	0.832 J	130	**2390**	**3970**	0.286		
	RW-18A	Jun-20		515	211	**2.03**	0.990 J	120	**2490**	**4280**	0.460		
	RW-20	Apr-15		228	**256**	0.530	<0.180	228	125	**1430**	<0.200		
	RW-22	Apr-15		184	**402**	0.860	0.319 J	274	78.4	**1680**	<0.200		
NCL	MW-18	Apr-19		536	86.7	**2.04**	7.60	76.6	**1910**	**3310**	**32.6**	<0.00180	
	MW-18	Jun-20		421	154	**1.61**	1.66 J	58.7	**1510**	**2870**	**18.3**	<0.00180	
	MW-18	Apr-21		393	206	**1.64**	1.56 J	63.7	**1150**	**2170**	9.30	<0.00180	
	MW-18	Apr-22		367	216	1.34	1.61 JB	58.1	**1200**	**2390**	**11.7**	<0.00180	
	MW-45	Jun-20		574	**413**	1.54	4.80	339	**2490**	**4480**	<0.0500	0.00225 J	
	MW-45	Oct-20		577	**429**	**1.70**	4.70	359	**2350**	**4970**	<0.0500	<0.00180	
	MW-45	Apr-21		603	**372**	**1.97**	4.42	375	**2450**	**3680**	0.0756 J	<0.0180	
	MW-45	Sep-21		548	**334**	1.34	4.12	339	**2110**	**4010**	<0.0500	<0.00180	
	MW-45	Apr-22		534	**338**	1.34	3.45	324	**2350**	**4330 Q**	<0.0500	<0.00180	
	MW-45	Oct-22		511	**291**	1.15 J	4.03	327	**2150**	**3400**	<0.0500	<0.00180	
	MW-53	Apr-16		459	**346**	1.06	1.42 J	161	**1340**	**2890**	**25.3**		
	MW-53	Apr-17		340	222	0.904	1.12	130	**1330**	**2290**	**15.6**		
	MW-53	Apr-18		315	72.9	1.13	1.12 B	118	**1250**	**1860**	1.58 J6		
	MW-53	Apr-19		259	59.6	1.30	1.17	88.4	**1100**	**1880**	0.290		
	MW-53R	Oct-20		298	66.7	1.11	4.08	69.1	**955**	**1920**	<0.0500		
	MW-53R	Apr-21		312	64.8	1.29	2.37	78.2	**1110**	**1870**	0.132		
	MW-53R	Apr-22		288	64.7	1.27	2.12 B	74.7	**1140**	**1710**	<0.0500		
	MW-54A	Jun-20		366	198	0.809	<0.534	55.5	**838**	**2030**	<0.0500		
	MW-54A	Oct-20		374	196	0.913	<0.534	60.8	**768**	**1990**	<0.0500 J5		
	MW-54A	Apr-21		414	217	0.969	0.355 J	64.3	**916**	**1940**	0.115		
	MW-54A	Sep-21		410	221	1.03	0.319 J	61.1	**923**	**2300**	<0.0500		
	MW-54A	Apr-22		407	241	0.816	0.414 JB	62.4	**1100**	**2300**	0.0516 J		
	MW-54A	Oct-22		436	244	1.39 J	0.313 J	69.7	**1160**	**2270**	0.389		
	MW-54B	Apr-15		307	166	0.613	0.767 J	48.0	**752**	**1890 J**	0.0276 J		
	MW-54B	Apr-17		317	127	0.617	1.18	54.5	**1040**	**1840**	0.100 J		
	MW-54B	Apr-19		319	140	0.634	0.811 J	50.5	**818**	**1870**	0.0410 J		
	MW-54B	Apr-21		458	205	0.654	1.47 J	69.9	**1320**	**2290**	0.0845 J		
	MW-55	Jun-20		410	**580**	1.55	0.672 J	225	**1540**	**3480**	0.0643 J	<0.00180	
	MW-55	Oct-20		333	**505**	1.30	0.842 JB	228	**949**	**3010**	<0.0500	<0.00180	
	MW-55	Apr-21		293	**463**	**1.62**	0.683 J	244	**781**	**2130**	0.0762 J	<0.00180	
	MW-55	Sep-21		282	**448**	1.58	0.644 J	199	**770**	**2520**	<0.0500	<0.00180	
	MW-55	Apr-22		232	**408**	1.20	0.640 JB	228	**685**	**2120**	0.0550 J	<0.00180	
	MW-55	Oct-22		291	**348**	1.44 J	0.679 J	191	**1020**	**2230**	<0.0500	<0.00180	

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
NCL	MW-56	Apr-19		475	221	1.06	1.99	212	**1890**	**3560**	<0.0197	
	MW-56	Jun-20		496	219	1.08	1.70 J	142	**1990**	**3520**	<0.0500	
	MW-56	Apr-21		484	211	1.19	1.80 J	140	**1740**	**2860**	0.252	
	MW-56	Apr-22		388	193	1.15	1.55 J	121	**1400**	**2020**	<0.0500	
	MW-108	Jun-20		157	17.9	**1.63**	<0.534	45.5	365	**1270**	<5.00	
	MW-108	Oct-20		139	15.8	1.48	<0.534	46.8	221	**1150**	<0.0500	
	MW-108	Apr-21		209	27.0	**1.66**	0.412 J	64.6	**718**	**1610**	<0.0500	
	MW-108	Sep-21		308	40.3	**1.90**	0.801 J	63.0	**963**	**2190**	<2.50	
	MW-108	Apr-22		190	29.7	1.30	0.593 JB	48.7	**737**	**1540**	<1.00	
	MW-108	Oct-22		234	29.7	**1.81**	0.472 J	49.3	**881**	**1750**	<2.50	
	NCL-31	Jun-20		308	21.3	1.36	<0.534	65.4	**1600**	**2580**	<0.0500	
	NCL-31	Oct-20		290	28.6	1.23	<0.534	69.7	**1360**	**2460**	<0.0500	
	NCL-31	Apr-21		251	45.1	**1.62**	0.539 J	70.8	**1100**	**1890**	0.118	
	NCL-31	Sep-21		206	50.2	**1.67**	0.346 J	43.1	**828**	**1680**	<0.0500	
	NCL-31	Apr-22		199	32.7	1.34	0.563 JB	33.4	**966**	**1610**	<0.0500	
	NCL-31	Oct-22		212	31.0	**1.73**	0.280 J	32.1	**895**	**1500**	<0.0500	
	NCL-32	Jun-20		472	90.7	1.36	3.12	107	**1730**	**2940**	6.45	
	NCL-32	Oct-20		483	90.7	1.27	3.47	118	**1640**	**3040**	5.82	
	NCL-32	Apr-21		511	87.3	1.47	3.79	113	**1670**	**2490**	6.30	
	NCL-32	Sep-21		453	92.6	1.45	3.39	98.0	**1650**	**2920**	4.59	
	NCL-32	Apr-22		454	99.8	1.21	3.71	101	**1780**	**2720**	2.89	
	NCL-32	Oct-22		513	204	1.51	3.51	111	**1750**	**2730**	0.855	
	NCL-33	Jun-20		714	**692**	**2.44**	5.60	166	**1540**	**3890**	0.0547 J	
	NCL-33	Oct-20		688	**667**	**2.64**	6.43	178	**1340**	**3960**	<0.0500	
	NCL-33	Apr-21		678	**790**	**2.72**	4.74	273	**1330**	**3420**	0.0825 J	
	NCL-33	Sep-21		548	**647**	**2.90**	6.37	254	**1340**	**3690**	<0.0500	
	NCL-33	Apr-22		581 V	**794**	**2.28**	4.50	290 V	**1370**	**3930 Q**	0.106	
	NCL-33	Oct-22		542	**607**	**2.55**	4.55	279	**1100**	**3230 Q**	<0.0500	
	NCL-34A	Oct-18		270	**289**	1.21 J3J5	1.25	111	117	**1710**	<0.394	
	NCL-34A	Apr-19		251 V	**262**	1.37	1.11	107 V	42.6	**1370**	<0.394	
	NCL-34A	Oct-19		235	245	1.38	1.15	116	119	**1470**	0.110	
	NCL-34A	Jun-20		283	**260**	1.31	1.13 J	104	234	**1680**	<5.00	
	NCL-44	Jun-20		373	141	**1.66**	2.15	135	**1290**	**2700**	<0.0500	
	NCL-44	Oct-20		358	126 B	**1.63**	2.29	142	**1170**	**2730**	<0.0500	
	NCL-44	Apr-21		362	121	**1.80**	2.27	146	**1200**	**2180**	0.114	
	NCL-44	Sep-21		334	125	**1.84**	2.12	136	**1170**	**2550**	<0.0500	
	NCL-44	Apr-22		332	118	**1.64**	2.17 B	145	**1380**	**1870**	0.0656 J	
	NCL-44	Oct-22		338	123	**2.05**	2.05	154	**1270**	**2150**	<0.0500	
	NCL-49	Jun-20		486	128	0.609	0.686 J	133	**1910**	**3350**	9.98	
	NCL-49	Jun-20	FD	472	128	0.613	0.652 J	135	**1920**	**3350**	9.95	
	NCL-49	Oct-20		487	135 B	0.606	0.692 JB	135	**1830**	**3380**	**10.1**	
	NCL-49	Oct-20	FD	482	135 B	0.600	0.675 JB	133	**1820**	**3430**	10.0	
	NCL-49	Apr-21		501	115	0.692	0.786 J	154	**1970**	**2930**	6.70	
	NCL-49	Apr-21	FD	491	118	0.645	0.706 J	149 V	**2030**	**2910**	7.30	
	NCL-49	Sep-21		491	105	0.697	0.726 J	140	**1980**	**3400**	**13.3**	
	NCL-49	Sep-21	FD	483	105	0.704	0.710 J	140	**1970**	**3340**	**13.3**	
	NCL-49	Apr-22		473	128	0.794	0.661 JB	148	**2230**	**2600**	**14.1**	
	NCL-49	Apr-22	FD	473	126	0.820	0.790 JB	150	**2170**	**2370**	**14.7**	
	NCL-49	Oct-22		514	181	0.781 J	0.700 J	158	**2080**	**3040**	**13.2**	
	NCL-49	Oct-22	FD	472	182	0.781 J	0.704 J	155	**2080**	**2980**	**12.8**	
North Refinery	MW-23	Apr-19		97.5	**444**	**1.70**	1.12	482	18.9	**2000**	<0.0197	
	MW-23	Oct-19		95.6	**428**	1.59	1.27	410	18.7	**2020**	<0.0197	
	MW-23	Jun-20		96.4	**410**	1.42	1.10 J	426 V	15.6	**1970**	<0.500	
	MW-23	Oct-20		96.8	**408**	1.19	1.29 J	459	7.39	**1990**	<0.0500	
	MW-29	Jun-20		396	**383**	**1.71**	2.03	356	**1890**	**3610**	<0.0500	
	MW-29	Oct-20		336	**418**	1.47	1.90 J	333 V	**1430**	**3530**	<0.0500	
	MW-29	Apr-21		379	**457**	**1.83**	2.06	330	**1580**	**3730**	0.105	
	MW-29	Sep-21		590	**502**	1.47	2.77	328	**2170**	**4180**	0.0504 J	
	MW-29	Apr-22		378	**571**	**1.68**	2.14	317	**1720**	**3190**	<0.0500	
	MW-29	Oct-22		461	**631**	**1.62**	2.52	358	**1670**	**3130**	<0.0500	
	MW-39	Apr-19		52.6	111	**4.21**	0.164 J	891	**1000**	**2580**	<0.0197	
	MW-39	Oct-19		45.8	86.8	**4.26**	0.245 J	771	**929**	**2590**	<0.0197	
	MW-39	Jun-20		61.8	97.7	**3.45**	<0.534	721	**821**	**2410**	<0.0500	
	MW-39	Oct-20		63.8	91.5	**3.28**	<0.534	655	**686**	**2260**	<0.0500	
	MW-40	Apr-17		474	156	**1.76**	1.62	110	**1550**	**3190**	<0.197	
	MW-40	Apr-18		425	141	**1.80**	1.41	107	**1440**	**2390**	<0.985	
	MW-40	Apr-19		450	106	1.52	1.39	107	**1400**	**2600 J3**	<0.394	
	MW-40	Jun-20		374	88.4	**1.88**	1.30 J	90.4	**1380**	**2430**	<0.500	
	MW-41	Apr-18		329	**682**	0.934	0.571 J	624	**1500**	**4060**	<0.0197	
	MW-41	Apr-19		238	**721**	0.884	0.590 J	624	**1140**	**4110**	<0.394	
	MW-41	Jun-20		282	**875**	1.00	0.653 J	828	**1780**	**4930**	<0.0500	
	MW-41	Apr-21		274	**856**	1.02	0.586 J	812	**1590**	**5010**	0.117	
	MW-42	Apr-19		233	**319**	0.780	0.449 J	425	**1010**	**2590**	<0.394	
	MW-42	Jun-20		246	**336**	0.851	<0.534	358	**1020**	**3310**	<2.50	
	MW-42	Apr-21		314	**585**	0.869	0.397 J	452	**1290**	**3870**	0.0775 J	
	MW-42	Apr-22		265	**699**	0.722	0.452 J	425	**1120**	**3770 Q**	**14.7**	
	MW-43	Apr-19		152	**639**	**1.71**	0.923 J	491	444	**2610**	<0.394	<0.0180
	MW-43	Oct-19		205	**662**	**1.66**	0.961 J	406	479	**2120**	<0.985	<0.0180 J4
	MW-43	Jun-20		141	**547**	1.36	0.828 J	341	198	**2210**	<0.250	<0.0360
	MW-43	Oct-20		141	**550**	1.09	0.896 J	350	102	**2150**	<0.0500	<0.0180
	MW-59	Apr-17		467	184	1.13	0.519 J	134	**1870**	**3160**	<0.197	
	MW-59	Apr-18		492	180	1.31	0.507 J	151	**1680**	**2760**	<0.0197 J6	
	MW-59	Apr-19		475	173	1.10	0.468 J	153	**1400**	**3110**	<0.0197	
	MW-59	Jun-20		366	201	1.33	<0.534	184	**1340**	**2900**	<0.0500	
	MW-60	Jun-20		418	206	0.778	<0.534	178	**1770**	**3720**	<2.50	<0.0360
	MW-60	Jun-20	FD	424	219	1.18 J	<0.534	176	**1660**	**3790**	<0.500	<0.0360
	MW-60	Oct-20		418	202	0.715	<0.534	189	**1510**	**3560**	0.203	<0.0180
	MW-60	Oct-20	FD	401	219	1.21 J	<0.534	190	**1780**	**3660**	<0.0500	<0.0180
	MW-61	Jun-20		292	**471**	1.09	0.933 J	299	541	**2570**	<5.00	
	MW-61	Oct-20		246	**339**	1.06	0.820 JB	302	532	**2110**	<0.0500	
	MW-61	Apr-21		250	**339**	0.906	0.637 J	273	475	**2140**	<0.500	
	MW-61	Sep-21		225	**312**	0.933	0.635 J	231	327	**2040**	<2.50	
	MW-61	Apr-22		266	**352**	1.02	0.788 J	243	500 J	**1770**	<2.50	
	MW-61	Oct-22		279	**387**	1.18	0.836 J	270	576	**1880**	<2.50	
	MW-62	Jun-20		282	**280**	1.19	0.973 J	235	524	**2290**	<2.50	
	MW-62	Oct-20		304	**296**	1.08	1.11 JB	241	531	**2370**	<0.0500	
	MW-62	Sep-21		376	**386**	1.03	1.07 J	225	**703**	**2750**	<2.50	
	MW-62	Apr-22		394	**317**	1.16	1.10 J	232	**855**	**2150 J3**	<1.00	
	MW-62	Oct-22		300	**364**	1.22	1.06 J	236	426	**1790**	<2.50	
	MW-62R	Oct-20		304	**311**	0.806	3.38	152	571	**2240**	<0.0500	
	MW-62R	Apr-21		183	**280**	1.02	1.00 J	116	2.65 J	**1340**	<0.0500	
	MW-62R	Apr-22		212	**287**	0.736	0.822 J	171	120	**1560 J3**	<1.00	
	MW-67	Oct-17		207	**305**	0.568	0.500 JB	200	388	**1740**	<0.0985	<0.00180
	MW-67	Apr-18		220	**328**	0.636	0.573 JB	245	404	**1660**	<0.197	<0.180
	MW-67	Oct-18		240	221	0.611	0.636 J	202	493	**1580**	<0.0197	<0.00180
	MW-67	Apr-19		202	**302**	0.637	0.538 J	225	447	**1630**	<0.0197	<0.00180

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	Well ID	Date	Dup										
North Refinery	MW-90	Jun-20		331	173	**2.25**	1.13 J	142	**1790**	**3120**	<2.50	
	MW-90	Oct-20		293	210	1.05	0.913 J	171	**1280**	**2910**	<0.0500	
	MW-90	Apr-21		314	230	1.06	0.760 J	170	**1250**	**2960**	<0.0500	
	MW-90	Sep-21		452	163	**3.03**	1.75 J	133	**2330**	**4090**	<1.00	
	MW-90	Apr-22		290	**265**	**1.78**	0.993 J	177	**1570**	**3020**	<1.00	
	MW-90	Oct-22		319	**262**	**1.89**	1.09 J	185	**1430**	**2620**	<2.50	
	MW-91	Oct-18		433	221	1.27	0.639 J	35.2	**966**	**2820**	<0.985	
	MW-91	Apr-19		460	**295**	1.27	0.468 J	38.9	**915**	**3290**	<1.97	
	MW-91	Oct-19		451	**422**	1.29	0.520 J	39.6	**1020**	**2430**	<0.197	
	MW-91	Jun-20		478	**501**	1.19	<0.534	36.7	**813**	**2830**	<10.0	
	MW-92	Apr-16		130 O1	**415**	1.30	1.73 J	450 O1V	24.1	**2310**	0.602 J	
	MW-92	Oct-16		134	**539**	**1.63**	2.02	454	14.6	**2150**	<0.985	
	MW-93	Apr-17		489	192	**2.38**	2.97	167	**1430**	**2930**	<0.197	
	MW-93	Apr-18		537	193	**2.39**	3.55	191	**1400**	**2760**	<0.197	
	MW-93	Apr-19		505	214	**2.09**	3.76	195	**1400**	**2810**	0.0220 J	
	MW-93	Jun-20		491	233	**1.88**	3.11	163	**1070**	**2820**	<2.50	
	MW-94	Oct-15		109	245	1.01	0.224 J	355	75.8	**2530**	<0.197	
	MW-94	Apr-16		124	217	1.02	0.189 J	532	199	**2980**	<0.197	
	MW-94	Oct-16		137	172	1.04	0.467 J	319	175	**2530**	<0.0197	
	MW-94	Apr-17		95.6	196	0.874	0.331 J	427	85.7	**2660**	<0.197	
	MW-95	Apr-17		203 V	**349**	0.868	0.730 J	194 V	420	**1710**	<0.197	
	MW-95	Apr-18		229	**258**	0.884	0.602 J	163	471	**1770**	<0.0197	
	MW-95	Apr-19		246	**264**	0.830	0.472 J	172	561	**2020**	<0.0197	
	MW-95	Jun-20		250	**300**	0.739	<0.534	151	**682**	**2020**	<0.0500	
	MW-96	Jun-20		147	131	1.32	1.52 J	200	95.2	**1320**	<2.50	
	MW-96	Oct-20		142	128	1.15	1.17 J	218	69.3 P1	**1420**	<0.0500	
	MW-96	Sep-21		207	129	1.37	1.29 J	193	422	**1800**	<0.500	
	MW-96	Apr-22		133	149	1.27	1.16 J	195	104	**1430 Q**	<1.00	
	MW-96	Oct-22		167	154	1.41	1.10 J	205	191	**1340**	<2.50	
	MW-98	Jun-20		561	239	**1.69**	<0.534	129	**1590**	**3280**	<5.00	
	MW-98	Oct-20		515	195	**1.73**	<0.534	125	**1300**	**3060**	<0.0500	
	MW-98	Apr-21		580	195	1.58	0.219 J	166	**1390**	**3380**	**<50.0**	
	MW-98	Sep-21		510	177	1.56	0.284 J	175	**1320**	**3220**	<2.50	
	MW-98	Apr-22		484	187 B	**1.70**	0.222 J	156	**1590**	**3190 Q**	<2.50	
	MW-98	Oct-22		536	90.4	**2.14**	0.323 J	145	**1410**	**2190**	<2.50	
	MW-137	Oct-17		141	**548**	1.11	0.979 JB	759	**683**	**2910**	<0.394	<0.00180
	MW-137	Apr-18		143	**446**	1.41	1.23	955	**713**	**3420**	<0.985	<0.180
	MW-137	Oct-18		133	**406**	0.873	0.971 J	632	384	**2730**	<1.97	<0.180
	MW-137	Apr-19		142	**407**	1.28	1.14	845	**607**	**3380**	<1.97	<0.0900
	MW-138	Oct-17		124	**453**	1.06	1.50 B	401	27.9	**2100**	<0.0985	<0.00180
	MW-138	Apr-18		130	**453**	0.874	1.58	436	26.8	**1910**	<0.0197	<0.00180
	MW-138	Oct-18		122	**408**	0.802	1.60	362	30.3	**1510**	<0.0197	<0.00180
	MW-138	Apr-19		130	**435**	0.966	1.62	402	41.4	**1730**	<0.0197	<0.00180
	RW-1R	Apr-16		505	180	1.38	6.39	203	**1500**	**2990**	0.422 J	
	RW-1	Apr-17		558	246	1.41	7.37	268	**1860**	**3690**	<0.197	
	RW-1	Apr-18		363	**255**	0.913	2.24	247	**1030**	**1810**	<1.97	
	RW-1	Apr-19		337	**286**	0.866	1.87	266	**939**	**2690**	<1.97	
	RW-2	Apr-15		726	**365**	**1.75**	5.55 J	383	**3510**	**5310**	<0.200	
	RW-2R	Apr-16		875	**430**	**2.09**	5.80	396	**2200**	**3810**	0.281 J	
	RW-2	Apr-17		519	**251**	**2.35**	2.86	261	**1200**	**3030**	<0.197	
	RW-2	Apr-18		402	**317**	**1.75**	2.25	335	**731**	**2600**	<0.394	
	RW-7	Apr-17		266	204	0.513	0.922 J	105	**693**	**1740**	<0.197	
	RW-7	Apr-18		295	217	1.22	2.54	149	475	**1820**	<0.985	
	RW-7	Apr-19		247	239	1.05	1.63	150	426	**1830**	<0.197	
	RW-7	Jun-20		184	218	0.995	0.651 J	151	162	**1530**	<2.50	
	RW-8	Apr-15		227	115	0.801	0.353 J	209	473	**1600**	<0.200	
	RW-8	Apr-17		218	163	0.731	0.360 J	161	**665**	**1820**	<0.197	
	RW-9	Apr-19		309	**399**	1.46	1.91	356	**1160**	**3100**	<1.97	
	RW-9	Jun-20		293	**469**	1.21	1.51 J	425	**1140**	**3330**	<2.50	
	RW-9	Apr-21		300	**556**	1.22	1.27 J	439	**1180**	**3560**	<0.500	
	RW-9	Apr-22		294	**554**	0.895	1.12 J	432	**901**	**2980**	<2.50	
	RW-10	Apr-18		499	131	**3.41**	3.49	143	**1530**	**2670**	<0.985	
	RW-10	Apr-19		572	65.9	**3.66**	3.68	102	**1470**	**2540 J3**	<0.197	
	RW-10	Jun-20		485	92.9	**3.87**	4.43	151	**1450**	**2520**	<0.0500	
	RW-10	Apr-21		353	193	**3.26**	3.53	312	**1110**	**2730**	0.0679 J	
	RW-16B	Apr-17		499	**291**	**4.90**	0.832 J	372	**2740**	**5030**	2.20	
	RW-16B	Apr-18		546	43.5	**4.89**	0.788 J	259	**2660**	**4240**	0.894 J6	
	RW-16B	Apr-19		540	83.0	**4.48**	0.677 J	333	**2690**	**4440**	1.47 J3J6	
	RW-16B	Jun-20		516	181	**3.78**	1.65 J	492	**2970**	**4720**	<0.0500	
	RW-17A	Apr-17		568	**398**	**2.61**	4.02	306	**2950**	**4820**	3.33	
	RW-17A	Apr-18		635	**358**	**2.31**	3.87	345	**3080**	**4430**	0.0920 J	
	RW-17A	Apr-19		563	**398**	**2.64**	2.97	286	**3290**	**5430**	<0.0197	
	RW-17A	Jun-20		554	**389**	**2.58**	4.62	306	**2940**	**5730**	0.386	
North RO Field	MW-117	Jun-20		578	**299**	**3.43**	6.39	129	**2300**	**3640**	2.46	
	MW-117	Oct-20		587	**271**	**3.25**	6.68	133	**2030**	**3870 J3**	4.05	
	MW-117	Apr-21		663	**304**	**2.89**	5.49	147	**2290**	**4080**	5.55	
	MW-117	Sep-21		614	**325 B**	**2.66**	5.98	144	**1910**	**4020**	1.76	
	MW-117	Apr-22		571	**365**	**3.03**	5.39	169	**2140**	**3830**	1.82	
	MW-117	Oct-22		507	248	**2.89**	4.52	163	**1730**	**2960**	0.527	
	MW-118	Jun-20		586	**290**	**5.20**	3.45	171	**2950**	**4620**	2.43	
	MW-118	Oct-20		558	**262**	**5.06**	3.07 B	178	**2600**	**4640**	2.03	
	MW-118	Apr-21		575	241	**4.51**	2.85	192	**2880**	**4840**	2.29	
	MW-118	Sep-21		568	**253 B**	**4.12**	2.38	186	**2720**	**4770**	2.06	
	MW-118	Apr-22		562	**265**	**4.40**	2.09	186	**3180**	**4750**	2.25	
	MW-118	Oct-22		588	245	**4.36**	2.04	202	**2630**	**4440**	1.94	
	MW-119	Jun-20		629	**345**	**1.66**	0.637 J	202	**2990**	**4500**	0.281	
	MW-119	Oct-20		641	**298**	1.39	0.832 JB	200 V	**2490**	**4420**	0.106	
	MW-119	Apr-21		620	**278**	1.49	0.690 J	189 V	**2580**	**4400**	0.237	
	MW-119	Sep-21		607	**282 B**	**1.70**	0.786 J	192	**2320**	**4360**	0.314	
	MW-119	Apr-22		585	**294**	**1.88**	0.684 J	186	**2730**	**3520**	1.43	
	MW-119	Oct-22		582	**263**	**1.69**	0.724 J	183	**2140**	**3930**	0.107	
South Refinery	KWB-2R	Apr-17		280	**279**	0.904	0.460 J	286	**1060**	**2550**	0.0220 J	
	KWB-2R	Oct-17		139	240	1.09	1.33	283	259	**1770**	<0.394	
	KWB-2R	Apr-19		322	246	0.656	0.516 JB	304	**1040**	**2370**	0.991 J	
	KWB-2R	Oct-19		169	**253**	0.927	0.534 J	246	345	**1590 J3**	<0.0197	
	KWB-5	Oct-17		220	**565**	0.877	1.41	208	21.9	**1560**	0.0530 J	
	KWB-5	Apr-18		233	**546**	0.861	1.95	215	9.96	**1730**	1.93	
	KWB-5	Oct-18		200	**546**	0.869	1.76 JB	208	11.8	**1450**	<0.0197	
	KWB-5	Apr-19		244	**525**	0.761	2.10	241	18.7	**1680**	<0.0197	
	KWB-6	Apr-17		227	**260**	0.965	0.183 J	120	211	**1630**	0.556 J	
	KWB-6	Oct-17		256	**290**	0.842	0.162 J	131	377	**1890**	<0.394	
	KWB-6	Apr-18		248	248	0.897	0.268 J	138	272	**1600**	0.0380 J	
	KWB-6	Oct-18		223	240	0.801	0.230 J	122	324	**1680 J3**	<0.0197	

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
South Refinery	MW-28	Apr-19		361	138	1.14	0.964 J	112	**1030**	**2920**	<0.985	<0.0180	
	MW-28	Oct-19		360	143	1.60	0.571 JB	101	**1630**	**2860**	<0.985	<0.0180 J4	
	MW-28	Jun-20		285	149	1.10	4.23	109	**1310**	**2610**	<0.250	<0.0360	
	MW-28	Oct-20		281	132	1.02	4.03	114	**1140**	**2670**	<0.0500	<0.00180	
	MW-48	Apr-18		200	**689**	**1.90**	0.776 J	269	9.52	**2490**	0.0860 J		
	MW-48	Oct-18		172 V	**498**	1.20	0.863 J	293 V	125	**1730 J4**	<0.394		
	MW-48	Apr-19		168	179	**1.82**	1.16	290	**1210**	**1630 J4**	<0.394		
	MW-48	Oct-19		159	**429**	1.08	1.12	297	85.7	**1580 J3**	<0.985		
	MW-50	Jun-20		495	**418**	**2.92**	4.42	577	**3370**	**5550 Q**	**74.6**		
	MW-50	Oct-20		490	**390**	**3.64**	4.05	682	**4100**	**7810**	**78.5 V**		
	MW-50	Apr-21		387	191	1.47	2.42	242	**1650**	**3370**	0.0950 J		
	MW-50	Sep-21		513	**477**	**5.41**	9.75	851	**4950**	**9740**	**266**		
	MW-50	Apr-22		376	**281**	**2.99**	3.59	456	**3250**	**5260 Q**	6.75		
	MW-50	Oct-22		506	**313**	**3.94**	3.65	574	**3930**	**5930**	**50.8**		
	MW-52	Jun-20		239	195	**1.71**	<0.534	340	**1140**	**2810**	**13.0**	<0.00180	
	MW-52	Oct-20		223	195	**1.62**	<0.534	332	**1110**	**2720**	**15.3 V**	<0.00180	
	MW-52	Apr-21		212	166 B	1.54	0.319 J	358	**958**	**2530**	**11.0**	<0.00180	
	MW-52	Sep-21		211	179	1.53	0.240 J	308	**1050**	**2560**	**12.0**	<0.00180	
	MW-52	Apr-22		187	176	**1.81**	0.373 J	309	**994**	**2450**	**19.2**	<0.00180	
	MW-52	Oct-22		198	182	**1.99**	0.271 J	338	**1130**	**2040**	**11.1**	<0.00180	
	MW-64	Jun-20		90.7	**324**	0.993	0.655 J	350	5.03	**1620**	<0.100		
	MW-64	Oct-20		88.5	**310**	0.710	0.586 JB	343	8.17	**1590**	<0.0500 J3J6		
	MW-64	Apr-21		93.9	**275**	0.750	0.581 J	350	23.4	**1580**	<0.0500		
	MW-64	Sep-21		88.9	**286 B**	0.878	0.536 J	329	9.58	**1600**	<2.50		
	MW-64	Apr-22		79.2	**295**	0.619	0.571 J	318	1.81 J	**1310**	<0.500		
	MW-64	Oct-22		87.2	**294**	0.723	0.537 J	338	3.00 J	**1500**	<0.250		
	MW-65	Apr-18		132	**306**	1.33	0.732 J	264	10.2	**1340**	<0.0985		
	MW-65	Oct-18		127	**284**	1.12	0.823 JB	229	4.80 J	**1280**	<0.0197 J6		
	MW-65	Apr-19		155	**284**	0.967	0.532 JB	262	1.23 J	**1310**	<0.0197		
	MW-65	Oct-19		113	234	1.23	0.466 J	223	5.53 B	**1080**	<0.0197		
	MW-66	Oct-19		121	168	1.04	1.18	131	6.99	912	<0.0197 J6	<0.00180	
	MW-66	Jun-20		136	188	1.13	0.842 J	155	1.16 J	**1070**	0.0979 J	<0.00180	
	MW-66	Oct-20		140	189	1.12	1.71 JB	145	6.68	**1060**	<0.0500	<0.00180	
	MW-66	Apr-21		176	**257**	1.26	2.12	205	1.59 J	**1230**	0.0769 J	<0.00180	
	MW-99	Oct-18		162	**254**	0.612	0.792 J	212	124	**1420**	<0.394		
	MW-99	Apr-19		184	225	0.572	1.31	214	145	**1390**	<0.394		
	MW-99	Oct-19		109	66.7	0.517	4.66	58.1	81.1	547	0.0300 J		
	MW-99	Jun-20		138	73.2	0.323	7.77	60.7	109	727	<0.0500		
	MW-101	Jun-20		183	202	0.965	0.556 J	144	183	**1330**	<0.0500		
	MW-101	Oct-20		207	185	0.915	0.881 JB	137	234	**1410**	<0.0500		
	MW-101	Apr-21		178	190	0.839	0.652 J	149	150	**1250**	0.112		
	MW-101	Sep-21		173	195	0.918	0.934 J	138	200	**1270**	<2.50		
	MW-101	Apr-22		164	190	0.931	0.762 J	135	125	**1210**	<0.500		
	MW-101	Oct-22		168	177	1.10	0.715 J	148	114	**1130 J3**	<0.250		
	MW-102	Jun-20		84.2	**285**	0.984	<0.534	446	21.2	**1610**	<0.0500		
	MW-102	Oct-20		91.9	**282**	0.812	<0.534	431	5.16	**1610**	<0.0500		
	MW-102	Apr-21		98.1	242 B	0.823	0.435 J	430	39.6	**1570**	0.0911 J		
	MW-102	Sep-21		118	226 B	0.899	0.532 J	410	55.5	**1650**	<2.50		
	MW-102	Sep-21	FD	117	**253**	1.05	0.601 J	423	55.0	**1620**	<2.50		
	MW-102	Apr-22		77.1	153	0.815	0.289 J	357	23.3	**1390**	<2.50		
	MW-102	Apr-22	FD	78.1	143	0.812	0.297 J	361	23.5	**1350**	<2.50		
	MW-102	Oct-22		98.3	131	1.14 J	0.279 J	358	84.5	**1280**	<2.50		
	MW-102	Oct-22	FD	99.2	134	1.15 J	0.291 J	366	97.1	**1380**	<2.50		
	MW-103	Apr-19		91.2	**4550**	**5.85**	1.16	3990	133	**9260**	<0.0197		
	MW-103	Jun-20		120	**4480**	**4.50**	1.21 J	2830	44.3	**7620**	<0.500		
	MW-103	Apr-21		186	**4530**	**3.47**	1.26 J	3010	157 J	**8460**	<0.500		
	MW-103	Apr-22		81.5	**4670**	**4.33**	1.06 J	2800	67.2	**8280 Q**	<0.500		
	MW-104	Jun-20		224	69.8	1.51	5.03	77.2	**703**	**1290**	<0.250		
	MW-104	Jun-20	FD	218	69.2	1.33	4.88	73.6	**703**	**1140**	<0.500		
	MW-104	Oct-20		256	71.7	1.34	5.63	73.9	**785**	**1470**	0.153		
	MW-104	Oct-20	FD	241	71.7	1.36	5.28	73.7	**702**	**1450**	<0.0500		
	MW-104	Apr-21		321	55.4	1.15	4.78	67.3	**935**	**1820**	0.109		
	MW-104	Apr-21	FD	314	55.8	1.18	4.58	67.3	**929**	**1760**	<0.0500		
	MW-104	Sep-21		306	69.0	1.31	6.26	70.5	**834**	**1830**	<2.50		
	MW-104	Apr-22		190	41.6	1.28	3.79	47.4	**623**	**1060**	<0.500		
	MW-104	Oct-22		198	58.2	1.58	5.40	60.2	542	**1030**	<2.50		
	MW-105	Jun-20		243	98.8	1.43	2.74	71.7	177	**1220**	<2.50		
	MW-105	Oct-20		170	99.9	1.47	2.73	89.5	17.4	**1050**	<0.0500		
	MW-105	Apr-21		325	119 B	1.32	3.02	94.8	**683**	**1910**	<0.0500		
	MW-105	Apr-22		400	50.7	1.24	3.58	58.4	**1020**	**1980**	<2.50		
	MW-105	Oct-22		181	17.8	0.633	4.04	11.7	372	740 J3	8.85		
	MW-106	Oct-19		360	217	1.29	1.74	264	**1340**	**3240**	<0.985		
	MW-106	Jun-20		295	206	1.11	1.53 J	258	**1130**	**2890**	<10.0		
	MW-106	Oct-20		285	213	0.865	0.777 J	318	**980**	**3110**	<0.0500		
	MW-106	Apr-21		308	**322**	1.01	1.02 J	333	**1580**	**3260**	<0.0500		
	MW-107	Oct-16		186	**271**	**1.82**	0.965 J	80.1	72.4	**1480**	0.170 B		
	MW-107	Apr-17		140	**313**	**1.76**	0.655 J	75.4	<0.0774	**1260**	<0.197		
	MW-107	Apr-18		147	**269**	**1.66**	0.555 J	81.7	1.08 J	**1370**	0.0410 J		
	MW-107	Apr-19		147	246	1.33	0.631 J	82.5	0.657 J	**1270**	<0.0197		
	MW-109	Jun-20		87.7	191	**1.97**	0.786 J	423	496	**2150**	<2.50		
	MW-109	Oct-20		70.2	200	**1.86**	0.700 JB	430	376	**1990**	<0.0500		
	MW-109	Apr-21		60.3	218	**1.78**	0.591 J	492	204	**1820**	0.104		
	MW-109	Sep-21		76.6	61.9	1.44	0.758 J	394	321	**2020**	<0.500		
	MW-109	Apr-22		60.9	201	**1.96**	0.852 J	389	276	**1910**	<1.00		
	MW-109	Oct-22		113	198	**1.83**	1.12 J	431	207	**1210**	<0.250		
	MW-110	Jun-20		97.8	95.6	1.39	<0.534	251	316	**1300**	<0.0500		
	MW-110	Oct-20		95.9	92.9	1.32	<0.534	252	401	**1290**	<0.0500		
	MW-110	Apr-21		101	75.8	1.33	0.430 J	271	433	**1310**	0.0916 J		
	MW-110	Sep-21		84.5	61.9	1.44	0.171 J	246	328	**1180**	<0.0500		
	MW-110	Apr-22		66.3	76.1	**1.82**	0.260 J	239	77.3	**1060**	<0.0500		
	MW-110	Oct-22		94.2	31.7	1.30	<0.108	251	483	**1230**	<0.0500		
	MW-139	Jun-20		362	236	0.646	0.597 J	252	**2010**	**3620**	<0.0500		
	MW-139	Oct-20		373	186	0.533	0.560 J	286	**1510**	**3690**	<0.0500		
	MW-139	Apr-21		363	163	0.636	0.433 J	282	**1630**	**3620**	<0.0500		
	MW-139	Sep-21		361	116	0.795	0.466 J	207	**1710**	**3350**	<0.0500		
	MW-139	Apr-22		328	160 B	0.621	0.463 J	234	**1870**	**2170**	0.0594 J		
	MW-139	Oct-22		369	152	0.831 J	0.471 J	244	**1830**	**2990**	<2.50		
	RA-313	Apr-19		238	221	0.772	1.69	139	**605**	**1510**	0.533		
	RA-313	Jun-20		221	190	0.898	1.66 J	99.9	**635**	**1400**	0.570		
	RA-313	Apr-21		214	153	0.817	1.50 J	99.8 V	545	**1310**	0.640		
	RA-313	Apr-22		214	144	0.938	1.52 J	100	553	**1220**	0.604		
	RW-4	Apr-18		181	242	0.909	1.52	172	410	**1550**	<0.0197		
	RW-4	Apr-19		188	228	0.691	1.24	151	325	**1660**	<0.197		
	RW-4	Jun-20		201	232	0.778	1.13 J	130	446	**1710**	<0.500		
	RW-4	Apr-22		223	218	0.648	0.912 J	125	523	**1480**	<2.50		

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Water Quality Parameters								Cyanide
				Analyte:	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
				CAS:	7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	--	250	1.60	--	--	600	1000	10.0	0.200
				CGWSL Source:	--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**										
South Refinery	RW-5R	Apr-15		4.82	**260**	0.965	0.461 J	189	0.376 J	565	<0.0200	
	RW-5R	Apr-16		4.61 J	**262**	0.564	0.364 J	203	0.655 J	399	0.495 J	
	RW-6	Apr-15		168	**414**	0.628	0.686 J	205	129	**1650**	0.0335 J	
	RW-6R	Apr-16		191	**405**	0.747	0.356 J	226	104	**1470**	0.485 JP1	
	RW-6	Apr-18		183	**409**	0.804	0.684 J	224	45.6	**1530**	0.0460 J	
	RW-6	Apr-19		165	**325**	0.620	0.598 J	191	3.36 J	**1350**	<0.394	
	RW-15C	Apr-17		160	**409**	0.774	1.59	269	19.4	**1610**	0.442 J	
	RW-15C	Apr-18		211 V	**652**	0.868	1.28	349 V	0.754 J	**1850**	<0.0197	
	RW-15C	Apr-19		247	**264**	0.882	1.63	322	**1070**	**2110 J4**	<0.0197	
South RO Field	MW-114	Jun-20		586	**251**	**2.17**	2.42	127	**2060**	**3470**	0.478 J5	
	MW-114	Oct-20		528	233	**2.07**	2.37 B	119	**1590**	**3300**	0.110	
	MW-114	Apr-21		532	180 B	**1.98**	2.46	118	**1410**	**2960**	0.110	
	MW-114	Sep-21		466	227	**2.32**	2.26	109	**1380**	**2820**	<0.0500	
	MW-114	Apr-22		380	114	**2.75**	1.89 J	97.1	**1320**	**2080**	<0.0500	
	MW-114	Oct-22		467	**408**	**2.25**	2.09	158	**1170**	**2670**	<0.0500	
	MW-115	Jun-20		475	**424**	**2.09**	<0.534	187	**2590**	**4320**	3.94	
	MW-115	Oct-20		467	**406**	**1.73**	<0.534	179	**2350**	**4590**	3.99	
	MW-115	Apr-21		508	**357 B**	1.54	0.552 J	212	**2240**	**4560**	3.56	
	MW-115	Sep-21		466	**357**	**1.75**	0.547 J	215	**2170**	**4330**	1.85	
	MW-115	Apr-22		437	**342**	1.57	0.516 J	219	**2220**	**4070 Q**	1.60	
	MW-115	Oct-22		433	**306**	**1.85**	0.363 J	251	**1870**	**3390**	0.492	
	MW-116	Jun-20		559	**282**	1.59	1.11 J	177	**2270**	**4210**	0.520	
	MW-116	Oct-20		550	**260**	1.53	1.14 JB	176	**1920**	**4040**	0.476	
	MW-116	Apr-21		588	**278 B**	1.52	1.39 J	186	**2080**	**4000**	0.636	
	MW-116	Sep-21		542	**283 B**	1.38	1.03 J	174	**1940**	**3860**	0.709	
	MW-116	Apr-22		534	**320 B**	1.56	1.09 J	164	**2300**	**4010**	0.505	
	MW-116	Oct-22		573	**321**	1.57	1.03 J	167	**1910**	**3980**	0.313	
TEL	MW-49	Jun-20		210	**442**	1.38	2.90	309	487	**2350**	<2.50	<0.0900
	MW-49	Oct-20		196	**451**	1.30	2.45	308	437	**2340**	<0.0500	0.0121 J
	MW-49	Apr-21		184	**395**	1.24	1.81 J	333	383	**1900**	<5.00	0.0990 J
	MW-49	Sep-21		164	**333**	1.26	1.96 J	290	317	**1810**	<2.50	<0.0900
	MW-49	Apr-22		144 V	**265**	1.30	1.76 J	270 V	258	**1470**	<0.500	<0.0900
	MW-49	Oct-22		146	233	1.47	1.93 J	277	179	**1410**	<2.50	<0.0450
	TEL-1	Oct-18		160	238	**2.13**	0.650 J	474	**719**	**2080**	<0.394	
	TEL-1	Apr-19		172	250	**2.14**	0.685 J	460	**803**	**2000**	<0.394	
	TEL-1	Oct-19		144	234	**2.23**	0.629 J	474	**640**	**2200**	<0.0197	
	TEL-1	Jun-20		143	184	**1.98**	0.565 J	435	**699**	**2140**	<0.500	
	TEL-2	Oct-18		266	205	0.967	1.14	363	**1360**	**2730**	<0.394	
	TEL-2	Apr-19		274	224	1.09	1.73	377	**1250**	**2940**	<0.394	
	TEL-2	Oct-19		298	159	1.28 B	1.30	407	**1610**	**3550**	<0.394	
	TEL-2	Jun-20		280	130	0.988	1.05 J	373	**1540**	**3400**	<0.500	
	TEL-3	Apr-18		302	**696**	**2.51**	6.00	308	442	**2440**	<0.0985	
	TEL-3	Apr-19		562	52.7	**2.77**	5.37	44.1	**1300**	**2290**	<0.0985	
	TEL-3	Oct-19		603	36.7	**3.06**	5.26	36.2	**1470**	**2790**	<0.985	
	TEL-3	Oct-20		424	114	**1.73**	2.55	86.5	**1290**	**2880**	<0.0500 J6	
	TEL-4	Jun-20		305	**456**	0.932	<0.534	284 O1V	**1480**	**3770**	<0.500	
	TEL-4	Jun-20	FD	308	**455**	0.841	<0.534	286	**1490**	**3770**	<0.0500	
	TEL-4	Oct-20		294	**400**	0.904	<0.534	296 V	**1140**	**3470**	<0.0500	
	TEL-4	Oct-20	FD	291	**450**	0.834	<0.534	307	**1230**	**3510**	<0.0500	
	TEL-4	Apr-21		342	**290**	0.829	0.513 J	367	**1240**	**3510**	0.0747 J	
	TEL-4	Apr-21	FD	341	**325**	0.825	0.521 J	356	**1410**	**3540**	0.0730 J	
	TEL-4	Sep-21		441	**316**	0.765	0.588 J	406	**1990**	**4670**	0.0517 J	
	TEL-4	Sep-21	FD	442	**308**	0.767	0.669 J	396	**2030**	**4700**	<0.0500	
	TEL-4	Apr-22		245	138 B	1.14	0.499 J	320	**1310**	**2330**	<0.500	
	TEL-4	Apr-22	FD	242	132 B	1.13	0.508 J	326	**1300**	**2130**	<0.500	
	TEL-4	Oct-22		275	209	1.05	0.570 J	382	**1290**	**2570**	<0.250	
	TEL-4	Oct-22	FD	282	204	1.03	0.580 J	385	**1290**	**2530**	<0.250	
Three Mile Ditch	MW-8	Apr-19		499	**450**	**2.08**	1.85	336	**3050**	**4640 J4**	**18.7**	
	MW-8	Jun-20		534	**599**	**2.04**	1.98 J	393	**3060**	**5260**	**16.0**	
	MW-8	Apr-21		595	**625**	1.55	2.05	464	**2690**	**5790**	**19.4**	
	MW-8	Apr-22		542	**724**	**2.08**	2.06	433	**3040**	**5650 Q**	**14.7**	
	MW-16	Apr-19		555	**349**	**2.57**	9.13	472	**2590**	**4590 J4**	0.790	
	MW-16	Jun-20		500	**446**	**2.69**	8.82	424	**2610**	**4390**	0.331	
	MW-16	Apr-21		487	**339**	**2.34**	8.73	371	**2040**	**4000**	1.20	
	MW-16	Apr-22		500	**363**	**2.63**	7.99	305	**2350**	**3980 Q**	0.512	
	MW-20	Apr-19		541	**373**	**2.27**	0.509 J	284	**2980**	**4710 Q**	2.02	
	MW-20	Jun-20		522	**382**	**2.26**	0.601 J	284	**2830**	**4590**	2.38	
	MW-20	Apr-21		572	**399**	**1.85**	0.598 J	295	**2590**	**4820**	3.60	
	MW-20	Apr-22		513 V	**518**	**1.85**	0.566 J	250 V	**2570**	**4530**	5.45	
	MW-21	Jun-20		586	**641**	**2.02**	2.17	440	**3130**	**5480**	**18.6**	
	MW-21	Oct-20		552	**616**	1.41	2.15	429	**2700**	**5600**	**17.5**	
	MW-21	Apr-21		592	**601**	**1.77**	2.18	467	**2570**	**5560**	**17.8**	
	MW-21	Sep-21		546	**647**	**1.91**	2.06	423	**2770**	**5490**	**17.1**	
	MW-21	Apr-22		541	**703**	**2.22**	2.20	422	**2960**	**5190**	**13.5**	
	MW-21	Oct-22		545	**670**	**1.93**	1.80 J	423	**2440**	**4440**	**13.4**	
	MW-25	Apr-19		330	**1040**	1.00	4.19	771	**1510**	**3810**	2.98	
	MW-25	Jun-20		323	**976**	1.31	3.90	653	**1450**	**3610**	0.143	
	MW-25	Apr-21		358	**940**	1.01	3.54	472	**1350**	**3660**	0.466	
	MW-25	Apr-22		1250	**5220**	1.10	7.69	2480	**3430**	**25300**	<0.0500	
	MW-26	Apr-19		584	**1010**	**2.09**	5.77	674	**4420**	**7020 Q**	1.66	
	MW-26	Jun-20		585	**671**	**2.06**	5.18	530	**3660**	**5990**	1.69	
	MW-26	Apr-21		517	**527**	**1.82**	4.86	530	**3130**	**5690**	1.79	
	MW-26	Apr-22		505	**605**	**2.36**	4.50	452	**3670**	**6070 Q**	1.52	
	MW-27	Apr-19		297	55.2	1.42	7.82	104	**1030**	**1720 J4**	0.987	
	MW-27	Jun-20		301	56.7	1.38	7.62	91.0	**1070**	**1820**	1.78	
	MW-27	Apr-21		335	60.0	1.18	7.70	94.6	**1110**	**1990**	0.418	
	MW-27	Apr-22		338	45.5	1.16	8.41	86.4	**1270 V**	**2060**	0.598	
	MW-46R	Jun-20		607	204	1.43	0.731 J	172	**2550**	**3930**	0.0922 J	
	MW-46R	Oct-20		553	175 B	1.16	0.725 JB	166	**2070**	**3860**	<0.0500	
	MW-46R	Apr-21		596	203	1.18	0.838 J	179	**2100**	**3850**	0.127	
	MW-46R	Sep-21		466	119 B	1.47	0.779 J	146	**1680**	**3110**	<0.0500	
	MW-46R	Apr-22		372	48.7	1.45	0.558 J	124	**1740**	**3970**	1.25	
	MW-46R	Oct-22		398	28.4	1.58	0.946 J	122	**1360**	**1720**	0.212	
	MW-68	Apr-19		326	145	**2.12**	4.87	153	**1310**	**2260 J4**	1.08	
	MW-68	Jun-20		420	**354**	**1.89**	5.27	190	**1700**	**3040**	2.05	
	MW-68	Apr-21		412	244	**1.70**	5.09	235	**1520**	**3090**	1.70	
	MW-68	Apr-22		390	**261 B**	**1.67**	5.07	218	**1720**	**3010**	2.47	
	MW-71	Apr-19		673	**799**	**1.71**	3.47	502	**3260**	**5940 J4**	**32.1**	<0.00180
	MW-71	Jun-20		630	**770**	**1.89**	3.51	510	**3130**	**6020**	**27.8**	<0.00180
	MW-71	Apr-21		625	**689**	**1.62**	3.42	532	**2810**	**6010**	**27.8**	<0.0450
	MW-71	Apr-22		573	**756**	**2.07**	3.31	512	**3280**	**5680**	**22.2**	<0.00180
	MW-89	Apr-19		607 V	233	**3.32**	11.7	193 V	**1040**	**3470 J4**	1.34	
	MW-89	Jun-20		480	162	**2.92**	8.84	148	**1810**	**2810**	0.151	
	MW-89	Apr-21		451	196	**2.35**	7.06	139 V	**1370**	**2650**	1.05	
	MW-89	Apr-22		421	183	**2.82**	7.91	143	**1640**	**2710**	1.29	

Appendix B, Table B.5 - Summary of Groundwater Analytical Data - Water Quality and Cyanide
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Water Quality Parameters								Cyanide
Analyte:				Calcium	Chloride	Fluoride	Potassium	Sodium	Sulfate	TDS	Nitrate/Nitrite	Cyanide
CAS:				7440-70-2	16887-00-6	16984-48-8	7440-09-7	7440-23-5	14808-79-8	TDS	NO_3NO_2	57-12-5
Units:				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CGWSL:				--	250	1.60	--	--	600	1000	10.0	0.200
CGWSL Source:				--	WQCC Dom	WQCC HH	--	--	WQCC Dom	WQCC Dom	WQCC HH	WQCC HH
Area	**Well ID**	**Date**	**Dup**									
Three Mile Ditch	NP-1	Jun-20		436	**409**	**1.89**	2.59	311	**2260**	**4060**	3.27	
	NP-1	Oct-20										
	NP-1	Apr-21		479	**402**	1.50	1.69 J	325	**1870**	**4090**	3.17	
	NP-1	Sep-21										
	NP-1	Apr-22		392	**411**	**1.96**	1.70 J	279	**1920**	**3760** Q	1.29	
	NP-1	Oct-22										
	NP-6	Apr-15										
	NP-6	Apr-17										
	NP-6	Apr-19										
	NP-6	Apr-21										
Upgradient	UG-1	Apr-19		525	98.3	0.623	1.29	105	**1800**	**3150**	**10.1**	<0.00180
	UG-1	Jun-20		503	97.3	0.784	1.16 J	84.0	**2060**	**3550** B	**10.6**	<0.00180
	UG-1	Apr-21		499	93.5	0.638	1.19 JB	93.1	**1860**	**2950**	**11.1**	<0.00180
	UG-1	Apr-22		536	113	0.662	0.985 J	84.8	**2330**	**3570**	**12.4**	<0.00180
	UG-2	Apr-19		357	61.3	1.32	1.58	90.6	**1020**	**2040** Q	7.70 J6	<0.00180
	UG-2	Jun-20		342	75.9	1.52	1.41 J	85.7	**1190**	**2150** B	9.75	<0.00180
	UG-2	Apr-21		330	66.3	1.36	1.33 JB	83.6	**1070**	**1710**	7.30	0.00321 J
	UG-2	Apr-22		310	70.4	1.41	1.20 J	78.9	**1080**	**1950**	9.64	<0.00180
	UG-3R	Apr-19		479	36.3	0.502	1.99	37.1	**1390**	**2440**	0.905	<0.00180
	UG-3R	Jun-20		440	39.6	0.582	1.93 J	30.1	**1560**	**2430**	1.93	<0.00180
	UG-3R	Apr-21		489	61.7	0.466	2.10	34.9	**1530**	**2300**	3.16	<0.00180
	UG-3R	Apr-22		529 V	58.4	0.433	2.01	31.9	**1840**	**2860**	2.49	<0.00180
	UG-4	Apr-19		694	133	0.544	1.96	190	**2420**	**4210**	0.418	<0.00180
	UG-4	Jun-20		622	108	0.605	1.78 J	168	**2810**	**4210** B	0.326	<0.00180
	UG-4	Apr-21		635	76.0	0.676 J	1.82 J	164	**2610**	**3800**	0.491	<0.00180
	UG-4	Apr-22		614	112	0.441	1.96 J	197	**2890**	**4280**	0.307 J3J6	<0.00180

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.
---	No applicable CGWSL.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
CGWSL Source	Source for CGWSL value (see Table 3)
Dup	Duplicate sample
FD	Field duplicate sample
mg/L	Milligrams per Liter
WQCC Dom	NMED Groundwater standard for domestic exposure, 20.6.2.3103.B NMAC
WQCC HH	NMED Groundwater standard for human health exposure, 20.6.2.3103.A NMAC

Lab Footnote

B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	Relative percent difference value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past recommended holding time.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	1,1'-Biphenyl	1,2,4-Trichlorobenzene	1,4-Dioxane	1-Methyl naphthalene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl naphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3- & 4-Methylphenol (m,p-Cresol)	3,3'-Dichloro-benzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl phenyl ether
				CAS:	92-52-4	120-82-1	123-91-1	90-12-0	95-95-4	88-06-2	120-83-2	105-67-9	51-28-5	121-14-2	606-20-2	91-58-7	95-57-8	91-57-6	95-48-7	88-74-4	88-75-5	65794-96-9	91-94-1	99-09-2	534-52-1	101-55-3
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0371		0.00459	0.0300				0.354						0.0300								
Area	**Well ID**	**Date**	**Dup**																						
Evaporation Ponds	MW-3	04/13/2022				0.000494																			
	MW-4A	04/13/2022				0.000324 J																			
	MW-6A	04/13/2022				0.000292 J																			
	MW-22A	04/13/2022				0.000929																			
	OCD-3	04/12/2022				<0.0000447																			
	OCD-6	04/12/2022				<0.0000447																			
	MW-74	04/12/2022				0.00124																			
	MW-76	04/13/2022				0.000501																			
	MW-78	04/13/2022				<0.0000447																			
	MW-120	09/14/2021				<0.0000447																			
	MW-120	04/13/2022				<0.0000447																			
	MW-121	04/13/2022				<0.0000447																			
	MW-122	04/12/2022				<0.0000447																			
	MW-123	04/13/2022				0.000895																			
Field East of Refinery	KWB-11A	09/14/2021				<0.0000447																			
	KWB-11A	10/11/2022				0.000378 J																			
	KWB-11B	09/14/2021				<0.0000447																			
	KWB-11B	04/13/2022				<0.0000447																			
	MW-113	09/14/2021				<0.0000447																			
	MW-113	09/14/2021	FD			<0.0000456																			
	MW-113	04/13/2022				<0.0000447																			
	MW-113	04/13/2022	FD			<0.0000447																			
	MW-126B	09/14/2021				<0.0000447																			
	MW-126B	04/12/2022				0.000113 J																			
	MW-134	09/15/2021				<0.0000447																			
	MW-134	09/15/2021	FD			<0.0000447																			
	MW-134	04/13/2022				<0.0000447																			
	MW-134	04/13/2022	FD			<0.0000469																			
	MW-135	09/14/2021				<0.0000447																			
	MW-135	04/12/2022				0.0000815 J																			
	RA-4798	09/14/2021				<0.0000447																			
	RA-4798	04/13/2022				<0.0000447																			
NCL	MW-45	09/15/2021				0.000239 J																			
	MW-45	04/13/2022				0.000273 J																			
	MW-53R	04/12/2022				<0.0000447																			
	MW-54A	09/14/2021				<0.0000447																			
	MW-54A	04/12/2022				<0.0000447																			
	MW-108	09/14/2021				<0.0000447																			
	MW-108	04/12/2022				<0.0000447																			
	NCL-31	09/14/2021				<0.0000447																			
	NCL-31	04/12/2022				<0.0000447																			
	NCL-49	09/14/2021				<0.0000447																			
	NCL-49	09/14/2021	FD			<0.0000447																			
	NCL-49	04/12/2022				0.0000839 J																			
	NCL-49	04/12/2022	FD			<0.0000447																			
TEL	MW-49	09/15/2021				0.000415																			
	MW-49	04/13/2022				0.000612																			
	TEL-4	04/02/2019		<0.000325	<0.000355		0.00498	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	<0.000311	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	TEL-4	04/02/2019	FD	<0.000325	<0.000355		0.00531	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	<0.000311	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	TEL-4	10/22/2019		<0.000325	<0.000355		0.00275	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	<0.000311	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	TEL-4	10/22/2019	FD	<0.000325	<0.000355		0.00300	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	<0.000311	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	TEL-4	09/14/2021				0.000499																			
	TEL-4	09/14/2021	FD			0.000558																			
	TEL-4	04/12/2022				<0.0000447																			
	TEL-4	04/12/2022	FD			0.000167 J																			

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	1,1'-Biphenyl	1,2,4-Trichlorobenzene	1,4-Dioxane	1-Methyl naphthalene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl naphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3- & 4-Methylphenol (m,p-Cresol)	3,3'-Dichloro-benzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl phenyl ether
				CAS:	92-52-4	120-82-1	123-91-1	90-12-0	95-95-4	88-06-2	120-83-2	105-67-9	51-28-5	121-14-2	606-20-2	91-58-7	95-57-8	91-57-6	95-48-7	88-74-4	88-75-5	65794-96-9	91-94-1	99-09-2	534-52-1	101-55-3
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:	0.0371		0.00459	0.0300				0.354						0.0300								
Area	**Well ID**	**Date**	**Dup**																						
North Refinery	MW-23	04/03/2019			<0.00163	<0.00178		**0.0531**	<0.00118	<0.00148	<0.00142	<0.00312	<0.0163	<0.00825	<0.00140	<0.00165	<0.00141	<0.00156	<0.00156	<0.00950	<0.00160		<0.0101	<0.00154	<0.0131	<0.00168
	MW-23	10/23/2019			<0.00650	<0.00710		**0.0922**	<0.00472	<0.00594	<0.00568	<0.0125	<0.0650	<0.0330	<0.00558	<0.00660	<0.00566	<0.00622	<0.00624	<0.0380	<0.00640		<0.0404	<0.00616	<0.0524	<0.00670
	MW-29	09/15/2021					0.000826																			
	MW-29	04/12/2022					0.000477																			
	MW-42	04/12/2022					0.000880																			
	MW-43	04/03/2019			0.00228 J	<0.000359		**0.0323**	<0.000238	<0.000300	<0.000287	0.00418 J	<0.00328	<0.00167	<0.000282	<0.000333	<0.000286	0.0232	<0.000315	<0.00192	<0.000323		<0.00204	<0.000311	<0.00265	<0.000338
	MW-43	10/23/2019			<0.00650	<0.00710		**0.0956**	<0.00472	<0.00594	<0.00568	<0.0125	<0.0650	<0.0330	<0.00558	<0.00660	<0.00566	**0.0603**	<0.00624	<0.0380	<0.00640		<0.0404	<0.00616	<0.0524	<0.00670
	MW-61	04/03/2019			0.00315 J	<0.000355		**0.0722**	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	0.0119	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	MW-61	10/23/2019			<0.000325	<0.000355		**0.0902**	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	0.0163	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	MW-61	09/14/2021			0.00362 J	<0.0000698	<0.0000447	**0.0631**	<0.000109	<0.000100	<0.000102	<0.0000636	<0.00593	<0.0000983	<0.000250	<0.0000648	<0.000133	0.0245	<0.0000929	<0.000102	<0.000117		<0.000212	<0.0000869	<0.00112	<0.0000877
	MW-61	04/13/2022			0.00540 J	<0.0000698	<0.0000447	**0.101**	<0.000109	<0.000100	<0.000102	<0.0000636	<0.00593	<0.0000983	<0.000250	<0.0000648	<0.000133	**0.0418**	<0.0000929	<0.000102	<0.000117		<0.000212	<0.0000869	<0.00112	<0.0000877
	MW-61	10/11/2022			0.00336 J	<0.0000698		**0.0738**	<0.000109	<0.000100	0.000268 J	0.000876 J	<0.00593	<0.0000983	<0.000250	<0.0000648	<0.000133	0.0280	<0.0000929	<0.000102	<0.000117	<0.000168	<0.000212	<0.0000869	<0.00112	<0.0000877
	MW-62	04/03/2019			0.00389 J	<0.000355		**0.0628**	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	**0.0320**	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	MW-62	10/23/2019			0.00865 J	<0.00710		**0.144**	<0.00472	<0.00594	<0.00568	<0.0125	<0.0650	<0.0330	<0.00558	<0.00660	<0.00566	**0.0581**	<0.00624	<0.0380	<0.00640		<0.0404	<0.00616	<0.0524	<0.00670
	MW-62	09/14/2021			0.00677 J	<0.000349	0.000237 J	**0.0984**	<0.000545	<0.000500	<0.000510	0.0252 J	<0.0297	<0.000491	<0.00125	<0.000324	<0.000665	**0.0537**	<0.000465	<0.000510	<0.000585		<0.00106	<0.000435	<0.00560	<0.000439
	MW-62	04/12/2022			0.00764 J	<0.000349	<0.0000447	**0.108**	<0.000545	<0.000500	<0.000510	0.0758	<0.0297	<0.000491	<0.00125	<0.000324	<0.000665	**0.0581**	<0.000465	<0.000510	<0.000585		<0.00106	<0.000435	<0.00560	<0.000439
	MW-62	10/11/2022			0.00237 J	<0.0000698		**0.0506**	<0.000109	<0.000100	<0.000102	0.0309	<0.00593	<0.0000983	<0.000250	<0.0000648	<0.000133	0.0124	0.00102 J	<0.000102	<0.000117	0.000474 J	<0.000212	<0.0000869	<0.00112	<0.0000877
	MW-90	09/14/2021					<0.0000447																			
	MW-90	04/12/2022					<0.0000447																			
	MW-93	04/03/2019			0.00229 J	<0.000355		**0.0313**	<0.000236	<0.000297	<0.000284	0.0173	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	0.00507	0.0979	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	MW-93	06/17/2020			<0.00395	<0.000349		**0.0340**	<0.000545	<0.000500	<0.000510	0.0157 J	<0.0297	<0.000491	<0.00125	<0.000324	<0.000665	<0.000585	<0.000465	<0.000510	<0.000585		<0.00106	<0.000435	<0.00560	<0.000439
	MW-95	04/03/2019			<0.000325	<0.000355		<0.000332	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	<0.000311	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	MW-95	06/16/2020			<0.00188	<0.000166		<0.000188	<0.000259	<0.000238	<0.000243	<0.000151	<0.0141	<0.000234	<0.000595	<0.000154	<0.000317	<0.000278	<0.000221	<0.000243	<0.000278		<0.000505	<0.000207	<0.00267	<0.000209
	MW-137	04/03/2019			<0.00650	<0.00710		**0.0480**	<0.00472	<0.00594	<0.00568	<0.0125	<0.0650	<0.0330	<0.00558	<0.00660	<0.00566	**0.0474**	<0.00624	<0.0380	<0.00640		<0.0404	<0.00616	<0.0524	<0.00670
	MW-138	04/03/2019			<0.000325	<0.000355		0.00549	<0.000236	<0.000297	<0.000284	<0.000624	<0.00325	<0.00165	<0.000279	<0.000330	<0.000283	0.00356	<0.000312	<0.00190	<0.000320		<0.00202	<0.000308	<0.00262	<0.000335
	RW-9	04/13/2022					0.000901																			
NRO	MW-117	09/14/2021					<0.0000447																			
	MW-117	04/12/2022					0.000160 J																			
South Refinery	MW-50	09/14/2021					<0.0000447																			
	MW-50	04/12/2022					<0.0000447																			
	MW-101	09/15/2021					0.000575																			
	MW-101	04/13/2022					0.000599																			
	MW-102	09/14/2021					<0.0000447																			
	MW-102	09/14/2021	FD				<0.0000447																			
	MW-102	04/13/2022					<0.0000447																			
	MW-102	04/13/2022	FD				<0.0000447																			
	MW-104	09/14/2021					<0.0000447																			
	MW-104	04/13/2022					<0.0000447																			
	MW-109	09/15/2021					<0.0000447																			
	MW-109	04/13/2022					<0.0000447																			
	MW-110	09/15/2021					<0.0000447																			
	MW-110	04/13/2022					<0.0000447																			
	MW-139	09/14/2021					<0.0000447																			
	MW-139	04/12/2022					<0.0000447																			
	RA-313	04/13/2022					<0.0000447																			
SRO	MW-114	09/14/2021					<0.0000447																			
	MW-114	04/13/2022					0.000464																			
Three Mile Ditch	MW-21	09/15/2021					<0.0000447																			
	MW-21	04/12/2022					0.000149 J																			
	MW-71	04/12/2022					0.000148 J																			
	NP-1	09/15/2021					0.000228 J																			
	NP-1	04/12/2022					0.000123 J																			
UG	UG-1	04/11/2022					<0.0000447																			

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Acetophenone	Anthracene	Atrazine	Benzaldehyde	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl) ether	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butylbenzyl-phthalate	Caprolactam	Carbazole
				CAS:	59-50-7	106-47-8	7005-72-3	100-01-6	100-02-7	83-32-9	208-96-8	98-86-2	120-12-7	1912-24-9	100-52-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	111-91-1	111-44-4	108-60-1	117-81-7	85-68-7	105-60-2	86-74-8
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:						0.535			1.72	0.00300			0.000200							0.00600	0.0160		
Area	**Well ID**	**Date**	**Dup**																								
Evaporation Ponds	MW-3	04/13/2022																									
	MW-4A	04/13/2022																									
	MW-6A	04/13/2022																									
	MW-22A	04/13/2022																									
	OCD-3	04/12/2022																									
	OCD-6	04/12/2022																									
	MW-74	04/12/2022																									
	MW-76	04/13/2022																									
	MW-78	04/13/2022																									
	MW-120	09/14/2021																									
	MW-120	04/13/2022																									
	MW-121	04/13/2022																									
	MW-122	04/12/2022																									
	MW-123	04/13/2022																									
Field East of Refinery	KWB-11A	09/14/2021																									
	KWB-11A	10/11/2022																									
	KWB-11B	09/14/2021																									
	KWB-11B	04/13/2022																									
	MW-113	09/14/2021																									
	MW-113	09/14/2021	FD																								
	MW-113	04/13/2022																									
	MW-113	04/13/2022	FD																								
	MW-126B	09/14/2021																									
	MW-126B	04/12/2022																									
	MW-134	09/15/2021																									
	MW-134	09/15/2021	FD																								
	MW-134	04/13/2022																									
	MW-134	04/13/2022	FD																								
	MW-135	09/14/2021																									
	MW-135	04/12/2022																									
	RA-4798	09/14/2021																									
	RA-4798	04/13/2022																									
NCL	MW-45	09/15/2021																									
	MW-45	04/13/2022																									
	MW-53R	04/12/2022																									
	MW-54A	09/14/2021																									
	MW-54A	04/12/2022																									
	MW-108	09/14/2021																									
	MW-108	04/12/2022																									
	NCL-31	09/14/2021																									
	NCL-31	04/12/2022																									
	NCL-49	09/14/2021																									
	NCL-49	09/14/2021	FD																								
	NCL-49	04/12/2022																									
	NCL-49	04/12/2022	FD																								
TEL	MW-49	09/15/2021																									
	MW-49	04/13/2022																									
	TEL-4	04/02/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000493 J	<0.000309	<0.00247	<0.000291	<0.000260	<0.00140	<0.0000510	0.000119 JB	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	**0.0641**	<0.000275	<0.00259	<0.000260
	TEL-4	04/02/2019	FD	<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000532 J	<0.000309	<0.00247	<0.000291	<0.000260	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.000835 J	<0.000275	<0.00259	<0.000260
	TEL-4	10/22/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000378 J	<0.000309	<0.00247	<0.000291	0.000434 J	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.00120 J	<0.000275	<0.00259	0.000400 J
	TEL-4	10/22/2019	FD	<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000465 J	<0.000309	<0.00247	<0.000291	0.000340 J	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.00146 J	<0.000275	<0.00259	0.000289 J
	TEL-4	09/14/2021																									
	TEL-4	09/14/2021	FD																								
	TEL-4	04/12/2022																									
	TEL-4	04/12/2022	FD																								

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Acetophenone	Anthracene	Atrazine	Benzaldehyde	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl) ether	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butylbenzyl-phthalate	Caprolactam	Carbazole
				CAS:	59-50-7	106-47-8	7005-72-3	100-01-6	100-02-7	83-32-9	208-96-8	98-86-2	120-12-7	1912-24-9	100-52-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	111-91-1	111-44-4	108-60-1	117-81-7	85-68-7	105-60-2	86-74-8
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:						0.535			1.72	0.00300			0.000200							0.00600	0.0160		
Area	Well ID	Date	Dup																								
North Refinery	MW-23	04/03/2019		<0.00132	<0.00191	<0.00152	<0.00174	<0.0101	<0.00158	<0.00154	<0.0123	<0.00146	0.00173 J	<0.00700	<0.000255	<0.000191	<0.000448	<0.0000113	<0.00178	<0.00164	<0.00810	<0.00222	0.00460 J	<0.00138	<0.0130	0.0132 J
	MW-23	10/23/2019		<0.00526	<0.00764	<0.00606	<0.00698	<0.0402	<0.00632	<0.00618	<0.0494	<0.00582	**<0.00520**	<0.0280	<0.00102	**<0.000762**	<0.00179	<0.0000454	<0.00710	<0.00658	<0.0324	<0.00890	**<0.0142**	<0.00550	<0.0518	0.0251 J
	MW-29	09/15/2021																									
	MW-29	04/12/2022																									
	MW-42	04/12/2022																									
	MW-43	04/03/2019		<0.000266	<0.000386	<0.000306	<0.000352	<0.00203	0.000872 J	<0.000312	<0.00249	<0.000294	0.000347 J	<0.00141	<0.0000515	<0.0000385	<0.0000905	<0.00000229	<0.000359	<0.000332	<0.00164	<0.000449	0.000920 J	0.00115 J	<0.00262	0.00772 J
	MW-43	10/23/2019		<0.00526	<0.00764	<0.00606	<0.00698	<0.0402	<0.00632	<0.00618	<0.0494	<0.00582	**<0.00520**	<0.0280	<0.00102	**<0.000762**	<0.00179	<0.0000454	<0.00710	<0.00658	<0.0324	<0.00890	**<0.0142**	<0.00550	<0.0518	0.0145 J
	MW-61	04/03/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000667 J	<0.000309	<0.00247	<0.000291	<0.000260	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	**0.00818**	<0.000275	<0.00259	0.00142 J
	MW-61	10/23/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000689 J	<0.000309	<0.00247	<0.000291	<0.000260	<0.00140	<0.0000510	<0.0000381	<0.0000896	0.00000240 J	<0.000355	<0.000329	<0.00162	<0.000445	0.00187 J	<0.000275	<0.00259	0.00127 J
	MW-61	09/14/2021		<0.000131	<0.000234	<0.0000926	<0.0000910	<0.000143	0.000700 J	<0.0000921	<0.000208	<0.0000804	<0.000255	<0.00169 J4	<0.000199	<0.0000381	<0.000130	<0.000121	<0.000120	<0.000116	<0.000137	<0.000210	**0.00884**	<0.000765	<0.000309	0.00145 J
	MW-61	04/13/2022		<0.000131	<0.000234	<0.0000926	<0.0000910	<0.000143	0.000905 J	<0.0000921	<0.000208	<0.0000804	<0.000255	<0.00169 J4	<0.000199	<0.0000381	<0.000130	<0.000121	<0.000120	<0.000116	<0.000137	<0.000210	**0.0152**	<0.000765	<0.000309	0.00179 J
	MW-61	10/11/2022		<0.000131	<0.000234	<0.0000926	<0.0000910	<0.000143	0.000495 J	<0.0000921	<0.000208	<0.0000804	<0.000255	<0.00169	<0.000199	<0.0000381	<0.000130	<0.000121	<0.000120	<0.000116	<0.000137	<0.000210	**0.0143**	<0.000765	<0.000309	0.00128 J
	MW-62	04/03/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.00134	<0.000309	<0.00247	<0.000291	<0.000260	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.00168 J	<0.000275	<0.00259	0.00472 J
	MW-62	10/23/2019		<0.00526	<0.00764	<0.00606	<0.00698	<0.0402	<0.00632	<0.00618	<0.0494	<0.00582	**<0.00520**	<0.0280	<0.00102	**<0.000762**	<0.00179	<0.0000454	<0.00710	<0.00658	<0.0324	<0.00890	**<0.0142**	<0.00550	<0.0518	0.0103 J
	MW-62	09/14/2021		<0.000655	<0.00117	<0.000463	<0.000455	<0.000715	0.00161 J	<0.000461	<0.00104	<0.000402	<0.00128	<0.00845 J4	<0.000995	<0.000191	<0.000650	<0.000605	<0.000600	<0.000580	<0.000685	<0.00105	<0.00448	<0.00383	<0.00154	0.00470 J
	MW-62	04/12/2022		<0.000655	<0.00117	<0.000463	<0.000455	<0.000715	0.00186 J	<0.000461	<0.00104	<0.000402	<0.00128	<0.00845 J4	<0.000995	<0.000191	<0.000650	<0.000605	<0.000600	<0.000580	<0.000685	<0.00105	<0.00448	<0.00383	<0.00154	0.00435 J
	MW-62	10/11/2022		<0.000131	<0.000234	<0.0000926	<0.0000910	<0.000143	0.000977 J	<0.0000921	<0.000208	<0.0000804	<0.000255	<0.00169	<0.000199	<0.0000381	<0.000130	<0.000121	<0.000120	<0.000116	<0.000137	<0.000210	<0.000895	<0.000765	<0.000309	0.00348 J
	MW-90	09/14/2021																									
	MW-90	04/12/2022																									
	MW-93	04/03/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.00176	<0.000309	<0.00247	0.00179	<0.000260	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.00129 J	<0.000275	<0.00259	0.0257
	MW-93	06/17/2020		<0.000655	<0.00117	<0.000463	<0.000455	<0.000715	0.00190 J	<0.000461	<0.00104	0.00137 J	<0.00128	<0.00845 J4	<0.000995	<0.000191	<0.000650	<0.000605	<0.000600	<0.000580	<0.000685	<0.00105	<0.00448	<0.00383	<0.00154	0.0264 J
	MW-95	04/03/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000508 J	<0.000309	<0.00247	<0.000291	0.00126 J	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	0.000850 J	<0.000275	<0.00259	<0.000260
	MW-95	06/16/2020		<0.000312	<0.000557	<0.000220	<0.000217	<0.000340	0.000679 J	<0.000219	<0.000495	<0.000191	<0.000607	<0.00402 J4	<0.000474	<0.0000907	<0.000309	<0.000288	<0.000286	<0.000276	<0.000326	<0.000500	<0.00213	<0.00182	<0.000735	<0.000264
	MW-137	04/03/2019		<0.00526	<0.00764	<0.00606	<0.00698	<0.0402	<0.00632	<0.00618	<0.0494	<0.00582	**<0.00520**	<0.0280	<0.00102	**<0.000762**	<0.00179	<0.0000454	<0.00710	<0.00658	<0.0324	<0.00890	**<0.0142**	<0.00550	<0.0518	<0.00520
	MW-138	04/03/2019		<0.000263	<0.000382	<0.000303	<0.000349	<0.00201	0.000968 J	<0.000309	<0.00247	<0.000291	0.000420 J	<0.00140	<0.0000510	<0.0000381	<0.0000896	<0.00000227	<0.000355	<0.000329	<0.00162	<0.000445	<0.000709	<0.000275	<0.00259	0.000643 J
	RW-9	04/13/2022																									
NRO	MW-117	09/14/2021																									
	MW-117	04/12/2022																									
South Refinery	MW-50	09/14/2021																									
	MW-50	04/12/2022																									
	MW-101	09/15/2021																									
	MW-101	04/13/2022																									
	MW-102	09/14/2021																									
	MW-102	09/14/2021	FD																								
	MW-102	04/13/2022																									
	MW-102	04/13/2022	FD																								
	MW-104	09/14/2021																									
	MW-104	04/13/2022																									
	MW-109	09/15/2021																									
	MW-109	04/13/2022																									
	MW-110	09/15/2021																									
	MW-110	04/13/2022																									
	MW-139	09/14/2021																									
	MW-139	04/12/2022																									
	RA-313	04/13/2022																									
SRO	MW-114	09/14/2021																									
	MW-114	04/13/2022																									
Three Mile Ditch	MW-21	09/15/2021																									
	MW-21	04/12/2022																									
	MW-71	04/12/2022																									
	NP-1	09/15/2021																									
	NP-1	04/12/2022																									
UG	UG-1	04/11/2022																									

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds
2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	Chrysene	Dibenz(a,h) anthracene	Dibenzofuran	Diethyl-phthalate	Dimethyl-phthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachloro-benzene	Hexachloro-butadiene	Hexachloro-cyclopentadiene	Hexachloro-ethane	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	n-Nitroso-di-n-propylamine	N-Nitro-sodi-phenylamine	Pentachloro-phenol	Phenanthrene	Phenol	Pyrene
				CAS:	218-01-9	53-70-3	132-64-9	84-66-2	131-11-3	84-74-2	117-84-0	206-44-0	86-73-7	118-74-1	87-68-3	77-47-4	67-72-1	193-39-5	78-59-1	91-20-3	98-95-3	621-64-7	86-30-6	87-86-5	85-01-8	108-95-2	129-00-0
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:			0.00790	14.8		0.885		0.802	0.288							0.0300					0.117	0.00500	0.117
Area	**Well ID**	**Date**	**Dup**																								
Evaporation Ponds	MW-3	04/13/2022																									
	MW-4A	04/13/2022																									
	MW-6A	04/13/2022																									
	MW-22A	04/13/2022																									
	OCD-3	04/12/2022																									
	OCD-6	04/12/2022																									
	MW-74	04/12/2022																									
	MW-76	04/13/2022																									
	MW-78	04/13/2022																									
	MW-120	09/14/2021																									
	MW-120	04/13/2022																									
	MW-121	04/13/2022																									
	MW-122	04/12/2022																									
	MW-123	04/13/2022																									
Field East of Refinery	KWB-11A	09/14/2021																									
	KWB-11A	10/11/2022																									
	KWB-11B	09/14/2021																									
	KWB-11B	04/13/2022																									
	MW-113	09/14/2021																									
	MW-113	09/14/2021	FD																								
	MW-113	04/13/2022																									
	MW-113	04/13/2022	FD																								
	MW-126B	09/14/2021																									
	MW-126B	04/12/2022																									
	MW-134	09/15/2021																									
	MW-134	09/15/2021	FD																								
	MW-134	04/13/2022																									
	MW-134	04/13/2022	FD																								
	MW-135	09/14/2021																									
	MW-135	04/12/2022																									
	RA-4798	09/14/2021																									
	RA-4798	04/13/2022																									
NCL	MW-45	09/15/2021																									
	MW-45	04/13/2022																									
	MW-53R	04/12/2022																									
	MW-54A	09/14/2021																									
	MW-54A	04/12/2022																									
	MW-108	09/14/2021																									
	MW-108	04/12/2022																									
	NCL-31	09/14/2021																									
	NCL-31	04/12/2022																									
	NCL-49	09/14/2021																									
	NCL-49	09/14/2021	FD																								
	NCL-49	04/12/2022																									
	NCL-49	04/12/2022	FD																								
TEL	MW-49	09/15/2021																									
	MW-49	04/13/2022																									
	TEL-4	04/02/2019		<0.000332	<0.0000644	0.00177 J	<0.000282	<0.000283	0.000273 J	<0.000278	<0.000310	0.00118	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	<0.000372	<0.000367	<0.000403	<0.00119	<0.000313	<0.000366	0.00150 J	<0.000330
	TEL-4	04/02/2019	FD	<0.000332	<0.0000644	0.00205 J	<0.000282	<0.000283	0.000267 J	<0.000278	<0.000310	0.00106	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	<0.000372	<0.000367	<0.000403	<0.00119	<0.000313	<0.000366	0.00177 J	<0.000330
	TEL-4	10/22/2019		<0.000332	<0.0000644	0.00161 J	<0.000282	<0.000283	0.000312 J	<0.000278	<0.000310	0.000570 J	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	0.000383 J	<0.000367	<0.000403	<0.00119	<0.000313	<0.000366	0.000961 J	<0.000330
	TEL-4	10/22/2019	FD	<0.000332	<0.0000644	0.00169 J	<0.000282	<0.000283	0.000278 J	<0.000278	<0.000310	0.000676 J	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	0.000395 J	<0.000367	<0.000403	<0.00119	<0.000313	<0.000366	0.00146 J	<0.000330
	TEL-4	09/14/2021																									
	TEL-4	09/14/2021	FD																								
	TEL-4	04/12/2022																									
	TEL-4	04/12/2022	FD																								

Appendix B, Table B.6 - Summary of Groundwater Analytical Data - Semi-Volatile Organic Compounds

2022 Annual Groundwater Monitoring Report
HF Sinclair Navajo Refining LLC, Artesia Refinery, Artesia, New Mexico

				Analyte Group:	Semi-Volatile Organic Compounds																				
				Analyte:	Chrysene	Dibenz(a,h) anthracene	Dibenzofuran	Diethyl-phthalate	Dimethyl-phthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachloro-benzene	Hexachloro-butadiene	Hexachloro-cyclopentadiene	Hexachloro-ethane	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	n-Nitroso-di-n-propylamine	N-Nitro-sodi-phenylamine	Pentachloro-phenol	Phenanthrene	Phenol	Pyrene
				CAS:	218-01-9	53-70-3	132-64-9	84-66-2	131-11-3	84-74-2	117-84-0	206-44-0	86-73-7	118-74-1	87-68-3	77-47-4	67-72-1	193-39-5	78-59-1	91-20-3	98-95-3	621-64-7	86-30-6	87-86-5	85-01-8	108-95-2	129-00-0
				Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				CGWSL:			0.00790	14.8		0.885		0.802	0.288							0.0300					0.117	0.00500	0.117
Area	**Well ID**	**Date**	**Dup**																								
North Refinery	MW-23	04/03/2019			<0.00166	<0.000322	0.00394 J	<0.00141	<0.00141	<0.00133	<0.00139	<0.00155	0.00472 J	<0.00170	<0.00164	<0.0117	<0.00183	<0.00140	<0.00136	**0.0450**	<0.00184	<0.00201	<0.00595	<0.00157	0.00788	**0.0133 J**	<0.00165
	MW-23	10/23/2019			<0.00664	<0.00129	**0.00924 J**	<0.00564	<0.00566	<0.00532	<0.00556	<0.00620	0.0112 J	<0.00682	<0.00658	<0.0466	<0.00730	<0.00558	<0.00544	0.0262	<0.00734	<0.00806	<0.0238	<0.00626	0.0146 J	**0.0166 J**	<0.00660
	MW-29	09/15/2021																									
	MW-29	04/12/2022																									
	MW-42	04/12/2022																									
	MW-43	04/03/2019			<0.000335	<0.0000650	0.00192 J	<0.000285	<0.000286	<0.000269	<0.000281	<0.000313	0.00264	<0.000344	<0.000332	<0.00235	<0.000369	<0.000282	<0.000275	**0.0749**	<0.000371	<0.000407	<0.00120	<0.000316	0.00224	**0.00703 J**	<0.000333
	MW-43	10/23/2019			<0.00664	<0.00129	<0.00676	<0.00564	<0.00566	<0.00532	<0.00556	<0.00620	0.00946 J	<0.00682	<0.00658	<0.0466	<0.00730	<0.00558	<0.00544	**0.249**	<0.00734	<0.00806	<0.0238	<0.00626	0.00892 J	**<0.00668**	<0.00660
	MW-61	04/03/2019			<0.000332	<0.0000644	0.00293 J	<0.000282	<0.000283	<0.000266	<0.000278	<0.000310	0.00193	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	**0.0701**	<0.000367	<0.000403	<0.00119	<0.000313	0.00126	0.00457 J	<0.000330
	MW-61	10/23/2019			<0.000332	<0.0000644	0.00398 J	<0.000282	<0.000283	<0.000266	<0.000278	<0.000310	0.00285	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	**0.0831**	<0.000367	<0.000403	<0.00119	<0.000313	0.00146	0.00164 J	<0.000330
	MW-61	09/14/2021			<0.000130	<0.0000644	0.00276 J	<0.000287	<0.000260	<0.000453	<0.000932	<0.000102	0.00187	<0.0000755	<0.0000968	<0.0000598	<0.000127	<0.000279	<0.000143	**0.0894**	<0.000297	<0.000261	<0.00237	<0.000313	0.00132	<0.00433	<0.000107
	MW-61	04/13/2022			<0.000130	<0.0000644	0.00406 J	<0.000287	<0.000260	<0.000453	<0.000932	<0.000102	0.00241	<0.0000755	<0.0000968	<0.0000598	<0.000127	<0.000279	<0.000143	**0.143**	<0.000297	<0.000261	<0.00237	<0.000313	0.00147	<0.00433	<0.000107
	MW-61	10/11/2022			<0.000130	<0.0000644	0.00311 J	<0.000287	<0.000260	<0.000453	<0.000932	<0.000102	0.00184	<0.0000755	<0.0000968	<0.0000598	<0.000127	<0.000279	<0.000143	**0.0978**	<0.000297	<0.000261	<0.00237 J4	<0.000313	0.00119	<0.00433	<0.000107
	MW-62	04/03/2019			<0.000332	<0.0000644	0.00458 J	<0.000282	<0.000283	<0.000266	<0.000278	<0.000310	0.00221	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	**0.0861**	<0.000367	<0.000403	<0.00119	<0.000313	0.00191	<0.000334	<0.000330
	MW-62	10/23/2019			<0.00664	<0.00129	**0.0128 J**	<0.00564	<0.00566	<0.00532	<0.00556	<0.00620	0.00862 J	<0.00682	<0.00658	<0.0466	<0.00730	<0.00558	<0.00544	**0.168**	<0.00734	<0.00806	<0.0238	<0.00626	<0.00732	**<0.00668**	<0.00660
	MW-62	09/14/2021			<0.000650	<0.000322	0.00575 J	<0.00143	<0.00130	<0.00227	<0.00466	<0.000510	0.00375 J	<0.000378	<0.000484	<0.000299	<0.000635	<0.00140	<0.000715	**0.157**	<0.00148	<0.00131	<0.0119	<0.00157	0.00194 J	**<0.0217**	<0.000535
	MW-62	04/12/2022			<0.000650	<0.000322	0.00579 J	<0.00143	<0.00130	<0.00227	<0.00466	<0.000510	0.00369 J	<0.000378	<0.000484	<0.000299	<0.000635	<0.00140	<0.000715	**0.161**	<0.00148	<0.00131	<0.0119	<0.00157	0.00241 J	**<0.0217**	<0.000535
	MW-62	10/11/2022			<0.000130	<0.0000644	0.00334 J	<0.000287	<0.000260	<0.000453	<0.000932	<0.000102	0.00238	<0.0000755	<0.0000968	<0.0000598	<0.000127	<0.000279	<0.000143	**0.0534**	<0.000297	<0.000261	<0.00237 J4	<0.000313	0.00227	<0.00433	<0.000107
	MW-90	09/14/2021																									
	MW-90	04/12/2022																									
	MW-93	04/03/2019			<0.000332	<0.0000644	0.00397 J	<0.000282	<0.000283	<0.000266	<0.000278	0.000373 J	0.00784	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	**0.0307**	<0.000367	<0.000403	<0.00119	<0.000313	0.0119	0.00492 J	0.000570 J
	MW-93	06/17/2020			<0.000650	<0.000322	0.00396 J	<0.00143	<0.00130	<0.00227	<0.00466	<0.000510	0.00813	<0.000378	<0.000484	<0.000299	<0.000635	<0.00140	<0.000715	0.0298	<0.00148	<0.00131	<0.0119	<0.00157	0.0132	**<0.0217**	0.000746 J
	MW-95	04/03/2019			<0.000332	<0.0000644	0.00173 J	<0.000282	<0.000283	<0.000266	<0.000278	<0.000310	<0.000323	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	<0.000372	<0.000367	<0.000403	<0.00119	<0.000313	<0.000366	0.00279 J	<0.000330
	MW-95	06/16/2020			<0.000309	<0.000153	0.00259 J	<0.000683	<0.000619	<0.00108	<0.00222	<0.000243	<0.000201	<0.000180	<0.000230	<0.000142	<0.000302	<0.000664	<0.000340	0.00115 JB	<0.000707	<0.000621	<0.00564	<0.000745	<0.000267	**<0.0103**	<0.000255
	MW-137	04/03/2019			<0.00664	<0.00129	<0.00676	0.00635 J	<0.00566	<0.00532	<0.00556	<0.00620	<0.00646	<0.00682	<0.00658	<0.0466	<0.00730	<0.00558	<0.00544	**0.116**	<0.00734	<0.00806	<0.0238	<0.00626	<0.00732	**<0.00668**	<0.00660
	MW-138	04/03/2019			<0.000332	<0.0000644	0.000611 J	<0.000282	<0.000283	<0.000266	<0.000278	<0.000310	0.00138	<0.000341	<0.000329	<0.00233	<0.000365	<0.000279	<0.000272	0.0117	<0.000367	<0.000403	<0.00119	<0.000313	0.000583 J	0.00288 J	<0.000330
	RW-9	04/13/2022																									
NRO	MW-117	09/14/2021																									
	MW-117	04/12/2022																									
South Refinery	MW-50	09/14/2021																									
	MW-50	04/12/2022																									
	MW-101	09/15/2021																									
	MW-101	04/13/2022																									
	MW-102	09/14/2021																									
	MW-102	09/14/2021	FD																								
	MW-102	04/13/2022																									
	MW-102	04/13/2022	FD																								
	MW-104	09/14/2021																									
	MW-104	04/13/2022																									
	MW-109	09/15/2021																									
	MW-109	04/13/2022																									
	MW-110	09/15/2021																									
	MW-110	04/13/2022																									
	MW-139	09/14/2021																									
	MW-139	04/12/2022																									
	RA-313	04/13/2022																									
SRO	MW-114	09/14/2021																									
	MW-114	04/13/2022																									
Three Mile Ditch	MW-21	09/15/2021																									
	MW-21	04/12/2022																									
	MW-71	04/12/2022																									
	NP-1	09/15/2021																									
	NP-1	04/12/2022																									
UG	UG-1	04/11/2022																									

Definitions

X	Reported concentration, X, exceeds the CGWSL.
X	Analyte detected above the detection limit at a concentration equal to X.
<x	Analyte not detected at detection limit equal to x.
<x	Analyte not detected at detection limit equal to x, but x exceeds the CGWSL.
	Blank cell indicates a sample was collected from the well during the indicated sampling event, but the analyte was not analyzed.

Lab Footnote

B	Analyte was also detected in the associated method blank.
J	Indicates an estimated value.

Abbreviations

CGWSL	Critical Groundwater Screening Level (see Table 3)
NRO	North RO Field
SRO	South RO Field
UG	Upgradient
Dup	Duplicate sample
FD	Field duplicate sample
mg/L	Milligrams per Liter

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 227929

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 227929
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
lbarr	None	10/3/2023