QUARTERLY REPORT

January through March 2022

North Indian Bend Wash Superfund Site

Prepared for:

U.S. Environmental Protection Agency
Region IX

Prepared by:

NIBW Participating Companies

May 27, 2022



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1 INTRODUCTION

This Quarterly Report (Report) summarizes the remedial activities performed and data collected at the North Indian Bend Wash (NIBW) Superfund Site (Site) during January through March 2022 (the reporting period) by the NIBW Participating Companies (PCs) pursuant to the Amended Consent Decree, CV-91-1835-PHX-FJM (Amended CD), entered by the U.S. District Court on June 5, 2003. A detailed summary of the components and work requirements of the remedial action program can be found in the Record of Decision Amendment – Final Operable Unit, Indian Bend Wash Area, dated September 27, 2001, and the Statement of Work (SOW), Appendix A to the Amended CD. Remedial activities are conducted to address constituents of concern (COCs) in groundwater at the Site.

2 GROUNDWATER MONITORING AND EVALUATION PROGRAM

During the reporting period, the NIBW PCs conducted sampling and analysis of monitoring and extraction wells according to requirements specified in the Groundwater Monitoring and Evaluation Plan (GM&EP), dated October 8, 2002. The U.S. Environmental Protection Agency (EPA) approved the GM&EP on the same date. The GM&EP and associated Phase I Sampling and Analysis Plan supersede all previous groundwater monitoring requirements in the Operable Unit-1 (OU-1) and OU-2 Consent Decrees. The NIBW PCs are currently working with EPA and other Technical Committee members to prepare an updated GM&EP to ensure that monitoring, analysis, and reporting requirements are protective and relevant.

During the reporting period, NIBW PCs' contractors collected groundwater samples from monitoring wells and remedial extraction wells, as shown in **Table 1**. Wells that were sampled during the reporting period are shown on **Figure 1**. The NIBW COCs are: trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene (DCE), and chloroform. All samples are analyzed by Eurofins TestAmerica (TestAmerica) per EPA method 524.2 for drinking water. Results for all COCs are included in the tables in **Appendix A**. TCE is the principal COC for NIBW; results for TCE are given in the tables included in the report.

Sample counts for monitoring wells (by hydrologic unit) and extraction wells (by treatment system) are summarized in **Table 1**. Sampling details for the reporting period are summarized in **Appendix A**. **Table A-1** lists all wells scheduled for sampling during the reporting period as part of the NIBW monitoring program and indicates which aquifer unit(s) the wells are designed to monitor, the sampling frequency for each well, and comments regarding why any specific wells were not sampled as planned. A summary of results for groundwater samples collected from monitoring wells, pursuant to the GM&EP, during the reporting period is provided in **Table A-2**. A summary of results for groundwater samples collected from extraction wells, pursuant to the GM&EP, during the reporting period is provided in **Table A-3**.

North Indian Bend Wash Superfund Site



Table 1. Groundwater Monitoring Summary

Number of Wells Sampled	Well Type	Hydrologic Unit	Treatment System	Contractor
14	Monitoring Well	MAU		Verdad / M&A
9	Monitoring Well	LAU		Verdad / M&A
1	Monitoring Well	MAU/LAU		M&A
0 (A)	Extraction Well		Area 7 GWETS	EnSolutions
2	Extraction Well		Area 12 GWETS	EnSolutions
2	Extraction Well		MRTF	EnSolutions
1	Extraction Well		NGTF	EnSolutions
2	Extraction Well		CGTF	EnSolutions
31	All Wells			

Notes:

(A) Area 7 GWETS did not operate in the first quarter; thus, no samples were obtained.

CGTF = Central Groundwater Treatment Facility

GWETS = Groundwater Extraction and Treatment System

LAU = Lower Alluvium Unit

MAU = Middle Alluvium Unit

MRTF = Miller Road Treatment Facility

NGTF = NIBW Granular Activated Carbon (GAC) Treatment Facility

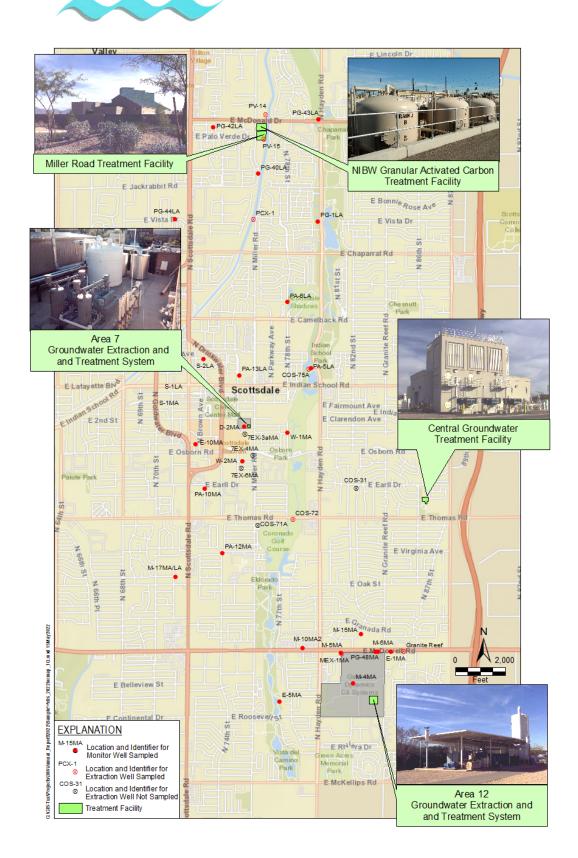


Figure 1. Location Map

3 GROUNDWATER REMEDIATION PROGRAM

The NIBW remedy provides for containment of the Middle Alluvium Unit (MAU) / Lower Alluvium Unit (LAU) plumes through a groundwater extraction and treatment program. Treatment occurs at MRTF, NGTF, CGTF, and Area 7 and Area 12 GWETSs. Locations of the groundwater treatment facilities and their corresponding extraction wells are shown on **Figure 1**. The NIBW PCs are responsible for compliance monitoring and reporting for MRTF, NGTF, Area 7 GWETS, and Area 12 GWETS. This Report provides a summary of operations and data collected for these 4 facilities during the reporting period. The City of Scottsdale owns and operates CGTF and reports the results of compliance testing and plant operations for this facility directly to EPA and Arizona Department of Environmental Quality (ADEQ). EPCOR Water USA (EPCOR) owns and operates MRTF. A summary of the treatment system monitoring data for MRTF, NGTF, Area 7, and Area 12 facilities for January through March 2022 is provided in **Table A-4**.

3.1 Groundwater Remediation at MRTF

MRTF achieved performance standards specified in the SOW during the reporting period by consistently treating groundwater to reduce NIBW COC concentrations safely below Treatment Standards. During the reporting period, groundwater from wells PV-14 and PV-15 was treated at MRTF by EPCOR and primarily delivered to the Paradise Valley Arsenic Removal Facility (PVARF) for subsequent distribution by EPCOR for drinking water use. If operating on the scheduled monitoring dates, monthly samples of groundwater from wells PV-14 and PV-15 were collected by the NIBW PCs and analyzed by TestAmerica. A summary of analytical results for extraction wells PV-14 and PV-15, in micrograms per liter (μ g/L), is included in **Table 2**.

Table 2. MRTF Groundwater & Treatment System Monitoring (TCE in μg/L)

Sample Date	PV-14	PV-15	Tower 1 Effluent	Tower 2 Effluent	Tower 3 Effluent
01/03/2022	<0.50	4.9	<0.50		<0.50
02/01/2022	0.80	5.8	<0.50		<0.50
03/01/2022	0.59	4.6	<0.50		<0.50

Note:

All samples collected by EnSolutions

In addition to the routine monitoring of extraction wells conducted pursuant to the GM&EP, the NIBW PCs ordinarily conduct supplemental sampling at wells PV-11 and PV-12B (if operating on the scheduled monthly sampling date). No samples were obtained at wells PV-11 or PV-12B



in the quarter because the wells were offline when the NIBW PCs visited the wells to obtain samples.

MRTF operated the entire reporting period. The total volume of groundwater extracted and treated at MRTF during the reporting period was approximately 556.5 million gallons (MG). Of this total, 273.6 MG was produced from well PV-14 and approximately 282.9 MG was produced from well PV-15. None of the treated water was discharged to the Salt River Project (SRP) Arizona Canal during the reporting period. An estimated 13 pounds of TCE were removed from groundwater treated at MRTF during the reporting period.

3.2 Groundwater Remediation at NGTF

NGTF achieved performance standards specified in the SOW during the reporting period by consistently treating groundwater to reduce NIBW COC concentrations below Treatment Standards. Treated water from the treatment system can be discharged to the City of Scottsdale Chaparral Water Treatment Plant (CWTP) and/or the Arizona Canal under the NGTF Arizona Pollutant Discharge Elimination System (AZPDES) permit; for the reporting period, about 219.9 MG of treated water was discharged to the CWTP and 39.6 MG of treated water was discharged to the Arizona Canal. For treated water discharged to the Arizona Canal, samples were collected at the Arizona Canal outfall for analyses required by the AZPDES permit. The results of sample analyses were summarized in monthly Discharge Monitoring Reports (DMRs) and submitted directly to EPA and ADEQ under separate cover.

During the reporting period, samples were collected monthly from NGTF extraction well PCX-1 by EnSolutions and analyzed for NIBW COCs by TestAmerica.

Compliance monitoring was performed in accordance with the SOW to verify removal of volatile organic compounds (VOCs) from the extracted groundwater and assure Treatment Standards were achieved. Treatment system samples were collected by the Operator and submitted to TestAmerica for analysis of NIBW COCs.

Results of TCE analyses for groundwater monitoring and treatment system samples collected during the reporting period are included in the following tables.

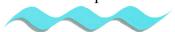


Table 3. NGTF Groundwater Monitoring (TCE in μg/L)

Date	PCX-1
01/05/2022	44
02/22/2022	40
03/14/2022	41

Table 4. NGTF Treatment System Monitoring (TCE in μg/L)

	Influent	Effluent
Week of:	NGTF-INFa	AZCOb or CHAP-CPc
Jan 03-07		<0.50
Jan 10-14		<0.50
Jan 17-21		<0.50
Jan 24-28		<0.50
Jan 31-Feb 04		<0.50
Feb 07-11		<0.50
Feb 14-18		<0.50
Feb 21-25		<0.50
Feb 28-Mar 04		<0.50
Mar 07-11		<0.50
Mar 14-18	43	<0.50
Mar 21-25		<0.50
Mar 28-Apr 01		<0.50

^a Results for influent samples, if obtained, from NGTF are not compliance data; however, they are included here for completeness when obtained. Extraction well PCX-1 is not accessible for wellhead sampling. Samples for the well are obtained at the NGTF pipeline, just a few feet away from the sample port for the NGTF influent. These samples meet the compliance requirements for monitoring influent to the treatment plant, therefore, beginning in July 2018, the redundant NGTF influent samples are no longer obtained.

NGTF was available for treatment of groundwater the entire reporting period. Well PCX-1 was offline while testing of the well was conducted from March 29 through March 31, 2022. The system was fully operational again on April 1, 2022. The total volume of groundwater extracted from well PCX-1 and treated at NGTF during the reporting period was approximately 259.8 MG, and an estimated 90 pounds of TCE were removed.

^b AZCO = Discharge to Arizona Canal

^c CHAP-CP = Discharge to City of Scottsdale Chaparral Water Treatment Plant



3.3 Groundwater Remediation at Area 7 GWETS

NIBW Area 7 GWETS was not in operation during the reporting period due to supply-chain challenges with upgraded communication system equipment. Compliance monitoring could not be conducted during the first quarter of 2022 with Area 7 GWETS offline.

Table 5. Area 7 Groundwater Monitoring (TCE in μg/L)

Date 7EX-3aMA		7EX-4MA	7EX-6MA				
January - March	Area 7 GWETS offline; no samples collected						

Note:

Area 7 GWETS did not operate in the first quarter; thus, no samples were obtained.

Table 6. Area 7 Treatment System Monitoring (TCE in μg/L)

	GWETS	UV/Ox	Air/Stripper				
	Influent	Effluent	Effluent				
Date	@ SP-102	@ SP-103	@ SP-105				
January - March	Area 7 GWETS offline; no samples collected						

Notes:

UV/Ox = Ultraviolet/Oxidation Reactor

Area 7 GWETS did not operate in the first quarter; thus, no samples were obtained.

No groundwater was extracted, treated, or injected and no TCE was removed during the first quarter of 2022.

3.4 Groundwater Remediation at Area 12 GWETS

NIBW Area 12 GWETS achieved performance standards specified in the SOW during the reporting period by consistently treating groundwater to reduce NIBW COC concentrations below Treatment Standards prior to discharge to an SRP irrigation lateral. Compliance monitoring was performed in accordance with the SOW to verify removal of VOCs from the extracted groundwater and assure groundwater treatment standards are achieved.

During the reporting period, treatment system samples were collected each month and submitted to TestAmerica for analysis of NIBW COCs. Treatment system samples included combined influent to Area 12 GWETS at sample port WSP-1 and effluent from Area 12 GWETS at sample port WSP-2. Area 12 extraction well samples were collected by the Operator, EnSolutions, on a monthly basis when the wells were operational, and submitted to TestAmerica for analysis. The results of TCE analyses of samples obtained by the NIBW PCs for groundwater and process water monitoring are included in **Table 7**.



Table 7. Area 12 Groundwater and Treatment System Monitoring (TCE in μg/L)

Data	MEX-1MA	Granite Reef Well	GWETS Influent	GWETS Effluent	
Date	(SRP 23.1E6N)	(SRP 23.6E6N)	WSP-1	WSP-2	
02/14/2022	47		48/49	<0.50	
02/22/2022		78			
03/01/2022	44	94	74/74	<0.50	

Treated groundwater from Area 12 discharges to the SRP distribution system for irrigation use and is regulated by an AZPDES permit. Samples were collected at the outfall to the irrigation lateral for analyses required by the permit. The results of the sample analyses were summarized in monthly DMRs and submitted directly to EPA and ADEQ under separate cover.

Area 12 GWETS operated most of the reporting period, except during the planned SRP canal Dry-Up (i.e., January 1 to February 11, 2022) and during routine preventative maintenance. During the reporting period, both wells MEX-1 and Granite Reef were available for pumping. The total volume of groundwater extracted and treated at Area 12 GWETS during the reporting period was approximately 103.7 MG. Of this total, approximately 52.3 MG was produced from well MEX-1 and approximately 51.3 MG was produced from Granite Reef Well. Performance data provided by the Area 12 GWETS Operator indicated an estimated 58 pounds of TCE were removed from the treated groundwater.

3.5 Groundwater Remediation Summary

Table 8 presents the volume of groundwater treated at each facility, as well as the estimated pounds of TCE removed from groundwater via treatment, both for the reporting period and cumulatively for the year (i.e., year-to-date).

North Indian Bend Wash Superfund Site



Table 8. Summary of Groundwater Treatment and TCE Removal

Treatment System	Volume of Groundwater Treated (MG)	Estimated Pounds of TCE Removed (1Q22)	Cumulative Pounds of TCE Removed (YTD 2022)		
MRTF	556.5	13	13		
NGTF	259.8	90	90		
Area 7 GWETS	0	0	0		
Area 12 GWETS	103.7	58	58		

Notes:
MG = million gallons
1Q22 = first quarter (January through March) 2022
YTD = year to date



4 MEETINGS AND OTHER EVENTS

Representatives of the NIBW Technical Committee held meetings by teleconference on January 11, February 14, and March 21 to coordinate ongoing NIBW remedial action efforts.



During the reporting period, from January through March 2022, the NIBW PCs provided EPA with the following documents.

- **Response to EPA Optimization Team Data Request**, data package submitted via electronic mail on February 23, 2022.
- **2021 Site Monitoring Report, North Indian Bend Wash Superfund Site**, technical report submitted via CloudShare on February 28, 2022.
- Groundwater Monitoring Program Supplemental Data, North Indian Bend Wash Superfund Site, electronic mail data submittal by NIBW PCs on February 28, 2022.
- Groundwater Extraction and Treatment System Supplemental Data, North Indian Bend Wash Superfund Site, electronic mail data submittal by NIBW PCs on February 28, 2022.
- Supplemental Data Collection Not Required for Compliance During 2021, North Indian Bend Wash Superfund Site, electronic mail data submittal by NIBW PCs on February 28, 2022.
- Summary of 2021 Air Sampling Data, North Indian Bend Wash Superfund Site, electronic mail data submittal by NIBW PCs on February 28, 2022.
- NIBW Technical Committee Meeting Minutes January and February 2022, electronic mail submitted by NIBW PCs on March 11, 2022.
- 2021 Site Monitoring Report, Site Monitoring Report Presentation, and Plume Animations, North Indian Bend Wash Superfund Site, revised technical report submitted via CloudShare on March 18, 2022.



APPENDIX A MATRIX AND LABORATORY RESULTS

Table A-1. Sampling Matrix - First Quarter 2022 North Indian Bend Wash Superfund Site, Scottsdale, Arizona

Well Identification	Aquifer Unit	Sampling Frequency	Comments
COS-31	MAU/LAU	Monthly	Not sampled during Quarter because the well was offline on the scheduled sampling dates
COS-71A	MAU/LAU	Monthly	Not sampled during Quarter because the well was offline; COS has removed this well from the remedial pumping priority list due to inorganic water quality
COS-72	MAU/LAU	Monthly	Not sampled during January 2022 because the well was offline on the scheduled sampling date
COS-75A	LAU	Monthly	
PCX-1	LAU	Monthly	
PV-14	LAU	Monthly	
PV-15	MAU/LAU	Monthly	
MEX-1MA	MAU	Quarterly	Not sampled during January 2022 because the well was offline on the scheduled sampling date due to SRP canal Dry-Up activities
Granite Reef	MAU	Quarterly	Not sampled during January 2022 because the well was offline on the scheduled sampling date due to SRP canal Dry-Up activities
7EX-3aMA	MAU	Quarterly	Not sampled during Quarter because the well was offline on the scheduled sampling dates
7EX-4MA	MAU	Quarterly	Not sampled during Quarter because the well was offline on the scheduled sampling dates; Area 7 GWETS presently operating without well 4MA
7EX-6MA	MAU	Quarterly	Not sampled during Quarter because the well was offline on the scheduled sampling dates
D-2MA	MAU	Quarterly	
E-1MA	MAU	Quarterly	
E-5MA	MAU	Quarterly	
E-10MA	MAU	Quarterly	
M-4MA	MAU	Quarterly	
M-5MA	MAU	Quarterly	
M-6MA	MAU	Quarterly	
M-10MA2	MAU	Quarterly	
M-15MA	MAU	Quarterly	
M-17MA/LA	MAU/LAU	Quarterly	
PA-5LA	LAU	Quarterly	
PA-6LA	LAU	Quarterly	
PA-10MA	MAU	Quarterly	
PA-12MA	MAU	Quarterly	
PA-13LA	LAU	Quarterly	
PG-1LA	LAU	Quarterly	
PG-40LA	LAU	Quarterly	
PG-42LA	LAU	Quarterly	
PG-43LA	LAU	Quarterly	
PG-44LA	LAU	Quarterly	
PG-48MA	MAU-Lower	Quarterly	
S-2LA	LAU	Quarterly	
W-1MA	MAU	Quarterly	
W-2MA	MAU	Quarterly	

EXPLANATION:

UAU = Upper Alluvium Unit MAU = Middle Alluvium Unit LAU = Lower Alluvium Unit

Table A-2. Laboratory Results For VOCs In Groundwater Monitoring Wells - First Quarter 2022

North Indian Bend Wash Superfund Site, Scottsdale, Arizona

(results presented in micrograms per liter, µg/L)

Well	Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Type	Location	ID	Date	Type	Lab	200	6	6	5	5	Report
MON	D-2MA	D-2MAHS	1/21/2022	Original	TA	<0.50	<0.50	0.91	<0.50	13	550-177729
MON	E-1MA	E-1MA	1/19/2022	Original	TA	<0.50	<0.50 ⁽¹⁾	<0.50	<0.50	1.7	550-177580
MON	E-1MA	В	1/19/2022	Duplicate	TA	<0.50	<0.50 ⁽¹⁾	<0.50	<0.50	1.6	550-177580
MON	E-5MA	E-5MA	1/19/2022	Original	TA	<0.50	<0.50 (1)	2.7	0.87	48	550-177580
MON	E-10MA	E-10MAHS	1/21/2022	Original	TA	<0.50	<0.50	0.76	2.8	6.4	550-177729
MON	M-4MA	M-4MAHS	1/21/2022	Original	TA	<0.50	<0.50	0.80	1.1	25	550-177729
MON	M-5MA	M-5MA	1/19/2022	Original	TA	<0.50	2.0	1.6	4.9	44	550-177580
MON	M-6MA	M-6MA	1/19/2022	Original	TA	<0.50	<0.50 ⁽¹⁾	1.5	0.80	27	550-177580
MON	M-10MA2	M-10MA2	1/19/2022	Original	TA	<0.50	1.0	1.4	1.3	59	550-177580
MON	M-15MA	M-15MA	1/19/2022	Original	TA	<0.50	<0.50 (1)	<0.50	<0.50	4.4	550-177580
MON	M-17MA/LA	M-17 MA/LAHS	1/21/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177729
MON	PA-5LA	PA-5LA	1/21/2022	Original	TA	<0.50	<0.50	2.5	2.5	40	550-177696
MON	PA-6LA	PA-6LAHS	1/21/2022	Original	TA	<0.50	1.5	0.84	4.1	56	550-177729
MON	PA-10MA	PA-10MAHS	1/21/2022	Original	TA	<0.50	<0.50	<0.50	0.56	21	550-177729
MON	PA-10MA	D	1/21/2022	Duplicate	TA	<0.50	<0.50	<0.50	0.68	23	550-177727
MON	PA-12MA	PA-12MA	1/18/2022	Original	TA	<0.50	<0.50	0.74	3.3	240	550-177492
MON	PA-13LA	PA-13LA	1/18/2022	Original	TA	<0.50	<0.50	1.6	0.90	66	550-177491
MON	PA-13LA	А	1/18/2022	Duplicate	TA	<0.50	<0.50	1.6	0.88	65	550-177491
MON	PG-1LA	PG-1LA	1/20/2022	Original	TA	<0.50	<0.50	1.3	<0.50	0.75	550-177677
MON	PG-40LA	PG-40LA	1/20/2022	Original	TA	<0.50	<0.50	0.53	<0.50	12	550-177677
MON	PG-40LA	С	1/20/2022	Duplicate	TA	<0.50	<0.50	0.54	<0.50	11	550-177677
MON	PG-42LA	PG-42LA	1/20/2022	Original	TA	<0.50	<0.50	0.56	<0.50	1.3	550-177677
MON	PG-43LA	PG-43LAHS	1/21/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177729
MON	PG-44LA	PG-44LA	1/20/2022	Original	TA	<0.50	<0.50	3.7	<0.50	<0.50	550-177677
MON	PG-48MA	PG-48MA	1/19/2022	Original	TA	<0.50	<0.50 (1)	0.68	<0.50	14	550-177580
MON	S-2LA	S-2LA	1/21/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	11	550-177696
MON	W-1MA	W-1MA	1/18/2011	Original	TA	<0.50	<0.50	1.1	1.7	340	550-177492
MON	W-2MA	W-2MA	1/18/2022	Original	TA	<0.50	0.71	1.3	13	3600	550-177492

Table A-2. Laboratory Results For VOCs In Groundwater Monitoring Wells - First Quarter 2022

North Indian Bend Wash Superfund Site, Scottsdale, Arizona

(results presented in micrograms per liter, µg/L)

Well	Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Туре	Location	ID	Date	Туре	Lab	200	6	6	5	5	Report
Trip/Field Blanks											
	QC	FRB (Trip)	1/18/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177492
	QC	FRB (Trip)	1/19/2022	TB	TA	<0.50	<0.50 (1)	<0.50	<0.50	<0.50	550-177580
	QC	FRB (Trip)	1/20/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177677
	QC	FRB (Trip)	1/21/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177696

EXPLANATION:

TCA = 1,1,1-Trichloroethane FRB = Field Reagent Blank (Trip Blank) TB = Trip Blank

DCE = 1,1-Dichloroethene ID = Identifier VOC = Volatile Organic Compound

TCM = Chloroform MON = Monitoring

PCE = Tetrachloroethene QC = Quality Control

TCE = Trichloroethene TA = Eurofins TestAmerica

NOTES:

<0.50	Analytical result is less than laboratory detection limit (Non-Detect)
5	Cleanup Standards for Treated Water (µg/L)
5.1	Results in bold exceed Cleanup Standard for Treated Water

Laboratories use standardized data qualifiers defined by Arizona Department of Health Services and listed in ADEQ document WQR282: Water Quality Database Arizona Lab Data Qualifiers.

(1) L5 Flag: The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.



Table A-3. Laboratory Results For VOCs In Groundwater Extraction Wells - First Quarter 2022 North Indian Bend Wash Superfund Site, Scottsdale, Arizona (results presented in micrograms per liter, µg/L)

Well	Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Type	Location	ID	Date	Type	Lab	200 VETS	ð	b	5	5	Report
	AREA 7 GWETS Area 7 GWETS down for maintenance during Quarter 1										
	CGTF										
Extraction											
Extraction	COS-72	COS-72	3/1/2022	Original	TA	<0.50	<0.50	0.79	1.1	8.3	550-179954
Extraction	COS-75A	COS-75A	1/3/2022	Original	TA	<0.50	0.58	1.8	5.2	33	550-176556
Extraction	COS-75A	EXT-1A-01032022	1/3/2022	Duplicate	TA	<0.50	0.57	1.9	4.9	32	550-176556
Extraction	COS-75A	COS-75A	2/1/2022	Original	TA	<0.50	0.67	1.9	5.5	32	550-178235
Extraction	COS-75A	EXT-1A-02012022	2/1/2022	Duplicate	TA	<0.50	0.72	1.9	5.6	32	550-178235
Extraction	COS-75A	COS-75A	3/1/2022	Original	TA	<0.50	0.60	1.7	5.2	31	550-179954
Extraction	COS-75A	EXT-1A-03012022	3/1/2022	Duplicate	TA	<0.50	0.58	1.7	5.1	30	550-179954
				AREA		WETS					ı
Extraction	MEX-1MA	MEX-1-1A-02142022	2/14/2022	Original	TA	<0.50	1.7	1.6	3.3	47	550-178996
Extraction	MEX-1MA	MEX-1-1A-03012022	3/1/2022	Original	TA	<0.50	1.3	1.6	2.5	44	550-179955
Extraction	Granite Reef	GR-1-1A-02222022	2/22/2022	Original	TA	<0.50	1.2	3.7	3.3	78	550-179554
Extraction	Granite Reef	GR-1-1A-03012022	3/1/2022	Original	TA	<0.50	1.4	4.0	2.6	94	550-179955
					NGTF						
Extraction	PCX-1	PCX-1	1/5/2022	Original	TA	<0.50	0.60	1.8	3.3	44	550-176731
Extraction	PCX-1	PCX-1	2/22/2022	Original	TA	<0.50	0.72	1.6	4.5	40	550-179556
Extraction	PCX-1	PCX-1	3/14/2022	Original	TA	<0.50	0.59	1.7	4.7	41	550-180755
					MRTF					•	
Extraction	PV-14	PV 14	1/3/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176561
Extraction	PV-14	PV 14	2/1/2022	Original	TA	<0.50	<0.50	0.79	<0.50	0.80	550-178233
Extraction	PV-14	PV 14	3/1/2022	Original	TA	<0.50	<0.50	0.55	<0.50	0.59	550-179957
Extraction	PV-15	PV 15	1/3/2022	Original	TA	<0.50	<0.50	0.61	<0.50	4.9	550-176561
Extraction	PV-15	PV 15	2/1/2022	Original	TA	<0.50	<0.50	0.64	<0.50	5.8	550-178233
Extraction	PV-15	PV 15	3/1/2022	Original	TA	<0.50	<0.50	0.55	<0.50	4.6	550-179957

Table A-3. Laboratory Results For VOCs In Groundwater Extraction Wells - First Quarter 2022

North Indian Bend Wash Superfund Site, Scottsdale, Arizona

(results presented in micrograms per liter, µg/L)

Well	Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Type	Location	ID	Date	Type	Lab	200	6	6	5	5	Report
Trip/Field Blanks											
	EX-QC (A)	FRB (TRIP)	1/3/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176560
	EX-QC (A)	TB-2-1A-01052022	1/5/2022	ТВ	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176728
	EX-QC (A)	FRB (TRIP)	2/1/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178231
	EX-QC (A)	FRB (TRIP)	2/14/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178999
	EX-QC (A)	FRB (TRIP)	2/22/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179555
	EX-QC (A)	FRB (TRIP)	3/1/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179959
	EX-QC (A)	FRB (TRIP)	3/14/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-180754

EXPLANATION:

TCA = 1,1,1-Trichloroethane

DCE = 1,1-Dichloroethene

TCM = Chloroform

PCE = Tetrachloroethene

TCE = Trichloroethene

CGTF = Central Groundwater Treatment Facility

FRB = Field Reagent Blank (Trip Blank)

GWETS = Groundwater Extraction and Treatment System

ID = Identifier

MRTF = Miller Road Treatment Facility

NGTF = NIBW Granular Activated Carbon Treatment Facility

QC = Quality Control

TA = Eurofins TestAmerica

TB = Trip Blank

VOC = Volatile Organic Compound

NOTES:

<0.50	Analytical result is less than laboratory detection limit (Non-Detect)
5	Cleanup Standards for Treated Water (µg/L)
5.1	Results in bold exceed Cleanup Standard for Treated Water

(A) EX-QC - A single trip blank is collected for all extraction well samples, regardless of facility, when collected and shipped on the same day.



Table A-4. Laboratory Results For VOCs In Treatment System Samples - First Quarter 2022

North Indian Bend Wash Superfund Site, Scottsdale, Arizona

(results presented in micrograms per liter, µg/L)

Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Location	ID	Date	Type	Lab	200	6	6	5	5	Report
					NETS					
Area 7 GWETS down for maintenance during Quarter 1										
			AREA		WETS					
WSP-1 (Influent)	WSP-1-1A-02142022	2/14/2022	Original	TA	<0.50	1.7	1.7	3.5	48	550-178998
WSP-1 (Influent)	TS-1-1A-02142022	2/14/2022	Duplicate	TA	<0.50	1.7	1.7	3.3	49	550-178998
WSP-1 (Influent)	WSP-1-1A-03012022	3/1/2022	Original	TA	<0.50	1.5	3.0	3.4 ^(A)	74	550-179956
WSP-1 (Influent)	TS-1-1A-03012022	3/1/2022	Duplicate	TA	<0.50	1.4	2.9	2.6 ^(A)	74	550-179956
WSP-2 (Air Stripper Effluent)	WSP-2-1A-02142022	2/14/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178997
WSP-2 (Air Stripper Effluent)	WSP-2-1A 03012022	3/1/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179952
			•	MRTI			•	•		•
Tower 1 Effluent	Tower 1	1/3/2022	Original	TA	<0.50	< 0.50	<0.50	< 0.50	<0.50	550-176558
Tower 1 Effluent	Tower 1	2/1/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178232
Tower 1 Effluent	Tower 1	3/1/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179958
Tower 3 Effluent	Tower 3	1/3/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176558
Tower 3 Effluent	Tower 3	2/1/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178232
Tower 3 Effluent	Tower 3	3/1/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179958
		0/ 1/2022	·	NGTI		0.00	0.00	0.00	0.00	
NGTF Influent (B)	NGTF - INF	3/14/2022	Original	TA	<0.50	0.58	1.9	4.7	43	550-180732
Outfall 001 (Effluent)	NGTF-CP	1/3/2022	Original	TA	<0.50	<0.50	1.0	<0.50	<0.50	550-176575
Outfall 001 (Effluent)	NGTF-CP	1/10/2022	Original	TA	<0.50	<0.50	0.66	<0.50	<0.50	550-176930
Outfall 001 (Effluent)	NGTF-CP	1/18/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50 (1)	550-177472
Outfall 001 (Effluent)	NGTF-CP	1/24/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177803
Outfall 001 (Effluent)	NGTF-CP	1/31/2022	Original	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178146
Outfall 001 (Effluent)	NGTF-CP	2/7/2022	Original	TA	<0.50	<0.50	0.59	<0.50	<0.50	550-178598
Outfall 001 (Effluent)	NGTF-CP	2/14/2022	Original	TA	<0.50	<0.50	0.76	<0.50	<0.50	550-178991
Outfall 001 (Effluent)	NGTF-CP	2/22/2022	Original	TA	<0.50	<0.50	1.0	<0.50	<0.50	550-179549
Outfall 001 (Effluent)	NGTF-CP	2/28/2022	Original	TA	<0.50	<0.50	0.63	<0.50	<0.50	550-179856
Outfall 001 (Effluent)	NGTF-CP	3/7/2022	Original	TA	<0.50	<0.50	0.77	<0.50	<0.50	550-180298
Outfall 001 (Effluent)	NGTF-CP	3/14/2022	Original	TA	<0.50	<0.50	0.85	<0.50	<0.50	550-180732
Outfall 001 (Effluent)	NGTF-CP	3/21/2022	Original	TA	<0.50	<0.50	0.90	<0.50	<0.50	550-181131
Outfall 001 (Effluent)	NGTF-CP	3/28/2022		TA		<0.50	0.62	<0.50	<0.50	550-181442
· · ·					Blanks		•		•	•
QC - Area 12	FB-1-1A-02142022	2/14/2022	FB	TA	< 0.50	<0.50	<0.50	<0.50	<0.50	550-179000
QC - Area 12	TB-1-1A-02142022	2/14/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179000
QC - Area 12	FB-1-1A-03012022	3/1/2022	FB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179961
QC - Area 12	TB-1-1A-03012022	3/1/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179961
QC - NGTF	ТВ	1/3/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176575
QC - NGTF	ТВ	1/10/2022	ТВ	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176930
QC - NGTF	TB	1/18/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50 (1)	550-177472
QC - NGTF	TB	1/24/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-177803
QC - NGTF	TB	1/31/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178146
QC - NGTF	TB	2/7/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178598
QC - NGTF	TB	2/14/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178991
	ТВ		ТВ	TA						
QC - NGTF		2/22/2022			<0.50	<0.50	<0.50	<0.50	<0.50	550-179549
QC - NGTF	TB	2/28/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179856
QC - NGTF	TB	3/7/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-180298

Table A-4. Laboratory Results For VOCs In Treatment System Samples - First Quarter 2022 North Indian Bend Wash Superfund Site, Scottsdale, Arizona (results presented in micrograms per liter, µg/L)

Sample	Sample	Sample	Sample		TCA	DCE	TCM	PCE	TCE	
Location	ID	Date	Туре	Lab	200	6	6	5	5	Report
QC - NGTF	TB	3/14/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-180732
QC - NGTF	TB	3/21/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-181131
QC - NGTF	TB	3/28/2022	TB	TA	<0.50	<0.50 (2),(3)	<0.50	<0.50	<0.50	550-181442
QC-TS (C)	FB-2-1A-01032022	1/3/2022	FB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176559
QC-TS (C)	TB-2-1A-01032022	1/3/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-176559
QC-TS (C)	FB-2-1A-02012022	2/1/2022	FB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178234
QC-TS (C)	TB-2-1A-02012022	2/1/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-178234
QC-TS (C)	FB-2-1A-03012022	3/1/2022	FB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179960
QC-TS (C)	TB-2-1A-03012022	3/1/2022	TB	TA	<0.50	<0.50	<0.50	<0.50	<0.50	550-179960

EXPLANATION:

TCA = 1,1,1-Trichloroethane ID = Identifier

DCE = 1,1-Dichloroethene MRTF = Miller Road Treatment Facility

TCM = Chloroform NGTF = NIBW Granular Activated Carbon Treatment Facility

PCE = Tetrachloroethene RPD = Relative Percent Difference

TCE = Trichloroethene QC = Quality Control
CCV = Continuing Calibration Verification TA = Eurofins TestAmerica

CP = Chaparral Compliance Point

TR = Euronis resum

TR = Euronis resum

TR = Trip Blank

FB = Field Blank TS = Treatment System

GWETS = Groundwater Extraction and Treatment System VOC = Volatile Organic Compound

NOTES:

<0.50	Analytical result is less than laboratory detection limit (Non-Detect)
5	Cleanup Standards for Treated Water (µg/L)
5.1	Results in bold exceed Cleanup Standard for Treated Water

- (A) Original and field duplicate sample results had >20% RPD. Re-analysis not requested due to low concentration range of analyte.
- (B) Influent sampling results at the NGTF are not required for compliance; however, they are reported here for completeness.
- (C) QC-TS A single trip blank and a single field blank are collected for Area 7 and MRTF samples, when collected and shipped on the same day.

Laboratories use standardized data qualifiers defined by Arizona Department of Health Services and listed in ADEQ document WQR282: Water Quality Database Arizona Lab Data Qualifiers.

- (1) V1 Flag: CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
- (2) L4 Flag: The associated blank spike recovery was below method acceptance limits.
- (3) V9 Flag: CCV recovery was below method acceptance limits.