



EPA Region 9

Technical Memorandum: Investigation of Abandoned Wells on Navajo Nation



Prepared for:

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Protection Agency**

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I. Introduction

The United States Environmental Protection Agency (EPA) Region 9 tasked Eastern Research Group, Inc. (ERG) to assist with sampling wells identified as potentially discharging on Navajo Nation lands in New Mexico and Utah. Initially, the State of New Mexico referred the Foshay Well (listed in this report as NM-001), located south of Farmington New Mexico, to the attention of the EPA. After further discussions with the Navajo Nation Environmental Protection Agency (NNEPA) and the State of New Mexico, approximately 48 orphaned well locations were identified. ERG assisted in making observations at each well site, collecting water samples, and preparing and shipping the samples to the EPA Region 9 Lab in Richmond, CA for analysis. The field work took place during the week of July 23-27, 2018. Each of the Navajo Nation Chapter Houses was notified in advance and invited to provide the EPA and NNEPA with information about the wells and potential uses of the water from the wells. Personnel from the Water Resources Program and Underground Injection Control Programs of the NNEPA also participated. The following sections of this report provide a summary of the field activities, including the sample analysis results. Table 1 contains the list provided to EPA of wells to be visited as part of the trip. A map of well locations is provided in Figure 1.

Table 1. Overview of Wells Visited

EPA #	Distance to nearest water body ¹	Nearest Water Body	Latitude	Longitude
NM-001	0.16 miles	Hunter Wash	36.245038	-108.237094
NM-002	0.40 miles	Unnamed tributary to San Juan River	36.946491	-108.914924
NM-003	0.40 miles	Unnamed tributary to San Juan River	36.848559	-108.871965
NM-004	0.35 miles	Unnamed tributary to Sanostee Wash	36.466875	-108.747519
NM-005	0.05 miles	Headwaters Coal Creek	36.566055	-108.686225
NM-006	0.05 miles	Unnamed tributary to Dead Mans Wash	36.663979	-108.703614
NM-007	0.80 miles	Unnamed tributary to Canal Creek	36.949960	-108.861080
NM-008	0.04 miles	Captain Tom Wash	36.338099	-108.606137
NM-009	0.08 Miles	Unnamed tributary to Dead Mans Wash	36.560996	-108.743029
NM-010	0.16 miles	Dead Mans Wash	36.588598	-108.801867
NM-011	0.07 miles	Unnamed tributary to San Juan River (Bob Lee Wash locally)	36.776355	-108.694277
NM-012	0.15 miles	Dead Mans Wash	36.682312	-108.659585
NM-013	0.17 miles	Dead Mans Wash	36.714334	-108.636995
NM-014	0.28 miles	Unnamed tributary to Shiprock Wash	36.756175	-108.811752
NM-015	0.21 miles	Unnamed tributary to Hunter Wash	36.257306	-108.326311
NM-016	0.20 miles	Unnamed tributary to Hunter Wash	36.255950	-108.312392
NM-017	0.48 miles	Unnamed tributary to Pena Blanca Arroyo	36.370172	-108.759744
NM-018	0.01 miles	Unnamed tributary to Tocito Wash	36.396642	-108.735391
NM-019	0.75 miles	Unnamed tributary to Coal Creek	36.60439	-108.638977
NM-020	0.16 miles	Chaco River	36.660928	-108.531515

¹ Findings of federal jurisdiction or compliance with any particular law or permit are beyond the scope of this technical memo, and no such findings should be inferred by the occasional use of descriptive terms (such as "waterbody" or "dry wash").

EPA #	Distance to nearest water body ¹	Nearest Water Body	Latitude	Longitude
NM-021	0.10 miles	Many Devils Wash	36.701599	-108.718738
NM-022	0.44 miles	Unnamed tributary to Shiprock Wash	36.760366	-108.814590
NM-023	0.2 miles	Unnamed tributary to Shiprock Wash	36.750998	-108.832756
NM-024	0.87 miles	Unnamed tributary to Shiprock Wash	36.812636	-108.862554
NM-025	0.09 miles	Unnamed tributary to Beclabito Wash	36.874828	-108.939572
NM-026	0.37 miles	Unnamed Tributary to Indian Creek	35.907263	-108.196736
NM-027	0.30 miles	Unnamed tributary to Little Shiprock Wash	36.755327	-108.895413
NM-028	0.15 miles	Unnamed tributary to Shiprock Wash	36.800610	-108.893418
NM-029*	0.25 miles	Middle Sanostee Wash	36.424442	-108.869999
NM-029A*	0.01 miles	50 feet to a pond	36.426250	-108.891300
NM-030	0 miles	Headwaters of unnamed tributary to Sheep Springs Wash	36.188230	-108.614489
UT-001	0.10 miles	Montezuma Creek	37.305228	-109.301357
UT-002	0.66 miles	San Juan River	37.201927	-109.185284
UT-003	0.67 miles	Unnamed tributary to Desert Creek	37.242245	-109.341598
UT-004	0.25 miles	Unnamed tributary to McElmo Creek	37.227680	-109.118423
UT-005	0.03 miles	Unnamed tributary to San Juan River	37.188754	-109.158535
UT-006	0.42 miles	Unnamed tributary to San Juan River	37.249027	-109.180991
UT-007	0.10 miles	Montezuma Creek	37.313337	-109.297489
UT-008	0.23 miles	Montezuma Creek	37.302587	-109.301409
UT-009	0.64 miles	Unnamed tributary to Montezuma Creek	37.296995	-109.313719
UT-010	0.34 miles	Unnamed tributary to Sahgzie Creek	37.179196	-109.284019
UT-011	0.36 miles	Unnamed tributary to McElmo Creek	37.234262	-109.120296
UT-012	0.03 miles	Lone Wash	37.163981	-109.299101
UT-013	0.45 miles	Unnamed tributary to San Juan River	37.111667	-109.076389
UT-014	0.31 miles	McCracken Wash	37.336401	-109.392383
UT-015	0.21 miles	McCracken Wash	37.337881	-109.384476
UT-016	0.02 miles	McCracken Wash	37.341654	-109.386066
UT-017	0.02 miles	West Fork Allen Canyon	37.285763	-109.242444
UT-018	0.13 miles	San Juan River	37.214646	-109.185307

*Coordinates provided for NM-029 initially identified a different location. Wells were discovered in two other locations, which were listed as NM-029 and NM-029A.

II. Background

As mentioned in Section I, the EPA learned from NNEPA there were approximately 48 orphaned wells located on Navajo Nation lands that may be producing water at the surface. Most of the wells were drilled for oil and natural gas exploration decades ago and none are currently producing hydrocarbons. An additional well was added during field activities (NM-029A) after it was observed discharging near NM-029, creating a total of 49 wells visited. All wells are located on the Navajo Nation reservation and would otherwise be located within the state lines of New Mexico and Utah. Figure 1 shows the exact well locations and Navajo Nation Chapter Houses. Some of the wells are in populated areas, but most are in remote locations.

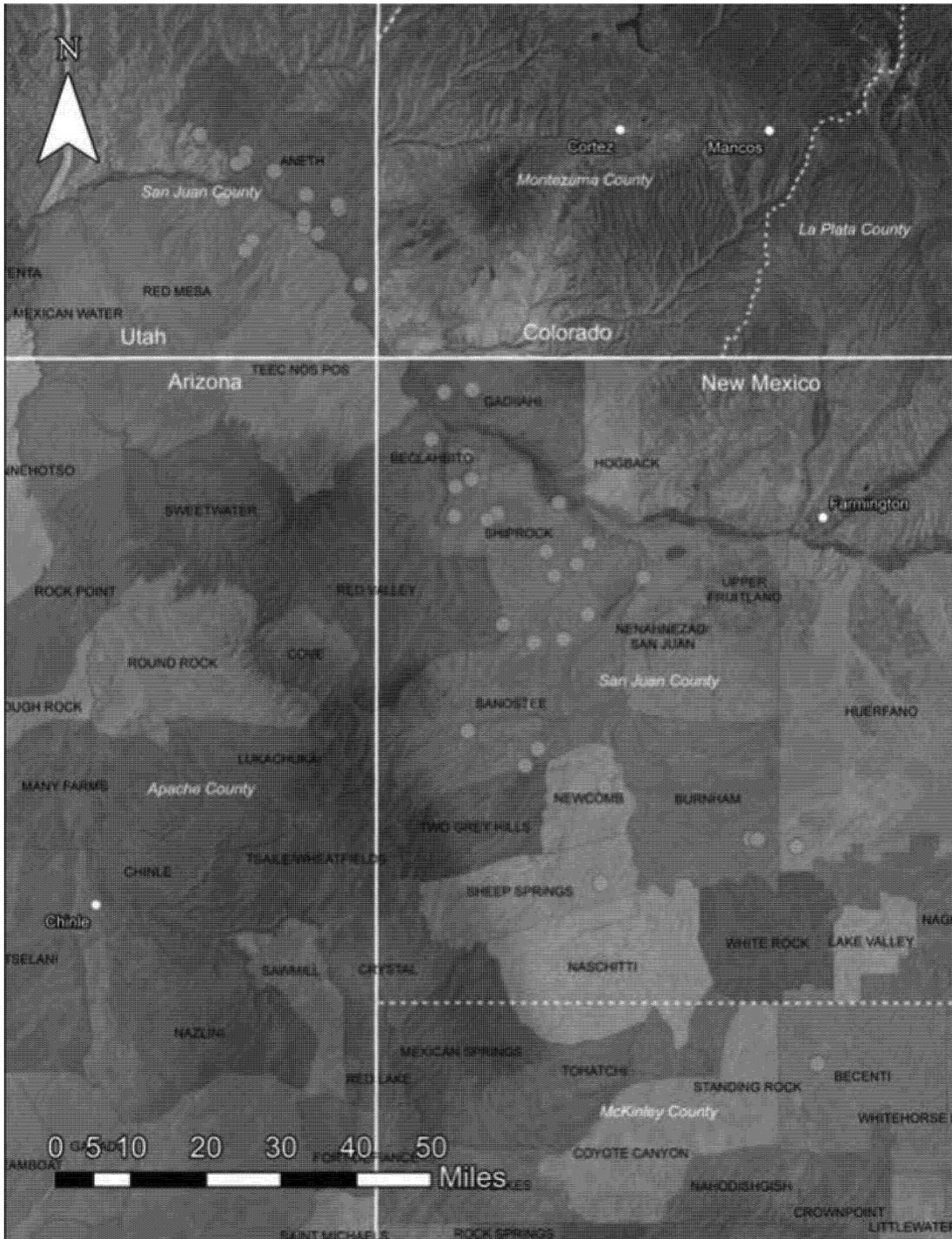


Figure 1. Map of Well locations and Navajo Nation Chapter Houses.

The EPA and NNEPA consulted with multiple tribal, federal and state agencies to gather information about the history of the wells and potential remediation strategies, as well as to develop the sampling plan. Among the agencies working with the EPA and NNEPA are:

- the Navajo Nation Division of Natural Resources,
- the US Bureau of Land Management (Department of the Interior),
- the US Bureau of Indian Affairs (Department of the Interior),
- the New Mexico Oil Conservation Division (New Mexico Energy, Minerals and Natural Resources Department – State of New Mexico),
- the New Mexico Environment Department (State of New Mexico),
- the New Mexico State Land Office (State of New Mexico),
- the Utah Department of Natural Resources (State of Utah).

Each of the Navajo Chapter Houses was notified and invited to provide the EPA and NNEPA with information about the wells and potential uses of the water from the wells.



Photograph 1. The Foshay well (NM-001), located approximately 55 miles northeast of Gallup, NM.

III. History of Wells

The history of each well was researched by the EPA through consultation with the tribal, federal, and state agencies. Table 2 provides a summary of the information compiled, including the date of well completion, depth, and any additional information gathered. This information was provided by the EPA and NNEPA and condensed to provide relevant historic information. If information was not available for a given category it was left blank. For thirteen of the discharging wells, no historic information was found, so they were not included in Table 2.

Table 2. Summary of Known Well History

EPA #	Well Completed	Recorded Depth (ft)	Additional Information
NM-001	01/22/1972	9,803	Plugged to a depth of 4,630 feet in early 1972; re-entered in summer of 1974 and turned over to Bureau of Land Management as livestock water supply well in 1980; via a land swap, turned over to the Navajo Nation with 1984 Navajo-Hopi Settlement Act.
NM-002	12/05/1962	1,885	Plugged 01/10/1963
NM-003	11/21/1977	2,000	Drilled to the Morrison formation
NM-004	05/28/1967	796	Drilled to the Dakota formation
NM-005	05/18/1964	778	Drilled to the Gallup formation; original operator was Lonnie Kraemer; plugged 05/18/1964
NM-006	07/24/1968	7,327	Plugged 08/26/1968
NM-007	11/15/1962	7,550	Plugged 11/21/62
NM-008	05/21/1962	4,335	Plugged back to depth of 3,660 feet; Drilled to the Gallup formation; turned over to "Navajo Indian Agency" in May 1962
NM-009	08/03/1960	1,992	Drilled to the Morrison formation
NM-010	12/04/1934	415	
NM-011	02/07/1961	1,850	Drilled to the Morrison formation; located next to Shiprock fairgrounds; flows into Bob Lee Wash and then onto San Juan River floodplain; Department of Energy ID is well 648; Water quality data available from DOE
NM-012	11/03/1977	2,520	Drilled to the Morrison formation
NM-013	11/02/1977	2,300	
NM-014	02/11/1924		
NM-015	08/18/1973	5,250	
NM-019			Drilled to the Dakota formation; assumed by Navajo Nation via letter in 1999
NM-022	03/25/1927	2,013	Drilled to the Morrison formation
NM-027	07/16/1979	1,721	
NM-028	07/19/1979	1,681	
NM-030	01/20/1966	1,826	Identified by Bernice Benally, whose family uses it as a domestic water source
UT-002	02/15/1962		Unclear if this is the P&A Giant well or if the P&A Giant well is just west of this location;
UT-003	02/12/1956	612	
UT-004	12/15/1964	5,854	
UT-005			Listed as a hand pump well
UT-006	02/18/1958	1,098	Mobil WSW 22 (lab results available); historic docs indicate water forms small ponds
UT-007	04/22/1974	5,590	
UT-008		230	sampled by NNEPA using funds from Resolute Natural Resources in 2005; historic docs state "flows from open casing at ground level"
UT-009			historic docs state " flows from open casing 4ft above land surface"
UT-010	07/31/1992	600	former oil test plugged in 1992 (USGS); historic docs state "water used for domestic and stock purposes"
UT-011	12/01/1958	720	abandoned windmill site (USGS)
UT-012	03/03/1960	5,686	historic docs state "former oil test; water flows from above 1,325ft"
UT-013	10/24/1960	1,880	historic doc states "Water flows from ground near sealed casing; initial well drilled to 1,880 ft and used as water well for deeper adjacent well"
UT-014	07/30/1957	5,597	historic doc state "former oil test; water flows from above 964ft"
UT-017		300	
UT-018	07/01/1942		Near the old Aneth chapter house; was dynamited in attempt to plug

IV. Field Work

The field activities were conducted by three teams, each comprised of three or four staff from the EPA, ERG and the NNEPA. Each team visited approximately one third of the 49 wells. Field observations were collected on an identical form at each well location. The date/time sampled, site description, evidence of public usage/exposure, livestock use, and other general observations were described at each site. Coordinates for each location were collected using a handheld Global Positioning System (GPS), and were recorded on the field sheets. A summary of observations made at each well is provided in Appendix A. Photos are included to support field observations at wells identified to be used as human drinking water sources, livestock use, and for other general points of interest. Photographs of each location can be found in Appendix B.

Temperature, specific conductance, and pH were collected using a multimeter. Multimeters were calibrated each day prior to use. Temperature is shown below in degrees Celsius, pH in standard units, and specific conductance in microSiemens per centimeter ($\mu\text{S}/\text{cm}$). Flow was measured using a flowmeter where a channel was present or by using a five-gallon bucket and a stopwatch when a spigot was present. Flow could not be measured or collected at sites where:

- flow was occurring below the surface of standing water,
- flow emanated from multiple points in such a way that they could not be separately collected and added together, or
- when seep flows were too low to measure where encountered.

Each team made onsite measurements of air emissions and radiation using a Multirae gas monitor and a Ludlum Geiger counter. No notable measurements outside of ambient background levels were observed. Therefore, results of these measurements are not included in this technical memo.

In addition, the team collected water samples, if able, for analysis at the EPA's laboratory in Richmond, CA. All sampling activities were performed in accordance with the Navajo Nation Discharging Wells Sampling Analysis Plan, which was reviewed by the EPA Quality Assurance Program Manager.



Photograph 2: Example of a well (NM-003) where well water was re-routed. The sampling team interviewed a local land owner who stated they used the water for drinking water and for livestock.

V. Analytical Results

Water samples were collected from 46 of the 49 wells and did not include the well sites UT-004, UT-014, and UT-017, which lacked sufficient flow to collect a sample. The samples were sent to the EPA Region 9 Laboratory and were analyzed for the following constituents:

- Total Metals,
- Volatile Organic Compounds,
- Petroleum Hydrocarbons,
- Semivolatile Organic Compounds, and
- Conventional Chemistry Parameters.

For the full list of constituents and complete analytical results, refer to Appendix C.

The analytical results were compared with EPA and NNEPA Drinking Water Maximum Contaminant Levels (MCLs), the EPA Secondary Drinking Water Regulations, Navajo Nation Water Quality Standards (WQS) for Primary Human Contact, Agricultural Water Supply, and Livestock Use, Ambient Water Quality Guidelines for Sulphate Technical Appendix Update (British Columbia Ministry of Environment, April 2013), and Ambient Water Quality Criteria for Chloride (EPA, 1998). Both the Ambient Water Quality Guidelines for Sulphate and the Ambient Water Quality Criteria for Chloride are guidance for chronic toxicity for aquatic life. The results were compared to the above benchmarks and guidelines solely as indicators for potential threats to human health or designated uses that could warrant further investigation. Exceedances of these benchmarks and guidelines were detected in 38 wells, listed below,

for lead, arsenic, sulfate, benzene, and chloride. Table 3, below, shows the lab results for these analytes compared against the benchmarks and guidelines.

- Orange text indicates an exceedance of EPA and NNEPA Drinking Water MCLs. For lead, arsenic, and benzene, the Navajo Nation WQS for domestic water supply are equivalent to the EPA drinking water MCLs.
- Red Text indicates an exceedance of the Navajo Nation WQS for primary human contact.
- Navajo Nation Water Quality Standards for Agricultural Water Supply and Livestock Use are shown in brown text for reference, although no exceedances of these standards were detected.
- Green text indicates an exceedance of either Ambient Water Quality Guidelines for Sulphate or Ambient Water Quality Criteria for Chloride.
- Empty cells in Water Quality Standards indicate that there is no standard associated with the constituent.

The full laboratory reports containing all sample results are included in Appendix C.

Table 3. Water Quality Sampling Results

		Lead (ug/L)	Arsenic (ug/L)	Sulfate (mg/L)	Benzene (ug/L)	Chloride (mg/L)
Water Quality Standards and	EPA Drinking Water MCL / Navajo Nation WQS (NNWQS) for Domestic Water Supply (identical)	15*	10		5	
	EPA Secondary Drinking Water Regulations			250		250
	NNWQS for Primary Human Contact	15	30		93	
	NNWQS for Livestock	100	200			
	NNWQS for Agricultural Water Supply	10000	2000			
	Ambient Water Quality Criteria (Chloride, EPA, 1998) or Guidelines (Sulphate) for Aquatic Life			429		230
Well Sample Results	NM-001	ND	5.9	5800	ND	500
	NM-002	ND	16	1300	0.7	510
	NM-003**	ND	22	31	0.6	11
	NM-004**	ND	ND	130	0.4	14
	NM-005	ND	ND	1500	ND	170
	NM-006	ND	0.54	3200	16	580
	NM-007	ND	4.2	2800	0.4	1100
	NM-008	ND	ND	2100	ND	220
	NM-009**	ND	3.6	55	ND	4
	NM-010	ND	ND	460	ND	20
	NM-011	ND	0.57	2000	0.8	54
	NM-012	ND	1.1	1900	16	83
	NM-013	ND	1.5	2000	7.9	99
	NM-014	ND	2.4	630	ND	3400
	NM-015	ND	5	400	ND	17

	Lead (ug/L)	Arsenic (ug/L)	Sulfate (mg/L)	Benzene (ug/L)	Chloride (mg/L)
NM-016	ND	5.1	400	ND	17
NM-017**	0.59	1.8	130	ND	39
NM-018	10	13	390	ND	65
NM-019	ND	ND	2500	ND	200
NM-020	ND	0.35	1600	ND	310
NM-021	15***	10	810	ND	88
NM-022	15***	6.2	1700	ND	760
NM-023	ND	5.5	1600	ND	740
NM-024	ND	1.5	1300	ND	98
NM-025	3.6	3.2	1600	ND	56
NM-026	ND	ND	1000	2.3	1600
NM-027	ND	3.1	7	ND	1.2
NM-028	ND	4.4	18	ND	3.1
NM-029**	ND	2.1	24	ND	2.6
NM-029A**	ND	1.1	4	ND	3.2
NM-030**	ND	ND	27	ND	4.1
UT-001	ND	25	280	ND	480
UT-002	0.59	21	3800	ND	1300
UT-003	ND	42	2600	ND	1400
UT-004	no sample				
UT-005	ND	4.1	1000	ND	100
UT-006	2.4	55	770	ND	700
UT-007	ND	11	43	ND	2.8
UT-008	ND	10	310	ND	170
UT-009	ND	32	230	ND	540
UT-010**	ND	15	230	ND	78
UT-011	ND	11	780	ND	150
UT-012	ND	22	430	ND	130
UT-013	ND	8.4	1100	ND	86
UT-014	no sample				
UT-015	ND	15	69	ND	16
UT-016	ND	12	740	ND	350
UT-017	no sample				
UT-018	ND	13	1600	ND	3900

ND= Non-Detect; "no sample" indicates the well was not sampled.

*The 15 µg/L value for lead is an Action Level, not an enforceable legal limit.

**Well was identified as used by people for drinking water during field activities.

***Sample result is equal to the EPA and NNEPA Drinking Water Action Level for Lead of 15 µg/L.

Lead: Although none of the samples showed an exceedance of the water quality standards for lead, samples from two wells (NM-021 and NM-022) contained concentrations of lead *equal to* the numeric Action Level established by the EPA and NNEPA Drinking Water Action Level for Lead, and the Navajo Nation WQS for primary human contact (all three standards have the same numeric limit for lead). Neither of these two wells were identified to be likely drinking water sources during field activities based on observations and discussions with local residents. For more information about human exposure to lead in drinking water, refer to the EPA Office of Water's webpage on Basic Information about Lead in Drinking Water—(<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#health>)

Arsenic: 15 of the 46 samples contained exceedances of the numeric limit for arsenic established by the EPA and NNEPA Drinking Water MCLs for arsenic. Three of these samples (wells UT-003, UT-006, and UT-009) contained concentrations of arsenic that also exceeded the numeric limit established by the Navajo Nation WQS for primary human contact. For more information about human exposure to arsenic in drinking water, refer to the EPA Office of Water's webpage - Drinking Water Standard for Arsenic (<https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=20001XXC.txt>).

Sulfate: 33 of the 46 samples contained exceedances of the numeric limit for sulfate established by the EPA secondary drinking water regulations. For more information about human exposure to sulfate in drinking water, refer to the EPA Office of Water's webpage on Secondary Drinking Water Standards: Guidance for Nuisance Chemicals (<https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals>).

Benzene: 3 of the 46 samples contained exceedances of the numeric limit for benzene established by the EPA and NNEPA Drinking Water MCLs for benzene. These wells are NM-006, NM-012, and NM-013, none of which were identified by the field teams as likely sources of human drinking water. For more information about human exposure to benzene in drinking water, refer to the EPA Office of Water's Benzene Fact Sheet (<https://safewater.zendesk.com/hc/en-us/sections/202346497>).

Chloride: 16 of the 46 samples contained exceedances of the numeric limit for chloride established by the EPA secondary drinking water regulations. For more information about human exposure to lead in drinking water, refer to the EPA Office of Water's webpage on Secondary Drinking Water Standards: Guidance for Nuisance Chemicals (<https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals>).

Appendix A
Field Summaries of Each Well

Navajo Nation Wells

Sample Dates: 7/23/2018-7/27/2018

1. New Mexico Wells

a) NM-001

Flows from the well head were observed from multiple points. Odor and heat from spraying water was noticeable from the sampling location. Marsh and salt flats were observed surrounding the well. Pallets were laid out surrounding the well. The well control valve was rusted. Ducks and dragon flies were observed in pond. There was evidence of livestock use. A large parking area and trash in area suggest people had access to the site.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.24	Not measured	35.57	13,542



Photograph 3. View looking north of the Foshay well (NM-001) during the field parameters measurement.

b) NM-002

The wellhead was approximately 4 inches above ground. Inscriptions on wellhead read “Ceenro Oil Co.” and “Navajo 590-1.” Horses and cows visited the well. There were no signs of human usage.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.98	22	28.29	5,174

c) NM-003

The well flowed directly into two livestock bins, then to a bath tub. Aquatic life was observed by the sampling team. A local resident stated that this well was a source of drinking water for local residents for years. The number of residents who used the well for drinking water was unknown. The resident stated that approximately 100 wild horses also used the water source.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.34	< 5	22.20	645



Photograph 4. View of the NM-003 wellhead where water flowed through a series of troughs, where water was used by local residents and livestock.

d) NM-004

The four-inch wellhead was next to a 2-inch pipe that water flowed from. A small pond formed around this pipe. Water flowed from the small pond through a narrow channel into two larger ponds. A NNEPA representative stated the well was used for domestic purposes (including drinking water) by residents. Livestock also used the well. Another well was drilled approximately 80 feet to the west. That well started to get oil and gas in it and was shut down in 1998-1999.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.37	< 5	20.36	629



Photograph 5. View of NM-004 sampling point where discharging water could be easily accessed on the adjacent concrete platform.

e) NM-005

The wellhead was surrounded by water (10-foot radius) and the top of the wellhead is approximately 18 inches from the surface of the water. Adjacent to the wellhead was a trough that extended partially into the ponded area. Water from the well head flowed from through the trough to the east. The presence of the trough indicated livestock use.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.00	10 (estimated; underwater/not measurable)	17.55	3,654

f) NM-006

The wellhead had two valves attached to HDPE pipes (high density polyethylene). A lot of deerflies were present. Two pipes had flow of approximately the same rate. The piping suggested that the water has some use (use could not be determined in the field). Cows were observed in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.22	14 (both pipes combined)	27.07	8,329

g) NM-007

A pond was present around the wellhead (approximately 150 by 300 feet). A dam is present that led water into a wide vegetated channel. No signs of human use were observed. Horse and cow scat was observed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.64	25	31.21	9,969

h) NM-008

The only visible part of the wellhead was piping that appeared to be a joint, leaking in two places. The water from the joint created a pond around the pipe and then flowed into an adjacent low area. Water around the pipe was dark in color. Cow prints were observed around ponded area and tire tracks were present.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.95	5	38.53	6,415

i) NM-009

The wellhead had a valve that controlled the flow of water from the well to fill truck-mounted water tanks. Another pipe on the wellhead sent water to a trough, which flowed east to northeast. Two residents in the area stated that an unknown number of people use water from this well for drinking.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.48	16.4	26.66	522



Photograph 6. Area at NM-009 where water piped from the wellhead discharged to a concrete trough.

j) NM-010

The wellhead provided water to a tank via a pipe. The water tank had a hole in the bottom and flows created a small channel and pond. The pond was approximately 75 by 75 feet. Horses and cows were observed in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.77	not measured	17.75	1,196

k) NM-011

The well area was fenced off, with a warning sign that stated that no animals or people should drink from it. Samples were taken where water flows under the fence into a channel, approximately 15 feet from the wellhead. The fence would not prevent animals from drinking water from the channel. A NNEPA representative stated that people historically used water from the well but do not currently. The Shiprock fairgrounds were located just south of the well. There were several nearby residences, the closest was approximately 200 feet away.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.03	81	27.4	4,522

l) NM-012

The wellhead had no visible seeps. However, a pipe that was connected to the wellhead daylighted approximately a hundred feet away. Flow from that pipe formed a stream that led to a large pond. The dam appears to have been breached. Cow scat was observed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.22	6	28.99	4,535

m) NM-013

There was an old corroded wellhead that seeped from the bottom. The wellhead also connected to several pipes and a valve. When the valve was opened, the water from the well was transported via pipe to a water tank, which appeared to be used for trucks to haul water. When the valve was closed, the water from the well flowed out of a pipe into a wet area. Horses were observed in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.35	150	29.48	4,847

n) NM-014

The wellhead was leaking water from a corroded lower pipe. The well was previously housed in a wooden structure, which is in poor condition due to impact from the salt precipitate from the leaking well. A sulfur odor was present. Tire tracks, 4-wheeler tracks, and livestock tracks were noticed in area. Discarded hoses were present in the area. Houses were visible down-gradient of the well at a distance of approximately a half mile.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.25	60	36.20	12,100

o) NM-015

On the wellhead was a new valve and piping. The wellhead was leaking into a distinct channel. Downgradient of the well was a wet area that receives water leaking from the well. Flows from the well could be traced to Hunter Wash, approximately ¾ mile away. A NNEPA representative stated water used to be hauled to a local mine for dust suppression. There was evidence of livestock in the area and a large parking area was present.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.77	150	56.00	912

p) NM-016

The well flowed directly into a livestock bin. The trenches were located in the area north of the bin. Truck tracks indicated human presence in area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.89	not measured (underwater)	45.43	1,414

q) NM-017

The well was located on the property of a local resident. Water seeped from a hill that then flowed to an open green field. A spring box with a pipe was observed next to where the seep daylighted. NNEPA staff stated water was used for livestock and drinking by the nearby household.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.03	2 (estimated; too shallow to measure)	20.56	740



Photograph 7. View of NM-017 facing east of the sampling location, Shiprock visible in the background.

r) NM-018

There was a stagnant pond with a trough behind it. An old rusted pipe may draw water from the pond. Cow prints in the area, indicate this well was likely used for livestock.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.10	< 5	17.81	1,678

s) NM-019

The wellhead was connected to a hose that carried water to a pond. The pond was used for livestock as stated by the landowners.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.77	8	19.5	5,252

t) NM-020

A large pond was observed with a visible pipe protruding in the center. No obvious flow was observed. An oily sheen was visible on water. There was a wet area around pond. Signs of horses and wildlife using the pond were observed. Minnows were visible in the pond.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.56	not measured	17.22	4,939

u) NM-021

There was a 30-foot radius pond with a dry channel that leads to the east to another pond of similar size. Very little flow was observed, however bubbles in the middle of the pond suggest the wellhead was underwater. A local resident stated there used to be a wellhead in the center of the pond. There were signs of livestock in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.80	not measurable	16.18	1,674

v) NM-022

This was a wellhead with three pipe connections. Flow from this well was valve-controlled but had a small leak. One pipe was not connected to the wellhead was leaking. One pipe had a corroded faucet.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.8	< 5	26.61	6,344

w) NM-023

There were two livestock tubs connected to each other on site. Inside one of the tubs was a hose that drew water from NM-022, which was upslope of these livestock tubs. The excess water from the tub with the hose, flowed into the other livestock tub. Local residents stated that the wells were used for livestock for approximately the last 100 years.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.81	not measured	27.38	6,097

x) NM-024

The wellhead had a two-inch pipe coming out of it that fed water to a trough. Wet areas are located downstream of the wellhead. There were cow tracks and scat in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.10	< 5	22.67	3,158

y) NM-025

While no flowing water was observed, standing water was puddled around the wellhead. To the east is a manmade basin that may receive water from the well during high periods of flow. Some plants were growing around the standing water. There was also evidence of trampling and signs of livestock. Waterfowl observed in area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.29	none	20.10	3,056

z) NM-026

This well flowed above ground to a manmade pond. A sulfurous odor was present. Biota was observed in pond, and there was evidence of cow use in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.25	not measured	27.46	7,729

aa) NM-027

A wellhead was located to the north of a large container on a concrete platform. Attached to the well were four livestock bins and multiple valves used to fill water tanks or trucks. This infrastructure looked relatively new. There was an impoundment located to the north of the well with standing water present. There were tracks from livestock and wild horses in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.37	< 5	21.30	423

bb) NM-028

This well was located next to a road and had a spigot installed. Water flowed to a livestock bin, then into a fenced pond. There was evidence of livestock in area. The parking area was well developed, and the well tap appeared to be relatively new.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.37	< 5	21.50	480

cc) NM-029

This wellhead had a leak at the top with water slowly seeping from it. There was a ball valve located on the well. A NNEPA representative stated the well was used for a local clinic and school, both of which were closed at the time of the site visit.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.27	< 5	18.73	317



Photograph 8. View of the NM-029 wellhead, where water was slowly leaked out.

dd) NM-029A

There was no visible wellhead, but a pipe extends horizontally from the ground. A local resident stated that the water comes from a well drilled around 1978, located two miles to the west. The resident stated this was a common drinking water source for local residents. The number of local residents who use the well in not known.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.65	7	25.15	290



Photograph 9. View of NM-029A wellhead area where water discharged from a horizontal pipe. Local residents stated the water was sourced approximately two miles to the west.

ee) NM-030

Water flowed from piping and the valve on the wellhead and seeped from the base of the wellhead. The piping from the wellhead led to a pond from which water was freely flowing. The ponded water flowed from the pond and formed a grassy wet area. A local resident stated that livestock drink the water, and that families in the area use the water for domestic uses, including drinking water. Wild horses were observed in the area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
9.1	< 5	24.78	734



Photograph 10. View of the NM-030 sampling location, and possibly where families in the area collected water for drinking water use.

2. Utah Wells

a) UT-001

The well appeared to be plugged and was discharging from the casing below the ground surface. Cattails and other plant species were observed downgradient from the well. The flows from the well formed a small creek that flowed east into a wash. There were limited signs of wildlife and human presence. Scat and livestock tracks were observed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.45	45	19.3	3,715

b) UT-002

The well consisted of a ponded area with a pipe, which appeared to be seeping. There were signs of livestock next to the road. A local resident stated that he wanted to use the well for cleaning dishes.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.78	< 5	30.85	7,520

c) UT-003

Water from the well was routed north through tubing to an impoundment. The water then seeped from the pond downgradient. Water was also discharging from a crack in the tubing and into the pond. The well was easily accessed from the road with a level parking area. There were limited signs of livestock and signs of human activity, such as trash. Damsels/dragonflies were observed around the impoundment.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.50	6	21.24	9,006

d) UT-004

The well appeared to have been plugged. There was ponding in some areas, but no visible above-ground flow. Field parameter samples were taken from standing water. There was limited evidence of livestock.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.0	none	26.89	11,228

e) UT-005

Water from the well traversed to a concrete structure before flowing across the ground toward the San Juan River. However, flow was not reaching the San Juan River at the time of the site visit. There were signs of livestock and human activity, including footprints and vehicle tracks.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.35	not measured	20.49	3,454

f) UT-006

There was a rusty wellhead standing about 2 feet high that was slowly leaking. Red staining was observed on the ground surface around the wellhead. Animal scat was observed near the well and a herd of goats and sheep came to drink from the well during the site visit. There were no signs of human activity.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.47	< 5	17.62	4,303

g) UT-007

The well had a concrete pad and a valve. There was an industrial pad to the north. There was a developed road and parking area at the well. A 5-gallon bucket was observed at the well. Tracking and other signs of livestock were present. Wild dogs were drinking from the well during the site visit.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.91	< 5	18.52	708.9

h) UT-008

The wellhead was about one inch below the ground surface. There was no concrete, just a casing. Water was flowing from the wellhead to the south. Dragonflies and other insects were observed at the well. There were signs of livestock use. An old pipe in the area suggested that water was once re-routed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.64	< 5	17.85	2,288

i) UT-009

No wellhead/structure was visible. The water emanated sub-surface and flowed east from the well. There were signs of horses, but minimal signs of human activity. Insect life was abundant, including dragonflies. Trash was observed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.41	36	21.04	3,949

j) UT-010

Local residents stated that the well was drilled by Navajo approximately 15 years ago. The well flows to a pipe where water flows from a spigot into a trough and ponds. Some pipes carry water up to a livestock corral. There was a gas line extending across the well site. Local residents stated that they use the well for livestock and others use it for drinking water. The number of individuals who use the well for drinking water is unknown.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.86	not measured	20.78	1,520



Photograph 11. View of the UT-010 sampling location. A spigot provides flow into an adjacent trough.

k) UT-011

The well consisted of an approximately one-inch pipe close to ground level. There was a large concrete pad above the pipe. There was evidence of flow toward an impoundment to the south, and of livestock use at the well. The well was located close to the road and had a parking area.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.51	< 5	28.10	3,238

l) UT-012

The wellhead was large and had a new PVC pipe attached which led to a trough flowing downhill to a wash. Concrete around the wellhead was dated 2017. The well appeared to be used for livestock.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.84	< 5	21.45	2,048

m) UT-013

The field team was unable to locate the wellhead. Water from a big grassy area flowed down a slope into a canyon. Wild horses and livestock were present. The site did not appear to be easily accessible by people since there was no road and steep terrain.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.21	224	19.30	2,849

n) UT-014

The well consisted of a small pipe with a little seeping. There was not enough flow to collect a sample. Cow paddies were present near the well.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
not measured	not measured	not measured	not measured

o) UT-015

There was significant flow coming from a pipe. The water from the pipe led to a large pond with a dam. Construction of the dam indicates human use of the well. The dam was breached and water from the pond was flowing toward McCracken Wash. The team observed cattle tracks at the site.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.6	30	18.50	522

p) UT-016

The wellhead consisted of a horizontal pipe with significant corrosion and mineral deposition (red colored). There was a small ponded area around the pipe, and a larger pond downstream.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
7.84	< 5	17.11	2,681

q) UT-017

No sign of a wellhead or flow/moisture at the site. Due to no flow or wellhead sampling was not performed. The site was located along the east side of a river bed.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
not measured	not measured	not measured	not measured

r) UT-018

No wellhead was located but orange/red colored flow was observed entering the San Juan River.

pH (S.U.)	Flow (gpm)	Temperature (°C)	Specific Conductance (µS/cm)
8.13	50	18.82	12,609

Appendix B
Photographs of Each Well Location
Navajo Nation Wells
Sample Dates: 7/23/2018-7/27/2018



NM-001



NM-002



NM-003



NM-004



NM-005



NM-006



NM-007



NM-008



NM-009



NM-010



NM-011



NM-012



NM-013



NM-014



NM-015



NM-016



NM-017



NM-018



NM-019



NM-020



NM-021



NM-022



NM-023



NM-024



NM-025



NM-026



NM-027



NM-028



NM-029



NM-029A



NM-030



UT-001



UT-002



UT-003



UT-004



UT-005



UT-006



UT-007



UT-008



UT-009



UT-010



UT-011



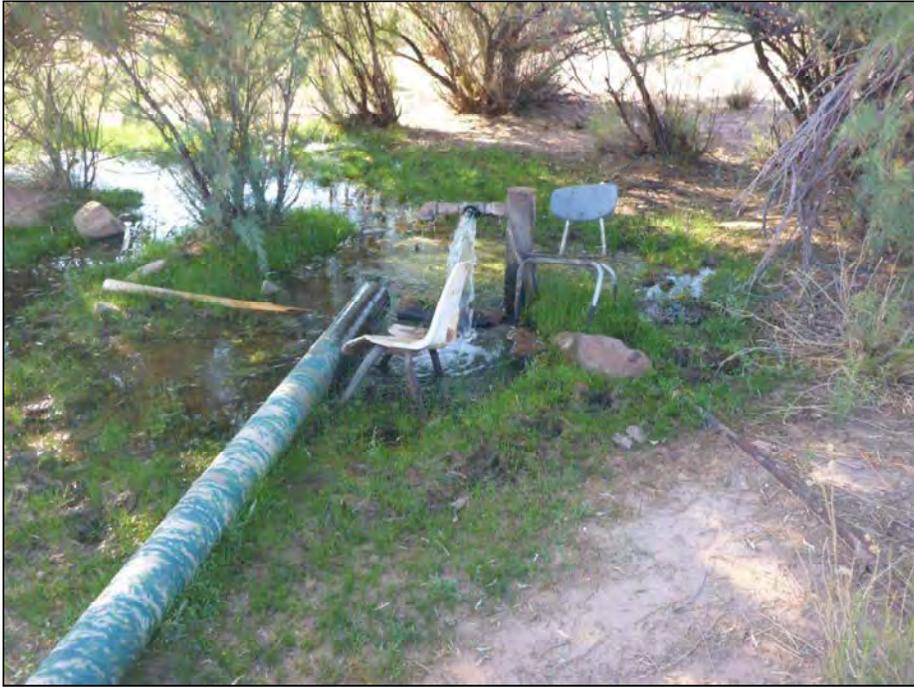
UT-012



UT-013



UT-014



UT-015



UT-016



UT-017



UT-018

Appendix C
Laboratory Analytical Results

Navajo Nation Wells

Sample Dates: 7/23/2018-7/27/2018



United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 8/17/2018

Subject: Analytical Testing Results - Project R18E03
SDG: 18211A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Elizabeth Aubuchon
Enforcement Division, Water Section 1
ENF-3-1

Attached are the results from the analysis of samples from the **Navajo Discharging Wells July 2018** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Alkalinity	Anions by Ion Chromatography
Mercury by CVAA	Metals by ICP
Metals by ICP/MS	Total Dissolved Solids
Semivolatile Organic Compounds by GC/MS	Semivolatile Organic Compounds by GC/MS
Extractable Petroleum Hydrocarbons by GC/FID	Purgeable Petroleum Hydrocarbons by GC/FID
Purgeable Petroleum Hydrocarbons by GC/FID	Volatile Organic Compounds by GC/MS



United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
NM-005	1807044-01	Water	07/27/18 07:10	07/28/18 10:00
NM-006	1807044-02	Water	07/27/18 08:15	07/28/18 10:00
NM-021	1807044-03	Water	07/27/18 09:15	07/28/18 10:00
NM-020	1807044-04	Water	07/27/18 08:10	07/28/18 10:00
NM-013	1807044-05	Water	07/27/18 09:45	07/28/18 10:00
NM-012	1807044-06	Water	07/27/18 10:25	07/28/18 10:00
TB-007	1807044-07	Water	07/27/18 12:00	07/28/18 10:00
NM-028	1807044-08	Water	07/27/18 10:15	07/28/18 10:00
NM-003	1807044-09	Water	07/27/18 10:45	07/28/18 10:00
NM-025	1807044-10	Water	07/27/18 08:00	07/28/18 10:00
NM-027	1807044-11	Water	07/27/18 09:30	07/28/18 10:00

Work Order 1807044

TPHg: Due to insufficient volume of samples, a matrix spike/matrix spike duplicate was not performed.

VOCs: Due to insufficient volume of samples, a matrix spike/matrix spike duplicate was not performed.

TPHd: Sample 1807044-03 showed what appears to be a baseline disturbance and a second system peak at the beginning of the chromatogram. The sample was reanalyzed and the reanalysis result was similar. Part of the peak fell into the diesel range and was calculated as diesel range. The extract was screened using a mass spectrometer (MS), but it did not reveal a hydrocarbon and it identified the peak as dimethyl dioxolane. Since the MS did not detect hydrocarbons, the sample detection limit was raised to just above the calculated value and reported as non-detect.



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-01

Water - Sampled: 07/27/18 07:10

Sample ID: NM-005

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		26,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		6,000		500	"	"	"	"	200.7
Potassium		6,500		2,000	"	"	"	"	200.7
Sodium	RE1	1,000,000		10,000	"	"	"	08/11/18	200.7
Arsenic		ND	U	0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.89	Cl, J	1	"	"	"	"	200.8
Selenium	RE2	1.4		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		ND	U	0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-005

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-01

Water - Sampled: 07/27/18 07:10

Sample ID: NM-005

Volatile Organic Compounds by EPA Method 524.2

Bromochloromethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-01		Water - Sampled: 07/27/18 07:10							
Sample ID: NM-005		Volatile Organic Compounds by EPA Method 524.2							
1,3,5-Trimethylbenzene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			96 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			97 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			101 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			88 %	74-113%		"	"	"	
Sample ID: NM-005		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	
Sample ID: NM-005		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			76 %	47-130%		"	"	"	
Sample ID: NM-005		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-01

Water - Sampled: 07/27/18 07:10

Sample ID: NM-005

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Fluoranthene	ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	86 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	78 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	100 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	111 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	110 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	88 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	147 %		47-130%		"	"	"	

Sample ID: NM-005

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	330		10	"	"	"	"	SM2320
Total Alkalinity	330		10	"	"	"	"	SM2320
Chloride	RE1		170	"	B18H031	08/07/18	08/07/18	300.0
Sulfate	1,500		25	"	"	"	08/07/18	300.0
Total Dissolved Solids	2,900	A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-02

Water - Sampled: 07/27/18 08:15

Sample ID: NM-006

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium	87,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium	14,000		500	"	"	"	"	200.7
Potassium	18,000		2,000	"	"	"	"	200.7
Sodium	RE1		2,000,000	"	"	"	08/11/18	200.7
Arsenic	0.54		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium	ND	U	0.40	"	"	"	"	200.8
Chromium	ND	U	1	"	"	"	"	200.8
Copper	1.1	C1, J	2	"	"	"	"	200.8
Lead	ND	U	1	"	"	"	"	200.8



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-02		Water - Sampled: 07/27/18 08:15							
Sample ID: NM-006		Total Metals by EPA 200 Series Methods							
Nickel		2.6		1	ug/L	B18H006	08/01/18	08/08/18	200.8
Selenium	RE2	1.9		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		ND	U	0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8
Sample ID: NM-006		Volatile Organic Compounds by EPA Method 524.2							
Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		16		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-02

Water - Sampled: 07/27/18 08:15

Sample ID: NM-006

Volatile Organic Compounds by EPA Method 524.2

Dibromomethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		0.7		0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-02		Water - Sampled: 07/27/18 08:15							
Sample ID: NM-006		Volatile Organic Compounds by EPA Method 524.2							
1,2,4-Trichlorobenzene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		0.3	Cl, J	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl		0.8	N TIC, J		"	"	"	"	524.2
unknown hydrocarbon		1.0	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			99 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			95 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			104 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			96 %	74-113%		"	"	"	
Sample ID: NM-006		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		49	Cl, F12, J	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: NM-006		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			74 %	47-130%		"	"	"	
Sample ID: NM-006		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-02

Water - Sampled: 07/27/18 08:15

Sample ID: NM-006

Semivolatile Organic Compounds by EPA Method 8270D									
Dibenz(a,h)anthracene		ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			94 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>			94 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			98 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			77 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			92 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			98 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			94 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>			151 %		47-130%	"	"	"	

Sample ID: NM-006

Conventional Chemistry Parameters by APHA/EPA Methods									
Hydroxide Alkalinity		ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		160		10	"	"	"	"	SM2320
Total Alkalinity		160		10	"	"	"	"	SM2320
Chloride		580		50	"	B18H031	08/07/18	08/07/18	300.0
Sulfate	RE1	3,200		50	"	"	"	08/07/18	300.0
Total Dissolved Solids		5,900	A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-03

Water - Sampled: 07/27/18 09:15

Sample ID: NM-021

Total Metals by EPA 200 Series Methods									
Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		100,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		22,000		500	"	"	"	"	200.7
Potassium		6,700		2,000	"	"	"	"	200.7
Sodium	RE1	640,000		10,000	"	"	"	08/11/18	200.7
Arsenic		10		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		0.56		0.40	"	"	"	"	200.8
Chromium		3.8		1	"	"	"	"	200.8
Copper		2.7		2	"	"	"	"	200.8
Lead		15		1	"	"	"	"	200.8
Nickel		13		1	"	"	"	"	200.8
Selenium	RE2	1.0		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		0.91	C1, J	1	"	"	"	08/08/18	200.8
Uranium		1.2		0.25	"	"	"	"	200.8
Zinc		31		5	"	"	"	"	200.8

Sample ID: NM-021

Volatile Organic Compounds by EPA Method 524.2									
Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-03

Water - Sampled: 07/27/18 09:15

Sample ID: NM-021

Volatile Organic Compounds by EPA Method 524.2

Vinyl chloride		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		4.6		4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2



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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-03

Water - Sampled: 07/27/18 09:15

Sample ID: NM-021

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichloropropane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		96 %		83-116%		"	"	"	
Surrogate: Toluene-d8		95 %		81-112%		"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		80-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		100 %		74-113%		"	"	"	



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-03 **Water - Sampled:** 07/27/18 09:15

Sample ID: NM-021 **Purgeable Petroleum Hydrocarbons**
 TPH - Gasoline Range Organics ND U 50 ug/L B18G089 07/30/18 07/30/18 8015C

Surrogate: a,a,a-Trifluorotoluene 102 % 87-110% " " "

Sample ID: NM-021 **Extractable Petroleum Hydrocarbons**
 TPH - Diesel Range Organics ND F1, U 3,100 " B18H016 08/02/18 08/06/18 8015C
 TPH - Oil Range Organics ND U 600 " " " " 8015C

Surrogate: Hexacosane 59 % 47-130% " " "

Sample ID: NM-021 **Semivolatile Organic Compounds by EPA Method 8270D**

Hexachloroethane	ND	U		1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene	ND	U		1	"	"	"	"	8270D
1-Methylnaphthalene	ND	U		1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	U		5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U		1	"	"	"	"	8270D
Acenaphthylene	ND	U		1	"	"	"	"	8270D
Acenaphthene	ND	U		1	"	"	"	"	8270D
Fluorene	ND	U		1	"	"	"	"	8270D
Hexachlorobenzene	ND	J, Q7, U		1	"	"	"	"	8270D
Anthracene	ND	J, Q7, U		1	"	"	"	"	8270D
Fluoranthene	ND	J, Q7, U		1	"	"	"	"	8270D
Pyrene	ND	J, Q7, U		1	"	"	"	"	8270D
Benzo(a)anthracene	ND	J, Q7, U		1	"	"	"	"	8270D
Chrysene	ND	J, Q7, U		1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	J, Q7, U		1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	J, Q7, U		1	"	"	"	"	8270D
Benzo(a)pyrene	ND	J, Q7, U		1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	J, Q7, U		1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	J, Q7, U		1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	J, Q7, U		1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol 81 % 54-110% " " "

Surrogate: Phenol-d5 69 % 54-110% " " "

Surrogate: 2-Chlorophenol-d4 83 % 60-110% " " "

Surrogate: 1,2-Dichlorobenzene-d4 69 % 38-110% " " "

Surrogate: Nitrobenzene-d5 81 % 26-134% " " "

Surrogate: 2-Fluorobiphenyl 71 % 57-110% " " "

Surrogate: 2,4,6-Tribromophenol 119 % 46-136% " " "

Surrogate: Terphenyl-d14 22 % 47-130% " " "

Sample ID: NM-021 **Conventional Chemistry Parameters by APHA/EPA Methods**



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-03		Water - Sampled: 07/27/18 09:15							
Sample ID: NM-021		Conventional Chemistry Parameters by APHA/EPA Methods							
Hydroxide Alkalinity		ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		610		10	"	"	"	"	SM2320
Total Alkalinity		610		10	"	"	"	"	SM2320
Chloride	RE1	88		10	"	B18H031	08/07/18	08/07/18	300.0
Sulfate		810		25	"	"	"	08/07/18	300.0
Total Dissolved Solids		2,500	A3, J	200	"	B18H053	08/08/18	08/08/18	2540C
Lab ID: 1807044-04		Water - Sampled: 07/27/18 08:10							
Sample ID: NM-020		Total Metals by EPA 200 Series Methods							
Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		56,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		29,000		500	"	"	"	"	200.7
Potassium		17,000		2,000	"	"	"	"	200.7
Sodium	RE1	1,400,000		10,000	"	"	"	08/11/18	200.7
Arsenic		0.35	Cl, J	0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.7	Cl, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		2.2		1	"	"	"	"	200.8
Selenium	RE2	1.2		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		ND	U	0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8
Sample ID: NM-020		Volatile Organic Compounds by EPA Method 524.2							
Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		5.0		4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-04

Water - Sampled: 07/27/18 08:10

Sample ID: NM-020

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
trans-1,2-Dichloroethene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-04

Water - Sampled: 07/27/18 08:10

Sample ID: NM-020

Volatile Organic Compounds by EPA Method 524.2									
Bromoform		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			102 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			94 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			104 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			101 %	74-113%		"	"	"	

Sample ID: NM-020

Purgeable Petroleum Hydrocarbons									
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			102 %	87-110%		"	"	"	

Sample ID: NM-020

Extractable Petroleum Hydrocarbons									
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			76 %	47-130%		"	"	"	

Sample ID: NM-020

Semivolatile Organic Compounds by EPA Method 8270D									
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-04

Water - Sampled: 07/27/18 08:10

Sample ID: NM-020

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1-Methylnaphthalene	ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Hexachlorocyclopentadiene	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

88 % 54-110%

" " "

Surrogate: Phenol-d5

90 % 54-110%

" " "

Surrogate: 2-Chlorophenol-d4

92 % 60-110%

" " "

Surrogate: 1,2-Dichlorobenzene-d4

77 % 38-110%

" " "

Surrogate: Nitrobenzene-d5

90 % 26-134%

" " "

Surrogate: 2-Fluorobiphenyl

93 % 57-110%

" " "

Surrogate: 2,4,6-Tribromophenol

115 % 46-136%

" " "

Surrogate: Terphenyl-d14

113 % 47-130%

" " "

Sample ID: NM-020

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity	66		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	1,000		10	"	"	"	"	SM2320
Total Alkalinity	1,100		10	"	"	"	"	SM2320
Chloride	310	RE1	20	"	B18H031	08/07/18	08/07/18	300.0
Sulfate	1,600		25	"	"	"	08/07/18	300.0
Total Dissolved Solids	4,100	A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-05

Water - Sampled: 07/27/18 09:45

Sample ID: NM-013

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium	150,000		100	"	B18H005	08/01/18	08/10/18	200.7



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-05

Water - Sampled: 07/27/18 09:45

Sample ID: NM-013

Total Metals by EPA 200 Series Methods										
							08/01/18	08/10/18	08/11/18	200.7
Magnesium		11,000		500	ug/L	B18H005				200.7
Potassium		9,700		2,000	"	"	"	"		200.7
Sodium	RE1	940,000		10,000	"	"		08/11/18		200.7
Arsenic		1.5		0.50	"	B18H006	08/01/18	08/08/18		200.8
Cadmium		ND	U	0.40	"	"	"	"		200.8
Chromium		ND	U	1	"	"	"	"		200.8
Copper		1.6	C1, J	2	"	"	"	"		200.8
Lead		ND	J, Q4, U	1	"	"	"	"		200.8
Nickel		4.2		1	"	"	"	"		200.8
Selenium	RE2	1.2	J, Q4	1	"	"		08/13/18		200.8
Silver	RE1	ND	U	0.25	"	"		08/13/18		200.8
Thorium		ND	U	1	"	"		08/08/18		200.8
Uranium		ND	U	0.25	"	"		"		200.8
Zinc		2.9	C1, Q4, J	5	"	"		"		200.8

Sample ID: NM-013

Volatile Organic Compounds by EPA Method 524.2									
							07/30/18	07/30/18	524.2
Dichlorodifluoromethane		ND	U	0.5	"	B18G086			524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-05

Water - Sampled: 07/27/18 09:45

Sample ID: NM-013

Volatile Organic Compounds by EPA Method 524.2									
1,1,1-Trichloroethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		7.9		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		0.3	CI, J	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-05		Water - Sampled: 07/27/18 09:45							
Sample ID: NM-013		Volatile Organic Compounds by EPA Method 524.2							
sec-Butylbenzene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl-		0.9	N TIC, J		"	"	"	"	524.2
Cyclohexane		0.6	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			95 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			97 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			104 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	
Sample ID: NM-013		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		31	C1, F12, J	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			99 %	87-110%		"	"	"	
Sample ID: NM-013		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %	47-130%		"	"	"	
Sample ID: NM-013		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	J, Q4, U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	J, Q4, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	J, Q4, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-05

Water - Sampled: 07/27/18 09:45

Sample ID: NM-013

Semivolatile Organic Compounds by EPA Method 8270D

Pyrene		ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		88 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		89 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		91 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		73 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		88 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		89 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		91 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		120 %		47-130%		"	"	"	

Sample ID: NM-013

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		66		10	"	"	"	"	SM2320
Total Alkalinity		66		10	"	"	"	"	SM2320
Chloride	RE1	99		10	"	B18H031	08/07/18	08/07/18	300.0
Sulfate		2,000		25	"	"	"	08/07/18	300.0
Total Dissolved Solids		3,300	A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-06

Water - Sampled: 07/27/18 10:25

Sample ID: NM-012

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		160,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		21,000		500	"	"	"	"	200.7
Potassium		9,000		2,000	"	"	"	"	200.7
Sodium	RE1	850,000		10,000	"	"	"	08/11/18	200.7
Arsenic		1.1		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.6	C1, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		4.4		1	"	"	"	"	200.8



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-06

Water - Sampled: 07/27/18 10:25

Sample ID: NM-012

Total Metals by EPA 200 Series Methods

Selenium	RE2	0.94	C1, J	1	ug/L	B18H006	08/01/18	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		ND	U	0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-012

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		16		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-06

Water - Sampled: 07/27/18 10:25

Sample ID: NM-012

Volatile Organic Compounds by EPA Method 524.2

Bromodichloromethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		0.9		0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		0.4	Cl, J	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-06		Water - Sampled: 07/27/18 10:25							
Sample ID: NM-012		Volatile Organic Compounds by EPA Method 524.2							
Naphthalene		0.5		0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl		2.0	N TIC, J		"	"	"	"	524.2
Isobutane		5.5	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			98 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			94 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			108 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			100 %	74-113%		"	"	"	
Sample ID: NM-012		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		53	F12	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	
Sample ID: NM-012		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %	47-130%		"	"	"	
Sample ID: NM-012		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-06

Water - Sampled: 07/27/18 10:25

Sample ID: NM-012

Semivolatile Organic Compounds by EPA Method 8270D

<i>Surrogate: 2-Fluorophenol</i>	85 %	54-110%	B18H010	08/01/18 08/03/18
<i>Surrogate: Phenol-d5</i>	87 %	54-110%	"	" "
<i>Surrogate: 2-Chlorophenol-d4</i>	89 %	60-110%	"	" "
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	72 %	38-110%	"	" "
<i>Surrogate: Nitrobenzene-d5</i>	84 %	26-134%	"	" "
<i>Surrogate: 2-Fluorobiphenyl</i>	86 %	57-110%	"	" "
<i>Surrogate: 2,4,6-Tribromophenol</i>	84 %	46-136%	"	" "
<i>Surrogate: Terphenyl-d14</i>	128 %	47-130%	"	" "

Sample ID: NM-012

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity	ND U	10	mg/L	B18H044	08/08/18	08/08/18	SM2320
Carbonate Alkalinity	ND U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	59	10	"	"	"	"	SM2320
Total Alkalinity	59	10	"	"	"	"	SM2320
Chloride	RE1	83	10	"	B18H031	08/07/18	08/07/18 300.0
Sulfate	1,900	25	"	"	"	08/07/18	300.0
Total Dissolved Solids	3,100 A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-07

Water - Sampled: 07/27/18 12:00

Sample ID: TB-007

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane	ND U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Chloromethane	ND U	0.5	"	"	"	"	524.2
Vinyl chloride	ND U	0.5	"	"	"	"	524.2
Bromomethane	ND U	0.5	"	"	"	"	524.2
Chloroethane	ND U	0.5	"	"	"	"	524.2
Trichlorofluoromethane	ND U	0.5	"	"	"	"	524.2
1,1-Dichloroethene	ND U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	0.5	"	"	"	"	524.2
Acetone	ND U	4	"	"	"	"	524.2
Carbon disulfide	ND U	0.5	"	"	"	"	524.2
Dichloromethane	ND U	0.5	"	"	"	"	524.2
tert-Butyl alcohol	ND U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene	ND U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)	ND U	2	"	"	"	"	524.2
1,1-Dichloroethane	ND U	0.5	"	"	"	"	524.2
Diisopropyl ether	ND U	2	"	"	"	"	524.2
Ethyl tert-butyl ether	ND U	2	"	"	"	"	524.2
2,2-Dichloropropane	ND U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene	ND U	0.5	"	"	"	"	524.2
2-Butanone (MEK)	ND U	4	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-07

Water - Sampled: 07/27/18 12:00

Sample ID: TB-007

Volatile Organic Compounds by EPA Method 524.2									
Bromochloromethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-07

Water - Sampled: 07/27/18 12:00

Sample ID: TB-007

Volatile Organic Compounds by EPA Method 524.2

1,3,5-Trimethylbenzene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			97 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			93 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	

Lab ID: 1807044-08

Water - Sampled: 07/27/18 10:15

Sample ID: NM-028

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		1,200		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	"	200.7
Potassium		1,100	C1, J	2,000	"	"	"	"	200.7
Sodium	RE1	100,000		10,000	"	"	"	08/11/18	200.7
Arsenic		4.4		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium	RE2	16		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		14		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-028

Volatile Organic Compounds by EPA Method 524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-08

Water - Sampled: 07/27/18 10:15

Sample ID: NM-028

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-08

Water - Sampled: 07/27/18 10:15

Sample ID: NM-028

Volatile Organic Compounds by EPA Method 524.2

1,1,2-Trichloroethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2

Surrogate: 1,2-Dichloroethane-d4

96 % 83-116%

" " "

Surrogate: Toluene-d8

94 % 81-112%

" " "



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-08						Water - Sampled: 07/27/18 10:15			
Sample ID: NM-028						Volatile Organic Compounds by EPA Method 524.2			
Surrogate: 4-Bromofluorobenzene			107 %	80-110%		B18G086	07/30/18	07/30/18	
Surrogate: 1,2-Dichlorobenzene-d4			100 %	74-113%		"	"	"	
Sample ID: NM-028						Purgeable Petroleum Hydrocarbons			
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
Surrogate: a,a,a-Trifluorotoluene			101 %	87-110%		"	"	"	
Sample ID: NM-028						Extractable Petroleum Hydrocarbons			
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
Surrogate: Hexacosane			74 %	47-130%		"	"	"	
Sample ID: NM-028						Semivolatile Organic Compounds by EPA Method 8270D			
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
Surrogate: 2-Fluorophenol			97 %	54-110%		"	"	"	
Surrogate: Phenol-d5			97 %	54-110%		"	"	"	
Surrogate: 2-Chlorophenol-d4			100 %	60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			86 %	38-110%		"	"	"	
Surrogate: Nitrobenzene-d5			96 %	26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl			103 %	57-110%		"	"	"	



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-08

Water - Sampled: 07/27/18 10:15

Sample ID: NM-028

Semivolatile Organic Compounds by EPA Method 8270D

Surrogate: 2,4,6-Tribromophenol	86 %	46-136%	B18H010	08/01/18	08/03/18	
Surrogate: Terphenyl-d14	127 %	47-130%	"	"	"	

Sample ID: NM-028

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity	ND U	10	mg/L	B18H044	08/08/18	08/08/18	SM2320
Carbonate Alkalinity	46	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	150	10	"	"	"	"	SM2320
Total Alkalinity	200	10	"	"	"	"	SM2320
Chloride	RE1	3.1	1	"	B18H042	08/08/18	08/08/18 300.0
Sulfate	RE1	18	0.50	"	"	"	300.0
Total Dissolved Solids		270 A3, J	20	"	B18H053	08/08/18	08/08/18 2540C

Lab ID: 1807044-09

Water - Sampled: 07/27/18 10:45

Sample ID: NM-003

Total Metals by EPA 200 Series Methods

Mercury	ND U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium	1,100	100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium	ND U	500	"	"	"	"	200.7
Potassium	1,100 Cl, J	2,000	"	"	"	"	200.7
Sodium	RE1	140,000	10,000	"	"	08/11/18	200.7
Arsenic	22	0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium	ND U	0.40	"	"	"	"	200.8
Chromium	ND U	1	"	"	"	"	200.8
Copper	ND U	2	"	"	"	"	200.8
Lead	ND U	1	"	"	"	"	200.8
Nickel	ND U	1	"	"	"	"	200.8
Selenium	RE2	ND U	1	"	"	08/13/18	200.8
Silver	RE1	ND U	0.25	"	"	08/13/18	200.8
Thorium	ND U	1	"	"	"	08/08/18	200.8
Uranium	2.0	0.25	"	"	"	"	200.8
Zinc	ND U	5	"	"	"	"	200.8

Sample ID: NM-003

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane	ND U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane	ND U	0.5	"	"	"	"	524.2
Vinyl chloride	ND U	0.5	"	"	"	"	524.2
Bromomethane	ND U	0.5	"	"	"	"	524.2
Chloroethane	ND U	0.5	"	"	"	"	524.2
Trichlorofluoromethane	ND U	0.5	"	"	"	"	524.2
1,1-Dichloroethene	ND U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	0.5	"	"	"	"	524.2
Acetone	ND U	4	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-09

Water - Sampled: 07/27/18 10:45

Sample ID: NM-003

Volatile Organic Compounds by EPA Method 524.2									
Carbon disulfide		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		0.6		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-09		Water - Sampled: 07/27/18 10:45							
Sample ID: NM-003		Volatile Organic Compounds by EPA Method 524.2							
m&p-Xylene		ND	U	1	ug/L	B18G086	07/30/18	07/30/18	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			100 %						83-116%
<i>Surrogate: Toluene-d8</i>			94 %						81-112%
<i>Surrogate: 4-Bromofluorobenzene</i>			108 %						80-110%
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			101 %						74-113%
Sample ID: NM-003		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %						87-110%
Sample ID: NM-003		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %						47-130%



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-09

Water - Sampled: 07/27/18 10:45

Sample ID: NM-003

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hexachloroethane	ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene	ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene	ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	95 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	94 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	97 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	81 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	94 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	100 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	86 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	122 %		47-130%		"	"	"	

Sample ID: NM-003

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H044	08/08/18	08/08/18	SM2320
Carbonate Alkalinity	48		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	200		10	"	"	"	"	SM2320
Total Alkalinity	250		10	"	"	"	"	SM2320
Chloride	RE1	11	1	"	B18H042	08/08/18	08/08/18	300.0
Sulfate	RE1	31	0.50	"	"	"	"	300.0
Total Dissolved Solids	360	A3, J	20	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-10

Water - Sampled: 07/27/18 08:00



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-10

Water - Sampled: 07/27/18 08:00

Sample ID: NM-025

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		94,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		3,200		500	"	"	"	"	200.7
Potassium		4,400		2,000	"	"	"	"	200.7
Sodium	RE1	840,000		10,000	"	"	"	08/11/18	200.7
Arsenic		3.2		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		1.3		1	"	"	"	"	200.8
Copper		5.5		2	"	"	"	"	200.8
Lead		3.6		1	"	"	"	"	200.8
Nickel		8.2		1	"	"	"	"	200.8
Selenium	RE2	1.1		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		0.89	Cl, J	1	"	"	"	08/08/18	200.8
Uranium		0.78		0.25	"	"	"	"	200.8
Zinc		17		5	"	"	"	"	200.8

Sample ID: NM-025

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		3.1	Cl, J	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-10

Water - Sampled: 07/27/18 08:00

Sample ID: NM-025

Volatile Organic Compounds by EPA Method 524.2									
Chloroform		7.5		0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807044-10		Water - Sampled: 07/27/18 08:00							
Sample ID: NM-025		Volatile Organic Compounds by EPA Method 524.2							
tert-Butylbenzene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			99 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			92 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			107 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	
Sample ID: NM-025		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	
Sample ID: NM-025		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			76 %	47-130%		"	"	"	
Sample ID: NM-025		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-10

Water - Sampled: 07/27/18 08:00

Sample ID: NM-025

Semivolatile Organic Compounds by EPA Method 8270D

Pyrene		ND	U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			86 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			87 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			88 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			74 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			84 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			86 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			98 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			58 %	47-130%		"	"	"	

Sample ID: NM-025

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H044	08/08/18	08/08/18	SM2320
Carbonate Alkalinity		8.3	CI, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		430		10	"	"	"	"	SM2320
Total Alkalinity		440		10	"	"	"	"	SM2320
Chloride	RE1	56		5	"	B18H042	08/08/18	08/08/18	300.0
Sulfate		1,600		25	"	B18H031	08/07/18	08/07/18	300.0
Total Dissolved Solids		2,700	A3, J	80	"	B18H053	08/08/18	08/08/18	2540C

Lab ID: 1807044-11

Water - Sampled: 07/27/18 09:30

Sample ID: NM-027

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		1,200		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	"	200.7
Potassium		ND	U	2,000	"	"	"	"	200.7
Sodium	RE1	94,000		10,000	"	"	"	08/11/18	200.7
Arsenic		3.1		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-11

Water - Sampled: 07/27/18 09:30

Sample ID: NM-027

Total Metals by EPA 200 Series Methods

Selenium	RE2	44		1	ug/L	B18H006	08/01/18	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		16		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-027

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G086	07/30/18	07/30/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-11

Water - Sampled: 07/27/18 09:30

Sample ID: NM-027

Volatile Organic Compounds by EPA Method 524.2

Bromodichloromethane		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-11

Water - Sampled: 07/27/18 09:30

Sample ID: NM-027

Volatile Organic Compounds by EPA Method 524.2

Hexachlorobutadiene		ND	U	0.5	ug/L	B18G086	07/30/18	07/30/18	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>				99 %					83-116%
<i>Surrogate: Toluene-d8</i>				93 %					81-112%
<i>Surrogate: 4-Bromofluorobenzene</i>				107 %					80-110%
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>				98 %					74-113%

Sample ID: NM-027

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>				98 %					87-110%

Sample ID: NM-027

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18H016	08/02/18	08/06/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>				74 %					47-130%

Sample ID: NM-027

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807044-11

Water - Sampled: 07/27/18 09:30

Sample ID: NM-027

Semivolatile Organic Compounds by EPA Method 8270D

						B18H010	08/01/18	08/03/18	
Surrogate: 2-Fluorophenol		67 %		54-110%		"	"	"	
Surrogate: Phenol-d5		72 %		54-110%		"	"	"	
Surrogate: 2-Chlorophenol-d4		79 %		60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		73 %		38-110%		"	"	"	
Surrogate: Nitrobenzene-d5		82 %		26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl		87 %		57-110%		"	"	"	
Surrogate: 2,4,6-Tribromophenol		75 %		46-136%		"	"	"	
Surrogate: Terphenyl-d14		122 %		47-130%		"	"	"	

Sample ID: NM-027

Conventional Chemistry Parameters by APHA/EPA Methods

		Result	Qualifiers	Limit	Units	B18H044	08/08/18	08/08/18	Method
Hydroxide Alkalinity		ND	U	10	mg/L	"	"	"	SM2320
Carbonate Alkalinity		37		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		160		10	"	"	"	"	SM2320
Total Alkalinity		190		10	"	"	"	"	SM2320
Chloride	RE1	1.2		1	"	B18H042	08/08/18	08/08/18	300.0
Sulfate	RE1	7.0		0.50	"	"	"	"	300.0
Total Dissolved Solids		240	A3, J	20	"	B18H053	08/08/18	08/08/18	2540C



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G086 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/30/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G086-BLK1)

Dichlorodifluoromethane	ND	U		0.5 ug/L						
Chloromethane	ND	U		0.5 "						
Vinyl chloride	ND	U		0.5 "						
Bromomethane	ND	U		0.5 "						
Chloroethane	ND	U		0.5 "						
Trichlorofluoromethane	ND	U		0.5 "						
1,1-Dichloroethene	ND	U		0.5 "						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5 "						
Acetone	ND	U		4 "						
Carbon disulfide	ND	U		0.5 "						
Dichloromethane	ND	U		0.5 "						
tert-Butyl alcohol	ND	U		10 "						
trans-1,2-Dichloroethene	ND	U		0.5 "						
tert-Butyl methyl ether (MTBE)	ND	U		2 "						
1,1-Dichloroethane	ND	U		0.5 "						
Diisopropyl ether	ND	U		2 "						
Ethyl tert-butyl ether	ND	U		2 "						
2,2-Dichloropropane	ND	U		0.5 "						
cis-1,2-Dichloroethene	ND	U		0.5 "						
2-Butanone (MEK)	ND	U		4 "						
Bromochloromethane	ND	U		0.5 "						
Chloroform	ND	U		0.5 "						
1,1,1-Trichloroethane	ND	U		0.5 "						
Carbon tetrachloride	ND	U		0.5 "						
1,1-Dichloropropene	ND	U		0.5 "						
Benzene	ND	U		0.5 "						
1,2-Dichloroethane	ND	U		0.5 "						
tert-Amyl methyl ether	ND	U		2 "						
Trichloroethene	ND	U		0.5 "						
1,2-Dichloropropane	ND	U		0.5 "						
Dibromomethane	ND	U		0.5 "						
Bromodichloromethane	ND	U		0.5 "						
cis-1,3-Dichloropropene	ND	U		0.5 "						
4-Methyl-2-pentanone (MIBK)	ND	U		4 "						
Toluene	ND	U		0.5 "						
trans-1,3-Dichloropropene	ND	U		0.5 "						
1,1,2-Trichloroethane	ND	U		0.5 "						
Tetrachloroethene	ND	U		0.5 "						
1,3-Dichloropropane	ND	U		0.5 "						
2-Hexanone	ND	U		4 "						
Chlorodibromomethane	ND	U		0.5 "						
1,2-Dibromoethane (EDB)	ND	U		0.5 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G086 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/30/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G086-BLK1)

Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.72			"	5.00		94	83-116		
<i>Surrogate: Toluene-d8</i>	4.69			"	5.00		94	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.24			"	5.00		105	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.91			"	5.00		98	74-113		

LCS (B18G086-BS1)

Dichlorodifluoromethane	5.23		0.5	ug/L	5.00		105	70-128		
Chloromethane	5.18		0.5	"	5.00		104	63-123		
Vinyl chloride	5.19		0.5	"	5.00		104	70-130		
Bromomethane	5.18		0.5	"	5.00		104	31-150		
Chloroethane	5.11		0.5	"	5.00		102	74-119		
Trichlorofluoromethane	5.03		0.5	"	5.00		101	72-123		
1,1-Dichloroethene	5.08		0.5	"	5.00		102	70-130		



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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18211A Reported: 08/17/18 18:08
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G086 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/30/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G086-BS1)

1,1,2-Trichloro-1,2,2-trifluoroethane	5.28		0.5	"	5.00		106	73-129		
Acetone	35.7		4	"	40.0		89	61-114		
Dichloromethane	4.97		0.5	"	5.00		99	70-130		
trans-1,2-Dichloroethene	5.08		0.5	"	5.00		102	70-130		
tert-Butyl methyl ether (MTBE)	18.1		2	"	20.0		90	62-117		
1,1-Dichloroethane	4.83		0.5	"	5.00		97	74-115		
2,2-Dichloropropane	5.1		0.5	"	5.00		102	64-144		
cis-1,2-Dichloroethene	4.99		0.5	"	5.00		100	70-130		
2-Butanone (MEK)	32.1		4	"	40.0		80	57-121		
Bromochloromethane	5.41		0.5	"	5.00		108	71-122		
Chloroform	4.99		0.5	"	5.00		100	70-130		
1,1,1-Trichloroethane	5.22		0.5	"	5.00		104	70-130		
Carbon tetrachloride	6.2		0.5	"	5.00		124	70-130		
1,1-Dichloropropene	4.8		0.5	"	5.00		96	71-119		
Benzene	4.95		0.5	"	5.00		99	70-130		
1,2-Dichloroethane	4.6		0.5	"	5.00		92	70-130		
Trichloroethene	4.9		0.5	"	5.00		98	70-130		
1,2-Dichloropropane	5.09		0.5	"	5.00		102	70-130		
Dibromomethane	5.05		0.5	"	5.00		101	72-121		
Bromodichloromethane	5.17		0.5	"	5.00		103	70-130		
cis-1,3-Dichloropropene	4.61		0.5	"	5.00		92	68-120		
Toluene	5.05		0.5	"	5.00		101	70-130		
trans-1,3-Dichloropropene	4.36		0.5	"	5.00		87	64-126		
1,1,2-Trichloroethane	4.99		0.5	"	5.00		100	70-130		
Tetrachloroethene	5.1		0.5	"	5.00		102	70-130		
1,3-Dichloropropane	4.72		0.5	"	5.00		94	80-114		
Chlorodibromomethane	5.57		0.5	"	5.00		111	70-130		
1,2-Dibromoethane (EDB)	4.97		0.5	"	5.00		99	80-115		
Chlorobenzene	5.1		0.5	"	5.00		102	70-130		
1,1,1,2-Tetrachloroethane	5.28		0.5	"	5.00		106	82-116		
Ethylbenzene	5.26		0.5	"	5.00		105	70-130		
m&p-Xylene	10.6		1	"	10.0		106	70-130		
o-Xylene	5.18		0.5	"	5.00		104	70-130		
Styrene	5.29		0.5	"	5.00		106	70-130		
Bromoform	6.05		0.5	"	5.00		121	70-130		
Isopropylbenzene	5.13		0.5	"	5.00		103	86-114		
Bromobenzene	5.23		0.5	"	5.00		105	84-110		
1,1,2,2-Tetrachloroethane	5.02		0.5	"	5.00		100	81-113		
1,2,3-Trichloropropane	4.94		0.5	"	5.00		99	81-114		
Propylbenzene	5.36		0.5	"	5.00		107	87-115		
2-Chlorotoluene	5.05		0.5	"	5.00		101	84-111		
4-Chlorotoluene	5.03		0.5	"	5.00		101	82-112		



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G086 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/30/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G086-BS1)

1,3,5-Trimethylbenzene	5.01		0.5	"	5.00		100	85-113		
tert-Butylbenzene	4.79		0.5	"	5.00		96	86-114		
1,2,4-Trimethylbenzene	5.06		0.5	"	5.00		101	84-114		
sec-Butylbenzene	5.02		0.5	"	5.00		100	87-119		
1,3-Dichlorobenzene	5.08		0.5	"	5.00		102	85-110		
p-Isopropyltoluene	5.11		0.5	"	5.00		102	86-117		
1,4-Dichlorobenzene	5.12		0.5	"	5.00		102	70-130		
1,2-Dichlorobenzene	4.9		0.5	"	5.00		98	70-130		
Butylbenzene	5.18		0.5	"	5.00		104	85-118		
1,2-Dibromo-3-chloropropane	19.3		2	"	20.0		96	54-133		
1,2,4-Trichlorobenzene	4.72		0.5	"	5.00		94	70-130		
Hexachlorobutadiene	4.6		0.5	"	5.00		92	66-113		
Naphthalene	4.36		0.5	"	5.00		87	58-126		
1,2,3-Trichlorobenzene	4.68		0.5	"	5.00		94	65-119		

Surrogate: 1,2-Dichloroethane-d4	4.40			"	5.00		88	83-116		
Surrogate: Toluene-d8	5.22			"	5.00		104	81-112		
Surrogate: 4-Bromofluorobenzene	5.41			"	5.00		108	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.08			"	5.00		102	74-113		

Batch B18G089 - 5030 P&T TPH-G - TPH - Purgeable

Prepared & Analyzed: 07/30/18

Purgeable Petroleum Hydrocarbons - Quality Control

Blank (B18G089-BLK1)

TPH - Gasoline Range Organics	ND	U			50 ug/L					
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Surrogate: a, a, a-Trifluorotoluene	117			"	125		93	87-110		
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LCS (B18G089-BS1)

TPH - Gasoline Range Organics	520				50 ug/L	500	104	81-119		
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Surrogate: a, a, a-Trifluorotoluene	121			"	125		97	87-110		
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Batch B18H005 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/10/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H005-BLK1)

Calcium	ND	U			100 ug/L					
Magnesium	ND	U			500 "					
Potassium	ND	U			2,000 "					
Sodium	450	J			500 "					

Blank (B18H005-BLK2)

Sodium	ND	U			500 ug/L					
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LCS (B18H005-BS1)

Calcium	1,060				100 ug/L	1000	106	85-115		
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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H005 - 200 Series Digest - Metals by 200.7, Total										
Prepared: 08/01/18 Analyzed: 08/10/18										
Total Metals by EPA 200 Series Methods - Quality Control										
LCS (B18H005-BS1)										
Magnesium	2,090		500	"	2000		105	85-115		
Potassium	10,800		2,000	"	10000		108	85-115		
LCS (B18H005-BS2)										
Sodium	3,180		500	ug/L	3000		106	85-115		
Matrix Spike (B18H005-MS1) Source: 1807044-05										
Calcium	146,000	Q10	100	ug/L	1000	146,000	NR	70-130		
Magnesium	12,300	Q10	500	"	2000	10,700	79	70-130		
Potassium	20,800		2,000	"	10000	9,750	110	70-130		
Matrix Spike (B18H005-MS2) Source: 1807044-05RE1										
Sodium	934,000	Q10	10,000	ug/L	3000	937,000	NR	70-130		
Matrix Spike Dup (B18H005-MSD1) Source: 1807044-05										
Calcium	157,000	Q10	100	ug/L	1000	146,000	NR	70-130	7	20
Magnesium	13,000	Q10	500	"	2000	10,700	115	70-130	6	20
Potassium	22,100		2,000	"	10000	9,750	123	70-130	6	20
Matrix Spike Dup (B18H005-MSD2) Source: 1807044-05RE1										
Sodium	942,000	Q10	10,000	ug/L	3000	937,000	175	70-130	0.9	20
Batch B18H006 - 200 Series Digest - Metals, ICP/MS, Total										
Prepared: 08/01/18 Analyzed: 08/08/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H006-BLK1)										
Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						
Chromium	ND	U	1	"						
Copper	ND	U	2	"						
Lead	ND	U	1	"						
Nickel	ND	U	1	"						
Selenium	ND	U	1	"						
Silver	ND	U	0.25	"						
Thorium	ND	U	1	"						
Uranium	ND	U	0.25	"						
Zinc	ND	U	5	"						
Blank (B18H006-BLK2)										
Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						
Selenium	ND	U	1	"						
Silver	ND	U	0.25	"						
Zinc	ND	U	5	"						
LCS (B18H006-BS1)										
Arsenic	41.2		0.5	ug/L	40.0		103	85-115		
Cadmium	39.6		0.4	"	40.0		99	85-115		
Chromium	40.8		1	"	40.0		102	85-115		
Copper	38.2		2	"	40.0		96	85-115		



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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18211A Reported: 08/17/18 18:08
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H006 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/08/18

Total Metals by EPA 200 Series Methods - Quality Control

LCS (B18H006-BS1)

Lead	42			1 "	40.0		105	85-115		
Nickel	39.8			1 "	40.0		99	85-115		
Thorium	40.1			1 "	40.0		100	85-115		
Uranium	41.2			0.25 "	40.0		103	85-115		
Zinc	38.9			5 "	40.0		97	85-115		

LCS (B18H006-BS2)

Selenium	41			1 ug/L	40.0		102	85-115		
Silver	38.9			0.25 "	40.0		97	85-115		

Matrix Spike (B18H006-MS1)

Source: 1807044-05

Arsenic	44.9			0.5 ug/L	40.0	1.54	108	70-130		
Cadmium	33.5			0.4 "	40.0	ND	84	70-130		
Chromium	41.3			1 "	40.0	ND	103	70-130		
Copper	32.7			2 "	40.0	1.62	78	70-130		
Lead	28.1			1 "	40.0	ND	70	70-130		
Nickel	39			1 "	40.0	4.22	87	70-130		
Thorium	31			1 "	40.0	ND	78	70-130		
Uranium	32.3			0.25 "	40.0	ND	81	70-130		
Zinc	24.7			5 "	40.0	2.88	55	70-130		

Matrix Spike (B18H006-MS2)

Source: 1807044-05RE1

Silver	34.5			0.25 ug/L	40.0	ND	86	70-130		
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Matrix Spike (B18H006-MS3)

Source: 1807044-05

Selenium	14.1			1 ug/L	40.0	8.56	14	70-130		
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Matrix Spike Dup (B18H006-MSD1)

Source: 1807044-05

Arsenic	44.4			0.5 ug/L	40.0	1.54	107	70-130	1	20
Cadmium	33.3			0.4 "	40.0	ND	83	70-130	0.6	20
Chromium	41.6			1 "	40.0	ND	104	70-130	0.7	20
Copper	32.4			2 "	40.0	1.62	77	70-130	1	20
Lead	27.8			1 "	40.0	ND	69	70-130	1	20
Nickel	38.9			1 "	40.0	4.22	87	70-130	0.1	20
Thorium	30.8			1 "	40.0	ND	77	70-130	0.7	20
Uranium	32.2			0.25 "	40.0	ND	81	70-130	0.1	20
Zinc	28.2			5 "	40.0	2.88	63	70-130	13	20

Matrix Spike Dup (B18H006-MSD2)

Source: 1807044-05RE1

Silver	34.2			0.25 ug/L	40.0	ND	85	70-130	0.9	20
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Matrix Spike Dup (B18H006-MSD3)

Source: 1807044-05

Selenium	14.4			1 ug/L	40.0	8.56	15	70-130	2	20
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK1)

Hexachloroethane	ND	U		1 ug/L						
Hexachlorobutadiene	ND	U		1 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK1)

1-Methylnaphthalene	ND	U		1 "						
Hexachlorocyclopentadiene	ND	U		5 "						
2-Chloronaphthalene	ND	U		1 "						
Acenaphthylene	ND	U		1 "						
Acenaphthene	ND	U		1 "						
Fluorene	ND	U		1 "						
Hexachlorobenzene	ND	U		1 "						
Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	43.2			"	50.0		86	54-110		
<i>Surrogate: Phenol-d5</i>	43.5			"	50.0		87	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	44.8			"	50.0		90	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	34.8			"	50.0		70	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	43.3			"	50.0		87	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	43.7			"	50.0		87	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	36.2			"	50.0		72	46-136		
<i>Surrogate: Terphenyl-d14</i>	70.7			"	50.0		141	47-130		

Blank (B18H010-BLK2)

Hexachloroethane	ND	U		1 ug/L						
Hexachlorobutadiene	ND	U		1 "						
1-Methylnaphthalene	ND	U		1 "						
Hexachlorocyclopentadiene	ND	U		5 "						
2-Chloronaphthalene	ND	U		1 "						
Acenaphthylene	ND	U		1 "						
Acenaphthene	ND	U		1 "						
Fluorene	ND	U		1 "						
Hexachlorobenzene	ND	U		1 "						
Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/06/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK2)

Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	<i>42.4</i>			<i>"</i>	<i>50.0</i>		<i>85</i>	<i>54-110</i>		
<i>Surrogate: Phenol-d5</i>	<i>43.2</i>			<i>"</i>	<i>50.0</i>		<i>86</i>	<i>54-110</i>		
<i>Surrogate: 2-Chlorophenol-d4</i>	<i>44.5</i>			<i>"</i>	<i>50.0</i>		<i>89</i>	<i>60-110</i>		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>34.5</i>			<i>"</i>	<i>50.0</i>		<i>69</i>	<i>38-110</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>43.6</i>			<i>"</i>	<i>50.0</i>		<i>87</i>	<i>26-134</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>44.3</i>			<i>"</i>	<i>50.0</i>		<i>89</i>	<i>57-110</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>36.4</i>			<i>"</i>	<i>50.0</i>		<i>73</i>	<i>46-136</i>		
<i>Surrogate: Terphenyl-d14</i>	<i>76.4</i>			<i>"</i>	<i>50.0</i>		<i>153</i>	<i>47-130</i>		

LCS (B18H010-BS1)

Hexachloroethane	5.92			1 ug/L	10.0		59	22-110		
Hexachlorobutadiene	5.77			1 "	10.0		58	22-110		
1-Methylnaphthalene	8.57			1 "	10.0		86	70-130		
Hexachlorocyclopentadiene	27.3			5 "	50.0		55	20-110		
2-Chloronaphthalene	8.65			1 "	10.0		86	43-110		
Acenaphthylene	8.68			1 "	10.0		87	46-110		
Acenaphthene	12.2			1 "	10.0		122	84-135		
Fluorene	9.31			1 "	10.0		93	60-110		
Hexachlorobenzene	8.8			1 "	10.0		88	52-112		
Anthracene	9.75			1 "	10.0		98	57-117		
Fluoranthene	9.85			1 "	10.0		98	68-119		
Pyrene	9.82			1 "	10.0		98	65-120		
Benzo(a)anthracene	10			1 "	10.0		100	67-110		
Chrysene	9.97			1 "	10.0		100	67-111		
Benzo(b)fluoranthene	9.97			1 "	10.0		100	60-110		
Benzo(k)fluoranthene	10.6			1 "	10.0		106	65-117		
Benzo(a)pyrene	9.19			1 "	10.0		92	56-110		
Indeno(1,2,3-cd)pyrene	9.64			1 "	10.0		96	62-110		
Dibenz(a,h)anthracene	9.67			1 "	10.0		97	59-119		
Benzo(g,h,i)perylene	9.87			1 "	10.0		99	64-110		

<i>Surrogate: 2-Fluorophenol</i>	<i>49.7</i>			<i>"</i>	<i>50.0</i>		<i>99</i>	<i>54-110</i>		
<i>Surrogate: Phenol-d5</i>	<i>47.1</i>			<i>"</i>	<i>50.0</i>		<i>94</i>	<i>54-110</i>		



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

LCS (B18H010-BS1)

Surrogate: 2-Chlorophenol-d4	52.2			"	50.0		104	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	41.1			"	50.0		82	38-110		
Surrogate: Nitrobenzene-d5	48.5			"	50.0		97	26-134		
Surrogate: 2-Fluorobiphenyl	49.9			"	50.0		100	57-110		
Surrogate: 2,4,6-Tribromophenol	58.5			"	50.0		117	46-136		
Surrogate: Terphenyl-d14	64.2			"	50.0		128	47-130		

Matrix Spike (B18H010-MS1)

Source: 1807044-05

Hexachloroethane	5.71			1 ug/L	9.67	ND	59	70-130		
Hexachlorobutadiene	5.82			1 "	9.67	ND	60	70-130		
1-Methylnaphthalene	7.87			1 "	9.67	ND	81	70-130		
Hexachlorocyclopentadiene	22.5			5 "	48.4	ND	47	70-130		
2-Chloronaphthalene	7.97			1 "	9.67	ND	82	70-130		
Acenaphthylene	8.01			1 "	9.67	ND	83	70-130		
Acenaphthene	12.2			1 "	9.67	ND	126	70-130		
Fluorene	9.53			1 "	9.67	ND	99	70-130		
Hexachlorobenzene	9.08			1 "	9.67	ND	94	70-130		
Anthracene	10.1			1 "	9.67	ND	105	70-130		
Fluoranthene	9.95			1 "	9.67	ND	103	66-126		
Pyrene	10.2			1 "	9.67	ND	105	65-125		
Benzo(a)anthracene	10.3			1 "	9.67	ND	107	60-120		
Chrysene	10.3			1 "	9.67	ND	107	60-120		
Benzo(b)fluoranthene	10.4			1 "	9.67	ND	107	59-119		
Benzo(k)fluoranthene	11			1 "	9.67	ND	114	59-119		
Benzo(a)pyrene	9.58			1 "	9.67	ND	99	46-110		
Indeno(1,2,3-cd)pyrene	10.4			1 "	9.67	ND	108	53-113		
Dibenz(a,h)anthracene	10.9			1 "	9.67	ND	113	60-120		
Benzo(g,h,i)perylene	10.9			1 "	9.67	ND	112	55-115		

Surrogate: 2-Fluorophenol	45.4			"	50.0		91	54-110		
Surrogate: Phenol-d5	48.3			"	50.0		97	54-110		
Surrogate: 2-Chlorophenol-d4	48.0			"	50.0		96	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	38.6			"	50.0		77	38-110		
Surrogate: Nitrobenzene-d5	45.6			"	50.0		91	26-134		
Surrogate: 2-Fluorobiphenyl	47.4			"	50.0		95	57-110		
Surrogate: 2,4,6-Tribromophenol	60.7			"	50.0		121	46-136		
Surrogate: Terphenyl-d14	69.6			"	50.0		139	47-130		

Matrix Spike Dup (B18H010-MSD1)

Source: 1807044-05

Hexachloroethane	5.84			1 ug/L	9.84	ND	59	70-130	2	20
Hexachlorobutadiene	5.97			1 "	9.84	ND	61	70-130	3	20



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Matrix Spike Dup (B18H010-MSD1)

Source: 1807044-05

1-Methylnaphthalene	7.42			1 "	9.84	ND	75	70-130	6	20
Hexachlorocyclopentadiene	22.1			5 "	49.2	ND	45	70-130	2	20
2-Chloronaphthalene	7.49			1 "	9.84	ND	76	70-130	6	20
Acenaphthylene	7.51			1 "	9.84	ND	76	70-130	6	20
Acenaphthene	11.6			1 "	9.84	ND	118	70-130	5	20
Fluorene	9.15			1 "	9.84	ND	93	70-130	4	20
Hexachlorobenzene	8.85			1 "	9.84	ND	90	70-130	3	20
Anthracene	9.95			1 "	9.84	ND	101	70-130	2	20
Fluoranthene	9.95			1 "	9.84	ND	101	66-126	0.0009	20
Pyrene	9.51			1 "	9.84	ND	97	65-125	7	20
Benzo(a)anthracene	10.1			1 "	9.84	ND	103	60-120	2	20
Chrysene	10.1			1 "	9.84	ND	102	60-120	2	20
Benzo(b)fluoranthene	9.95			1 "	9.84	ND	101	59-119	4	20
Benzo(k)fluoranthene	10.8			1 "	9.84	ND	110	59-119	2	20
Benzo(a)pyrene	9.41			1 "	9.84	ND	96	46-110	2	20
Indeno(1,2,3-cd)pyrene	10.4			1 "	9.84	ND	105	53-113	0.9	20
Dibenz(a,h)anthracene	10.7			1 "	9.84	ND	109	60-120	2	20
Benzo(g,h,i)perylene	10.5			1 "	9.84	ND	107	55-115	3	20

<i>Surrogate: 2-Fluorophenol</i>	42.4			"	50.0		85	54-110		
<i>Surrogate: Phenol-d5</i>	44.6			"	50.0		89	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	45.3			"	50.0		91	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	35.9			"	50.0		72	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	43.1			"	50.0		86	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	43.4			"	50.0		87	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	58.1			"	50.0		116	46-136		
<i>Surrogate: Terphenyl-d14</i>	63.4			"	50.0		127	47-130		

Batch B18H016 - 3520C CLLE - TPH - Extractable

Prepared: 08/02/18 Analyzed: 08/06/18

Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18H016-BLK1)

TPH - Diesel Range Organics	ND	U		150 ug/L						
TPH - Oil Range Organics	ND	U		600 "						

<i>Surrogate: Hexacosane</i>	34.9			"	50.0		70	47-130		
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LCS (B18H016-BS1)

TPH - Diesel Range Organics	1,390			150 ug/L	1500		92	59-109		
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<i>Surrogate: Hexacosane</i>	35.2			"	50.0		70	47-130		
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Matrix Spike (B18H016-MS1)

Source: 1807044-05

TPH - Diesel Range Organics	1,410			150 ug/L	1470	ND	96	50-126		
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H016 - 3520C CLLE - TPH - Extractable										
Prepared: 08/02/18 Analyzed: 08/06/18										
Extractable Petroleum Hydrocarbons - Quality Control										
Matrix Spike (B18H016-MS1) Source: 1807044-05										
<i>Surrogate: Hexacosane</i>	36.3			"	50.0		73	47-130		
Matrix Spike Dup (B18H016-MSD1) Source: 1807044-05										
TPH - Diesel Range Organics	1,380		150	ug/L	1460	ND	95	50-126	2	37
<i>Surrogate: Hexacosane</i>	34.9			"	50.0		70	47-130		
Batch B18H028 - 245.1 Hg Prep. - Mercury by 245.1 (total)										
Prepared: 08/06/18 Analyzed: 08/07/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H028-BLK1)										
Mercury	ND	U		0.03	ug/L					
LCS (B18H028-BS1)										
Mercury	0.206			0.03	ug/L	0.200	103	85-115		
Matrix Spike (B18H028-MS1) Source: 1807044-05										
Mercury	0.212			0.03	ug/L	0.200	ND	106	70-130	
Matrix Spike Dup (B18H028-MSD1) Source: 1807044-05										
Mercury	0.201			0.03	ug/L	0.200	ND	100	70-130	6 20
Batch B18H030 - 3520C CLLE - SVOCs										
Prepared: 08/06/18 Analyzed: 08/07/18										
Semivolatile Organic Compounds by EPA Method 8270D - Quality Control										
Blank (B18H030-BLK1)										
Hexachloroethane	ND	U		1	ug/L					
Hexachlorobutadiene	ND	Q3, J, U		1	"					
1-Methylnaphthalene	ND	U		1	"					
Hexachlorocyclopentadiene	ND	U		5	"					
2-Chloronaphthalene	ND	U		1	"					
Acenaphthylene	ND	U		1	"					
Acenaphthene	ND	U		1	"					
Fluorene	ND	U		1	"					
Hexachlorobenzene	ND	U		1	"					
Anthracene	ND	U		1	"					
Fluoranthene	ND	U		1	"					
Pyrene	ND	U		1	"					
Benzo(a)anthracene	ND	U		1	"					
Chrysene	ND	U		1	"					
Benzo(b)fluoranthene	ND	U		1	"					
Benzo(k)fluoranthene	ND	U		1	"					
Benzo(a)pyrene	ND	U		1	"					
Indeno(1,2,3-cd)pyrene	ND	U		1	"					
Dibenz(a,h)anthracene	ND	U		1	"					
Benzo(g,h,i)perylene	ND	U		1	"					
<i>Surrogate: 2-Fluorophenol</i>	39.3			"	50.0		79	54-110		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18211A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H030 - 3520C CLLE - SVOCs

Prepared: 08/06/18 Analyzed: 08/07/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H030-BLK1)

<i>Surrogate: Phenol-d5</i>	39.2			"	50.0		78	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	40.6			"	50.0		81	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	32.5			"	50.0		65	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.0			"	50.0		80	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	39.6			"	50.0		79	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	39.2			"	50.0		78	46-136		
<i>Surrogate: Terphenyl-d14</i>	72.6			"	50.0		145	47-130		

Batch B18H031 - - General Inorganic - Anions

Prepared & Analyzed: 08/07/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18H031-BLK1)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18H031-BLK2)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

LCS (B18H031-BS1)

Chloride	9.16			mg/L	10.0		92	90-110		
Nitrite as N	4.84			"	5.00		97	90-110		
Nitrate as N	4.82			"	5.00		96	90-110		
Sulfate	9.43			"	10.0		94	90-110		

Duplicate (B18H031-DUP1)

Source: 1807044-05

Sulfate	1,980			25 mg/L		2,000			1	20
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Duplicate (B18H031-DUP2)

Source: 1807044-05RE1

Chloride	99.3			10 mg/L		99.4			0.1	20
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Batch B18H032 - Alkalinity - Alkalinity

Prepared & Analyzed: 08/07/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18H032-BLK1)

Hydroxide Alkalinity	ND	U		10 mg/L						
Carbonate Alkalinity	ND	U		10 "						
Bicarbonate Alkalinity	ND	U		10 "						
Total Alkalinity	ND	U		10 "						

LCS (B18H032-BS1)

Total Alkalinity	48.8			10 mg/L	48.7		100	85-115		
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Duplicate (B18H032-DUP1)

Source: 1807044-05

Hydroxide Alkalinity	ND	U		10 mg/L		ND				20
Carbonate Alkalinity	ND	U		10 "		ND				20
Bicarbonate Alkalinity	67.5			10 "		66.5			2	20
Total Alkalinity	67.5			10 "		66.5			2	20

Batch B18H042 - - General Inorganic - Anions

Prepared & Analyzed: 08/08/18



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 18:08
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H042-BLK1)										
Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						
Blank (B18H042-BLK2)										
Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						
LCS (B18H042-BS1)										
Chloride	9.51			mg/L	10.0		95	90-110		
Nitrite as N	4.81			"	5.00		96	90-110		
Nitrate as N	4.78			"	5.00		96	90-110		
Sulfate	9.78			"	10.0		98	90-110		
Batch B18H044 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/08/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H044-BLK1)										
Hydroxide Alkalinity	ND	U		10 mg/L						
Carbonate Alkalinity	ND	U		10 "						
Bicarbonate Alkalinity	ND	U		10 "						
Total Alkalinity	ND	U		10 "						
LCS (B18H044-BS1)										
Total Alkalinity	48.6			10 mg/L	48.7		100	85-115		
Duplicate (B18H044-DUP1)										
Source: 1807044-06										
Hydroxide Alkalinity	ND	U		10 mg/L		ND				20
Carbonate Alkalinity	ND	U		10 "		ND				20
Bicarbonate Alkalinity	57.9			10 "		59			2	20
Total Alkalinity	57.9			10 "		59			2	20
Batch B18H053 - - General Biology - Solids, Total Dissolved										
Prepared & Analyzed: 08/08/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H053-BLK1)										
Total Dissolved Solids	ND	U		20 mg/L						
LCS (B18H053-BS1)										
Total Dissolved Solids	206			mg/L	206		100	85-115		
Duplicate (B18H053-DUP1)										
Source: 1807044-05										
Total Dissolved Solids	3,300			80 mg/L		3,290			0.1	5



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Project Manager: Elizabeth Aubuchon

Project Number: R18E03

Project: Navajo Discharging Wells July 2018

Enforcement Division, Water Section 1

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18211A

Reported: 08/17/18 18:08

Qualifiers and Comments

- Q7 Surrogate spike recoveries for this sample were outside control limits.
- Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
- Q3 The quantitation limit standard did not meet recovery criteria for this analyte.
- Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
- N TIC Tentatively Identified Compound - This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
- F12 Single component, unidentified
 - F1 Type: Not a fuel or hydrocarbon mixture
 - C1 The reported concentration for this analyte is below the quantitation limit.
 - A3 The sample was prepped/analyzed past the recommended holding time.
- U Not Detected
- NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 8/17/2018

Subject: Analytical Testing Results - Project R18E03
SDG: 18208A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Elizabeth Aubuchon
Enforcement Division, Water Section 1
ENF-3-1

Attached are the results from the analysis of samples from the **Navajo Discharging Wells July 2018** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Alkalinity	Anions by Ion Chromatography
Mercury by CVAA	Metals by ICP
Metals by ICP/MS	Total Dissolved Solids
Semivolatile Organic Compounds by GC/MS	Semivolatile Organic Compounds by GC/MS
Extractable Petroleum Hydrocarbons by GC/FID	Purgeable Petroleum Hydrocarbons by GC/FID
Purgeable Petroleum Hydrocarbons by GC/FID	Volatile Organic Compounds by GC/MS



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
UT-008	1807041-01	Water	07/26/18 08:45	07/27/18 09:03
UT-007	1807041-02	Water	07/26/18 09:30	07/27/18 09:03
UT-001	1807041-03	Water	07/26/18 10:00	07/27/18 09:03
UT-009	1807041-04	Water	07/26/18 10:45	07/27/18 09:03
UT-015	1807041-05	Water	07/26/18 08:45	07/27/18 09:03
UT-010	1807041-06	Water	07/26/18 11:05	07/27/18 09:03
UT-012	1807041-07	Water	07/26/18 11:40	07/27/18 09:03
UT-006	1807041-08	Water	07/26/18 12:00	07/27/18 09:03
TB-006	1807041-09	Water	07/26/18 12:00	07/27/18 09:03
NM-002	1807041-10	Water	07/25/18 09:45	07/27/18 09:03
NM-007	1807041-11	Water	07/25/18 11:10	07/27/18 09:03
NM-024	1807041-12	Water	07/25/18 14:40	07/27/18 09:03
NM-011	1807041-13	Water	07/25/18 15:40	07/27/18 09:03
TB-005	1807041-14	Water	07/25/18 12:00	07/27/18 09:03
UT-016	1807041-15	Water	07/26/18 09:15	07/27/18 09:03

Work Order 1807041

Five coolers were received on 7/27/18, one cooler was received on 7/28/18, and one cooler was received on 7/31/18. Three coolers were measured above the recommended 0 - 6 degrees C window for sample shipment at 8 degrees C, 11 degrees C, and 16 degrees C upon receipt. Where bottles used for analysis were taken from the three coolers that exceed 6 degrees, the results are qualified as estimates ("J" flagged).



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-01

Water - Sampled: 07/26/18 08:45

Sample ID: UT-008

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		22,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		13,000		500	"	"	"	"	200.7
Potassium		21,000		2,000	"	"	"	"	200.7
Sodium	RE1	490,000		10,000	"	"	"	08/11/18	200.7
Arsenic		10		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.80	C1, J	1	"	"	"	"	200.8
Selenium		0.66	C1, J	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		3.1		0.25	"	"	"	08/03/18	200.8
Zinc		4.0	C1, J	5	"	"	"	"	200.8

Sample ID: UT-008

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		0.4	C1, J	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-01

Water - Sampled: 07/26/18 08:45

Sample ID: UT-008

Volatile Organic Compounds by EPA Method 524.2

Bromochloromethane		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-01		Water - Sampled: 07/26/18 08:45							
Sample ID: UT-008		Volatile Organic Compounds by EPA Method 524.2							
1,3,5-Trimethylbenzene		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			104 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			95 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	
Sample ID: UT-008		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			97 %	87-110%		"	"	"	
Sample ID: UT-008		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		74	C1, F13, J	140	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	570	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			67 %	47-130%		"	"	"	
Sample ID: UT-008		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-01

Water - Sampled: 07/26/18 08:45

Sample ID: UT-008

Semivolatile Organic Compounds by EPA Method 8270D

Fluoranthene	ND	U		1	ug/L	B18G093	07/30/18	08/01/18	8270D
Pyrene	ND	U		1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U		1	"	"	"	"	8270D
Chrysene	ND	U		1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U		1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U		1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U		1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U		1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U		1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U		1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			77 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>			79 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			79 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			58 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			74 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			72 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			95 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>			102 %		47-130%	"	"	"	

Sample ID: UT-008

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity	ND	U		10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	ND	U		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	520			10	"	"	"	"	SM2320
Total Alkalinity	520			10	"	"	"	"	SM2320
Chloride	170			10	"	B18H012	08/03/18	08/03/18	300.0
Sulfate	310			5	"	"	"	"	300.0
Total Dissolved Solids	1,300			20	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-02

Water - Sampled: 07/26/18 09:30

Sample ID: UT-007

Total Metals by EPA 200 Series Methods

Mercury	ND	U		0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium	23,000			100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium	13,000			500	"	"	"	"	200.7
Potassium	18,000			2,000	"	"	"	"	200.7
Sodium	RE1	100,000		10,000	"	"	"	08/11/18	200.7
Arsenic	11			0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium	ND	U		0.40	"	"	"	"	200.8
Chromium	ND	U		1	"	"	"	"	200.8
Copper	ND	U		2	"	"	"	"	200.8
Lead	ND	U		1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-02

Water - Sampled: 07/26/18 09:30

Sample ID: UT-007

Total Metals by EPA 200 Series Methods

Nickel		0.92	C1, J	1	ug/L	B18H004	08/01/18	08/03/18	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		7.2		0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-007

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-02

Water - Sampled: 07/26/18 09:30

Sample ID: UT-007

Volatile Organic Compounds by EPA Method 524.2

1,2-Dichloropropane		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		0.4	Cl, J	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-02		Water - Sampled: 07/26/18 09:30							
Sample ID: UT-007		Volatile Organic Compounds by EPA Method 524.2							
1,2-Dibromo-3-chloropropane		ND	U	2	ug/L	B18G077	07/27/18	07/27/18	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			104 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			101 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			96 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	
Sample ID: UT-007		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: UT-007		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			77 %	47-130%		"	"	"	
Sample ID: UT-007		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-02

Water - Sampled: 07/26/18 09:30

Sample ID: UT-007

Semivolatile Organic Compounds by EPA Method 8270D

Benzo(g,h,i)perylene		ND	U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
<i>Surrogate: 2-Fluorophenol</i>		88 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		88 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		90 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		71 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		84 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		83 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		81 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		124 %		47-130%		"	"	"	

Sample ID: UT-007

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		280		10	"	"	"	"	SM2320
Total Alkalinity		280		10	"	"	"	"	SM2320
Chloride		2.8		1	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		43		0.50	"	"	"	"	300.0
Total Dissolved Solids		380		20	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-03

Water - Sampled: 07/26/18 10:00

Sample ID: UT-001

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		26,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		11,000		500	"	"	"	"	200.7
Potassium		23,000		2,000	"	"	"	"	200.7
Sodium	RE1	800,000		10,000	"	"	"	08/11/18	200.7
Arsenic		25		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.93	C1, J	1	"	"	"	"	200.8
Selenium		1.4		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		2.1		0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-001

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-03

Water - Sampled: 07/26/18 10:00

Sample ID: UT-001

Volatile Organic Compounds by EPA Method 524.2

Vinyl chloride		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Bromomethane		ND	C3, C4, I, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-03

Water - Sampled: 07/26/18 10:00

Sample ID: UT-001

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichloropropane		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		98 %		74-113%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-03

Water - Sampled: 07/26/18 10:00

Sample ID: UT-001

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	ug/L	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			102 %	87-110%		"	"	"	

Sample ID: UT-001

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			72 %	47-130%		"	"	"	

Sample ID: UT-001

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			95 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			95 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			97 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			76 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			92 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			91 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			86 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			119 %	47-130%		"	"	"	

Sample ID: UT-001

Conventional Chemistry Parameters by APHA/EPA Methods



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-03

Water - Sampled: 07/26/18 10:00

Sample ID: UT-001

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		790		10	"	"	"	"	SM2320
Total Alkalinity		790		10	"	"	"	"	SM2320
Chloride		480		20	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		280		10	"	"	"	"	300.0
Total Dissolved Solids		2,100		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-04

Water - Sampled: 07/26/18 10:45

Sample ID: UT-009

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		25,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		9,100		500	"	"	"	"	200.7
Potassium		22,000		2,000	"	"	"	"	200.7
Sodium	RE1	860,000		10,000	"	"	"	08/11/18	200.7
Arsenic		32		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.95	C1, J	1	"	"	"	"	200.8
Selenium		1.4		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		3.0		0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-009

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-04

Water - Sampled: 07/26/18 10:45

Sample ID: UT-009

Volatile Organic Compounds by EPA Method 524.2

tert-Butyl alcohol		ND	U	10	ug/L	B18G077	07/27/18	07/27/18	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-04		Water - Sampled: 07/26/18 10:45							
Sample ID: UT-009		Volatile Organic Compounds by EPA Method 524.2							
Styrene		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			106 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			96 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	
Sample ID: UT-009		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: UT-009		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			80 %	47-130%		"	"	"	
Sample ID: UT-009		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-04

Water - Sampled: 07/26/18 10:45

Sample ID: UT-009

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hexachlorobutadiene	ND	U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
1-Methylnaphthalene	ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D

<i>Surrogate: 2-Fluorophenol</i>	99 %	54-110%	"	"	"	"	"	"
<i>Surrogate: Phenol-d5</i>	98 %	54-110%	"	"	"	"	"	"
<i>Surrogate: 2-Chlorophenol-d4</i>	101 %	60-110%	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	79 %	38-110%	"	"	"	"	"	"
<i>Surrogate: Nitrobenzene-d5</i>	95 %	26-134%	"	"	"	"	"	"
<i>Surrogate: 2-Fluorobiphenyl</i>	96 %	57-110%	"	"	"	"	"	"
<i>Surrogate: 2,4,6-Tribromophenol</i>	75 %	46-136%	"	"	"	"	"	"
<i>Surrogate: Terphenyl-d14</i>	129 %	47-130%	"	"	"	"	"	"

Sample ID: UT-009

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	960		10	"	"	"	"	SM2320
Total Alkalinity	960		10	"	"	"	"	SM2320
Chloride	540		20	"	B18H012	08/03/18	08/03/18	300.0
Sulfate	230		10	"	"	"	"	300.0
Total Dissolved Solids	2,400		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-05

Water - Sampled: 07/26/18 08:45

Sample ID: UT-015

Total Metals by EPA 200 Series Methods



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-05

Water - Sampled: 07/26/18 08:45

Sample ID: UT-015

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		7,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		2,500		500	"	"	"	"	200.7
Potassium		3,500		2,000	"	"	"	"	200.7
Sodium	RE1	130,000		10,000	"	"	"	08/11/18	200.7
Arsenic		15		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		ND	U	0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-015

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-05

Water - Sampled: 07/26/18 08:45

Sample ID: UT-015

Volatile Organic Compounds by EPA Method 524.2

Bromochloromethane		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-05		Water - Sampled: 07/26/18 08:45							
Sample ID: UT-015		Volatile Organic Compounds by EPA Method 524.2							
1,3,5-Trimethylbenzene		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			107 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			95 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	
Sample ID: UT-015		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	
Sample ID: UT-015		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			66 %	47-130%		"	"	"	
Sample ID: UT-015		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	A2, J, U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthene		ND	A2, J, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	A2, J, U	1	"	"	"	"	8270D



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-05

Water - Sampled: 07/26/18 08:45

Sample ID: UT-015

Semivolatile Organic Compounds by EPA Method 8270D

Fluoranthene		ND	A2, J, U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
Pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			79 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			79 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			80 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			63 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			77 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			76 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			67 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			117 %	47-130%		"	"	"	

Sample ID: UT-015

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		190	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		190	A2, J	10	"	"	"	"	SM2320
Chloride		16	A2, J	2	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		69	A2, J	1	"	"	"	"	300.0
Total Dissolved Solids		360		20	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-06

Water - Sampled: 07/26/18 11:05

Sample ID: UT-010

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		2,300		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		700		500	"	"	"	"	200.7
Potassium		2,100		2,000	"	"	"	"	200.7
Sodium	RE1	390,000		10,000	"	"	"	08/11/18	200.7
Arsenic		15		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-06							Water - Sampled: 07/26/18 11:05		
Sample ID: UT-010							Total Metals by EPA 200 Series Methods		
Nickel		ND	U	1	ug/L	B18H006	08/01/18	08/08/18	200.8
Selenium	RE1	ND	U	1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	"	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		1.0		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8
Sample ID: UT-010							Volatile Organic Compounds by EPA Method 524.2		
Dichlorodifluoromethane		ND	U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	C4, J, Q2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-06

Water - Sampled: 07/26/18 11:05

Sample ID: UT-010

Volatile Organic Compounds by EPA Method 524.2

1,2-Dichloropropane		ND	U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-06		Water - Sampled: 07/26/18 11:05							
Sample ID: UT-010		Volatile Organic Compounds by EPA Method 524.2							
1,2-Dibromo-3-chloropropane		ND	U	2	ug/L	B18G077	07/27/18	07/27/18	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>				106 %					83-116%
<i>Surrogate: Toluene-d8</i>				104 %					81-112%
<i>Surrogate: 4-Bromofluorobenzene</i>				97 %					80-110%
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>				100 %					74-113%
Sample ID: UT-010		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>				92 %					87-110%
Sample ID: UT-010		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>				72 %					47-130%
Sample ID: UT-010		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-06

Water - Sampled: 07/26/18 11:05

Sample ID: UT-010

Semivolatile Organic Compounds by EPA Method 8270D									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Benzo(g,h,i)perylene		ND	U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
<i>Surrogate: 2-Fluorophenol</i>			92 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			92 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			95 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			76 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			89 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			90 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			80 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			123 %	47-130%		"	"	"	

Sample ID: UT-010

Conventional Chemistry Parameters by APHA/EPA Methods									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity		ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		29		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		430		10	"	"	"	"	SM2320
Total Alkalinity		460		10	"	"	"	"	SM2320
Chloride		78		10	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		230		5	"	"	"	"	300.0
Total Dissolved Solids		1,000		20	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-07

Water - Sampled: 07/26/18 11:40

Sample ID: UT-012

Total Metals by EPA 200 Series Methods									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		4,500		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		1,400		500	"	"	"	"	200.7
Potassium		2,900		2,000	"	"	"	"	200.7
Sodium	RE1	500,000		10,000	"	"	"	08/11/18	200.7
Arsenic		22		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium	RE1	0.64	C1, J	1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	"	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		0.40		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-012

Volatile Organic Compounds by EPA Method 524.2									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane		ND	U	0.5	"	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-07

Water - Sampled: 07/26/18 11:40

Sample ID: UT-012

Volatile Organic Compounds by EPA Method 524.2

Vinyl chloride		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-07

Water - Sampled: 07/26/18 11:40

Sample ID: UT-012

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichloropropane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		100 %		83-116%		"	"	"	
Surrogate: Toluene-d8		93 %		81-112%		"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		80-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		99 %		74-113%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-07 **Water - Sampled:** 07/26/18 11:40

Sample ID: UT-012 **Purgeable Petroleum Hydrocarbons**
 TPH - Gasoline Range Organics ND U 50 ug/L B18G089 07/30/18 07/30/18 8015C

Surrogate: a,a,a-Trifluorotoluene 94 % 87-110% " " "

Sample ID: UT-012 **Extractable Petroleum Hydrocarbons**
 TPH - Diesel Range Organics ND U 150 " B18G101 07/31/18 08/02/18 8015C
 TPH - Oil Range Organics ND U 600 " " " 8015C

Surrogate: Hexacosane 73 % 47-130% " " "

Sample ID: UT-012 **Semivolatile Organic Compounds by EPA Method 8270D**

Hexachloroethane	ND	U		1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene	ND	U		1	"	"	"	"	8270D
1-Methylnaphthalene	ND	U		1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	U		5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U		1	"	"	"	"	8270D
Acenaphthylene	ND	U		1	"	"	"	"	8270D
Acenaphthene	ND	U		1	"	"	"	"	8270D
Fluorene	ND	U		1	"	"	"	"	8270D
Hexachlorobenzene	ND	U		1	"	"	"	"	8270D
Anthracene	ND	U		1	"	"	"	"	8270D
Fluoranthene	ND	U		1	"	"	"	"	8270D
Pyrene	ND	U		1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U		1	"	"	"	"	8270D
Chrysene	ND	U		1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U		1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U		1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U		1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U		1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U		1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U		1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol 90 % 54-110% " " "

Surrogate: Phenol-d5 89 % 54-110% " " "

Surrogate: 2-Chlorophenol-d4 92 % 60-110% " " "

Surrogate: 1,2-Dichlorobenzene-d4 74 % 38-110% " " "

Surrogate: Nitrobenzene-d5 86 % 26-134% " " "

Surrogate: 2-Fluorobiphenyl 87 % 57-110% " " "

Surrogate: 2,4,6-Tribromophenol 76 % 46-136% " " "

Surrogate: Terphenyl-d14 129 % 47-130% " " "

Sample ID: UT-012 **Conventional Chemistry Parameters by APHA/EPA Methods**



**United States Environmental Protection Agency
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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-07

Water - Sampled: 07/26/18 11:40

Sample ID: UT-012

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		33		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		370		10	"	"	"	"	SM2320
Total Alkalinity		410		10	"	"	"	"	SM2320
Chloride		130		10	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		430		5	"	"	"	"	300.0
Total Dissolved Solids		1,300		20	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-08

Water - Sampled: 07/26/18 12:00

Sample ID: UT-006

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		34,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		15,000		500	"	"	"	"	200.7
Potassium		18,000		2,000	"	"	"	"	200.7
Sodium	RE1	1,100,000		10,000	"	"	"	08/11/18	200.7
Arsenic		55		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.4	Cl, J	2	"	"	"	"	200.8
Lead		2.4		1	"	"	"	"	200.8
Nickel		1.4		1	"	"	"	"	200.8
Selenium	RE1	1.1		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	"	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		7.7		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-006

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-08

Water - Sampled: 07/26/18 12:00

Sample ID: UT-006

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
trans-1,2-Dichloroethene		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-08		Water - Sampled: 07/26/18 12:00							
Sample ID: UT-006		Volatile Organic Compounds by EPA Method 524.2							
Bromoform		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			98 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			94 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	
Sample ID: UT-006		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: UT-006		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			68 %	47-130%		"	"	"	
Sample ID: UT-006		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	A2, J, U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-08

Water - Sampled: 07/26/18 12:00

Sample ID: UT-006

Semivolatile Organic Compounds by EPA Method 8270D

1-Methylnaphthalene		ND	A2, J, U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthene		ND	A2, J, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

83 % 54-110%

" " "

Surrogate: Phenol-d5

84 % 54-110%

" " "

Surrogate: 2-Chlorophenol-d4

86 % 60-110%

" " "

Surrogate: 1,2-Dichlorobenzene-d4

68 % 38-110%

" " "

Surrogate: Nitrobenzene-d5

81 % 26-134%

" " "

Surrogate: 2-Fluorobiphenyl

80 % 57-110%

" " "

Surrogate: 2,4,6-Tribromophenol

76 % 46-136%

" " "

Surrogate: Terphenyl-d14

123 % 47-130%

" " "

Sample ID: UT-006

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity	ND	A2, J, U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity	42	J, A2	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	740	J, A2	10	"	"	"	"	SM2320
Total Alkalinity	790	A2, J	10	"	"	"	"	SM2320
Chloride	700	A2, J	50	"	B18H012	08/03/18	08/03/18	300.0
Sulfate	770	A2, J	25	"	"	"	"	300.0
Total Dissolved Solids	3,200		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-09

Water - Sampled: 07/26/18 12:00

Sample ID: TB-006

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane	ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
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**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-09

Water - Sampled: 07/26/18 12:00

Sample ID: TB-006

Volatile Organic Compounds by EPA Method 524.2

Chloromethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-09

Water - Sampled: 07/26/18 12:00

Sample ID: TB-006

Volatile Organic Compounds by EPA Method 524.2

Tetrachloroethene		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2

Surrogate: 1,2-Dichloroethane-d4

97 %

83-116%

"

"

"

Surrogate: Toluene-d8

92 %

81-112%

"

"

"

Surrogate: 4-Bromofluorobenzene

107 %

80-110%

"

"

"



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-09 **Water - Sampled:** 07/26/18 12:00

Sample ID: TB-006 **Volatile Organic Compounds by EPA Method 524.2**
Surrogate: 1,2-Dichlorobenzene-d4 100 % 74-113% B18G076 07/27/18 07/27/18

Lab ID: 1807041-10 **Water - Sampled:** 07/25/18 09:45

Sample ID: NM-002 **Total Metals by EPA 200 Series Methods**

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		67,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		15,000		500	"	"	"	"	200.7
Potassium		6,700		2,000	"	"	"	"	200.7
Sodium	RE1	1,100,000		10,000	"	"	"	08/11/18	200.7
Arsenic		16		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		1.9		1	"	"	"	"	200.8
Selenium	RE1	1.5		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	"	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		3.9		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-002 **Volatile Organic Compounds by EPA Method 524.2**

Dichlorodifluoromethane		ND	J, A2, U	0.5	"	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	J, A2, U	0.5	"	"	"	"	524.2
Bromomethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-10

Water - Sampled: 07/25/18 09:45

Sample ID: NM-002

Volatile Organic Compounds by EPA Method 524.2

2,2-Dichloropropane		ND	A2, J, U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	J, A2, U	4	"	"	"	"	524.2
Bromochloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		0.7	A2, J	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-10		Water - Sampled: 07/25/18 09:45							
Sample ID: NM-002		Volatile Organic Compounds by EPA Method 524.2							
Propylbenzene		ND	A2, J, U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
2-Chlorotoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butane, methyl		0.8	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		95 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		97 %		74-113%		"	"	"	
Sample ID: NM-002		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %		87-110%		"	"	"	
Sample ID: NM-002		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		76 %		47-130%		"	"	"	
Sample ID: NM-002		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	A2, J, U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-10

Water - Sampled: 07/25/18 09:45

Sample ID: NM-002

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Acenaphthene	ND	A2, J, U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Fluorene	ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	A2, J, U	1	"	"	"	"	8270D
Anthracene	ND	A2, J, U	1	"	"	"	"	8270D
Fluoranthene	ND	A2, J, U	1	"	"	"	"	8270D
Pyrene	ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	A2, J, U	1	"	"	"	"	8270D
Chrysene	ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	A2, J, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	A2, J, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	89 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	92 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	93 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	74 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	92 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	99 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	83 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	144 %		47-130%		"	"	"	

Sample ID: NM-002

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	A2, J, U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity	ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	330	A2, J	10	"	"	"	"	SM2320
Total Alkalinity	330	A2, J	10	"	"	"	"	SM2320
Chloride	510	A2, J	50	"	B18H012	08/03/18	08/03/18	300.0
Sulfate	1,300	A2, J	25	"	"	"	"	300.0
Total Dissolved Solids	3,300		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-11

Water - Sampled: 07/25/18 11:10

Sample ID: NM-007

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium	100,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium	21,000		500	"	"	"	"	200.7
Potassium	15,000		2,000	"	"	"	"	200.7
Sodium	2,000,000	RE1	10,000	"	"	"	08/11/18	200.7
Arsenic	4.2		0.50	"	B18H006	08/01/18	08/08/18	200.8



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-11

Water - Sampled: 07/25/18 11:10

Sample ID: NM-007

Total Metals by EPA 200 Series Methods

Cadmium		ND	U	0.40	ug/L	B18H006	08/01/18	08/08/18	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		2.7		1	"	"	"	"	200.8
Selenium	RE2	8.3		1	"	"	"	08/14/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		0.81		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-007

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		0.4	C1, J	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-11

Water - Sampled: 07/25/18 11:10

Sample ID: NM-007

Volatile Organic Compounds by EPA Method 524.2

1,2-Dichloroethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-11		Water - Sampled: 07/25/18 11:10							
Sample ID: NM-007		Volatile Organic Compounds by EPA Method 524.2							
1,4-Dichlorobenzene		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>				102 %	83-116%	"	"	"	
<i>Surrogate: Toluene-d8</i>				92 %	81-112%	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>				107 %	80-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>				101 %	74-113%	"	"	"	
Sample ID: NM-007		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G089	07/30/18	07/30/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>				95 %	87-110%	"	"	"	
Sample ID: NM-007		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>				79 %	47-130%	"	"	"	
Sample ID: NM-007		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	J, A2, U	1	"	B18H010	08/01/18	08/03/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	J, A2, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthene		ND	A2, J, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-11

Water - Sampled: 07/25/18 11:10

Sample ID: NM-007

Semivolatile Organic Compounds by EPA Method 8270D

Benzo(a)pyrene		ND	A2, J, U	1	ug/L	B18H010	08/01/18	08/03/18	8270D
Indeno(1,2,3-cd)pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			102 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			102 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			105 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			80 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			100 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			104 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			84 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			136 %	47-130%		"	"	"	

Sample ID: NM-007

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		240	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		240	A2, J	10	"	"	"	"	SM2320
Chloride		1,100	A2, J	100	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		2,800	A2, J	50	"	"	"	"	300.0
Total Dissolved Solids		6,300		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-12

Water - Sampled: 07/25/18 14:40

Sample ID: NM-024

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		44,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		3,100		500	"	"	"	"	200.7
Potassium		5,600		2,000	"	"	"	"	200.7
Sodium	RE1	740,000		10,000	"	"	"	08/11/18	200.7
Arsenic		1.5		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		1.3		1	"	"	"	"	200.8
Selenium	RE2	1.1		1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		0.95		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-12

Water - Sampled: 07/25/18 14:40

Sample ID: NM-024

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-12

Water - Sampled: 07/25/18 14:40

Sample ID: NM-024

Volatile Organic Compounds by EPA Method 524.2

1,1,2-Trichloroethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		97 %		83-116%		"	"	"	
Surrogate: Toluene-d8		92 %		81-112%		"	"	"	



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-12		Water - Sampled: 07/25/18 14:40							
Sample ID: NM-024		Volatile Organic Compounds by EPA Method 524.2							
Surrogate: 4-Bromofluorobenzene			105 %	80-110%		B18G076	07/27/18	07/27/18	
Surrogate: 1,2-Dichlorobenzene-d4			99 %	74-113%		"	"	"	
Sample ID: NM-024		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
Surrogate: a,a,a-Trifluorotoluene			101 %	87-110%		"	"	"	
Sample ID: NM-024		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
Surrogate: Hexacosane			67 %	47-130%		"	"	"	
Sample ID: NM-024		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
Surrogate: 2-Fluorophenol			98 %	54-110%		"	"	"	
Surrogate: Phenol-d5			97 %	54-110%		"	"	"	
Surrogate: 2-Chlorophenol-d4			100 %	60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			77 %	38-110%		"	"	"	
Surrogate: Nitrobenzene-d5			94 %	26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl			92 %	57-110%		"	"	"	



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-12 **Water - Sampled:** 07/25/18 14:40

Sample ID: NM-024				Semivolatile Organic Compounds by EPA Method 8270D
<i>Surrogate: 2,4,6-Tribromophenol</i>	83 %		46-136%	<i>B18G093</i> 07/30/18 08/01/18
<i>Surrogate: Terphenyl-d14</i>	122 %		47-130%	" " "

Sample ID: NM-024				Conventional Chemistry Parameters by APHA/EPA Methods
Hydroxide Alkalinity	ND U		10 mg/L	B18H032 08/07/18 08/07/18 SM2320
Carbonate Alkalinity	ND U		10 "	" " " SM2320
Bicarbonate Alkalinity		200	10 "	" " " SM2320
Total Alkalinity		200	10 "	" " " SM2320
Chloride	RE1	98	10 "	B18H012 08/03/18 08/03/18 300.0
Sulfate		1,300	25 "	" " 08/03/18 300.0
Total Dissolved Solids		2,300	80 "	B18H007 08/01/18 08/01/18 2540C

Lab ID: 1807041-13 **Water - Sampled:** 07/25/18 15:40

Sample ID: NM-011				Total Metals by EPA 200 Series Methods
Mercury	ND U		0.030 ug/L	B18H028 08/06/18 08/07/18 245.1
Calcium		110,000	100 "	B18H005 08/01/18 08/10/18 200.7
Magnesium		13,000	500 "	" " " 200.7
Potassium		8,800	2,000 "	" " " 200.7
Sodium	RE1	870,000	10,000 "	" " 08/11/18 200.7
Arsenic		0.57	0.50 "	B18H006 08/01/18 08/08/18 200.8
Cadmium	ND U		0.40 "	" " " 200.8
Chromium	ND U		1 "	" " " 200.8
Copper	ND U		2 "	" " " 200.8
Lead	ND U		1 "	" " " 200.8
Nickel		3.0	1 "	" " " 200.8
Selenium	RE2	1.2	1 "	" " 08/13/18 200.8
Silver	RE1	ND U	0.25 "	" " 08/13/18 200.8
Thorium	ND U		1 "	" " 08/08/18 200.8
Uranium	ND U		0.25 "	" " " 200.8
Zinc	ND U		5 "	" " " 200.8

Sample ID: NM-011				Volatile Organic Compounds by EPA Method 524.2
Dichlorodifluoromethane	ND U		0.5 "	B18G076 07/27/18 07/27/18 524.2
Chloromethane	ND U		0.5 "	" " " 524.2
Vinyl chloride	ND U		0.5 "	" " " 524.2
Bromomethane	ND U		0.5 "	" " " 524.2
Chloroethane	ND U		0.5 "	" " " 524.2
Trichlorofluoromethane	ND U		0.5 "	" " " 524.2
1,1-Dichloroethene	ND U		0.5 "	" " " 524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U		0.5 "	" " " 524.2
Acetone	ND U		4 "	" " " 524.2



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-13

Water - Sampled: 07/25/18 15:40

Sample ID: NM-011

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Carbon disulfide		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		0.8		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-13		Water - Sampled: 07/25/18 15:40							
Sample ID: NM-011		Volatile Organic Compounds by EPA Method 524.2							
m&p-Xylene		ND	U	1	ug/L	B18G076	07/27/18	07/27/18	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			98 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			93 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	
Sample ID: NM-011		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	
Sample ID: NM-011		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			74 %	47-130%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-13

Water - Sampled: 07/25/18 15:40

Sample ID: NM-011

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hexachloroethane	ND	U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene	ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene	ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	89 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	89 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	91 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	72 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	85 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	85 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	74 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	125 %		47-130%		"	"	"	

Sample ID: NM-011

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	59		10	"	"	"	"	SM2320
Total Alkalinity	59		10	"	"	"	"	SM2320
Chloride	54	RE1	5	"	B18H012	08/03/18	08/03/18	300.0
Sulfate	2,000		25	"	"	"	08/03/18	300.0
Total Dissolved Solids	3,100		80	"	B18H007	08/01/18	08/01/18	2540C

Lab ID: 1807041-14

Water - Sampled: 07/25/18 12:00



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-14

Water - Sampled: 07/25/18 12:00

Sample ID: TB-005

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-14

Water - Sampled: 07/25/18 12:00

Sample ID: TB-005

Volatile Organic Compounds by EPA Method 524.2

1,1,2-Trichloroethane		ND	U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		100 %		83-116%		"	"	"	
Surrogate: Toluene-d8		92 %		81-112%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-14 **Water - Sampled: 07/25/18 12:00**

Sample ID: TB-005 **Volatile Organic Compounds by EPA Method 524.2**

<i>Surrogate: 4-Bromofluorobenzene</i>		107 %		80-110%		B18G076	07/27/18	07/27/18	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		99 %		74-113%		"	"	"	

Lab ID: 1807041-15 **Water - Sampled: 07/26/18 09:15**

Sample ID: UT-016 **Total Metals by EPA 200 Series Methods**

Mercury		ND	U	0.030	ug/L	B18H028	08/06/18	08/07/18	245.1
Calcium		61,000		100	"	B18H005	08/01/18	08/10/18	200.7
Magnesium		30,000		500	"	"	"	"	200.7
Potassium		25,000		2,000	"	"	"	"	200.7
Sodium	RE1	620,000		10,000	"	"	"	08/11/18	200.7
Arsenic		12		0.50	"	B18H006	08/01/18	08/08/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		1.9		1	"	"	"	"	200.8
Selenium	RE2	0.65	C1, J	1	"	"	"	08/13/18	200.8
Silver	RE1	ND	U	0.25	"	"	"	08/13/18	200.8
Thorium		ND	U	1	"	"	"	08/08/18	200.8
Uranium		1.0		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-016 **Volatile Organic Compounds by EPA Method 524.2**

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G077	07/27/18	07/27/18	524.2
Chloromethane		ND	Q2, C4, J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-15

Water - Sampled: 07/26/18 09:15

Sample ID: UT-016

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethyl tert-butyl ether		ND	A2, J, U	2	ug/L	B18G077	07/27/18	07/27/18	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807041-15

Water - Sampled: 07/26/18 09:15

Sample ID: UT-016

Volatile Organic Compounds by EPA Method 524.2

1,2,3-Trichloropropane		ND	A2, J, U	0.5	ug/L	B18G077	07/27/18	07/27/18	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			102 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			103 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			94 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			97 %	74-113%		"	"	"	

Sample ID: UT-016

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G079	07/27/18	07/27/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			100 %	87-110%		"	"	"	

Sample ID: UT-016

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G101	07/31/18	08/02/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %	47-130%		"	"	"	

Sample ID: UT-016

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	J, A2, U	1	"	B18G093	07/30/18	08/01/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	J, A2, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807041-15		Water - Sampled: 07/26/18 09:15							
Sample ID: UT-016		Semivolatile Organic Compounds by EPA Method 8270D							
Acenaphthene		ND	A2, J, U	1	ug/L	B18G093	07/30/18	08/01/18	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		81 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		82 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		83 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		64 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		78 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		78 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		82 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		122 %		47-130%		"	"	"	
Sample ID: UT-016		Conventional Chemistry Parameters by APHA/EPA Methods							
Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H032	08/07/18	08/07/18	SM2320
Carbonate Alkalinity		ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		280	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		280	A2, J	10	"	"	"	"	SM2320
Chloride		350	A2, J	50	"	B18H012	08/03/18	08/03/18	300.0
Sulfate		740	A2, J	25	"	"	"	"	300.0
Total Dissolved Solids		2,000		40	"	B18H007	08/01/18	08/01/18	2540C



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK1)

Dichlorodifluoromethane	ND	U		0.5 ug/L						
Chloromethane	ND	U		0.5 "						
Vinyl chloride	ND	U		0.5 "						
Bromomethane	ND	U		0.5 "						
Chloroethane	ND	U		0.5 "						
Trichlorofluoromethane	ND	U		0.5 "						
1,1-Dichloroethene	ND	U		0.5 "						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5 "						
Acetone	ND	U		4 "						
Carbon disulfide	ND	U		0.5 "						
Dichloromethane	0.3	Cl, J		0.5 "						
tert-Butyl alcohol	ND	U		10 "						
trans-1,2-Dichloroethene	ND	U		0.5 "						
tert-Butyl methyl ether (MTBE)	ND	U		2 "						
1,1-Dichloroethane	ND	U		0.5 "						
Diisopropyl ether	ND	U		2 "						
Ethyl tert-butyl ether	ND	U		2 "						
2,2-Dichloropropane	ND	U		0.5 "						
cis-1,2-Dichloroethene	ND	U		0.5 "						
2-Butanone (MEK)	ND	U		4 "						
Bromochloromethane	ND	U		0.5 "						
Chloroform	ND	U		0.5 "						
1,1,1-Trichloroethane	ND	U		0.5 "						
Carbon tetrachloride	ND	U		0.5 "						
1,1-Dichloropropene	ND	U		0.5 "						
Benzene	ND	U		0.5 "						
1,2-Dichloroethane	ND	U		0.5 "						
tert-Amyl methyl ether	ND	U		2 "						
Trichloroethene	ND	U		0.5 "						
1,2-Dichloropropane	ND	U		0.5 "						
Dibromomethane	ND	U		0.5 "						
Bromodichloromethane	ND	U		0.5 "						
cis-1,3-Dichloropropene	ND	U		0.5 "						
4-Methyl-2-pentanone (MIBK)	ND	U		4 "						
Toluene	ND	U		0.5 "						
trans-1,3-Dichloropropene	ND	U		0.5 "						
1,1,2-Trichloroethane	ND	U		0.5 "						
Tetrachloroethene	ND	U		0.5 "						
1,3-Dichloropropane	ND	U		0.5 "						
2-Hexanone	ND	U		4 "						
Chlorodibromomethane	ND	U		0.5 "						
1,2-Dibromoethane (EDB)	ND	U		0.5 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK1)

Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

Surrogate: 1,2-Dichloroethane-d4	4.92			"	5.00		98	83-116		
Surrogate: Toluene-d8	4.59			"	5.00		92	81-112		
Surrogate: 4-Bromofluorobenzene	5.36			"	5.00		107	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	4.97			"	5.00		99	74-113		

Blank (B18G076-BLK2)

Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK2)

1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5	"					
Acetone	ND	U		4	"					
Carbon disulfide	ND	U		0.5	"					
Dichloromethane	ND	U		0.5	"					
tert-Butyl alcohol	ND	U		10	"					
trans-1,2-Dichloroethene	ND	U		0.5	"					
tert-Butyl methyl ether (MTBE)	ND	U		2	"					
1,1-Dichloroethane	ND	U		0.5	"					
Diisopropyl ether	ND	U		2	"					
Ethyl tert-butyl ether	ND	U		2	"					
2,2-Dichloropropane	ND	U		0.5	"					
cis-1,2-Dichloroethene	ND	U		0.5	"					
2-Butanone (MEK)	ND	U		4	"					
Bromochloromethane	ND	U		0.5	"					
Chloroform	ND	U		0.5	"					
1,1,1-Trichloroethane	ND	U		0.5	"					
Carbon tetrachloride	ND	U		0.5	"					
1,1-Dichloropropene	ND	U		0.5	"					
Benzene	ND	U		0.5	"					
1,2-Dichloroethane	ND	U		0.5	"					
tert-Amyl methyl ether	ND	U		2	"					
Trichloroethene	ND	U		0.5	"					
1,2-Dichloropropane	ND	U		0.5	"					
Dibromomethane	ND	U		0.5	"					
Bromodichloromethane	ND	U		0.5	"					
cis-1,3-Dichloropropene	ND	U		0.5	"					
4-Methyl-2-pentanone (MIBK)	ND	U		4	"					
Toluene	ND	U		0.5	"					
trans-1,3-Dichloropropene	ND	U		0.5	"					
1,1,2-Trichloroethane	ND	U		0.5	"					
Tetrachloroethene	ND	U		0.5	"					
1,3-Dichloropropane	ND	U		0.5	"					
2-Hexanone	ND	U		4	"					
Chlorodibromomethane	ND	U		0.5	"					
1,2-Dibromoethane (EDB)	ND	U		0.5	"					
Chlorobenzene	ND	U		0.5	"					
1,1,1,2-Tetrachloroethane	ND	U		0.5	"					
Ethylbenzene	ND	U		0.5	"					
m&p-Xylene	ND	U		1	"					
o-Xylene	ND	U		0.5	"					
Styrene	ND	U		0.5	"					
Bromoform	ND	U		0.5	"					



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK2)

Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.51			"	5.00		90	83-116		
<i>Surrogate: Toluene-d8</i>	4.64			"	5.00		93	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.31			"	5.00		106	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.91			"	5.00		98	74-113		

LCS (B18G076-BS1)

Dichlorodifluoromethane	5.51		0.5	ug/L	5.00		110	70-128		
Chloromethane	5.46		0.5	"	5.00		109	63-123		
Vinyl chloride	5.55		0.5	"	5.00		111	70-130		
Bromomethane	5.54		0.5	"	5.00		111	31-150		
Chloroethane	5.49		0.5	"	5.00		110	74-119		
Trichlorofluoromethane	5.6		0.5	"	5.00		112	72-123		
1,1-Dichloroethene	5.6		0.5	"	5.00		112	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.79		0.5	"	5.00		116	73-129		
Acetone	36.9		4	"	40.0		92	61-114		
Dichloromethane	5.3		0.5	"	5.00		106	70-130		
trans-1,2-Dichloroethene	5.54		0.5	"	5.00		111	70-130		
tert-Butyl methyl ether (MTBE)	18.7		2	"	20.0		93	62-117		
1,1-Dichloroethane	5.19		0.5	"	5.00		104	74-115		
2,2-Dichloropropane	5.42		0.5	"	5.00		108	64-144		



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G076-BS1)

cis-1,2-Dichloroethene	5.18		0.5	"	5.00		104	70-130		
2-Butanone (MEK)	31.1		4	"	40.0		78	57-121		
Bromochloromethane	5.36		0.5	"	5.00		107	71-122		
Chloroform	5.08		0.5	"	5.00		102	70-130		
1,1,1-Trichloroethane	5.49		0.5	"	5.00		110	70-130		
Carbon tetrachloride	6.43		0.5	"	5.00		129	70-130		
1,1-Dichloropropene	5.06		0.5	"	5.00		101	71-119		
Benzene	5.07		0.5	"	5.00		101	70-130		
1,2-Dichloroethane	4.71		0.5	"	5.00		94	70-130		
Trichloroethene	5.18		0.5	"	5.00		104	70-130		
1,2-Dichloropropane	5.07		0.5	"	5.00		101	70-130		
Dibromomethane	5.13		0.5	"	5.00		103	72-121		
Bromodichloromethane	5.19		0.5	"	5.00		104	70-130		
cis-1,3-Dichloropropene	4.43		0.5	"	5.00		89	68-120		
Toluene	5.19		0.5	"	5.00		104	70-130		
trans-1,3-Dichloropropene	4.17		0.5	"	5.00		83	64-126		
1,1,2-Trichloroethane	5.12		0.5	"	5.00		102	70-130		
Tetrachloroethene	5.42		0.5	"	5.00		108	70-130		
1,3-Dichloropropane	4.84		0.5	"	5.00		97	80-114		
Chlorodibromomethane	5.4		0.5	"	5.00		108	70-130		
1,2-Dibromoethane (EDB)	5.08		0.5	"	5.00		102	80-115		
Chlorobenzene	5.1		0.5	"	5.00		102	70-130		
1,1,1,2-Tetrachloroethane	5.38		0.5	"	5.00		108	82-116		
Ethylbenzene	5.35		0.5	"	5.00		107	70-130		
m&p-Xylene	10.7		1	"	10.0		107	70-130		
o-Xylene	5.2		0.5	"	5.00		104	70-130		
Styrene	5.26		0.5	"	5.00		105	70-130		
Bromoform	5.49		0.5	"	5.00		110	70-130		
Isopropylbenzene	5.3		0.5	"	5.00		106	86-114		
Bromobenzene	5.24		0.5	"	5.00		105	84-110		
1,1,2,2-Tetrachloroethane	5.02		0.5	"	5.00		100	81-113		
1,2,3-Trichloropropane	4.94		0.5	"	5.00		99	81-114		
Propylbenzene	5.45		0.5	"	5.00		109	87-115		
2-Chlorotoluene	5.12		0.5	"	5.00		102	84-111		
4-Chlorotoluene	5.07		0.5	"	5.00		101	82-112		
1,3,5-Trimethylbenzene	5.13		0.5	"	5.00		103	85-113		
tert-Butylbenzene	5.03		0.5	"	5.00		101	86-114		
1,2,4-Trimethylbenzene	5.12		0.5	"	5.00		102	84-114		
sec-Butylbenzene	5.26		0.5	"	5.00		105	87-119		
1,3-Dichlorobenzene	5.15		0.5	"	5.00		103	85-110		
p-Isopropyltoluene	5.24		0.5	"	5.00		105	86-117		
1,4-Dichlorobenzene	5.13		0.5	"	5.00		103	70-130		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G076-BS1)

1,2-Dichlorobenzene	5.02		0.5	"	5.00		100	70-130		
Butylbenzene	5.39		0.5	"	5.00		108	85-118		
1,2-Dibromo-3-chloropropane	19		2	"	20.0		95	54-133		
1,2,4-Trichlorobenzene	4.85		0.5	"	5.00		97	70-130		
Hexachlorobutadiene	4.93		0.5	"	5.00		99	66-113		
Naphthalene	4.62		0.5	"	5.00		92	58-126		
1,2,3-Trichlorobenzene	4.79		0.5	"	5.00		96	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.49			"	5.00		90	83-116		
<i>Surrogate: Toluene-d8</i>	5.16			"	5.00		103	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.21			"	5.00		104	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.98			"	5.00		100	74-113		

Batch B18G077 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G077-BLK1)

Dichlorodifluoromethane	ND	U			0.5 ug/L					
Chloromethane	ND	C4, J, Q2, U			0.5 "					
Vinyl chloride	ND	U			0.5 "					
Bromomethane	ND	C3, C4, J, Q3, U			0.5 "					
Chloroethane	ND	U			0.5 "					
Trichlorofluoromethane	ND	U			0.5 "					
1,1-Dichloroethene	ND	U			0.5 "					
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U			0.5 "					
Acetone	ND	U			4 "					
Carbon disulfide	ND	U			0.5 "					
Dichloromethane	ND	U			0.5 "					
tert-Butyl alcohol	ND	U			10 "					
trans-1,2-Dichloroethene	ND	U			0.5 "					
tert-Butyl methyl ether (MTBE)	ND	U			2 "					
1,1-Dichloroethane	ND	U			0.5 "					
Diisopropyl ether	ND	U			2 "					
Ethyl tert-butyl ether	ND	U			2 "					
2,2-Dichloropropane	ND	U			0.5 "					
cis-1,2-Dichloroethene	ND	U			0.5 "					
2-Butanone (MEK)	ND	U			4 "					
Bromochloromethane	ND	U			0.5 "					
Chloroform	ND	U			0.5 "					
1,1,1-Trichloroethane	ND	U			0.5 "					
Carbon tetrachloride	ND	U			0.5 "					
1,1-Dichloropropene	ND	U			0.5 "					
Benzene	ND	U			0.5 "					



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G077 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G077-BLK1)

1,2-Dichloroethane	ND	U	0.5	"						
tert-Amyl methyl ether	ND	U	2	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
4-Methyl-2-pentanone (MIBK)	ND	U	4	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G077 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G077-BLK1)

Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.98			"	5.00		100	83-116		
<i>Surrogate: Toluene-d8</i>	5.20			"	5.00		104	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	4.71			"	5.00		94	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.78			"	5.00		96	74-113		

LCS (B18G077-BS1)

Dichlorodifluoromethane	3.85		0.5	ug/L	5.00		77	70-128		
Chloromethane	2.74		0.5	"	5.00		55	63-123		
Vinyl chloride	3.63		0.5	"	5.00		73	70-130		
Bromomethane	1.56		0.5	"	5.00		31	31-150		
Chloroethane	4.11		0.5	"	5.00		82	74-119		
Trichlorofluoromethane	4.29		0.5	"	5.00		86	72-123		
1,1-Dichloroethene	4.11		0.5	"	5.00		82	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	4.25		0.5	"	5.00		85	73-129		
Acetone	29.2		4	"	40.0		73	61-114		
Carbon disulfide	4.3		0.5	"	5.00		86	0-200		
Dichloromethane	4.13		0.5	"	5.00		83	70-130		
tert-Butyl alcohol	81.9		10	"	100		82	0-200		
trans-1,2-Dichloroethene	4.09		0.5	"	5.00		82	70-130		
tert-Butyl methyl ether (MTBE)	15.5		2	"	20.0		77	62-117		
1,1-Dichloroethane	4.13		0.5	"	5.00		83	74-115		
Diisopropyl ether	16.1		2	"	20.0		81	0-200		
Ethyl tert-butyl ether	14.4		2	"	20.0		72	0-200		
2,2-Dichloropropane	5.46		0.5	"	5.00		109	64-144		
cis-1,2-Dichloroethene	4.65		0.5	"	5.00		93	70-130		
2-Butanone (MEK)	34.4		4	"	40.0		86	57-121		
Bromochloromethane	4.75		0.5	"	5.00		95	71-122		
Chloroform	4.72		0.5	"	5.00		94	70-130		
1,1,1-Trichloroethane	4.84		0.5	"	5.00		97	70-130		
Carbon tetrachloride	5.12		0.5	"	5.00		102	70-130		
1,1-Dichloropropene	4.85		0.5	"	5.00		97	71-119		
Benzene	4.82		0.5	"	5.00		96	70-130		
1,2-Dichloroethane	4.83		0.5	"	5.00		97	70-130		
tert-Amyl methyl ether	16		2	"	20.0		80	0-200		
Trichloroethene	4.74		0.5	"	5.00		95	70-130		
1,2-Dichloropropane	4.76		0.5	"	5.00		95	70-130		
Dibromomethane	4.83		0.5	"	5.00		97	72-121		
Bromodichloromethane	5.09		0.5	"	5.00		102	70-130		
cis-1,3-Dichloropropene	4.96		0.5	"	5.00		99	68-120		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G077 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G077-BS1)

Toluene	4.94		0.5	"	5.00		99	70-130		
trans-1,3-Dichloropropene	5.51		0.5	"	5.00		110	64-126		
1,1,2-Trichloroethane	5.13		0.5	"	5.00		103	70-130		
Tetrachloroethene	5.12		0.5	"	5.00		102	70-130		
1,3-Dichloropropane	5.25		0.5	"	5.00		105	80-114		
2-Hexanone	40.2		4	"	40.0		101	0-200		
Chlorodibromomethane	5.72		0.5	"	5.00		114	70-130		
1,2-Dibromoethane (EDB)	5.19		0.5	"	5.00		104	80-115		
Chlorobenzene	5.15		0.5	"	5.00		103	70-130		
1,1,1,2-Tetrachloroethane	5.32		0.5	"	5.00		106	82-116		
Ethylbenzene	5.17		0.5	"	5.00		103	70-130		
m&p-Xylene	10.4		1	"	10.0		104	70-130		
o-Xylene	5.22		0.5	"	5.00		104	70-130		
Styrene	5.07		0.5	"	5.00		101	70-130		
Bromoform	5.81		0.5	"	5.00		116	70-130		
Isopropylbenzene	5.24		0.5	"	5.00		105	86-114		
Bromobenzene	5.07		0.5	"	5.00		101	84-110		
1,1,2,2-Tetrachloroethane	5.5		0.5	"	5.00		110	81-113		
1,2,3-Trichloropropane	5.11		0.5	"	5.00		102	81-114		
Propylbenzene	5.25		0.5	"	5.00		105	87-115		
2-Chlorotoluene	5.16		0.5	"	5.00		103	84-111		
4-Chlorotoluene	5.17		0.5	"	5.00		103	82-112		
1,3,5-Trimethylbenzene	5.22		0.5	"	5.00		104	85-113		
tert-Butylbenzene	5.25		0.5	"	5.00		105	86-114		
1,2,4-Trimethylbenzene	5.18		0.5	"	5.00		104	84-114		
sec-Butylbenzene	5.22		0.5	"	5.00		104	87-119		
1,3-Dichlorobenzene	5.15		0.5	"	5.00		103	85-110		
p-Isopropyltoluene	5.2		0.5	"	5.00		104	86-117		
1,4-Dichlorobenzene	5.16		0.5	"	5.00		103	70-130		
1,2-Dichlorobenzene	5.09		0.5	"	5.00		102	70-130		
Butylbenzene	4.83		0.5	"	5.00		97	85-118		
1,2-Dibromo-3-chloropropane	23.5		2	"	20.0		117	54-133		
1,2,4-Trichlorobenzene	5.09		0.5	"	5.00		102	70-130		
Hexachlorobutadiene	5.21		0.5	"	5.00		104	66-113		
Naphthalene	4.91		0.5	"	5.00		98	58-126		
1,2,3-Trichlorobenzene	5.14		0.5	"	5.00		103	65-119		

Surrogate: 1,2-Dichloroethane-d4	4.97			"	5.00		99	83-116		
Surrogate: Toluene-d8	5.13			"	5.00		103	81-112		
Surrogate: 4-Bromofluorobenzene	4.92			"	5.00		98	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.00			"	5.00		100	74-113		



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G079 - 5030 P&T TPH-G - TPH - Purgeable

**Prepared & Analyzed: 07/27/18
Purgeable Petroleum Hydrocarbons - Quality Control**

Blank (B18G079-BLK1)

TPH - Gasoline Range Organics	ND	U	50 ug/L							
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	125		"	125		100	87-110			
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LCS (B18G079-BS1)

TPH - Gasoline Range Organics	497		50 ug/L	500		99	81-119			
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	126		"	125		101	87-110			
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Batch B18G089 - 5030 P&T TPH-G - TPH - Purgeable

**Prepared & Analyzed: 07/30/18
Purgeable Petroleum Hydrocarbons - Quality Control**

Blank (B18G089-BLK1)

TPH - Gasoline Range Organics	ND	U	50 ug/L							
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	117		"	125		93	87-110			
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LCS (B18G089-BS1)

TPH - Gasoline Range Organics	520		50 ug/L	500		104	81-119			
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	121		"	125		97	87-110			
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Batch B18G093 - 3520C CLLE - SVOCs

**Prepared: 07/30/18 Analyzed: 08/01/18
Semivolatile Organic Compounds by EPA Method 8270D - Quality Control**

Blank (B18G093-BLK1)

Hexachloroethane	ND	U	1 ug/L							
Hexachlorobutadiene	ND	U	1 "							
1-Methylnaphthalene	ND	U	1 "							
Hexachlorocyclopentadiene	ND	U	5 "							
2-Chloronaphthalene	ND	U	1 "							
Acenaphthylene	ND	U	1 "							
Acenaphthene	ND	U	1 "							
Fluorene	ND	U	1 "							
Hexachlorobenzene	ND	U	1 "							
Anthracene	ND	U	1 "							
Fluoranthene	ND	U	1 "							
Pyrene	ND	U	1 "							
Benzo(a)anthracene	ND	U	1 "							
Chrysene	ND	U	1 "							
Benzo(b)fluoranthene	ND	U	1 "							
Benzo(k)fluoranthene	ND	U	1 "							
Benzo(a)pyrene	ND	U	1 "							
Indeno(1,2,3-cd)pyrene	ND	U	1 "							
Dibenz(a,h)anthracene	ND	U	1 "							
Benzo(g,h,i)perylene	ND	U	1 "							



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G093 - 3520C CLLE - SVOCs

Prepared: 07/30/18 Analyzed: 08/01/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G093-BLK1)

<i>Surrogate: 2-Fluorophenol</i>	41.9			"	50.0		84	54-110		
<i>Surrogate: Phenol-d5</i>	41.5			"	50.0		83	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	43.0			"	50.0		86	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	32.7			"	50.0		65	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.9			"	50.0		82	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	40.1			"	50.0		80	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	36.2			"	50.0		72	46-136		
<i>Surrogate: Terphenyl-d14</i>	62.9			"	50.0		126	47-130		

LCS (B18G093-BS1)

Hexachloroethane	5.01			1 ug/L	10.0		50	22-110		
Hexachlorobutadiene	4.82			1 "	10.0		48	22-110		
1-Methylnaphthalene	7.06			1 "	10.0		71	70-130		
Hexachlorocyclopentadiene	19.9			5 "	50.0		40	20-110		
2-Chloronaphthalene	6.95			1 "	10.0		70	43-110		
Acenaphthylene	7.64			1 "	10.0		76	46-110		
Acenaphthene	10.8			1 "	10.0		108	84-135		
Fluorene	8.81			1 "	10.0		88	60-110		
Hexachlorobenzene	8.27			1 "	10.0		83	52-112		
Anthracene	9.09			1 "	10.0		91	57-117		
Fluoranthene	9.05			1 "	10.0		90	68-119		
Pyrene	8.75			1 "	10.0		88	65-120		
Benzo(a)anthracene	9.06			1 "	10.0		91	67-110		
Chrysene	9.01			1 "	10.0		90	67-111		
Benzo(b)fluoranthene	8.6			1 "	10.0		86	60-110		
Benzo(k)fluoranthene	9.6			1 "	10.0		96	65-117		
Benzo(a)pyrene	8.2			1 "	10.0		82	56-110		
Indeno(1,2,3-cd)pyrene	8.69			1 "	10.0		87	62-110		
Dibenz(a,h)anthracene	8.9			1 "	10.0		89	59-119		
Benzo(g,h,i)perylene	8.44			1 "	10.0		84	64-110		

<i>Surrogate: 2-Fluorophenol</i>	42.4			"	50.0		85	54-110		
<i>Surrogate: Phenol-d5</i>	44.4			"	50.0		89	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	44.6			"	50.0		89	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	32.9			"	50.0		66	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.0			"	50.0		80	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	40.0			"	50.0		80	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	56.6			"	50.0		113	46-136		
<i>Surrogate: Terphenyl-d14</i>	58.4			"	50.0		117	47-130		

Batch B18G101 - 3520C CLLE - TPH - Extractable

Prepared: 07/31/18 Analyzed: 08/02/18



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18208A Reported: 08/17/18 13:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18G101-BLK1)

TPH - Diesel Range Organics	ND	U	150	ug/L						
TPH - Oil Range Organics	ND	U	600	"						

<i>Surrogate: Hexacosane</i>	31.2			"	50.0		62	47-130		
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LCS (B18G101-BS1)

TPH - Diesel Range Organics	1,380		150	ug/L	1500		92	59-109		
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<i>Surrogate: Hexacosane</i>	38.5			"	50.0		77	47-130		
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Batch B18H003 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/09/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H003-BLK1)

Calcium	ND	U	100	ug/L						
Magnesium	ND	U	500	"						
Potassium	ND	U	2,000	"						
Sodium	ND	U	500	"						

Blank (B18H003-BLK2)

Calcium	ND	U	100	ug/L						
Sodium	ND	U	500	"						

LCS (B18H003-BS1)

Calcium	1,010		100	ug/L	1000		101	85-115		
Magnesium	2,030		500	"	2000		101	85-115		
Potassium	10,400		2,000	"	10000		104	85-115		

LCS (B18H003-BS2)

Sodium	3,050		500	ug/L	3000		102	85-115		
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Matrix Spike (B18H003-MS2)

Source: 1807041-01

Calcium	22,700	Q10	100	ug/L	1000	22,200	50	70-130		
Magnesium	14,800	Q10	500	"	2000	13,200	77	70-130		
Potassium	32,100		2,000	"	10000	21,200	109	70-130		

Matrix Spike (B18H003-MS4)

Source: 1807041-01RE1

Sodium	474,000	Q10	10,000	ug/L	3000	489,000	NR	70-130		
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Matrix Spike Dup (B18H003-MSD2)

Source: 1807041-01

Calcium	23,500	Q10	100	ug/L	1000	22,200	131	70-130	4	20
Magnesium	15,100	Q10	500	"	2000	13,200	90	70-130	2	20
Potassium	32,700		2,000	"	10000	21,200	115	70-130	2	20

Matrix Spike Dup (B18H003-MSD4)

Source: 1807041-01RE1

Sodium	482,000	Q10	10,000	ug/L	3000	489,000	NR	70-130	2	20
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Batch B18H004 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/03/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H004-BLK1)

Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H004 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/03/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H004-BLK1)

Chromium	ND	U		1 "						
Copper	ND	U		2 "						
Lead	ND	U		1 "						
Nickel	ND	U		1 "						
Selenium	ND	U		1 "						
Silver	ND	U		0.25 "						
Thorium	ND	U		1 "						
Uranium	ND	U		0.25 "						
Zinc	ND	U		5 "						

Blank (B18H004-BLK2)

Arsenic	ND	U		0.5 ug/L						
Cadmium	ND	U		0.4 "						
Chromium	ND	U		1 "						
Lead	ND	U		1 "						
Silver	ND	U		0.25 "						
Thorium	ND	U		1 "						
Uranium	ND	U		0.25 "						

LCS (B18H004-BS1)

Arsenic	41.1			0.5 ug/L	40.0		103	85-115		
Cadmium	38.9			0.4 "	40.0		97	85-115		
Chromium	39.5			1 "	40.0		99	85-115		
Copper	40.7			2 "	40.0		102	85-115		
Lead	41.6			1 "	40.0		104	85-115		
Nickel	40.1			1 "	40.0		100	85-115		
Selenium	43.3			1 "	40.0		108	85-115		
Silver	36.8			0.25 "	40.0		92	85-115		
Uranium	39.8			0.25 "	40.0		99	85-115		
Zinc	41.4			5 "	40.0		103	85-115		

LCS (B18H004-BS2)

Thorium	42.1			1 ug/L	40.0		105	85-115		
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Matrix Spike (B18H004-MS2)

Source: 1807041-01

Arsenic	51.3			0.5 ug/L	40.0	10.2	103	70-130		
Cadmium	35			0.4 "	40.0	ND	88	70-130		
Chromium	42.2			1 "	40.0	ND	106	70-130		
Copper	33			2 "	40.0	ND	82	70-130		
Lead	35.2			1 "	40.0	ND	88	70-130		
Nickel	35.2			1 "	40.0	0.8	86	70-130		
Selenium	35.7			1 "	40.0	0.663	88	70-130		
Silver	38			0.25 "	40.0	ND	95	70-130		
Uranium	42.7			0.25 "	40.0	3.06	99	70-130		
Zinc	34.9			5 "	40.0	4.01	77	70-130		



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H004 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/07/18

Total Metals by EPA 200 Series Methods - Quality Control

Matrix Spike (B18H004-MS4)

Source: 1807041-01RE1

Thorium	37.9			1 ug/L	40.0	ND	95	70-130		
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Matrix Spike Dup (B18H004-MSD2)

Source: 1807041-01

Arsenic	51.9			0.5 ug/L	40.0	10.2	104	70-130	1	20
Cadmium	34.5			0.4 "	40.0	ND	86	70-130	1	20
Chromium	42.6			1 "	40.0	ND	106	70-130	0.8	20
Copper	31.9			2 "	40.0	ND	80	70-130	3	20
Lead	35.2			1 "	40.0	ND	88	70-130	0.2	20
Nickel	34.1			1 "	40.0	0.8	83	70-130	3	20
Selenium	36.4			1 "	40.0	0.663	89	70-130	2	20
Silver	36.1			0.25 "	40.0	ND	90	70-130	5	20
Uranium	43.1			0.25 "	40.0	3.06	100	70-130	0.9	20
Zinc	36			5 "	40.0	4.01	80	70-130	3	20

Matrix Spike Dup (B18H004-MSD4)

Source: 1807041-01RE1

Thorium	37.8			1 ug/L	40.0	ND	94	70-130	0.3	20
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Batch B18H005 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/10/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H005-BLK1)

Calcium	ND	U		100 ug/L						
Magnesium	ND	U		500 "						
Potassium	ND	U		2,000 "						
Sodium	450	J		500 "						

Blank (B18H005-BLK2)

Sodium	ND	U		500 ug/L						
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LCS (B18H005-BS1)

Calcium	1,060			100 ug/L	1000		106	85-115		
Magnesium	2,090			500 "	2000		105	85-115		
Potassium	10,800			2,000 "	10000		108	85-115		

LCS (B18H005-BS2)

Sodium	3,180			500 ug/L	3000		106	85-115		
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Batch B18H006 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/08/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H006-BLK1)

Arsenic	ND	U		0.5 ug/L						
Cadmium	ND	U		0.4 "						
Chromium	ND	U		1 "						
Copper	ND	U		2 "						
Lead	ND	U		1 "						
Nickel	ND	U		1 "						
Selenium	ND	U		1 "						
Silver	ND	U		0.25 "						
Thorium	ND	U		1 "						



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H006 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/08/18
Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H006-BLK1)

Uranium	ND	U	0.25	"						
Zinc	ND	U	5	"						

Blank (B18H006-BLK2)

Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						
Selenium	ND	U	1	"						
Silver	ND	U	0.25	"						
Zinc	ND	U	5	"						

LCS (B18H006-BS1)

Arsenic	41.2		0.5	ug/L	40.0		103	85-115		
Cadmium	39.6		0.4	"	40.0		99	85-115		
Chromium	40.8		1	"	40.0		102	85-115		
Copper	38.2		2	"	40.0		96	85-115		
Lead	42		1	"	40.0		105	85-115		
Nickel	39.8		1	"	40.0		99	85-115		
Thorium	40.1		1	"	40.0		100	85-115		
Uranium	41.2		0.25	"	40.0		103	85-115		
Zinc	38.9		5	"	40.0		97	85-115		

LCS (B18H006-BS2)

Selenium	41		1	ug/L	40.0		102	85-115		
Silver	38.9		0.25	"	40.0		97	85-115		

Batch B18H007 - - General Biology - Solids, Total Dissolved

Prepared & Analyzed: 08/01/18
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18H007-BLK1)

Total Dissolved Solids	ND	U	20	mg/L						
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LCS (B18H007-BS1)

Total Dissolved Solids	208			mg/L	206		101	85-115		
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Duplicate (B18H007-DUP1)

Source: 1807041-06

Total Dissolved Solids	990		20	mg/L			996		0.6	5
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18
Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK1)

Hexachloroethane	ND	U	1	ug/L						
Hexachlorobutadiene	ND	U	1	"						
1-Methylnaphthalene	ND	U	1	"						
Hexachlorocyclopentadiene	ND	U	5	"						
2-Chloronaphthalene	ND	U	1	"						
Acenaphthylene	ND	U	1	"						
Acenaphthene	ND	U	1	"						
Fluorene	ND	U	1	"						
Hexachlorobenzene	ND	U	1	"						



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/03/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK1)

Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	43.2			"	50.0		86	54-110		
<i>Surrogate: Phenol-d5</i>	43.5			"	50.0		87	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	44.8			"	50.0		90	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	34.8			"	50.0		70	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	43.3			"	50.0		87	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	43.7			"	50.0		87	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	36.2			"	50.0		72	46-136		
<i>Surrogate: Terphenyl-d14</i>	70.7			"	50.0		141	47-130		

Blank (B18H010-BLK2)

Hexachloroethane	ND	U		1 ug/L						
Hexachlorobutadiene	ND	U		1 "						
1-Methylnaphthalene	ND	U		1 "						
Hexachlorocyclopentadiene	ND	U		5 "						
2-Chloronaphthalene	ND	U		1 "						
Acenaphthylene	ND	U		1 "						
Acenaphthene	ND	U		1 "						
Fluorene	ND	U		1 "						
Hexachlorobenzene	ND	U		1 "						
Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H010 - 3520C CLLE - SVOCs

Prepared: 08/01/18 Analyzed: 08/06/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H010-BLK2)

Surrogate: 2-Fluorophenol	42.4			"	50.0		85	54-110		
Surrogate: Phenol-d5	43.2			"	50.0		86	54-110		
Surrogate: 2-Chlorophenol-d4	44.5			"	50.0		89	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	34.5			"	50.0		69	38-110		
Surrogate: Nitrobenzene-d5	43.6			"	50.0		87	26-134		
Surrogate: 2-Fluorobiphenyl	44.3			"	50.0		89	57-110		
Surrogate: 2,4,6-Tribromophenol	36.4			"	50.0		73	46-136		
Surrogate: Terphenyl-d14	76.4			"	50.0		153	47-130		

LCS (B18H010-BS1)

Hexachloroethane	5.92			1 ug/L	10.0		59	22-110		
Hexachlorobutadiene	5.77			1 "	10.0		58	22-110		
1-Methylnaphthalene	8.57			1 "	10.0		86	70-130		
Hexachlorocyclopentadiene	27.3			5 "	50.0		55	20-110		
2-Chloronaphthalene	8.65			1 "	10.0		86	43-110		
Acenaphthylene	8.68			1 "	10.0		87	46-110		
Acenaphthene	12.2			1 "	10.0		122	84-135		
Fluorene	9.31			1 "	10.0		93	60-110		
Hexachlorobenzene	8.8			1 "	10.0		88	52-112		
Anthracene	9.75			1 "	10.0		98	57-117		
Fluoranthene	9.85			1 "	10.0		98	68-119		
Pyrene	9.82			1 "	10.0		98	65-120		
Benzo(a)anthracene	10			1 "	10.0		100	67-110		
Chrysene	9.97			1 "	10.0		100	67-111		
Benzo(b)fluoranthene	9.97			1 "	10.0		100	60-110		
Benzo(k)fluoranthene	10.6			1 "	10.0		106	65-117		
Benzo(a)pyrene	9.19			1 "	10.0		92	56-110		
Indeno(1,2,3-cd)pyrene	9.64			1 "	10.0		96	62-110		
Dibenz(a,h)anthracene	9.67			1 "	10.0		97	59-119		
Benzo(g,h,i)perylene	9.87			1 "	10.0		99	64-110		

Surrogate: 2-Fluorophenol	49.7			"	50.0		99	54-110		
Surrogate: Phenol-d5	47.1			"	50.0		94	54-110		
Surrogate: 2-Chlorophenol-d4	52.2			"	50.0		104	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	41.1			"	50.0		82	38-110		
Surrogate: Nitrobenzene-d5	48.5			"	50.0		97	26-134		
Surrogate: 2-Fluorobiphenyl	49.9			"	50.0		100	57-110		
Surrogate: 2,4,6-Tribromophenol	58.5			"	50.0		117	46-136		
Surrogate: Terphenyl-d14	64.2			"	50.0		128	47-130		



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H012 - - General Inorganic - Anions										
Prepared & Analyzed: 08/03/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H012-BLK1)										
Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						
Blank (B18H012-BLK2)										
Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						
LCS (B18H012-BS1)										
Chloride	9.53			mg/L	10.0		95	90-110		
Sulfate	9.79			"	10.0		98	90-110		
Duplicate (B18H012-DUP1) Source: 1807041-01										
Chloride	168			10 mg/L		167			0.6	20
Sulfate	315			5 "		313			0.5	20
Batch B18H027 - 245.1 Hg Prep. - Mercury by 245.1 (total)										
Prepared: 08/06/18 Analyzed: 08/07/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H027-BLK1)										
Mercury	ND	U		0.03 ug/L						
LCS (B18H027-BS1)										
Mercury	0.203			0.03 ug/L	0.200		102	85-115		
Matrix Spike (B18H027-MS2) Source: 1807041-01										
Mercury	0.199			0.03 ug/L	0.200	ND	100	70-130		
Matrix Spike Dup (B18H027-MSD2) Source: 1807041-01										
Mercury	0.2			0.03 ug/L	0.200	ND	100	70-130	0.7	20
Batch B18H028 - 245.1 Hg Prep. - Mercury by 245.1 (total)										
Prepared: 08/06/18 Analyzed: 08/07/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H028-BLK1)										
Mercury	ND	U		0.03 ug/L						
LCS (B18H028-BS1)										
Mercury	0.206			0.03 ug/L	0.200		103	85-115		
Batch B18H029 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/06/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H029-BLK1)										
Hydroxide Alkalinity	ND	U		10 mg/L						
Carbonate Alkalinity	ND	U		10 "						
Bicarbonate Alkalinity	ND	U		10 "						
Total Alkalinity	ND	U		10 "						
LCS (B18H029-BS1)										
Total Alkalinity	47.8			10 mg/L	48.7		98	85-115		
Duplicate (B18H029-DUP2) Source: 1807041-01										
Hydroxide Alkalinity	ND	U		10 mg/L		ND				20
Carbonate Alkalinity	ND	U		10 "		ND				20
Bicarbonate Alkalinity	525			10 "		523			0.4	20



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18208A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/17/18 13:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H029 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/06/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Duplicate (B18H029-DUP2)										
Source: 1807041-01										
Total Alkalinity	525		10	"		523			0.4	20
Batch B18H032 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/07/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H032-BLK1)										
Hydroxide Alkalinity	ND	U	10	mg/L						
Carbonate Alkalinity	ND	U	10	"						
Bicarbonate Alkalinity	ND	U	10	"						
Total Alkalinity	ND	U	10	"						
LCS (B18H032-BS1)										
Total Alkalinity	48.8		10	mg/L	48.7		100	85-115		



United States Environmental Protection Agency
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon

Project Number: R18E03

Project: Navajo Discharging Wells July 2018

Enforcement Division, Water Section 1

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18208A

Reported: 08/17/18 13:48

Qualifiers and Comments

- Q3 The quantitation limit standard did not meet recovery criteria for this analyte.
- Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).
- Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
- N TIC Tentatively Identified Compound - This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
- F13 Fuel or Product Type: mixed or unknown
- C4 The calibration verification check did not meet % difference criteria for this analyte.
- C3 The initial calibration for this analyte did not meet calibration criteria.
- C1 The reported concentration for this analyte is below the quantitation limit.
- A2 The sample was received above the recommended temperature range.
- U Not Detected
- NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 8/16/2018

Subject: Analytical Testing Results - Project R18E03
SDG: 18207A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Elizabeth Aubuchon
Enforcement Division, Water Section 1
ENF-3-1

Attached are the results from the analysis of samples from the **Navajo Discharging Wells July 2018** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Alkalinity	Anions by Ion Chromatography
Mercury by CVAA	Metals by ICP
Metals by ICP/MS	Total Dissolved Solids
Semivolatile Organic Compounds by GC/MS	Semivolatile Organic Compounds by GC/MS
Extractable Petroleum Hydrocarbons by GC/FID	Purgeable Petroleum Hydrocarbons by GC/FID
Purgeable Petroleum Hydrocarbons by GC/FID	Volatile Organic Compounds by GC/MS



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
UT-005	1807036-01	Water	07/25/18 08:30	07/26/18 09:00
UT-005-DUP	1807036-02	Water	07/25/18 09:00	07/26/18 09:00
UT-011	1807036-03	Water	07/25/18 09:45	07/26/18 09:00
UT-003	1807036-04	Water	07/25/18 12:20	07/26/18 09:00
UT-013	1807036-05	Water	07/25/18 08:20	07/26/18 09:00
UT-018	1807036-06	Water	07/25/18 10:30	07/26/18 09:00
UT-018-DUP	1807036-07	Water	07/25/18 10:45	07/26/18 09:00
UT-002	1807036-08	Water	07/25/18 11:55	07/26/18 09:00
TB-004	1807036-09	Water	07/25/18 12:00	07/26/18 09:00
NM-029	1807036-10	Water	07/24/18 10:20	07/26/18 09:00
NM-029A	1807036-11	Water	07/24/18 11:15	07/26/18 09:00
NM-010	1807036-12	Water	07/24/18 13:20	07/26/18 09:00
NM-004	1807036-13	Water	07/24/18 15:00	07/26/18 09:00
NM-009	1807036-14	Water	07/24/18 16:05	07/26/18 09:00
TB-003	1807036-15	Water	07/24/18 12:00	07/26/18 09:00

Work Order 1807036

Seven coolers were received on 7/26/18. One of the coolers were measured at 7 degrees C upon receipt. The remaining six coolers were all within the recommended 0 - 6 degrees C window for sample shipment. Where bottles used for analysis were taken from the cooler that exceeded 6 degrees, the results are qualified as estimates ("J" flagged).



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-01

Water - Sampled: 07/25/18 08:30

Sample ID: UT-005

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		6,400		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		3,100		500	"	"	"	"	200.7
Potassium		5,400		2,000	"	"	"	"	200.7
Sodium	RE1	870,000		10,000	"	"	"	08/11/18	200.7
Arsenic		4.1		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		3.3		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		1.5		0.25	"	"	"	08/03/18	200.8
Zinc		2.5	C1, J	5	"	"	"	"	200.8

Sample ID: UT-005

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-01

Water - Sampled: 07/25/18 08:30

Sample ID: UT-005

Volatile Organic Compounds by EPA Method 524.2

Bromochloromethane		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-01		Water - Sampled: 07/25/18 08:30							
Sample ID: UT-005		Volatile Organic Compounds by EPA Method 524.2							
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			102 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			95 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	
Sample ID: UT-005		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			96 %	87-110%		"	"	"	
Sample ID: UT-005		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %	47-130%		"	"	"	
Sample ID: UT-005		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-01

Water - Sampled: 07/25/18 08:30

Sample ID: UT-005

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Fluoranthene	ND	U	1	ug/L	B18G080	07/27/18	07/31/18	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	86 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	87 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	88 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	65 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	83 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	81 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	77 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	122 %		47-130%		"	"	"	

Sample ID: UT-005

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	25		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	600		10	"	"	"	"	SM2320
Total Alkalinity	630		10	"	"	"	"	SM2320
Chloride	100	RE1	10	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	1,000		25	"	"	"	07/31/18	300.0
Total Dissolved Solids	2,300		80	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-02

Water - Sampled: 07/25/18 09:00

Sample ID: UT-005-DUP

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium	6,200		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium	3,000		500	"	"	"	"	200.7
Potassium	5,300		2,000	"	"	"	"	200.7
Sodium	850,000	RE1	10,000	"	"	"	08/11/18	200.7
Arsenic	4.1		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium	ND	U	0.40	"	"	"	"	200.8
Chromium	0.52	C1, J	1	"	"	"	"	200.8
Copper	ND	U	2	"	"	"	"	200.8
Lead	ND	U	1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1807036-02							Water - Sampled: 07/25/18 09:00	
Sample ID:	UT-005-DUP							Total Metals by EPA 200 Series Methods	
Nickel		ND	U	1	ug/L	B18H004	08/01/18	08/03/18	200.8
Selenium		1.8		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		1.5		0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8
Sample ID:	UT-005-DUP							Volatile Organic Compounds by EPA Method 524.2	
Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	J, A2, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	J, A2, U	4	"	"	"	"	524.2
Bromochloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-02

Water - Sampled: 07/25/18 09:00

Sample ID: UT-005-DUP

Volatile Organic Compounds by EPA Method 524.2									
1,2-Dichloropropane		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	J, A2, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	J, A2, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	J, A2, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-02		Water - Sampled: 07/25/18 09:00							
Sample ID: UT-005-DUP		Volatile Organic Compounds by EPA Method 524.2							
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	ug/L	B18G068	07/26/18	07/26/18	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			103 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			95 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			97 %	74-113%		"	"	"	
Sample ID: UT-005-DUP		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: UT-005-DUP		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			72 %	47-130%		"	"	"	
Sample ID: UT-005-DUP		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-02

Water - Sampled: 07/25/18 09:00

Sample ID: UT-005-DUP

Semivolatile Organic Compounds by EPA Method 8270D									
						B18G080	07/27/18	07/31/18	8270D
Benzo(g,h,i)perylene		ND	U		1	ug/L			
<i>Surrogate: 2-Fluorophenol</i>			80 %						
<i>Surrogate: Phenol-d5</i>			80 %						
<i>Surrogate: 2-Chlorophenol-d4</i>			81 %						
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			64 %						
<i>Surrogate: Nitrobenzene-d5</i>			76 %						
<i>Surrogate: 2-Fluorobiphenyl</i>			76 %						
<i>Surrogate: 2,4,6-Tribromophenol</i>			72 %						
<i>Surrogate: Terphenyl-d14</i>			126 %						

Sample ID: UT-005-DUP

Conventional Chemistry Parameters by APHA/EPA Methods									
						B18H029	08/06/18	08/06/18	SM2320
Hydroxide Alkalinity		ND	U		10	mg/L			
Carbonate Alkalinity		42			10	"			SM2320
Bicarbonate Alkalinity		570			10	"			SM2320
Total Alkalinity		610			10	"			SM2320
Chloride	RE1	100			10	"	B18G096	07/31/18	07/31/18 300.0
Sulfate		1,000			25	"		07/31/18	300.0
Total Dissolved Solids		2,300			80	"	B18G094	07/30/18	07/30/18 2540C

Lab ID: 1807036-03

Water - Sampled: 07/25/18 09:45

Sample ID: UT-011

Total Metals by EPA 200 Series Methods									
						B18H027	08/06/18	08/07/18	245.1
Mercury		ND	U		0.030	ug/L			
Calcium		4,400			100	"	B18H003	08/01/18	08/10/18 200.7
Magnesium		2,400			500	"			200.7
Potassium		5,000			2,000	"			200.7
Sodium	RE1	850,000			10,000	"		08/11/18	200.7
Arsenic		11			0.50	"	B18H004	08/01/18	08/03/18 200.8
Cadmium		ND	U		0.40	"			200.8
Chromium		ND	U		1	"			200.8
Copper		ND	U		2	"			200.8
Lead		ND	U		1	"			200.8
Nickel		ND	U		1	"			200.8
Selenium		1.2			1	"			200.8
Silver		ND	U		0.25	"			200.8
Thorium	RE1	ND	U		1	"		08/07/18	200.8
Uranium		3.1			0.25	"		08/03/18	200.8
Zinc		ND	U		5	"			200.8

Sample ID: UT-011

Volatile Organic Compounds by EPA Method 524.2									
						B18G068	07/26/18	07/26/18	524.2
Dichlorodifluoromethane		ND	U		0.5	"			
Chloromethane		ND	C4, J, U		0.5	"			524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-03

Water - Sampled: 07/25/18 09:45

Sample ID: UT-011

Volatile Organic Compounds by EPA Method 524.2

Vinyl chloride		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Bromomethane		ND	C3, C4, I, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-03

Water - Sampled: 07/25/18 09:45

Sample ID: UT-011

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichloropropane		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		105 %		83-116%		"	"	"	
Surrogate: Toluene-d8		103 %		81-112%		"	"	"	
Surrogate: 4-Bromofluorobenzene		95 %		80-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		99 %		74-113%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-03

Water - Sampled: 07/25/18 09:45

Sample ID: UT-011

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	ug/L	B18G071	07/26/18	07/26/18	8015C
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Surrogate: a,a,a-Trifluorotoluene

99 % 87-110% " " "

Sample ID: UT-011

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
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TPH - Oil Range Organics

ND U 600 " " " 8015C

Surrogate: Hexacosane

75 % 47-130% " " "

Sample ID: UT-011

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

92 % 54-110% " " "

Surrogate: Phenol-d5

93 % 54-110% " " "

Surrogate: 2-Chlorophenol-d4

95 % 60-110% " " "

Surrogate: 1,2-Dichlorobenzene-d4

73 % 38-110% " " "

Surrogate: Nitrobenzene-d5

88 % 26-134% " " "

Surrogate: 2-Fluorobiphenyl

88 % 57-110% " " "

Surrogate: 2,4,6-Tribromophenol

81 % 46-136% " " "

Surrogate: Terphenyl-d14

123 % 47-130% " " "

Sample ID: UT-011

Conventional Chemistry Parameters by APHA/EPA Methods



**United States Environmental Protection Agency
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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-03

Water - Sampled: 07/25/18 09:45

Sample ID: UT-011

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		54		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		680		10	"	"	"	"	SM2320
Total Alkalinity		730		10	"	"	"	"	SM2320
Chloride	RE1	150		10	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		780		25	"	"	"	07/31/18	300.0
Total Dissolved Solids		2,200		80	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-04

Water - Sampled: 07/25/18 12:20

Sample ID: UT-003

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		90,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		32,000		500	"	"	"	"	200.7
Potassium		37,000		2,000	"	"	"	"	200.7
Sodium	RE1	2,100,000		10,000	"	"	"	08/11/18	200.7
Arsenic		42		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.4	C1, J	2	"	"	"	"	200.8
Lead	RE1	ND	U	1	"	"	"	08/07/18	200.8
Nickel		2.9		1	"	"	"	08/03/18	200.8
Selenium		3.4		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium	RE1	7.2		0.25	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	08/03/18	200.8

Sample ID: UT-003

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-04		Water - Sampled: 07/25/18 12:20							
Sample ID: UT-003		Volatile Organic Compounds by EPA Method 524.2							
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-04		Water - Sampled: 07/25/18 12:20							
Sample ID: UT-003		Volatile Organic Compounds by EPA Method 524.2							
Bromoform		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			106 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			100 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			97 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			100 %	74-113%		"	"	"	
Sample ID: UT-003		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: UT-003		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %	47-130%		"	"	"	
Sample ID: UT-003		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-04

Water - Sampled: 07/25/18 12:20

Sample ID: UT-003

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1-Methylnaphthalene	ND	U	1	ug/L	B18G080	07/27/18	07/31/18	8270D
Hexachlorocyclopentadiene	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

88 %

54-110%

"

"

"

Surrogate: Phenol-d5

88 %

54-110%

"

"

"

Surrogate: 2-Chlorophenol-d4

89 %

60-110%

"

"

"

Surrogate: 1,2-Dichlorobenzene-d4

69 %

38-110%

"

"

"

Surrogate: Nitrobenzene-d5

82 %

26-134%

"

"

"

Surrogate: 2-Fluorobiphenyl

79 %

57-110%

"

"

"

Surrogate: 2,4,6-Tribromophenol

76 %

46-136%

"

"

"

Surrogate: Terphenyl-d14

123 %

47-130%

"

"

"

Sample ID: UT-003

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	17		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	480		10	"	"	"	"	SM2320
Total Alkalinity	490		10	"	"	"	"	SM2320
Chloride	1,400		50	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	2,600	RE1	50	"	"	"	07/31/18	300.0
Total Dissolved Solids	6,200		200	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-05

Water - Sampled: 07/25/18 08:20

Sample ID: UT-013

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium	9,900		100	"	B18H003	08/01/18	08/10/18	200.7



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-05

Water - Sampled: 07/25/18 08:20

Sample ID: UT-013

Total Metals by EPA 200 Series Methods

Magnesium		3,700		500	ug/L	B18H003	08/01/18	08/10/18	200.7
Potassium		4,500		2,000	"	"	"	"	200.7
Sodium	RE1	800,000		10,000	"	"	"	08/11/18	200.7
Arsenic		8.4		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.0	C1, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		2.3		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		0.19	C1, J	0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: UT-013

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	A2, C4, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	J, A2, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	J, A2, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-05

Water - Sampled: 07/25/18 08:20

Sample ID: UT-013

Volatile Organic Compounds by EPA Method 524.2

1,1,1-Trichloroethane		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Carbon tetrachloride		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	J, A2, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	J, A2, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-05		Water - Sampled: 07/25/18 08:20							
Sample ID: UT-013		Volatile Organic Compounds by EPA Method 524.2							
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		100 %		74-113%		"	"	"	
Sample ID: UT-013		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %		87-110%		"	"	"	
Sample ID: UT-013		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		72 %		47-130%		"	"	"	
Sample ID: UT-013		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1.2	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1.2	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1.2	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5.8	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1.2	"	"	"	"	8270D
Acenaphthylene		ND	U	1.2	"	"	"	"	8270D
Acenaphthene		ND	U	1.2	"	"	"	"	8270D
Fluorene		ND	U	1.2	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1.2	"	"	"	"	8270D
Anthracene		ND	U	1.2	"	"	"	"	8270D
Fluoranthene		ND	U	1.2	"	"	"	"	8270D
Pyrene		ND	U	1.2	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-05

Water - Sampled: 07/25/18 08:20

Sample ID: UT-013

Semivolatile Organic Compounds by EPA Method 8270D

Benzo(a)anthracene		ND	U	1.2	ug/L	B18G080	07/27/18	07/31/18	8270D
Chrysene		ND	U	1.2	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1.2	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1.2	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1.2	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1.2	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1.2	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1.2	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		81 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		82 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		84 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		61 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		78 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		75 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		70 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		121 %		47-130%		"	"	"	

Sample ID: UT-013

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		8.3	Cl, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		410		10	"	"	"	"	SM2320
Total Alkalinity		420		10	"	"	"	"	SM2320
Chloride	RE1	86		10	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		1,100		25	"	"	"	07/31/18	300.0
Total Dissolved Solids		2,100		20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-06

Water - Sampled: 07/25/18 10:30

Sample ID: UT-018

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		120,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		39,000		500	"	"	"	"	200.7
Potassium		36,000		2,000	"	"	"	"	200.7
Sodium	RE1	3,200,000		10,000	"	"	"	08/11/18	200.7
Arsenic	RE1	13		1	"	B18H004	08/01/18	08/07/18	200.8
Cadmium	RE1	ND	U	0.80	"	"	"	"	200.8
Chromium	RE1	ND	U	2	"	"	"	"	200.8
Copper		2.4		2	"	"	"	08/03/18	200.8
Lead	RE1	ND	U	2	"	"	"	08/07/18	200.8
Nickel		4.3		1	"	"	"	08/03/18	200.8
Selenium		9.4		1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-06

Water - Sampled: 07/25/18 10:30

Sample ID: UT-018

Total Metals by EPA 200 Series Methods

Silver	RE1	ND	U	0.50	ug/L	B18H004	08/01/18	08/07/18	200.8
Thorium	RE1	ND	U	2	"	"	"	"	200.8
Uranium	RE1	11		0.50	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	08/03/18	200.8

Sample ID: UT-018

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, A2, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, C4, Q3, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-06

Water - Sampled: 07/25/18 10:30

Sample ID: UT-018

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Bromodichloromethane		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-06

Water - Sampled: 07/25/18 10:30

Sample ID: UT-018

Volatile Organic Compounds by EPA Method 524.2

Hexachlorobutadiene		ND	A2, J, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			108 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			99 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			97 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			101 %	74-113%		"	"	"	

Sample ID: UT-018

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	

Sample ID: UT-018

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			69 %	47-130%		"	"	"	

Sample ID: UT-018

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-06

Water - Sampled: 07/25/18 10:30

Sample ID: UT-018

Semivolatile Organic Compounds by EPA Method 8270D

<i>Surrogate: 2-Fluorophenol</i>	96 %		54-110%	B18G080	07/27/18 07/31/18
<i>Surrogate: Phenol-d5</i>	98 %		54-110%	"	" "
<i>Surrogate: 2-Chlorophenol-d4</i>	100 %		60-110%	"	" "
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	77 %		38-110%	"	" "
<i>Surrogate: Nitrobenzene-d5</i>	93 %		26-134%	"	" "
<i>Surrogate: 2-Fluorobiphenyl</i>	91 %		57-110%	"	" "
<i>Surrogate: 2,4,6-Tribromophenol</i>	74 %		46-136%	"	" "
<i>Surrogate: Terphenyl-d14</i>	129 %		47-130%	"	" "

Sample ID: UT-018

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18 SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	SM2320
Bicarbonate Alkalinity	520		10	"	"	"	SM2320
Total Alkalinity	520		10	"	"	"	SM2320
Chloride	RE1	3,900	100	"	B18G096	07/31/18	07/31/18 300.0
Sulfate		1,600	25	"	"	"	07/31/18 300.0
Total Dissolved Solids		8,700	400	"	B18G094	07/30/18	07/30/18 2540C

Lab ID: 1807036-07

Water - Sampled: 07/25/18 10:45

Sample ID: UT-018-DUP

Total Metals by EPA 200 Series Methods

Mercury	ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18 245.1
Calcium	120,000		100	"	B18H003	08/01/18	08/10/18 200.7
Magnesium	39,000		500	"	"	"	200.7
Potassium	36,000		2,000	"	"	"	200.7
Sodium	RE1	3,200,000	10,000	"	"	"	08/11/18 200.7
Arsenic	RE1	14	1	"	B18H004	08/01/18	08/07/18 200.8
Cadmium	RE1	ND	0.80	"	"	"	200.8
Chromium	RE1	ND	2	"	"	"	200.8
Copper		2.1	2	"	"	"	08/03/18 200.8
Lead	RE1	ND	2	"	"	"	08/07/18 200.8
Nickel		3.9	1	"	"	"	08/03/18 200.8
Selenium		8.0	1	"	"	"	200.8
Silver	RE1	ND	0.50	"	"	"	08/07/18 200.8
Thorium	RE1	ND	2	"	"	"	200.8
Uranium	RE1	11	0.50	"	"	"	200.8
Zinc		ND	5	"	"	"	08/03/18 200.8

Sample ID: UT-018-DUP

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane	RE1	ND	A2, J, U	0.5	"	B18G076	07/27/18 07/27/18 524.2
Chloromethane	RE1	ND	A2, J, U	0.5	"	"	" 524.2
Vinyl chloride	RE1	ND	A2, J, U	0.5	"	"	" 524.2
Bromomethane	RE1	ND	A2, J, U	0.5	"	"	" 524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-07								Water - Sampled: 07/25/18 10:45	
Sample ID: UT-018-DUP									Volatile Organic Compounds by EPA Method 524.2
Chloroethane	RE1	ND	A2, J, U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
Trichlorofluoromethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone	RE1	ND	J, A2, U	4	"	"	"	"	524.2
Carbon disulfide	RE1	ND	J, A2, U	0.5	"	"	"	"	524.2
Dichloromethane	RE1	ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol	RE1	ND	J, A2, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)	RE1	ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether	RE1	ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether	RE1	ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)	RE1	ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether	RE1	ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)	RE1	ND	A2, J, U	4	"	"	"	"	524.2
Toluene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone	RE1	ND	A2, J, U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-07

Water - Sampled: 07/25/18 10:45

Sample ID: UT-018-DUP

Volatile Organic Compounds by EPA Method 524.2

Chlorodibromomethane	RE1	ND	A2, J, U	0.5	ug/L	B18G076	07/27/18	07/27/18	524.2
1,2-Dibromoethane (EDB)	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene	RE1	ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane	RE1	ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene	RE1	ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>RE1</i>		103 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>	<i>RE1</i>		91 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>RE1</i>		107 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>RE1</i>		101 %	74-113%		"	"	"	

Sample ID: UT-018-DUP

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics	ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
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**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-07								Water - Sampled: 07/25/18 10:45	
Sample ID: UT-018-DUP								Purgeable Petroleum Hydrocarbons	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		B18G071	07/26/18	07/26/18	
Sample ID: UT-018-DUP								Extractable Petroleum Hydrocarbons	
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		69 %		47-130%		"	"	"	
Sample ID: UT-018-DUP								Semivolatile Organic Compounds by EPA Method 8270D	
Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		82 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		83 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		85 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		66 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		80 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		78 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		65 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		119 %		47-130%		"	"	"	
Sample ID: UT-018-DUP								Conventional Chemistry Parameters by APHA/EPA Methods	
Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-07

Water - Sampled: 07/25/18 10:45

Sample ID: UT-018-DUP

Conventional Chemistry Parameters by APHA/EPA Methods

Bicarbonate Alkalinity		510		10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Total Alkalinity		510		10	"	"	"	"	SM2320
Chloride	RE1	3,900		100	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		1,600		25	"	"	"	07/31/18	300.0
Total Dissolved Solids		9,200		400	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-08

Water - Sampled: 07/25/18 11:55

Sample ID: UT-002

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		43,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		24,000		500	"	"	"	"	200.7
Potassium		25,000	J, Q4	2,000	"	"	"	"	200.7
Sodium	RE1	2,800,000		10,000	"	"	"	08/11/18	200.7
Arsenic	RE1	21		0.50	"	B18H004	08/01/18	08/07/18	200.8
Cadmium		ND	U	0.40	"	"	"	08/03/18	200.8
Chromium	RE1	0.52	C1, J	1	"	"	"	08/07/18	200.8
Copper		3.5	J, Q4	2	"	"	"	08/03/18	200.8
Lead		0.59	C1, J	1	"	"	"	"	200.8
Nickel		1.8		1	"	"	"	"	200.8
Selenium		7.4		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		4.0		0.25	"	"	"	08/03/18	200.8
Zinc		5.6	J, Q4	5	"	"	"	"	200.8

Sample ID: UT-002

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G072	07/26/18	07/26/18	524.2
Chloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		4.6	A2, J	4	"	"	"	"	524.2
Carbon disulfide		0.2	C1, A2, J	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-08

Water - Sampled: 07/25/18 11:55

Sample ID: UT-002

Volatile Organic Compounds by EPA Method 524.2

1,1-Dichloroethane		ND	A2, J, U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		2.9	A2, J	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	Q4, J, A2, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		0.8	A2, J	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		0.4	C1, A2, J	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-08		Water - Sampled: 07/25/18 11:55							
Sample ID: UT-002		Volatile Organic Compounds by EPA Method 524.2							
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, Q4, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			107 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			91 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			110 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			105 %	74-113%		"	"	"	
Sample ID: UT-002		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			102 %	87-110%		"	"	"	
Sample ID: UT-002		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics	RE1	270	A2, J, F13	150	"	B18H016	07/26/18	08/06/18	8015C
TPH - Oil Range Organics	RE1	ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			RE1	49 %	47-130%	"	"	"	
Sample ID: UT-002		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	A2, J, Q4, U	1.1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1.1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, Q4, U	5.5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1.1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-08

Water - Sampled: 07/25/18 11:55

Sample ID: UT-002

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Acenaphthylene	ND	A2, J, U	1.1	ug/L	B18G080	07/27/18	07/31/18	8270D
Acenaphthene	ND	A2, J, U	1.1	"	"	"	"	8270D
Fluorene	ND	A2, J, U	1.1	"	"	"	"	8270D
Hexachlorobenzene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Anthracene	ND	A2, J, U	1.1	"	"	"	"	8270D
Fluoranthene	ND	A2, J, U	1.1	"	"	"	"	8270D
Pyrene	ND	A2, J, U	1.1	"	"	"	"	8270D
Benzo(a)anthracene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Chrysene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Benzo(a)pyrene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	A2, J, Q4, U	1.1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	84 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	88 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	87 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	73 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	80 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	81 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	113 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	56 %		47-130%		"	"	"	

Sample ID: UT-002

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	A2, J, U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	42	A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	520	A2, J	10	"	"	"	"	SM2320
Total Alkalinity	560	A2, J	10	"	"	"	"	SM2320
Chloride	1,300	A2, J	50	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	3,800	A2, J	50	"	"	"	07/31/18	300.0
Total Dissolved Solids	8,100		400	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-09

Water - Sampled: 07/25/18 12:00

Sample ID: TB-004

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane	ND	A2, J, U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
Chloromethane	ND	A2, J, U	0.5	"	"	"	"	524.2
Vinyl chloride	ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane	ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1807036-09							Water - Sampled: 07/25/18 12:00	
Sample ID:	TB-004								Volatile Organic Compounds by EPA Method 524.2
Chloroethane		ND	A2, J, U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	A2, J, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	J, A2, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	J, A2, U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-09								Water - Sampled: 07/25/18 12:00	
Sample ID: TB-004									Volatile Organic Compounds by EPA Method 524.2
Chlorodibromomethane		ND	J, A2, U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
1,2-Dibromoethane (EDB)		ND	J, A2, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	J, A2, U	1	"	"	"	"	524.2
o-Xylene		ND	J, A2, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	A2, J, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		93 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		100 %		74-113%		"	"	"	



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-10

Water - Sampled: 07/24/18 10:20

Sample ID: NM-029

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		2,300		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		250	C1, J	500	"	"	"	"	200.7
Potassium		1,100	C1, J	2,000	"	"	"	"	200.7
Sodium	RE1	94,000		10,000	"	"	"	08/11/18	200.7
Arsenic		2.1		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		16		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		6.7		0.25	"	"	"	08/03/18	200.8
Zinc		91		5	"	"	"	"	200.8

Sample ID: NM-029

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-10

Water - Sampled: 07/24/18 10:20

Sample ID: NM-029

Volatile Organic Compounds by EPA Method 524.2

Bromochloromethane		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		1.0		0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-10

Water - Sampled: 07/24/18 10:20

Sample ID: NM-029

Volatile Organic Compounds by EPA Method 524.2

1,3,5-Trimethylbenzene		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		0.3	C1, J	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		0.3	C1, J	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		100 %		74-113%		"	"	"	

Sample ID: NM-029

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %		87-110%		"	"	"	

Sample ID: NM-029

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		73 %		47-130%		"	"	"	

Sample ID: NM-029

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-10

Water - Sampled: 07/24/18 10:20

Sample ID: NM-029

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Fluoranthene	ND	U	1	ug/L	B18G080	07/27/18	07/31/18	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	92 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	96 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	97 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	77 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	90 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	90 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	73 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	123 %		47-130%		"	"	"	

Sample ID: NM-029

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	33		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	130		10	"	"	"	"	SM2320
Total Alkalinity	160		10	"	"	"	"	SM2320
Chloride	RE1	2.6	1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	24	0.50	"	"	"	"	300.0
Total Dissolved Solids		220	20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-11

Water - Sampled: 07/24/18 11:15

Sample ID: NM-029A

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium	38,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium	2,500		500	"	"	"	"	200.7
Potassium	3,100		2,000	"	"	"	"	200.7
Sodium	RE1	28,000	10,000	"	"	"	08/11/18	200.7
Arsenic	1.1		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium	ND	U	0.40	"	"	"	"	200.8
Chromium	ND	U	1	"	"	"	"	200.8
Copper	ND	U	2	"	"	"	"	200.8
Lead	ND	U	1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-11

Water - Sampled: 07/24/18 11:15

Sample ID: NM-029A

Total Metals by EPA 200 Series Methods

Nickel		1.1		1	ug/L	B18H004	08/01/18	08/03/18	200.8
Selenium		2.1		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		7.6		0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-029A

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-11

Water - Sampled: 07/24/18 11:15

Sample ID: NM-029A

Volatile Organic Compounds by EPA Method 524.2

1,2-Dichloropropane		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		0.7		0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807036-11		Water - Sampled: 07/24/18 11:15							
Sample ID: NM-029A		Volatile Organic Compounds by EPA Method 524.2							
1,2-Dibromo-3-chloropropane		ND	U	2	ug/L	B18G068	07/26/18	07/26/18	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			104 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			99 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			97 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			100 %	74-113%		"	"	"	
Sample ID: NM-029A		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: NM-029A		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			74 %	47-130%		"	"	"	
Sample ID: NM-029A		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane	RE1	ND	U	1	"	B18G080	07/27/18	08/01/18	8270D
Hexachlorobutadiene	RE1	ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene	RE1	ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	RE1	ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene	RE1	ND	U	1	"	"	"	"	8270D
Acenaphthylene	RE1	ND	U	1	"	"	"	"	8270D
Acenaphthene	RE1	ND	U	1	"	"	"	"	8270D
Fluorene	RE1	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	RE1	ND	U	1	"	"	"	"	8270D
Anthracene	RE1	ND	U	1	"	"	"	"	8270D
Fluoranthene	RE1	ND	U	1	"	"	"	"	8270D
Pyrene	RE1	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	RE1	ND	U	1	"	"	"	"	8270D
Chrysene	RE1	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	RE1	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	RE1	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	RE1	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	RE1	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	RE1	ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-11

Water - Sampled: 07/24/18 11:15

Sample ID: NM-029A

Semivolatile Organic Compounds by EPA Method 8270D									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Benzo(g,h,i)perylene	RE1	ND	U	1	ug/L	B18G080	07/27/18	08/01/18	8270D
<i>Surrogate: 2-Fluorophenol</i>	RE1	85 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	RE1	86 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	RE1	88 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	RE1	73 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	RE1	82 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	RE1	85 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	RE1	86 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	RE1	128 %		47-130%		"	"	"	

Sample ID: NM-029A

Conventional Chemistry Parameters by APHA/EPA Methods									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		150		10	"	"	"	"	SM2320
Total Alkalinity		150		10	"	"	"	"	SM2320
Chloride	RE1	3.2		1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	4.0		0.50	"	"	"	"	300.0
Total Dissolved Solids		190		20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-12

Water - Sampled: 07/24/18 13:20

Sample ID: NM-010

Total Metals by EPA 200 Series Methods									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		28,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		21,000		500	"	"	"	"	200.7
Potassium		3,300		2,000	"	"	"	"	200.7
Sodium	RE1	280,000		10,000	"	"	"	08/11/18	200.7
Arsenic		ND	U	0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.93	C1, J	1	"	"	"	"	200.8
Selenium		0.59	C1, J	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		ND	U	0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-010

Volatile Organic Compounds by EPA Method 524.2									
Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane		ND	U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-12

Water - Sampled: 07/24/18 13:20

Sample ID: NM-010

Volatile Organic Compounds by EPA Method 524.2									
Vinyl chloride		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Bromomethane		ND	C3, C4, I, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-12

Water - Sampled: 07/24/18 13:20

Sample ID: NM-010

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichloropropane		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		0.4	Cl, J	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4		103 %		83-116%		"	"	"	
Surrogate: Toluene-d8		98 %		81-112%		"	"	"	
Surrogate: 4-Bromofluorobenzene		97 %		80-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		102 %		74-113%		"	"	"	



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-12 **Water - Sampled:** 07/24/18 13:20

Sample ID: NM-010 **Purgeable Petroleum Hydrocarbons**
 TPH - Gasoline Range Organics ND U 50 ug/L B18G071 07/26/18 07/26/18 8015C

Surrogate: a,a,a-Trifluorotoluene 101 % 87-110% " " "

Sample ID: NM-010 **Extractable Petroleum Hydrocarbons**
 TPH - Diesel Range Organics ND U 150 " B18G073 07/26/18 07/31/18 8015C
 TPH - Oil Range Organics ND U 600 " " " 8015C

Surrogate: Hexacosane 54 % 47-130% " " "

Sample ID: NM-010 **Semivolatile Organic Compounds by EPA Method 8270D**

Hexachloroethane	ND U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene	ND U	1	"	"	"	"	8270D
1-Methylnaphthalene	ND U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND U	1	"	"	"	"	8270D
Acenaphthylene	ND U	1	"	"	"	"	8270D
Acenaphthene	ND U	1	"	"	"	"	8270D
Fluorene	ND U	1	"	"	"	"	8270D
Hexachlorobenzene	ND U	1	"	"	"	"	8270D
Anthracene	ND U	1	"	"	"	"	8270D
Fluoranthene	ND U	1	"	"	"	"	8270D
Pyrene	ND U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND U	1	"	"	"	"	8270D
Chrysene	ND U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND U	1	"	"	"	"	8270D

<i>Surrogate: 2-Fluorophenol</i>	78 %	54-110%	"	"	"
<i>Surrogate: Phenol-d5</i>	80 %	54-110%	"	"	"
<i>Surrogate: 2-Chlorophenol-d4</i>	80 %	60-110%	"	"	"
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67 %	38-110%	"	"	"
<i>Surrogate: Nitrobenzene-d5</i>	74 %	26-134%	"	"	"
<i>Surrogate: 2-Fluorobiphenyl</i>	75 %	57-110%	"	"	"
<i>Surrogate: 2,4,6-Tribromophenol</i>	77 %	46-136%	"	"	"
<i>Surrogate: Terphenyl-d14</i>	120 %	47-130%	"	"	"

Sample ID: NM-010 **Conventional Chemistry Parameters by APHA/EPA Methods**



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-12

Water - Sampled: 07/24/18 13:20

Sample ID: NM-010

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		21		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		210		10	"	"	"	"	SM2320
Total Alkalinity		230		10	"	"	"	"	SM2320
Chloride	RE1	20		1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		460		25	"	"	"	07/31/18	300.0
Total Dissolved Solids		940		20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-13

Water - Sampled: 07/24/18 15:00

Sample ID: NM-004

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		990		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	"	200.7
Potassium		ND	U	2,000	"	"	"	"	200.7
Sodium	RE1	170,000		10,000	"	"	"	08/11/18	200.7
Arsenic		ND	U	0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		ND	U	0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-004

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G072	07/26/18	07/26/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-13

Water - Sampled: 07/24/18 15:00

Sample ID: NM-004

Volatile Organic Compounds by EPA Method 524.2

tert-Butyl alcohol		ND	U	10	ug/L	B18G072	07/26/18	07/26/18	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		0.4	CI, J	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-13

Water - Sampled: 07/24/18 15:00

Sample ID: NM-004

Volatile Organic Compounds by EPA Method 524.2

Styrene		ND	U	0.5	ug/L	B18G072	07/26/18	07/26/18	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Cyclohexane, dimethyl (01)		0.5	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (02)		0.9	N TIC, J		"	"	"	"	524.2
Cyclohexane, methyl (01)		1.3	N TIC, J		"	"	"	"	524.2
Cyclohexane, methyl (02)		0.6	N TIC, J		"	"	"	"	524.2
Cyclohexane, trimethyl		0.5	N TIC, J		"	"	"	"	524.2
Cyclopentane, dimethyl		0.7	N TIC, J		"	"	"	"	524.2
Isobutane		2.8	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		95 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		100 %		74-113%		"	"	"	

Sample ID: NM-004

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99 %		87-110%		"	"	"	



**United States Environmental Protection Agency
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-13

Water - Sampled: 07/24/18 15:00

Sample ID: NM-004

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	ug/L	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>				72 %					47-130%

Sample ID: NM-004

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>				73 %					54-110%
<i>Surrogate: Phenol-d5</i>				77 %					54-110%
<i>Surrogate: 2-Chlorophenol-d4</i>				77 %					60-110%
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>				71 %					38-110%
<i>Surrogate: Nitrobenzene-d5</i>				73 %					26-134%
<i>Surrogate: 2-Fluorobiphenyl</i>				76 %					57-110%
<i>Surrogate: 2,4,6-Tribromophenol</i>				51 %					46-136%
<i>Surrogate: Terphenyl-d14</i>				126 %					47-130%

Sample ID: NM-004

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity		42		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		140		10	"	"	"	"	SM2320
Total Alkalinity		180		10	"	"	"	"	SM2320



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-13 **Water - Sampled: 07/24/18 15:00**

Conventional Chemistry Parameters by APHA/EPA Methods									
Chloride	RE2	14		1	mg/L	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	130		5	"	"	"	07/31/18	300.0
Total Dissolved Solids		430		20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-14 **Water - Sampled: 07/24/18 16:05**

Total Metals by EPA 200 Series Methods									
Mercury		ND	U	0.030	ug/L	B18H027	08/06/18	08/07/18	245.1
Calcium		1,000		100	"	B18H003	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	"	200.7
Potassium		ND	U	2,000	"	"	"	"	200.7
Sodium	RE1	130,000		10,000	"	"	"	08/11/18	200.7
Arsenic		3.6		0.50	"	B18H004	08/01/18	08/03/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/07/18	200.8
Uranium		ND	U	0.25	"	"	"	08/03/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Volatile Organic Compounds by EPA Method 524.2									
Dichlorodifluoromethane		ND	U	0.5	"	B18G068	07/26/18	07/26/18	524.2
Chloromethane		ND	C4, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, C4, J, Q3, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-14

Water - Sampled: 07/24/18 16:05

Sample ID: NM-009

Volatile Organic Compounds by EPA Method 524.2

Diisopropyl ether		ND	U	2	ug/L	B18G068	07/26/18	07/26/18	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-14

Water - Sampled: 07/24/18 16:05

Sample ID: NM-009

Volatile Organic Compounds by EPA Method 524.2

1,1,2,2-Tetrachloroethane		ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Isobutane		1.0	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			105 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			102 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			97 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			100 %	74-113%		"	"	"	

Sample ID: NM-009

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G071	07/26/18	07/26/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			99 %	87-110%		"	"	"	

Sample ID: NM-009

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G073	07/26/18	07/31/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %	47-130%		"	"	"	

Sample ID: NM-009

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G080	07/27/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-14

Water - Sampled: 07/24/18 16:05

Sample ID: NM-009

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
2-Chloronaphthalene	ND	U	1	ug/L	B18G080	07/27/18	07/31/18	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	96 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	99 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	101 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	94 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	94 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	100 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	59 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	122 %		47-130%		"	"	"	

Sample ID: NM-009

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H029	08/06/18	08/06/18	SM2320
Carbonate Alkalinity	54		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	140		10	"	"	"	"	SM2320
Total Alkalinity	190		10	"	"	"	"	SM2320
Chloride	RE2		4.0	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1		55	"	"	"	07/31/18	300.0
Total Dissolved Solids	310		20	"	B18G094	07/30/18	07/30/18	2540C

Lab ID: 1807036-15

Water - Sampled: 07/24/18 12:00

Sample ID: TB-003

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane	ND	U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Chloromethane	ND	C4, J, U	0.5	"	"	"	"	524.2
Vinyl chloride	ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-15

Water - Sampled: 07/24/18 12:00

Sample ID: TB-003

Volatile Organic Compounds by EPA Method 524.2									
Bromomethane		ND	J, Q3, C3, C4, U	0.5	ug/L	B18G068	07/26/18	07/26/18	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807036-15

Water - Sampled: 07/24/18 12:00

Sample ID: TB-003

Volatile Organic Compounds by EPA Method 524.2

2-Hexanone		ND	U	4	ug/L	B18G068	07/26/18	07/26/18	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		96 %		74-113%		"	"	"	



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G068-BLK1)

Dichlorodifluoromethane	ND	U		0.5 ug/L						
Chloromethane	ND	C4, J, U		0.5 "						
Vinyl chloride	ND	U		0.5 "						
Bromomethane	ND	C3, C4, J, Q3, U		0.5 "						
Chloroethane	ND	U		0.5 "						
Trichlorofluoromethane	ND	U		0.5 "						
1,1-Dichloroethene	ND	U		0.5 "						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5 "						
Acetone	ND	U		4 "						
Carbon disulfide	ND	U		0.5 "						
Dichloromethane	ND	U		0.5 "						
tert-Butyl alcohol	ND	U		10 "						
trans-1,2-Dichloroethene	ND	U		0.5 "						
tert-Butyl methyl ether (MTBE)	ND	U		2 "						
1,1-Dichloroethane	ND	U		0.5 "						
Diisopropyl ether	ND	U		2 "						
Ethyl tert-butyl ether	ND	U		2 "						
2,2-Dichloropropane	ND	U		0.5 "						
cis-1,2-Dichloroethene	ND	U		0.5 "						
2-Butanone (MEK)	ND	U		4 "						
Bromochloromethane	ND	U		0.5 "						
Chloroform	ND	U		0.5 "						
1,1,1-Trichloroethane	ND	U		0.5 "						
Carbon tetrachloride	ND	U		0.5 "						
1,1-Dichloropropene	ND	U		0.5 "						
Benzene	ND	U		0.5 "						
1,2-Dichloroethane	ND	U		0.5 "						
tert-Amyl methyl ether	ND	U		2 "						
Trichloroethene	ND	U		0.5 "						
1,2-Dichloropropane	ND	U		0.5 "						
Dibromomethane	ND	U		0.5 "						
Bromodichloromethane	ND	U		0.5 "						
cis-1,3-Dichloropropene	ND	U		0.5 "						
4-Methyl-2-pentanone (MIBK)	ND	U		4 "						
Toluene	ND	U		0.5 "						
trans-1,3-Dichloropropene	ND	U		0.5 "						
1,1,2-Trichloroethane	ND	U		0.5 "						
Tetrachloroethene	ND	U		0.5 "						
1,3-Dichloropropane	ND	U		0.5 "						
2-Hexanone	ND	U		4 "						
Chlorodibromomethane	ND	U		0.5 "						
1,2-Dibromoethane (EDB)	ND	U		0.5 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G068-BLK1)

Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

Surrogate: 1,2-Dichloroethane-d4	5.04			"	5.00		101	83-116		
Surrogate: Toluene-d8	5.24			"	5.00		105	81-112		
Surrogate: 4-Bromofluorobenzene	4.71			"	5.00		94	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	4.74			"	5.00		95	74-113		

Blank (B18G068-BLK2)

Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	C4, J, U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	C3, J, C4, Q3, U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G068-BLK2)

1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5	"					
Acetone	ND	U		4	"					
Carbon disulfide	ND	U		0.5	"					
Dichloromethane	ND	U		0.5	"					
tert-Butyl alcohol	ND	U		10	"					
trans-1,2-Dichloroethene	ND	U		0.5	"					
tert-Butyl methyl ether (MTBE)	ND	U		2	"					
1,1-Dichloroethane	ND	U		0.5	"					
Diisopropyl ether	ND	U		2	"					
Ethyl tert-butyl ether	ND	U		2	"					
2,2-Dichloropropane	ND	U		0.5	"					
cis-1,2-Dichloroethene	ND	U		0.5	"					
2-Butanone (MEK)	ND	U		4	"					
Bromochloromethane	ND	U		0.5	"					
Chloroform	ND	U		0.5	"					
1,1,1-Trichloroethane	ND	U		0.5	"					
Carbon tetrachloride	ND	U		0.5	"					
1,1-Dichloropropene	ND	U		0.5	"					
Benzene	ND	U		0.5	"					
1,2-Dichloroethane	ND	U		0.5	"					
tert-Amyl methyl ether	ND	U		2	"					
Trichloroethene	ND	U		0.5	"					
1,2-Dichloropropane	ND	U		0.5	"					
Dibromomethane	ND	U		0.5	"					
Bromodichloromethane	ND	U		0.5	"					
cis-1,3-Dichloropropene	ND	U		0.5	"					
4-Methyl-2-pentanone (MIBK)	ND	U		4	"					
Toluene	ND	U		0.5	"					
trans-1,3-Dichloropropene	ND	U		0.5	"					
1,1,2-Trichloroethane	ND	U		0.5	"					
Tetrachloroethene	ND	U		0.5	"					
1,3-Dichloropropane	ND	U		0.5	"					
2-Hexanone	ND	U		4	"					
Chlorodibromomethane	ND	U		0.5	"					
1,2-Dibromoethane (EDB)	ND	U		0.5	"					
Chlorobenzene	ND	U		0.5	"					
1,1,1,2-Tetrachloroethane	ND	U		0.5	"					
Ethylbenzene	ND	U		0.5	"					
m&p-Xylene	ND	U		1	"					
o-Xylene	ND	U		0.5	"					
Styrene	ND	U		0.5	"					
Bromoform	ND	U		0.5	"					



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G068-BLK2)

Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.00			"	5.00		100	83-116		
<i>Surrogate: Toluene-d8</i>	5.26			"	5.00		105	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	4.76			"	5.00		95	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.87			"	5.00		97	74-113		

LCS (B18G068-BS1)

Dichlorodifluoromethane	3.95		0.5	ug/L	5.00		79	70-128		
Chloromethane	3.23		0.5	"	5.00		65	63-123		
Vinyl chloride	3.9		0.5	"	5.00		78	70-130		
Bromomethane	2.79		0.5	"	5.00		56	31-150		
Chloroethane	3.93		0.5	"	5.00		79	74-119		
Trichlorofluoromethane	4.22		0.5	"	5.00		84	72-123		
1,1-Dichloroethene	4.07		0.5	"	5.00		81	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	4.31		0.5	"	5.00		86	73-129		
Acetone	29.4		4	"	40.0		73	61-114		
Carbon disulfide	4.17		0.5	"	5.00		83	0-200		
Dichloromethane	4.04		0.5	"	5.00		81	70-130		
tert-Butyl alcohol	78.7		10	"	100		79	0-200		
trans-1,2-Dichloroethene	4.03		0.5	"	5.00		81	70-130		
tert-Butyl methyl ether (MTBE)	16.3		2	"	20.0		81	62-117		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G068-BS1)

1,1-Dichloroethane	4.07			0.5	"	5.00	81	74-115		
Diisopropyl ether	16			2	"	20.0	80	0-200		
Ethyl tert-butyl ether	16			2	"	20.0	80	0-200		
2,2-Dichloropropane	5.23			0.5	"	5.00	105	64-144		
cis-1,2-Dichloroethene	4.53			0.5	"	5.00	91	70-130		
2-Butanone (MEK)	34.5			4	"	40.0	86	57-121		
Bromochloromethane	4.72			0.5	"	5.00	94	71-122		
Chloroform	4.6			0.5	"	5.00	92	70-130		
1,1,1-Trichloroethane	4.69			0.5	"	5.00	94	70-130		
Carbon tetrachloride	4.91			0.5	"	5.00	98	70-130		
1,1-Dichloropropene	4.72			0.5	"	5.00	94	71-119		
Benzene	4.69			0.5	"	5.00	94	70-130		
1,2-Dichloroethane	4.77			0.5	"	5.00	95	70-130		
tert-Amyl methyl ether	18.4			2	"	20.0	92	0-200		
Trichloroethene	4.57			0.5	"	5.00	91	70-130		
1,2-Dichloropropane	4.65			0.5	"	5.00	93	70-130		
Dibromomethane	4.74			0.5	"	5.00	95	72-121		
Bromodichloromethane	4.87			0.5	"	5.00	97	70-130		
cis-1,3-Dichloropropene	4.87			0.5	"	5.00	97	68-120		
4-Methyl-2-pentanone (MIBK)	38.6			4	"	40.0	96	0-200		
Toluene	4.9			0.5	"	5.00	98	70-130		
trans-1,3-Dichloropropene	5.56			0.5	"	5.00	111	64-126		
1,1,2-Trichloroethane	5.18			0.5	"	5.00	104	70-130		
Tetrachloroethene	5.11			0.5	"	5.00	102	70-130		
1,3-Dichloropropane	5.17			0.5	"	5.00	103	80-114		
Chlorodibromomethane	5.56			0.5	"	5.00	111	70-130		
1,2-Dibromoethane (EDB)	5.13			0.5	"	5.00	103	80-115		
Chlorobenzene	5.14			0.5	"	5.00	103	70-130		
1,1,1,2-Tetrachloroethane	5.29			0.5	"	5.00	106	82-116		
Ethylbenzene	5.07			0.5	"	5.00	101	70-130		
m&p-Xylene	10.3			1	"	10.0	103	70-130		
o-Xylene	5.15			0.5	"	5.00	103	70-130		
Styrene	5.1			0.5	"	5.00	102	70-130		
Bromoform	5.57			0.5	"	5.00	111	70-130		
Isopropylbenzene	5.16			0.5	"	5.00	103	86-114		
Bromobenzene	5.09			0.5	"	5.00	102	84-110		
1,1,2,2-Tetrachloroethane	5.36			0.5	"	5.00	107	81-113		
1,2,3-Trichloropropane	5.24			0.5	"	5.00	105	81-114		
Propylbenzene	5.15			0.5	"	5.00	103	87-115		
2-Chlorotoluene	5.05			0.5	"	5.00	101	84-111		
4-Chlorotoluene	5.1			0.5	"	5.00	102	82-112		
1,3,5-Trimethylbenzene	5.15			0.5	"	5.00	103	85-113		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G068 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G068-BS1)

tert-Butylbenzene	5.16		0.5	"	5.00		103	86-114		
1,2,4-Trimethylbenzene	5.13		0.5	"	5.00		103	84-114		
sec-Butylbenzene	5.16		0.5	"	5.00		103	87-119		
1,3-Dichlorobenzene	5.14		0.5	"	5.00		103	85-110		
p-Isopropyltoluene	5.13		0.5	"	5.00		103	86-117		
1,4-Dichlorobenzene	5.11		0.5	"	5.00		102	70-130		
1,2-Dichlorobenzene	5.08		0.5	"	5.00		102	70-130		
Butylbenzene	4.78		0.5	"	5.00		96	85-118		
1,2-Dibromo-3-chloropropane	22.7		2	"	20.0		113	54-133		
1,2,4-Trichlorobenzene	5.14		0.5	"	5.00		103	70-130		
Hexachlorobutadiene	5.13		0.5	"	5.00		103	66-113		
Naphthalene	4.91		0.5	"	5.00		98	58-126		
1,2,3-Trichlorobenzene	5.14		0.5	"	5.00		103	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.94			"	5.00		99	83-116		
<i>Surrogate: Toluene-d8</i>	5.17			"	5.00		103	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	4.96			"	5.00		99	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.00			"	5.00		100	74-113		

Batch B18G071 - 5030 P&T TPH-G - TPH - Purgeable

Prepared & Analyzed: 07/26/18

Purgeable Petroleum Hydrocarbons - Quality Control

Blank (B18G071-BLK1)

TPH - Gasoline Range Organics	ND	U			50 ug/L					
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	126			"	125		100	87-110		
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LCS (B18G071-BS1)

TPH - Gasoline Range Organics	485				50 ug/L	500	97	81-119		
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	125			"	125		100	87-110		
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Matrix Spike (B18G071-MS1) Source: 1807036-08

TPH - Gasoline Range Organics	556				50 ug/L	500	ND	111	66-148	
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	129			"	125		103	87-110		
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Matrix Spike Dup (B18G071-MSD1) Source: 1807036-08

TPH - Gasoline Range Organics	571				50 ug/L	500	ND	114	66-148	3 5
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	129			"	125		103	87-110		
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G072-BLK1)

Dichlorodifluoromethane	ND	U			0.5 ug/L					
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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G072-BLK1)

Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Carbon disulfide	ND	U	0.5	"						
Dichloromethane	ND	U	0.5	"						
tert-Butyl alcohol	ND	U	10	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
Diisopropyl ether	ND	U	2	"						
Ethyl tert-butyl ether	ND	U	2	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
tert-Amyl methyl ether	ND	U	2	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
4-Methyl-2-pentanone (MIBK)	ND	U	4	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G072-BLK1)

1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.80			"	5.00		96	83-116		
<i>Surrogate: Toluene-d8</i>	4.67			"	5.00		93	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.27			"	5.00		105	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.98			"	5.00		100	74-113		

LCS (B18G072-BS1)

Dichlorodifluoromethane	5.25		0.5	ug/L	5.00		105	70-128		
Chloromethane	5.19		0.5	"	5.00		104	63-123		
Vinyl chloride	5.21		0.5	"	5.00		104	70-130		
Bromomethane	5.32		0.5	"	5.00		106	31-150		
Chloroethane	5.16		0.5	"	5.00		103	74-119		
Trichlorofluoromethane	5.29		0.5	"	5.00		106	72-123		
1,1-Dichloroethene	5.26		0.5	"	5.00		105	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.46		0.5	"	5.00		109	73-129		



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G072-BS1)

Acetone	29.7			4 "	40.0		74	61-114		
Dichloromethane	4.97			0.5 "	5.00		99	70-130		
trans-1,2-Dichloroethene	5.23			0.5 "	5.00		105	70-130		
tert-Butyl methyl ether (MTBE)	18.2			2 "	20.0		91	62-117		
1,1-Dichloroethane	4.89			0.5 "	5.00		98	74-115		
2,2-Dichloropropane	5.4			0.5 "	5.00		108	64-144		
cis-1,2-Dichloroethene	5.04			0.5 "	5.00		101	70-130		
2-Butanone (MEK)	32.7			4 "	40.0		82	57-121		
Bromochloromethane	5.3			0.5 "	5.00		106	71-122		
Chloroform	4.97			0.5 "	5.00		99	70-130		
1,1,1-Trichloroethane	5.4			0.5 "	5.00		108	70-130		
Carbon tetrachloride	6.38			0.5 "	5.00		128	70-130		
1,1-Dichloropropene	4.87			0.5 "	5.00		97	71-119		
Benzene	4.97			0.5 "	5.00		99	70-130		
1,2-Dichloroethane	4.58			0.5 "	5.00		92	70-130		
Trichloroethene	4.95			0.5 "	5.00		99	70-130		
1,2-Dichloropropane	5.04			0.5 "	5.00		101	70-130		
Dibromomethane	4.89			0.5 "	5.00		98	72-121		
Bromodichloromethane	5.06			0.5 "	5.00		101	70-130		
cis-1,3-Dichloropropene	4.45			0.5 "	5.00		89	68-120		
Toluene	4.97			0.5 "	5.00		99	70-130		
trans-1,3-Dichloropropene	4.08			0.5 "	5.00		82	64-126		
1,1,2-Trichloroethane	4.91			0.5 "	5.00		98	70-130		
Tetrachloroethene	5.15			0.5 "	5.00		103	70-130		
1,3-Dichloropropane	4.6			0.5 "	5.00		92	80-114		
Chlorodibromomethane	5.23			0.5 "	5.00		105	70-130		
1,2-Dibromoethane (EDB)	4.8			0.5 "	5.00		96	80-115		
Chlorobenzene	4.97			0.5 "	5.00		99	70-130		
1,1,1,2-Tetrachloroethane	5.25			0.5 "	5.00		105	82-116		
Ethylbenzene	5.22			0.5 "	5.00		104	70-130		
m&p-Xylene	10.5			1 "	10.0		105	70-130		
o-Xylene	5.1			0.5 "	5.00		102	70-130		
Styrene	5.14			0.5 "	5.00		103	70-130		
Bromoform	5.38			0.5 "	5.00		108	70-130		
Isopropylbenzene	5.18			0.5 "	5.00		104	86-114		
Bromobenzene	5.15			0.5 "	5.00		103	84-110		
1,1,2,2-Tetrachloroethane	4.99			0.5 "	5.00		100	81-113		
1,2,3-Trichloropropane	4.87			0.5 "	5.00		97	81-114		
Propylbenzene	5.3			0.5 "	5.00		106	87-115		
2-Chlorotoluene	5.04			0.5 "	5.00		101	84-111		
4-Chlorotoluene	5.04			0.5 "	5.00		101	82-112		
1,3,5-Trimethylbenzene	4.99			0.5 "	5.00		100	85-113		



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G072-BS1)

tert-Butylbenzene	4.83		0.5	"	5.00		97	86-114		
1,2,4-Trimethylbenzene	5.04		0.5	"	5.00		101	84-114		
sec-Butylbenzene	5.08		0.5	"	5.00		102	87-119		
1,3-Dichlorobenzene	5.12		0.5	"	5.00		102	85-110		
p-Isopropyltoluene	5.1		0.5	"	5.00		102	86-117		
1,4-Dichlorobenzene	5.08		0.5	"	5.00		102	70-130		
1,2-Dichlorobenzene	4.94		0.5	"	5.00		99	70-130		
Butylbenzene	5.23		0.5	"	5.00		105	85-118		
1,2-Dibromo-3-chloropropane	19.1		2	"	20.0		95	54-133		
1,2,4-Trichlorobenzene	4.77		0.5	"	5.00		95	70-130		
Hexachlorobutadiene	4.74		0.5	"	5.00		95	66-113		
Naphthalene	4.55		0.5	"	5.00		91	58-126		
1,2,3-Trichlorobenzene	4.68		0.5	"	5.00		94	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.44			"	5.00		89	83-116		
<i>Surrogate: Toluene-d8</i>	5.10			"	5.00		102	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.29			"	5.00		106	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.03			"	5.00		101	74-113		

Matrix Spike (B18G072-MS1)

Source: 1807036-08

Dichlorodifluoromethane	5.56		0.5	ug/L	5.00	ND	111	62-142		
Chloromethane	5.68		0.5	"	5.00	ND	114	54-144		
Vinyl chloride	5.71		0.5	"	5.00	ND	114	62-141		
Bromomethane	5.6		0.5	"	5.00	ND	112	32-150		
Chloroethane	5.6		0.5	"	5.00	ND	112	68-136		
Trichlorofluoromethane	5.6		0.5	"	5.00	ND	112	66-142		
1,1-Dichloroethene	5.67		0.5	"	5.00	ND	113	73-134		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.66		0.5	"	5.00	ND	113	65-148		
Acetone	48.2		4	"	40.0	4.62	109	20-150		
Dichloromethane	5.37		0.5	"	5.00	ND	107	65-126		
trans-1,2-Dichloroethene	5.6		0.5	"	5.00	ND	112	70-134		
tert-Butyl methyl ether (MTBE)	20		2	"	20.0	ND	100	56-128		
1,1-Dichloroethane	5.23		0.5	"	5.00	ND	105	67-134		
2,2-Dichloropropane	5.7		0.5	"	5.00	ND	114	41-150		
cis-1,2-Dichloroethene	5.44		0.5	"	5.00	ND	109	63-137		
2-Butanone (MEK)	39.2		4	"	40.0	ND	98	48-142		
Bromochloromethane	5.64		0.5	"	5.00	ND	113	70-132		
Chloroform	7.5		0.5	"	5.00	2.92	92	65-141		
1,1,1-Trichloroethane	5.65		0.5	"	5.00	ND	113	69-116		
Carbon tetrachloride	6.7		0.5	"	5.00	ND	134	65-130		
1,1-Dichloropropene	5.32		0.5	"	5.00	ND	106	71-116		
Benzene	5.29		0.5	"	5.00	ND	106	77-115		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike (B18G072-MS1)

Source: 1807036-08

1,2-Dichloroethane	4.92			0.5 "	5.00	ND	98	71-112		
Trichloroethene	5.36			0.5 "	5.00	ND	107	65-124		
1,2-Dichloropropane	5.34			0.5 "	5.00	ND	107	73-118		
Dibromomethane	5.35			0.5 "	5.00	ND	107	65-123		
Bromodichloromethane	6.04			0.5 "	5.00	0.82	104	72-118		
cis-1,3-Dichloropropene	4.67			0.5 "	5.00	ND	93	69-113		
Toluene	5.36			0.5 "	5.00	ND	107	84-115		
trans-1,3-Dichloropropene	4.24			0.5 "	5.00	ND	85	67-117		
1,1,2-Trichloroethane	5.18			0.5 "	5.00	ND	104	81-115		
Tetrachloroethene	5.44			0.5 "	5.00	ND	109	81-115		
1,3-Dichloropropane	5.04			0.5 "	5.00	ND	101	82-113		
Chlorodibromomethane	5.85			0.5 "	5.00	0.41	109	82-116		
1,2-Dibromoethane (EDB)	5.2			0.5 "	5.00	ND	104	83-115		
Chlorobenzene	5.24			0.5 "	5.00	ND	105	82-110		
1,1,1,2-Tetrachloroethane	5.48			0.5 "	5.00	ND	110	77-116		
Ethylbenzene	5.44			0.5 "	5.00	ND	109	85-112		
m&p-Xylene	10.9			1 "	10.0	ND	109	84-113		
o-Xylene	5.34			0.5 "	5.00	ND	107	82-110		
Styrene	5.5			0.5 "	5.00	ND	110	25-150		
Bromoform	5.63			0.5 "	5.00	ND	113	69-121		
Isopropylbenzene	5.35			0.5 "	5.00	ND	107	80-117		
Bromobenzene	5.45			0.5 "	5.00	ND	109	84-110		
1,1,1,2-Tetrachloroethane	5.42			0.5 "	5.00	ND	108	77-117		
1,2,3-Trichloropropane	5.24			0.5 "	5.00	ND	105	78-115		
Propylbenzene	5.46			0.5 "	5.00	ND	109	83-116		
2-Chlorotoluene	5.22			0.5 "	5.00	ND	104	83-110		
4-Chlorotoluene	5.17			0.5 "	5.00	ND	103	82-110		
1,3,5-Trimethylbenzene	5.19			0.5 "	5.00	ND	104	82-112		
tert-Butylbenzene	5.07			0.5 "	5.00	ND	101	81-115		
1,2,4-Trimethylbenzene	5.25			0.5 "	5.00	ND	105	81-113		
sec-Butylbenzene	5.16			0.5 "	5.00	ND	103	79-122		
1,3-Dichlorobenzene	5.32			0.5 "	5.00	ND	106	82-110		
p-Isopropyltoluene	5.14			0.5 "	5.00	ND	103	78-120		
1,4-Dichlorobenzene	5.3			0.5 "	5.00	ND	106	81-110		
1,2-Dichlorobenzene	5.25			0.5 "	5.00	ND	105	82-110		
Butylbenzene	5.15			0.5 "	5.00	ND	103	72-122		
1,2-Dibromo-3-chloropropane	21.7			2 "	20.0	ND	109	47-131		
1,2,4-Trichlorobenzene	5.23			0.5 "	5.00	ND	105	62-115		
Hexachlorobutadiene	4.47			0.5 "	5.00	ND	89	51-116		
Naphthalene	5.59			0.5 "	5.00	ND	112	47-137		
1,2,3-Trichlorobenzene	5.43			0.5 "	5.00	ND	109	62-117		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike (B18G072-MS1)

Source: 1807036-08

Surrogate: 1,2-Dichloroethane-d4	4.92	"	5.00	"	5.00	98	83-116		
Surrogate: Toluene-d8	5.11	"	5.00	"	5.00	102	81-112		
Surrogate: 4-Bromofluorobenzene	5.33	"	5.00	"	5.00	107	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.17	"	5.00	"	5.00	103	74-113		

Matrix Spike Dup (B18G072-MSD1)

Source: 1807036-08

Dichlorodifluoromethane	5.57		0.5 ug/L	5.00	ND	111	62-142	0.2	21
Chloromethane	5.44		0.5 "	5.00	ND	109	54-144	4	20
Vinyl chloride	5.61		0.5 "	5.00	ND	112	62-141	2	19
Bromomethane	5.42		0.5 "	5.00	ND	108	32-150	3	20
Chloroethane	5.37		0.5 "	5.00	ND	107	68-136	4	17
Trichlorofluoromethane	5.46		0.5 "	5.00	ND	109	66-142	3	19
1,1-Dichloroethene	5.55		0.5 "	5.00	ND	111	73-134	2	18
1,1,2-Trichloro-1,2,2-trifluoroethane	5.65		0.5 "	5.00	ND	113	65-148	0.2	19
Acetone	47.3		4 "	40.0	4.62	107	20-150	2	31
Dichloromethane	5.23		0.5 "	5.00	ND	105	65-126	3	16
trans-1,2-Dichloroethene	5.42		0.5 "	5.00	ND	108	70-134	3	19
tert-Butyl methyl ether (MTBE)	20.1		2 "	20.0	ND	100	56-128	0.2	22
1,1-Dichloroethane	5.06		0.5 "	5.00	ND	101	67-134	3	19
2,2-Dichloropropane	5.3		0.5 "	5.00	ND	106	41-150	7	40
cis-1,2-Dichloroethene	5.22		0.5 "	5.00	ND	104	63-137	4	46
2-Butanone (MEK)	41.4		4 "	40.0	ND	104	48-142	5	34
Bromochloromethane	5.48		0.5 "	5.00	ND	110	70-132	3	21
Chloroform	7.36		0.5 "	5.00	2.92	89	65-141	2	23
1,1,1-Trichloroethane	5.42		0.5 "	5.00	ND	108	69-116	4	14
Carbon tetrachloride	6.34		0.5 "	5.00	ND	127	65-130	6	14
1,1-Dichloropropene	5.1		0.5 "	5.00	ND	102	71-116	4	15
Benzene	5.06		0.5 "	5.00	ND	101	77-115	4	13
1,2-Dichloroethane	4.73		0.5 "	5.00	ND	95	71-112	4	14
Trichloroethene	5.2		0.5 "	5.00	ND	104	65-124	3	15
1,2-Dichloropropane	5.15		0.5 "	5.00	ND	103	73-118	4	14
Dibromomethane	5.2		0.5 "	5.00	ND	104	65-123	3	16
Bromodichloromethane	5.96		0.5 "	5.00	0.82	103	72-118	1	16
cis-1,3-Dichloropropene	4.56		0.5 "	5.00	ND	91	69-113	2	19
Toluene	5.19		0.5 "	5.00	ND	104	84-115	3	15
trans-1,3-Dichloropropene	4.25		0.5 "	5.00	ND	85	67-117	0.2	19
1,1,2-Trichloroethane	5.08		0.5 "	5.00	ND	102	81-115	2	20
Tetrachloroethene	5.35		0.5 "	5.00	ND	107	81-115	2	14
1,3-Dichloropropane	4.88		0.5 "	5.00	ND	98	82-113	3	18
Chlorodibromomethane	5.79		0.5 "	5.00	0.41	108	82-116	1	18
1,2-Dibromoethane (EDB)	5.17		0.5 "	5.00	ND	103	83-115	0.6	20
Chlorobenzene	5.09		0.5 "	5.00	ND	102	82-110	3	13



United States Environmental Protection Agency Region 9 Laboratory

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G072 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/26/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B18G072-MSD1)

Source: 1807036-08

1,1,1,2-Tetrachloroethane	5.36		0.5	"	5.00	ND	107	77-116	2	17
Ethylbenzene	5.32		0.5	"	5.00	ND	106	85-112	2	13
m&p-Xylene	10.6		1	"	10.0	ND	106	84-113	3	13
o-Xylene	5.28		0.5	"	5.00	ND	106	82-110	1	13
Styrene	5.34		0.5	"	5.00	ND	107	25-150	3	29
Bromoform	5.56		0.5	"	5.00	ND	111	69-121	1	17
Isopropylbenzene	5.19		0.5	"	5.00	ND	104	80-117	3	14
Bromobenzene	5.3		0.5	"	5.00	ND	106	84-110	3	14
1,1,2,2-Tetrachloroethane	5.32		0.5	"	5.00	ND	106	77-117	2	15
1,2,3-Trichloropropane	5.24		0.5	"	5.00	ND	105	78-115	0	13
Propylbenzene	5.33		0.5	"	5.00	ND	107	83-116	2	12
2-Chlorotoluene	5.1		0.5	"	5.00	ND	102	83-110	2	12
4-Chlorotoluene	5.05		0.5	"	5.00	ND	101	82-110	2	12
1,3,5-Trimethylbenzene	5.06		0.5	"	5.00	ND	101	82-112	3	13
tert-Butylbenzene	4.89		0.5	"	5.00	ND	98	81-115	4	16
1,2,4-Trimethylbenzene	5.11		0.5	"	5.00	ND	102	81-113	3	13
sec-Butylbenzene	5.06		0.5	"	5.00	ND	101	79-122	2	14
1,3-Dichlorobenzene	5.2		0.5	"	5.00	ND	104	82-110	2	12
p-Isopropyltoluene	5.04		0.5	"	5.00	ND	101	78-120	2	13
1,4-Dichlorobenzene	5.22		0.5	"	5.00	ND	104	81-110	2	11
1,2-Dichlorobenzene	5.16		0.5	"	5.00	ND	103	82-110	2	12
Butylbenzene	5.06		0.5	"	5.00	ND	101	72-122	2	10
1,2-Dibromo-3-chloropropane	21.5		2	"	20.0	ND	108	47-131	1	15
1,2,4-Trichlorobenzene	5.35		0.5	"	5.00	ND	107	62-115	2	13
Hexachlorobutadiene	4.51		0.5	"	5.00	ND	90	51-116	0.9	14
Naphthalene	5.77		0.5	"	5.00	ND	115	47-137	3	16
1,2,3-Trichlorobenzene	5.9		0.5	"	5.00	ND	118	62-117	8	17

Surrogate: 1,2-Dichloroethane-d4	4.81			"	5.00		96	83-116		
Surrogate: Toluene-d8	5.11			"	5.00		102	81-112		
Surrogate: 4-Bromofluorobenzene	5.29			"	5.00		106	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.22			"	5.00		104	74-113		

Batch B18G073 - 3520C CLLE - TPH - Extractable

Prepared: 07/26/18 Analyzed: 07/31/18

Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18G073-BLK1)

TPH - Diesel Range Organics	140	J			150 ug/L					
TPH - Oil Range Organics	ND	U			600 "					

Surrogate: Hexacosane	31.6			"	50.0		63	47-130		
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LCS (B18G073-BS1)

TPH - Diesel Range Organics	1,320				150 ug/L	1500	88	59-109		
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**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G073 - 3520C CLLE - TPH - Extractable

Prepared: 07/26/18 Analyzed: 07/31/18
Extractable Petroleum Hydrocarbons - Quality Control

LCS (B18G073-BS1)

Surrogate: Hexacosane 33.8 " 50.0 68 47-130

Matrix Spike (B18G073-MS1) **Source: 1807036-08**

TPH - Diesel Range Organics 1,610 170 ug/L 1710 354 73 50-126

Surrogate: Hexacosane 36.9 " 50.0 74 47-130

Matrix Spike Dup (B18G073-MSD1) **Source: 1807036-08**

TPH - Diesel Range Organics 1,530 160 ug/L 1630 354 72 50-126 5 37

Surrogate: Hexacosane 29.0 " 50.0 58 47-130

Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18
Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK1)

Dichlorodifluoromethane	ND	U	0.5 ug/L
Chloromethane	ND	U	0.5 "
Vinyl chloride	ND	U	0.5 "
Bromomethane	ND	U	0.5 "
Chloroethane	ND	U	0.5 "
Trichlorofluoromethane	ND	U	0.5 "
1,1-Dichloroethene	ND	U	0.5 "
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5 "
Acetone	ND	U	4 "
Carbon disulfide	ND	U	0.5 "
Dichloromethane	0.3	Cl, J	0.5 "
tert-Butyl alcohol	ND	U	10 "
trans-1,2-Dichloroethene	ND	U	0.5 "
tert-Butyl methyl ether (MTBE)	ND	U	2 "
1,1-Dichloroethane	ND	U	0.5 "
Diisopropyl ether	ND	U	2 "
Ethyl tert-butyl ether	ND	U	2 "
2,2-Dichloropropane	ND	U	0.5 "
cis-1,2-Dichloroethene	ND	U	0.5 "
2-Butanone (MEK)	ND	U	4 "
Bromochloromethane	ND	U	0.5 "
Chloroform	ND	U	0.5 "
1,1,1-Trichloroethane	ND	U	0.5 "
Carbon tetrachloride	ND	U	0.5 "
1,1-Dichloropropene	ND	U	0.5 "
Benzene	ND	U	0.5 "
1,2-Dichloroethane	ND	U	0.5 "
tert-Amyl methyl ether	ND	U	2 "



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK1)

Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
4-Methyl-2-pentanone (MIBK)	ND	U	4	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK1)

Surrogate: 1,2-Dichloroethane-d4	4.92			"	5.00		98	83-116		
Surrogate: Toluene-d8	4.59			"	5.00		92	81-112		
Surrogate: 4-Bromofluorobenzene	5.36			"	5.00		107	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	4.97			"	5.00		99	74-113		

Blank (B18G076-BLK2)

Dichlorodifluoromethane	ND	U			0.5 ug/L					
Chloromethane	ND	U			0.5 "					
Vinyl chloride	ND	U			0.5 "					
Bromomethane	ND	U			0.5 "					
Chloroethane	ND	U			0.5 "					
Trichlorofluoromethane	ND	U			0.5 "					
1,1-Dichloroethene	ND	U			0.5 "					
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U			0.5 "					
Acetone	ND	U			4 "					
Carbon disulfide	ND	U			0.5 "					
Dichloromethane	ND	U			0.5 "					
tert-Butyl alcohol	ND	U			10 "					
trans-1,2-Dichloroethene	ND	U			0.5 "					
tert-Butyl methyl ether (MTBE)	ND	U			2 "					
1,1-Dichloroethane	ND	U			0.5 "					
Diisopropyl ether	ND	U			2 "					
Ethyl tert-butyl ether	ND	U			2 "					
2,2-Dichloropropane	ND	U			0.5 "					
cis-1,2-Dichloroethene	ND	U			0.5 "					
2-Butanone (MEK)	ND	U			4 "					
Bromochloromethane	ND	U			0.5 "					
Chloroform	ND	U			0.5 "					
1,1,1-Trichloroethane	ND	U			0.5 "					
Carbon tetrachloride	ND	U			0.5 "					
1,1-Dichloropropene	ND	U			0.5 "					
Benzene	ND	U			0.5 "					
1,2-Dichloroethane	ND	U			0.5 "					
tert-Amyl methyl ether	ND	U			2 "					
Trichloroethene	ND	U			0.5 "					
1,2-Dichloropropane	ND	U			0.5 "					
Dibromomethane	ND	U			0.5 "					
Bromodichloromethane	ND	U			0.5 "					
cis-1,3-Dichloropropene	ND	U			0.5 "					
4-Methyl-2-pentanone (MIBK)	ND	U			4 "					
Toluene	ND	U			0.5 "					



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G076-BLK2)

trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.51	"	5.00	90	83-116
<i>Surrogate: Toluene-d8</i>	4.64	"	5.00	93	81-112
<i>Surrogate: 4-Bromofluorobenzene</i>	5.31	"	5.00	106	80-110
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.91	"	5.00	98	74-113

LCS (B18G076-BS1)



United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G076-BS1)

Dichlorodifluoromethane	5.51		0.5	ug/L	5.00		110	70-128		
Chloromethane	5.46		0.5	"	5.00		109	63-123		
Vinyl chloride	5.55		0.5	"	5.00		111	70-130		
Bromomethane	5.54		0.5	"	5.00		111	31-150		
Chloroethane	5.49		0.5	"	5.00		110	74-119		
Trichlorofluoromethane	5.6		0.5	"	5.00		112	72-123		
1,1-Dichloroethene	5.6		0.5	"	5.00		112	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.79		0.5	"	5.00		116	73-129		
Acetone	36.9		4	"	40.0		92	61-114		
Dichloromethane	5.3		0.5	"	5.00		106	70-130		
trans-1,2-Dichloroethene	5.54		0.5	"	5.00		111	70-130		
tert-Butyl methyl ether (MTBE)	18.7		2	"	20.0		93	62-117		
1,1-Dichloroethane	5.19		0.5	"	5.00		104	74-115		
2,2-Dichloropropane	5.42		0.5	"	5.00		108	64-144		
cis-1,2-Dichloroethene	5.18		0.5	"	5.00		104	70-130		
2-Butanone (MEK)	31.1		4	"	40.0		78	57-121		
Bromochloromethane	5.36		0.5	"	5.00		107	71-122		
Chloroform	5.08		0.5	"	5.00		102	70-130		
1,1,1-Trichloroethane	5.49		0.5	"	5.00		110	70-130		
Carbon tetrachloride	6.43		0.5	"	5.00		129	70-130		
1,1-Dichloropropene	5.06		0.5	"	5.00		101	71-119		
Benzene	5.07		0.5	"	5.00		101	70-130		
1,2-Dichloroethane	4.71		0.5	"	5.00		94	70-130		
Trichloroethene	5.18		0.5	"	5.00		104	70-130		
1,2-Dichloropropane	5.07		0.5	"	5.00		101	70-130		
Dibromomethane	5.13		0.5	"	5.00		103	72-121		
Bromodichloromethane	5.19		0.5	"	5.00		104	70-130		
cis-1,3-Dichloropropene	4.43		0.5	"	5.00		89	68-120		
Toluene	5.19		0.5	"	5.00		104	70-130		
trans-1,3-Dichloropropene	4.17		0.5	"	5.00		83	64-126		
1,1,2-Trichloroethane	5.12		0.5	"	5.00		102	70-130		
Tetrachloroethene	5.42		0.5	"	5.00		108	70-130		
1,3-Dichloropropane	4.84		0.5	"	5.00		97	80-114		
Chlorodibromomethane	5.4		0.5	"	5.00		108	70-130		
1,2-Dibromoethane (EDB)	5.08		0.5	"	5.00		102	80-115		
Chlorobenzene	5.1		0.5	"	5.00		102	70-130		
1,1,1,2-Tetrachloroethane	5.38		0.5	"	5.00		108	82-116		
Ethylbenzene	5.35		0.5	"	5.00		107	70-130		
m&p-Xylene	10.7		1	"	10.0		107	70-130		
o-Xylene	5.2		0.5	"	5.00		104	70-130		
Styrene	5.26		0.5	"	5.00		105	70-130		
Bromoform	5.49		0.5	"	5.00		110	70-130		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G076 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/27/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G076-BS1)

Isopropylbenzene	5.3		0.5	"	5.00		106	86-114		
Bromobenzene	5.24		0.5	"	5.00		105	84-110		
1,1,2,2-Tetrachloroethane	5.02		0.5	"	5.00		100	81-113		
1,2,3-Trichloropropane	4.94		0.5	"	5.00		99	81-114		
Propylbenzene	5.45		0.5	"	5.00		109	87-115		
2-Chlorotoluene	5.12		0.5	"	5.00		102	84-111		
4-Chlorotoluene	5.07		0.5	"	5.00		101	82-112		
1,3,5-Trimethylbenzene	5.13		0.5	"	5.00		103	85-113		
tert-Butylbenzene	5.03		0.5	"	5.00		101	86-114		
1,2,4-Trimethylbenzene	5.12		0.5	"	5.00		102	84-114		
sec-Butylbenzene	5.26		0.5	"	5.00		105	87-119		
1,3-Dichlorobenzene	5.15		0.5	"	5.00		103	85-110		
p-Isopropyltoluene	5.24		0.5	"	5.00		105	86-117		
1,4-Dichlorobenzene	5.13		0.5	"	5.00		103	70-130		
1,2-Dichlorobenzene	5.02		0.5	"	5.00		100	70-130		
Butylbenzene	5.39		0.5	"	5.00		108	85-118		
1,2-Dibromo-3-chloropropane	19		2	"	20.0		95	54-133		
1,2,4-Trichlorobenzene	4.85		0.5	"	5.00		97	70-130		
Hexachlorobutadiene	4.93		0.5	"	5.00		99	66-113		
Naphthalene	4.62		0.5	"	5.00		92	58-126		
1,2,3-Trichlorobenzene	4.79		0.5	"	5.00		96	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.49			"	5.00		90	83-116		
<i>Surrogate: Toluene-d8</i>	5.16			"	5.00		103	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.21			"	5.00		104	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.98			"	5.00		100	74-113		

Batch B18G080 - 3520C CLLE - SVOCs

Prepared: 07/27/18 Analyzed: 07/31/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G080-BLK1)

Hexachloroethane	ND	U			1 ug/L					
Hexachlorobutadiene	ND	U			1 "					
1-Methylnaphthalene	ND	U			1 "					
Hexachlorocyclopentadiene	ND	U			5 "					
2-Chloronaphthalene	ND	U			1 "					
Acenaphthylene	ND	U			1 "					
Acenaphthene	ND	U			1 "					
Fluorene	ND	U			1 "					
Hexachlorobenzene	ND	U			1 "					
Anthracene	ND	U			1 "					
Fluoranthene	ND	U			1 "					
Pyrene	ND	U			1 "					



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G080 - 3520C CLLE - SVOCs

Prepared: 07/27/18 Analyzed: 07/31/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G080-BLK1)

Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	42.5			"	50.0		85	54-110		
<i>Surrogate: Phenol-d5</i>	42.9			"	50.0		86	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	43.2			"	50.0		86	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	34.9			"	50.0		70	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.7			"	50.0		81	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	41.7			"	50.0		83	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	35.5			"	50.0		71	46-136		
<i>Surrogate: Terphenyl-d14</i>	60.3			"	50.0		121	47-130		

LCS (B18G080-BS1)

Hexachloroethane	5.47			1 ug/L	10.0		55	22-110		
Hexachlorobutadiene	5.33			1 "	10.0		53	22-110		
1-Methylnaphthalene	8.31			1 "	10.0		83	70-130		
Hexachlorocyclopentadiene	27			5 "	50.0		54	20-110		
2-Chloronaphthalene	8.18			1 "	10.0		82	43-110		
Acenaphthylene	8.31			1 "	10.0		83	46-110		
Acenaphthene	11.4			1 "	10.0		114	84-135		
Fluorene	9.07			1 "	10.0		91	60-110		
Hexachlorobenzene	8.78			1 "	10.0		88	52-112		
Anthracene	9.44			1 "	10.0		94	57-117		
Fluoranthene	9.4			1 "	10.0		94	68-119		
Pyrene	8.97			1 "	10.0		90	65-120		
Benzo(a)anthracene	9.44			1 "	10.0		94	67-110		
Chrysene	9.63			1 "	10.0		96	67-111		
Benzo(b)fluoranthene	9.17			1 "	10.0		92	60-110		
Benzo(k)fluoranthene	10			1 "	10.0		100	65-117		
Benzo(a)pyrene	8.71			1 "	10.0		87	56-110		
Indeno(1,2,3-cd)pyrene	9.73			1 "	10.0		97	62-110		
Dibenz(a,h)anthracene	9.92			1 "	10.0		99	59-119		
Benzo(g,h,i)perylene	9.99			1 "	10.0		100	64-110		

<i>Surrogate: 2-Fluorophenol</i>	48.0			"	50.0		96	54-110		
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**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G080 - 3520C CLLE - SVOCs

Prepared: 07/27/18 Analyzed: 07/31/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

LCS (B18G080-BS1)

<i>Surrogate: Phenol-d5</i>	49.9			"	50.0		100	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	50.4			"	50.0		101	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	37.7			"	50.0		75	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	46.1			"	50.0		92	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	46.2			"	50.0		92	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	55.4			"	50.0		111	46-136		
<i>Surrogate: Terphenyl-d14</i>	56.5			"	50.0		113	47-130		

Matrix Spike (B18G080-MS1)

Source: 1807036-08

Hexachloroethane	6.76			1.1 ug/L	10.8	ND	63	70-130		
Hexachlorobutadiene	6			1.1 "	10.8	ND	56	70-130		
1-Methylnaphthalene	8.71			1.1 "	10.8	ND	81	70-130		
Hexachlorocyclopentadiene	21.6			5.4 "	53.8	ND	40	70-130		
2-Chloronaphthalene	8.56			1.1 "	10.8	ND	80	70-130		
Acenaphthylene	8.62			1.1 "	10.8	ND	80	70-130		
Acenaphthene	12.1			1.1 "	10.8	ND	112	70-130		
Fluorene	8.85			1.1 "	10.8	ND	82	70-130		
Hexachlorobenzene	6.13			1.1 "	10.8	ND	57	70-130		
Anthracene	7.92			1.1 "	10.8	ND	73	70-130		
Fluoranthene	7.51			1.1 "	10.8	ND	70	66-126		
Pyrene	8.16			1.1 "	10.8	ND	76	65-125		
Benzo(a)anthracene	5.59			1.1 "	10.8	ND	52	60-120		
Chrysene	5.23			1.1 "	10.8	ND	49	60-120		
Benzo(b)fluoranthene	4.29			1.1 "	10.8	ND	40	59-119		
Benzo(k)fluoranthene	4.44			1.1 "	10.8	ND	41	59-119		
Benzo(a)pyrene	4.01			1.1 "	10.8	ND	37	46-110		
Indeno(1,2,3-cd)pyrene	3.98			1.1 "	10.8	ND	37	53-113		
Dibenz(a,h)anthracene	4.05			1.1 "	10.8	ND	38	60-120		
Benzo(g,h,i)perylene	4.14			1.1 "	10.8	ND	38	55-115		

<i>Surrogate: 2-Fluorophenol</i>	48.9			"	50.0		98	54-110		
<i>Surrogate: Phenol-d5</i>	49.9			"	50.0		100	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	51.4			"	50.0		103	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	37.1			"	50.0		74	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	46.7			"	50.0		93	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	44.1			"	50.0		88	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	56.2			"	50.0		112	46-136		
<i>Surrogate: Terphenyl-d14</i>	22.7			"	50.0		45	47-130		

Matrix Spike Dup (B18G080-MSD1)

Source: 1807036-08

Hexachloroethane	5.71			1.1 ug/L	10.6	ND	54	70-130	17	20
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United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G080 - 3520C CLLE - SVOCs

Prepared: 07/27/18 Analyzed: 07/31/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Matrix Spike Dup (B18G080-MSD1)

Source: 1807036-08

Hexachlorobutadiene	5.16			1.1 "	10.6	ND	49	70-130	15	20
1-Methylnaphthalene	7.75			1.1 "	10.6	ND	73	70-130	12	20
Hexachlorocyclopentadiene	20.2			5.3 "	52.8	ND	38	70-130	7	20
2-Chloronaphthalene	7.69			1.1 "	10.6	ND	73	70-130	11	20
Acenaphthylene	8.22			1.1 "	10.6	ND	78	70-130	5	20
Acenaphthene	12.4			1.1 "	10.6	ND	118	70-130	3	20
Fluorene	8.76			1.1 "	10.6	ND	83	70-130	1	20
Hexachlorobenzene	5.85			1.1 "	10.6	ND	55	70-130	5	20
Anthracene	8.04			1.1 "	10.6	ND	76	70-130	2	20
Fluoranthene	7.61			1.1 "	10.6	ND	72	66-126	1	20
Pyrene	7.68			1.1 "	10.6	ND	73	65-125	6	20
Benzo(a)anthracene	5.45			1.1 "	10.6	ND	52	60-120	3	20
Chrysene	5.16			1.1 "	10.6	ND	49	60-120	1	20
Benzo(b)fluoranthene	4.19			1.1 "	10.6	ND	40	59-119	2	20
Benzo(k)fluoranthene	4.47			1.1 "	10.6	ND	42	59-119	0.6	20
Benzo(a)pyrene	4.02			1.1 "	10.6	ND	38	46-110	0.4	20
Indeno(1,2,3-cd)pyrene	4.29			1.1 "	10.6	ND	41	53-113	7	20
Dibenz(a,h)anthracene	4.43			1.1 "	10.6	ND	42	60-120	9	20
Benzo(g,h,i)perylene	4.52			1.1 "	10.6	ND	43	55-115	9	20

Surrogate: 2-Fluorophenol	43.2			"	50.0		86	54-110		
Surrogate: Phenol-d5	45.6			"	50.0		91	54-110		
Surrogate: 2-Chlorophenol-d4	44.9			"	50.0		90	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	30.6			"	50.0		61	38-110		
Surrogate: Nitrobenzene-d5	41.5			"	50.0		83	26-134		
Surrogate: 2-Fluorobiphenyl	40.2			"	50.0		80	57-110		
Surrogate: 2,4,6-Tribromophenol	59.3			"	50.0		119	46-136		
Surrogate: Terphenyl-d14	23.3			"	50.0		47	47-130		

Batch B18G094 - - General Biology - Solids, Total Dissolved

Prepared & Analyzed: 07/30/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G094-BLK1)

Total Dissolved Solids	10	J		20 mg/L						
LCS (B18G094-BS1)										
Total Dissolved Solids	210			mg/L	206		102	85-115		

Duplicate (B18G094-DUP1)

Source: 1807036-08

Total Dissolved Solids	8,040			400 mg/L		8,140			1	5
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Batch B18G096 - - General Inorganic - Anions

Prepared & Analyzed: 07/31/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G096-BLK1)

Chloride	ND	U		1 mg/L						
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United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18207A Reported: 08/16/18 07:48
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G096 - - General Inorganic - Anions

Prepared & Analyzed: 07/31/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G096-BLK1)

Sulfate	ND	U	0.5	"						
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Blank (B18G096-BLK2)

Chloride	ND	U	1	mg/L						
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Sulfate	ND	U	0.5	"						
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Blank (B18G096-BLK3)

Chloride	ND	U	1	mg/L						
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Sulfate	ND	U	0.5	"						
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Blank (B18G096-BLK4)

Chloride	ND	U	1	mg/L						
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Sulfate	ND	U	0.5	"						
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LCS (B18G096-BS1)

Chloride	9.96			mg/L	10.0		100	90-110		
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Sulfate	10.3			"	10.0		103	90-110		
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LCS (B18G096-BS2)

Chloride	10.1			mg/L	10.0		101	90-110		
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Sulfate	10.5			"	10.0		105	90-110		
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Duplicate (B18G096-DUP1)

Source: 1807036-08

Chloride	1,340			50 mg/L		1,330			0.7	20
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Duplicate (B18G096-DUP3)

Source: 1807036-08RE1

Sulfate	3,800			50 mg/L		3,810			0.3	20
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Batch B18H003 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/09/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H003-BLK1)

Calcium	ND	U	100	ug/L						
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Magnesium	ND	U	500	"						
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Potassium	ND	U	2,000	"						
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Sodium	ND	U	500	"						
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Blank (B18H003-BLK2)

Calcium	ND	U	100	ug/L						
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Sodium	ND	U	500	"						
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LCS (B18H003-BS1)

Calcium	1,010			100 ug/L	1000		101	85-115		
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Magnesium	2,030			500 "	2000		101	85-115		
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Potassium	10,400			2,000 "	10000		104	85-115		
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LCS (B18H003-BS2)

Sodium	3,050			500 ug/L	3000		102	85-115		
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Matrix Spike (B18H003-MS1)

Source: 1807036-08

Calcium	43,600	Q10		100 ug/L	1000	43,000	52	70-130		
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Magnesium	25,700	Q10		500 "	2000	24,100	80	70-130		
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Potassium	37,300			2,000 "	10000	25,400	120	70-130		
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United States Environmental Protection Agency Region 9 Laboratory

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H003 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/11/18

Total Metals by EPA 200 Series Methods - Quality Control

Matrix Spike (B18H003-MS3)		Source: 1807036-08RE1								
Sodium	2,880,000	Q10	10,000	ug/L	3000	2,840,000	NR	70-130		
Matrix Spike Dup (B18H003-MSD1)		Source: 1807036-08								
Calcium	44,300	Q10	100	ug/L	1000	43,000	128	70-130	2	20
Magnesium	26,500	Q10	500	"	2000	24,100	118	70-130	3	20
Potassium	38,700		2,000	"	10000	25,400	133	70-130	4	20
Matrix Spike Dup (B18H003-MSD3)		Source: 1807036-08RE1								
Sodium	2,930,000	Q10	10,000	ug/L	3000	2,840,000	NR	70-130	2	20

Batch B18H004 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/03/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H004-BLK1)										
Arsenic	ND	U		0.5	ug/L					
Cadmium	ND	U		0.4	"					
Chromium	ND	U		1	"					
Copper	ND	U		2	"					
Lead	ND	U		1	"					
Nickel	ND	U		1	"					
Selenium	ND	U		1	"					
Silver	ND	U		0.25	"					
Thorium	ND	U		1	"					
Uranium	ND	U		0.25	"					
Zinc	ND	U		5	"					
Blank (B18H004-BLK2)										
Arsenic	ND	U		0.5	ug/L					
Cadmium	ND	U		0.4	"					
Chromium	ND	U		1	"					
Lead	ND	U		1	"					
Silver	ND	U		0.25	"					
Thorium	ND	U		1	"					
Uranium	ND	U		0.25	"					
LCS (B18H004-BS1)										
Arsenic	41.1			0.5	ug/L	40.0	103	85-115		
Cadmium	38.9			0.4	"	40.0	97	85-115		
Chromium	39.5			1	"	40.0	99	85-115		
Copper	40.7			2	"	40.0	102	85-115		
Lead	41.6			1	"	40.0	104	85-115		
Nickel	40.1			1	"	40.0	100	85-115		
Selenium	43.3			1	"	40.0	108	85-115		
Silver	36.8			0.25	"	40.0	92	85-115		
Uranium	39.8			0.25	"	40.0	99	85-115		
Zinc	41.4			5	"	40.0	103	85-115		
LCS (B18H004-BS2)										



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H004 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/07/18

Total Metals by EPA 200 Series Methods - Quality Control

LCS (B18H004-BS2)

Thorium	42.1			1 ug/L	40.0		105	85-115		
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Matrix Spike (B18H004-MS1)

Source: 1807036-08

Cadmium	29.7			0.4 ug/L	40.0	ND	74	70-130		
Copper	30.3			2 "	40.0	3.49	67	70-130		
Lead	31.2			1 "	40.0	0.587	77	70-130		
Nickel	31.9			1 "	40.0	1.85	75	70-130		
Selenium	45.4			1 "	40.0	7.37	95	70-130		
Silver	33.6			0.25 "	40.0	ND	84	70-130		
Uranium	42.4			0.25 "	40.0	4.01	96	70-130		
Zinc	31			5 "	40.0	5.62	63	70-130		

Matrix Spike (B18H004-MS3)

Source: 1807036-08RE1

Arsenic	62.2			0.5 ug/L	40.0	21.2	103	70-130		
Chromium	42.1			1 "	40.0	0.524	104	70-130		
Thorium	34			1 "	40.0	ND	85	70-130		

Matrix Spike Dup (B18H004-MSD1)

Source: 1807036-08

Cadmium	35.5			0.4 ug/L	40.0	ND	89	70-130	18	20
Copper	35			2 "	40.0	3.49	79	70-130	15	20
Lead	35.5			1 "	40.0	0.587	87	70-130	13	20
Nickel	37.3			1 "	40.0	1.85	89	70-130	16	20
Selenium	51.7			1 "	40.0	7.37	111	70-130	13	20
Silver	40.8			0.25 "	40.0	ND	102	70-130	19	20
Uranium	47.5			0.25 "	40.0	4.01	109	70-130	11	20
Zinc	35			5 "	40.0	5.62	73	70-130	12	20

Matrix Spike Dup (B18H004-MSD3)

Source: 1807036-08RE1

Arsenic	69.8			0.5 ug/L	40.0	21.2	122	70-130	12	20
Chromium	49.6			1 "	40.0	0.524	123	70-130	16	20
Thorium	38.8			1 "	40.0	ND	97	70-130	13	20

Batch B18H016 - 3520C CLLE - TPH - Extractable

Prepared: 08/02/18 Analyzed: 08/06/18

Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18H016-BLK1)

TPH - Diesel Range Organics	ND	U		150 ug/L						
TPH - Oil Range Organics	ND	U		600 "						

Surrogate: Hexacosane

34.9

"

50.0

70

47-130

LCS (B18H016-BS1)

TPH - Diesel Range Organics	1,390			150 ug/L	1500		92	59-109		
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Surrogate: Hexacosane

35.2

"

50.0

70

47-130

Batch B18H027 - 245.1 Hg Prep. - Mercury by 245.1 (total)

Prepared: 08/06/18 Analyzed: 08/07/18

Total Metals by EPA 200 Series Methods - Quality Control



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18207A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/16/18 07:48
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H027 - 245.1 Hg Prep. - Mercury by 245.1 (total)										
Prepared: 08/06/18 Analyzed: 08/07/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H027-BLK1)										
Mercury	ND	U	0.03	ug/L						
LCS (B18H027-BS1)										
Mercury	0.203		0.03	ug/L	0.200		102	85-115		
Matrix Spike (B18H027-MS1)										
Source: 1807036-08										
Mercury	0.186		0.03	ug/L	0.200	ND	93	70-130		
Matrix Spike Dup (B18H027-MSD1)										
Source: 1807036-08										
Mercury	0.181		0.03	ug/L	0.200	ND	91	70-130	2	20
Batch B18H029 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/06/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H029-BLK1)										
Hydroxide Alkalinity	ND	U	10	mg/L						
Carbonate Alkalinity	ND	U	10	"						
Bicarbonate Alkalinity	ND	U	10	"						
Total Alkalinity	ND	U	10	"						
LCS (B18H029-BS1)										
Total Alkalinity	47.8		10	mg/L	48.7		98	85-115		
Duplicate (B18H029-DUP1)										
Source: 1807036-08										
Hydroxide Alkalinity	ND	U	10	mg/L		ND				20
Carbonate Alkalinity	41.5		10	"		41.5			0	20
Bicarbonate Alkalinity	519		10	"		515			0.8	20
Total Alkalinity	561		10	"		557			0.7	20



United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon

Project Number: R18E03

Project: Navajo Discharging Wells July 2018

Enforcement Division, Water Section 1

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18207A

Reported: 08/16/18 07:48

Qualifiers and Comments

- Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
- Q3 The quantitation limit standard did not meet recovery criteria for this analyte.
- Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
- N TIC Tentatively Identified Compound - This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
- F13 Fuel or Product Type: mixed or unknown
- C4 The calibration verification check did not meet % difference criteria for this analyte.
- C3 The initial calibration for this analyte did not meet calibration criteria.
- C1 The reported concentration for this analyte is below the quantitation limit.
- A2 The sample was received above the recommended temperature range.
- U Not Detected
- NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 8/15/2018

Subject: Analytical Testing Results - Project R18E03
SDG: 18205A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Elizabeth Aubuchon
Enforcement Division, Water Section 1
ENF-3-1

Attached are the results from the analysis of samples from the **Navajo Discharging Wells July 2018** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Alkalinity	Anions by Ion Chromatography
Mercury by CVAA	Metals by ICP
Metals by ICP/MS	Total Dissolved Solids
Semivolatile Organic Compounds by GC/MS	Semivolatile Organic Compounds by GC/MS
Extractable Petroleum Hydrocarbons by GC/FID	Purgeable Petroleum Hydrocarbons by GC/FID
Purgeable Petroleum Hydrocarbons by GC/FID	Volatile Organic Compounds by GC/MS



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
NM-026	1807034-01	Water	07/24/18 08:40	07/25/18 09:10
NM-026-DUP	1807034-02	Water	07/24/18 08:50	07/25/18 09:10
NM-015	1807034-03	Water	07/24/18 11:15	07/25/18 09:10
NM-016	1807034-04	Water	07/24/18 12:30	07/25/18 09:10
NM-001	1807034-05	Water	07/24/18 10:15	07/25/18 09:10
NM-018	1807034-06	Water	07/24/18 07:40	07/25/18 09:10
NM-030	1807034-07	Water	07/24/18 09:10	07/25/18 09:10
NM-030-DUP	1807034-08	Water	07/24/18 09:20	07/25/18 09:10
NM-008	1807034-09	Water	07/24/18 10:45	07/25/18 09:10
NM-017	1807034-10	Water	07/24/18 11:55	07/25/18 09:10
NM-019	1807034-11	Water	07/24/18 13:00	07/25/18 09:10
TB-002	1807034-12	Water	07/24/18 12:00	07/25/18 09:10

Work Order 1807034

Six coolers were received on 7/25/18. Two of the coolers were measured at 8 degrees C upon receipt. The remaining four coolers were all within the recommended 0 - 6 degrees C window for sample shipment. Where bottles used for analysis were taken from the two coolers than exceeded 6 degrees, the results are qualified as estimates ("J" flagged).



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-01

Water - Sampled: 07/24/18 08:40

Sample ID: NM-026

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	27,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		9,200		500	"	"	"	08/09/18	200.7
Potassium		7,700		2,000	"	"	"	"	200.7
Sodium	RE1	1,500,000		5,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.5	C1, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		1.3		1	"	"	"	"	200.8
Selenium		4.3		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-026

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-01

Water - Sampled: 07/24/18 08:40

Sample ID: NM-026

Volatile Organic Compounds by EPA Method 524.2									
Bromochloromethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		2.3		0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		1.0		0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		0.3	Cl, J	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-01

Water - Sampled: 07/24/18 08:40

Sample ID: NM-026

Volatile Organic Compounds by EPA Method 524.2

tert-Butylbenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, methyl		4.2	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (01)		1.3	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (02)		0.8	N TIC, J		"	"	"	"	524.2
Cyclohexane, ethyl		0.8	N TIC, J		"	"	"	"	524.2
Cyclohexane, methyl		3.2	N TIC, J		"	"	"	"	524.2
Cyclopentane, methyl		2.6	N TIC, J		"	"	"	"	524.2
Isobutane		9.4	N TIC, J		"	"	"	"	524.2
Pentane, methyl (01)		2.0	N TIC, J		"	"	"	"	524.2
Pentane, methyl (02)		1.0	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		98 %		74-113%		"	"	"	

Sample ID: NM-026

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		53	F13	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		"	"	"	

Sample ID: NM-026

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		75	C1, F13, J	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		71 %		47-130%		"	"	"	

Sample ID: NM-026

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-01

Water - Sampled: 07/24/18 08:40

Sample ID: NM-026

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hexachlorocyclopentadiene	ND	U	5	ug/L	B18G061	07/25/18	07/27/18	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	80 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	83 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	83 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	71 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	79 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	83 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	97 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	117 %		47-130%		"	"	"	

Sample ID: NM-026

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	410		10	"	"	"	"	SM2320
Total Alkalinity	410		10	"	"	"	"	SM2320
Chloride	1,600		50	"	B18G088	07/30/18	07/30/18	300.0
Sulfate	1,000		25	"	"	"	"	300.0
Total Dissolved Solids	4,300		80	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-02

Water - Sampled: 07/24/18 08:50

Sample ID: NM-026-DUP

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	29,000	RE2	100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium	9,400		500	"	"	"	08/09/18	200.7



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-02

Water - Sampled: 07/24/18 08:50

Sample ID: NM-026-DUP

Total Metals by EPA 200 Series Methods

Potassium		7,900		2,000	ug/L	B18H001	08/01/18	08/09/18	200.7
Sodium	RE1	1,500,000		5,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.4	C1, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		1.1		1	"	"	"	"	200.8
Selenium		4.7		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-026-DUP

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	A2, C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		ND	J, A2, U	0.5	"	"	"	"	524.2
Dichloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	J, A2, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	J, A2, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	J, A2, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	J, A2, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	J, A2, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	J, A2, U	4	"	"	"	"	524.2
Bromochloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-02

Water - Sampled: 07/24/18 08:50

Sample ID: NM-026-DUP

Volatile Organic Compounds by EPA Method 524.2									
Carbon tetrachloride		ND	J, A2, U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,1-Dichloropropene		ND	J, A2, U	0.5	"	"	"	"	524.2
Benzene		2.3	J, A2	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	J, A2, U	2	"	"	"	"	524.2
Trichloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	J, A2, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	J, A2, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	J, A2, U	4	"	"	"	"	524.2
Toluene		1.0	J, A2	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	J, A2, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	J, A2, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	J, A2, U	0.5	"	"	"	"	524.2
Chlorobenzene		0.3	J, C1, A2	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	J, A2, U	1	"	"	"	"	524.2
o-Xylene		0.2	J, C1, A2	0.5	"	"	"	"	524.2
Styrene		ND	J, A2, U	0.5	"	"	"	"	524.2
Bromoform		ND	J, A2, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	J, A2, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-02

Water - Sampled: 07/24/18 08:50

Sample ID: NM-026-DUP

Volatile Organic Compounds by EPA Method 524.2

1,3-Dichlorobenzene		ND	J, A2, U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
p-Isopropyltoluene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	J, A2, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	J, A2, U	0.5	"	"	"	"	524.2
Naphthalene		ND	J, A2, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	J, A2, U	0.5	"	"	"	"	524.2
Butane		21	N TIC, J		"	"	"	"	524.2
Butane, methyl		3.9	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (01)		1.3	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (02)		0.9	N TIC, J		"	"	"	"	524.2
Cyclohexane, ethyl		0.9	N TIC, J		"	"	"	"	524.2
Cyclohexane, methyl		3.2	N TIC, J		"	"	"	"	524.2
Cyclopentane, methyl		2.5	N TIC, J		"	"	"	"	524.2
Pentane, methyl (01)		2.0	N TIC, J		"	"	"	"	524.2
Pentane, methyl (02)		1.1	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			101 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			101 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			98 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			100 %	74-113%		"	"	"	

Sample ID: NM-026-DUP

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		53	A2, F13, J	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	

Sample ID: NM-026-DUP

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			72 %	47-130%		"	"	"	

Sample ID: NM-026-DUP

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-02

Water - Sampled: 07/24/18 08:50

Sample ID: NM-026-DUP

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Acenaphthene	ND	U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	84 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	85 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	86 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	74 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	82 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	84 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	97 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	111 %		47-130%		"	"	"	

Sample ID: NM-026-DUP

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity	8.3	C1, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	400		10	"	"	"	"	SM2320
Total Alkalinity	410		10	"	"	"	"	SM2320
Chloride	1,600		50	"	B18G088	07/30/18	07/30/18	300.0
Sulfate	1,000		25	"	"	"	"	300.0
Total Dissolved Solids	4,300		80	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-03

Water - Sampled: 07/24/18 11:15

Sample ID: NM-015

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	26,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium	290	C1, J	500	"	"	"	08/09/18	200.7
Potassium	2,300		2,000	"	"	"	"	200.7
Sodium	230,000		1,000	"	"	"	08/09/18	200.7
Arsenic	5.0		0.50	"	B18H002	08/01/18	08/02/18	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-03

Water - Sampled: 07/24/18 11:15

Sample ID: NM-015

Total Metals by EPA 200 Series Methods

Cadmium		ND	U	0.40	ug/L	B18H002	08/01/18	08/02/18	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.76	C1, J	1	"	"	"	"	200.8
Selenium		0.79	C1, J	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-015

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	A2, J, U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, A2, U	0.5	"	"	"	"	524.2
Chloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Acetone		ND	A2, J, U	4	"	"	"	"	524.2
Carbon disulfide		1.0	A2, J	0.5	"	"	"	"	524.2
Dichloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	A2, J, U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	A2, J, U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	A2, J, U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	A2, J, U	4	"	"	"	"	524.2
Bromochloromethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Chloroform		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
Benzene		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-03

Water - Sampled: 07/24/18 11:15

Sample ID: NM-015

Volatile Organic Compounds by EPA Method 524.2

1,2-Dichloroethane		ND	A2, J, U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
tert-Amyl methyl ether		ND	A2, J, U	2	"	"	"	"	524.2
Trichloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Dibromomethane		ND	J, A2, U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	J, A2, U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	A2, J, U	4	"	"	"	"	524.2
Toluene		ND	A2, J, U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Hexanone		ND	A2, J, U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	A2, J, U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	A2, J, U	1	"	"	"	"	524.2
o-Xylene		ND	A2, J, U	0.5	"	"	"	"	524.2
Styrene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromoform		ND	A2, J, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	A2, J, U	0.5	"	"	"	"	524.2
Propylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	A2, J, U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-03								Water - Sampled: 07/24/18 11:15	
Sample ID: NM-015									Volatile Organic Compounds by EPA Method 524.2
1,4-Dichlorobenzene		ND	A2, J, U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,2-Dichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	J, A2, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	A2, J, U	0.5	"	"	"	"	524.2
Naphthalene		ND	A2, J, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	A2, J, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			100 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			103 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			95 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			97 %	74-113%		"	"	"	
Sample ID: NM-015									Purgeable Petroleum Hydrocarbons
TPH - Gasoline Range Organics		ND	A2, J, U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			103 %	87-110%		"	"	"	
Sample ID: NM-015									Extractable Petroleum Hydrocarbons
TPH - Diesel Range Organics		ND	J, A2, U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %	47-130%		"	"	"	
Sample ID: NM-015									Semivolatile Organic Compounds by EPA Method 8270D
Hexachloroethane		ND	A2, J, U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthylene		ND	A2, J, U	1	"	"	"	"	8270D
Acenaphthene		ND	A2, J, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-03

Water - Sampled: 07/24/18 11:15

Sample ID: NM-015

Semivolatile Organic Compounds by EPA Method 8270D

Benzo(a)pyrene		ND	A2, J, U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Indeno(1,2,3-cd)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			85 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>			86 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			86 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			77 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			82 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			85 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			82 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>			117 %		47-130%	"	"	"	

Sample ID: NM-015

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity		ND	A2, J, U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		140	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		140	A2, J	10	"	"	"	"	SM2320
Chloride	RE1	17	A2, J	1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		400	A2, J	25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids		800		20	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-04

Water - Sampled: 07/24/18 12:30

Sample ID: NM-016

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	25,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		290	C1, J	500	"	"	"	08/09/18	200.7
Potassium		2,300		2,000	"	"	"	"	200.7
Sodium	RE1	220,000		1,000	"	"	"	08/09/18	200.7
Arsenic		5.1		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		0.75	C1, J	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-04

Water - Sampled: 07/24/18 12:30

Sample ID: NM-016

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-04

Water - Sampled: 07/24/18 12:30

Sample ID: NM-016

Volatile Organic Compounds by EPA Method 524.2

1,1,2-Trichloroethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %		81-112%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-04							Water - Sampled: 07/24/18 12:30		
Sample ID: NM-016							Volatile Organic Compounds by EPA Method 524.2		
Surrogate: 4-Bromofluorobenzene			94 %	80-110%		B18G062	07/25/18	07/25/18	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	74-113%		"	"	"	
Sample ID: NM-016							Purgeable Petroleum Hydrocarbons		
TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
Surrogate: a,a,a-Trifluorotoluene			102 %	87-110%		"	"	"	
Sample ID: NM-016							Extractable Petroleum Hydrocarbons		
TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
Surrogate: Hexacosane			69 %	47-130%		"	"	"	
Sample ID: NM-016							Semivolatile Organic Compounds by EPA Method 8270D		
Hexachloroethane		ND	A2, J, U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	J, A2, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	J, A2, U	1	"	"	"	"	8270D
Acenaphthylene		ND	J, A2, U	1	"	"	"	"	8270D
Acenaphthene		ND	J, A2, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	J, A2, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	J, A2, U	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	J, A2, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	J, A2, U	1	"	"	"	"	8270D
Surrogate: 2-Fluorophenol			79 %	54-110%		"	"	"	
Surrogate: Phenol-d5			81 %	54-110%		"	"	"	
Surrogate: 2-Chlorophenol-d4			82 %	60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			71 %	38-110%		"	"	"	
Surrogate: Nitrobenzene-d5			77 %	26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl			79 %	57-110%		"	"	"	



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-04 **Water - Sampled:** 07/24/18 12:30

Sample ID: NM-016 **Semivolatile Organic Compounds by EPA Method 8270D**
Surrogate: 2,4,6-Tribromophenol 73 % 46-136% *B18G061* 07/25/18 07/27/18
Surrogate: Terphenyl-d14 115 % 47-130% " " "

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Conventional Chemistry Parameters by APHA/EPA Methods									
Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity		ND	A2, J, U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		140	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		140	A2, J	10	"	"	"	"	SM2320
Chloride	RE1	17	A2, J	1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		400	A2, J	25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids		780		20	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-05 **Water - Sampled:** 07/24/18 10:15

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Total Metals by EPA 200 Series Methods									
Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	230,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		8,400		500	"	"	"	08/09/18	200.7
Potassium		22,000	J, Q4	2,000	"	"	"	"	200.7
Sodium	RE1	2,700,000		10,000	"	"	"	08/09/18	200.7
Arsenic	RE2	5.9		1	"	B18H002	08/01/18	08/07/18	200.8
Cadmium		ND	U	0.40	"	"	"	08/02/18	200.8
Chromium	RE2	ND	U	2	"	"	"	08/07/18	200.8
Copper		2.3	J, Q4	2	"	"	"	08/02/18	200.8
Lead		ND	J, Q4, U	1	"	"	"	"	200.8
Nickel		5.9		1	"	"	"	"	200.8
Selenium		5.8		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE2	ND	U	2	"	"	"	08/07/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		3.8	C1, Q4, J	5	"	"	"	"	200.8

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Volatile Organic Compounds by EPA Method 524.2									
Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, Q6, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/15/18 08:06
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-05

Water - Sampled: 07/24/18 10:15

Sample ID: NM-001

Volatile Organic Compounds by EPA Method 524.2									
Carbon disulfide		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1807034-05							Water - Sampled: 07/24/18 10:15	
Sample ID:	NM-001							Volatile Organic Compounds by EPA Method 524.2	
m&p-Xylene		ND	U	1	ug/L	B18G062	07/25/18	07/25/18	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			103 %						83-116%
<i>Surrogate: Toluene-d8</i>			102 %						81-112%
<i>Surrogate: 4-Bromofluorobenzene</i>			96 %						80-110%
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %						74-113%
Sample ID:	NM-001							Purgeable Petroleum Hydrocarbons	
TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			102 %						87-110%
Sample ID:	NM-001							Extractable Petroleum Hydrocarbons	
TPH - Diesel Range Organics		ND	U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %						47-130%



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-05

Water - Sampled: 07/24/18 10:15

Sample ID: NM-001

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hexachloroethane	ND	J, Q4, U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene	ND	J, Q4, U	1	"	"	"	"	8270D
1-Methylnaphthalene	ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene	ND	J, Q4, U	5	"	"	"	"	8270D
2-Chloronaphthalene	ND	U	1	"	"	"	"	8270D
Acenaphthylene	ND	U	1	"	"	"	"	8270D
Acenaphthene	ND	U	1	"	"	"	"	8270D
Fluorene	ND	U	1	"	"	"	"	8270D
Hexachlorobenzene	ND	U	1	"	"	"	"	8270D
Anthracene	ND	U	1	"	"	"	"	8270D
Fluoranthene	ND	U	1	"	"	"	"	8270D
Pyrene	ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene	ND	U	1	"	"	"	"	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

90 % 54-110%

" " "

Surrogate: Phenol-d5

91 % 54-110%

" " "

Surrogate: 2-Chlorophenol-d4

91 % 60-110%

" " "

Surrogate: 1,2-Dichlorobenzene-d4

80 % 38-110%

" " "

Surrogate: Nitrobenzene-d5

87 % 26-134%

" " "

Surrogate: 2-Fluorobiphenyl

88 % 57-110%

" " "

Surrogate: 2,4,6-Tribromophenol

85 % 46-136%

" " "

Surrogate: Terphenyl-d14

121 % 47-130%

" " "

Sample ID: NM-001

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	100		10	"	"	"	"	SM2320
Total Alkalinity	100		10	"	"	"	"	SM2320
Chloride	500		50	"	B18G088	07/30/18	07/30/18	300.0
Sulfate	RE1	5,800	100	"	B18G096	07/31/18	07/31/18	300.0
Total Dissolved Solids	9,400		400	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-06

Water - Sampled: 07/24/18 07:40



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-06

Water - Sampled: 07/24/18 07:40

Sample ID: NM-018

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	49,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		8,500		500	"	"	"	08/09/18	200.7
Potassium		14,000		2,000	"	"	"	"	200.7
Sodium	RE1	350,000		1,000	"	"	"	08/09/18	200.7
Arsenic		13		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		0.20	C1, J	0.40	"	"	"	"	200.8
Chromium		2.4		1	"	"	"	"	200.8
Copper		6.1		2	"	"	"	"	200.8
Lead		10		1	"	"	"	"	200.8
Nickel		12		1	"	"	"	"	200.8
Selenium		1.7		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	0.56	C1, J	1	"	"	"	08/06/18	200.8
Uranium		0.70		0.25	"	"	"	08/02/18	200.8
Zinc		30		5	"	"	"	"	200.8

Sample ID: NM-018

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		3.0	C1, J	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-06

Water - Sampled: 07/24/18 07:40

Sample ID: NM-018

Volatile Organic Compounds by EPA Method 524.2									
Chloroform		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-06

Water - Sampled: 07/24/18 07:40

Sample ID: NM-018

Volatile Organic Compounds by EPA Method 524.2

tert-Butylbenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		97 %		74-113%		"	"	"	

Sample ID: NM-018

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		"	"	"	

Sample ID: NM-018

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		160	A2, F13, J	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		61 %		47-130%		"	"	"	

Sample ID: NM-018

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	A2, J, U	1	"	B18G061	07/25/18	08/01/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	J, A2, U	1	"	"	"	"	8270D
Acenaphthylene		ND	J, A2, U	1	"	"	"	"	8270D
Acenaphthene		ND	J, A2, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Anthracene		ND	J, Q7, A2, U	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-06

Water - Sampled: 07/24/18 07:40

Sample ID: NM-018

Semivolatile Organic Compounds by EPA Method 8270D

Pyrene		ND	A2, J, U	1	ug/L	B18G061	07/25/18	08/01/18	8270D
Benzo(a)anthracene		ND	J, Q7, A2, U	1	"	"	"	"	8270D
Chrysene		ND	Q7, A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	Q7, J, A2, U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			82 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			88 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			85 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			67 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			77 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			73 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			119 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			31 %	47-130%		"	"	"	

Sample ID: NM-018

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	A2, J, U	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity		ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		460	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		460	A2, J	10	"	"	"	"	SM2320
Chloride	RE1	65	A2, J	5	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		390	A2, J	25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids		1,400		200	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-07

Water - Sampled: 07/24/18 09:10

Sample ID: NM-030

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	1,200		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	08/09/18	200.7
Potassium		ND	U	2,000	"	"	"	"	200.7
Sodium	RE1	170,000		1,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-07

Water - Sampled: 07/24/18 09:10

Sample ID: NM-030

Total Metals by EPA 200 Series Methods

Selenium		0.83	C1, J	1	ug/L	B18H002	08/01/18	08/02/18	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-030

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-07

Water - Sampled: 07/24/18 09:10

Sample ID: NM-030

Volatile Organic Compounds by EPA Method 524.2									
Dibromomethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-07		Water - Sampled: 07/24/18 09:10							
Sample ID: NM-030		Volatile Organic Compounds by EPA Method 524.2							
1,2,4-Trichlorobenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			100 %			"	"	"	
<i>Surrogate: Toluene-d8</i>			103 %			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			94 %			"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %			"	"	"	
Sample ID: NM-030		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %			"	"	"	
Sample ID: NM-030		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %			"	"	"	
Sample ID: NM-030		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-07 **Water - Sampled: 07/24/18 09:10**

Sample ID: NM-030 **Semivolatile Organic Compounds by EPA Method 8270D**

Surrogate: 2-Fluorophenol		81 %		54-110%		B18G061	07/25/18	07/27/18	
Surrogate: Phenol-d5		83 %		54-110%		"	"	"	
Surrogate: 2-Chlorophenol-d4		83 %		60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		75 %		38-110%		"	"	"	
Surrogate: Nitrobenzene-d5		81 %		26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl		83 %		57-110%		"	"	"	
Surrogate: 2,4,6-Tribromophenol		72 %		46-136%		"	"	"	
Surrogate: Terphenyl-d14		119 %		47-130%		"	"	"	

Sample ID: NM-030 **Conventional Chemistry Parameters by APHA/EPA Methods**

Hydroxide Alkalinity		ND	U	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity		56		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		290		10	"	"	"	"	SM2320
Total Alkalinity		340		10	"	"	"	"	SM2320
Chloride	RE1	4.1		1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	27		0.50	"	"	"	"	300.0
Total Dissolved Solids		460		20	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-08 **Water - Sampled: 07/24/18 09:20**

Sample ID: NM-030-DUP **Total Metals by EPA 200 Series Methods**

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	1,200		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		ND	U	500	"	"	"	08/09/18	200.7
Potassium		ND	U	2,000	"	"	"	"	200.7
Sodium	RE1	170,000		1,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-030-DUP **Volatile Organic Compounds by EPA Method 524.2**

Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-08

Water - Sampled: 07/24/18 09:20

Sample ID: NM-030-DUP

Volatile Organic Compounds by EPA Method 524.2									
Bromomethane		ND	C3, J, U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-08

Water - Sampled: 07/24/18 09:20

Sample ID: NM-030-DUP

Volatile Organic Compounds by EPA Method 524.2

2-Hexanone		ND	U	4	ug/L	B18G062	07/25/18	07/25/18	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		96 %		74-113%		"	"	"	

Sample ID: NM-030-DUP

Purgeable Petroleum Hydrocarbons



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-08							Water - Sampled: 07/24/18 09:20		
Sample ID: NM-030-DUP							Purgeable Petroleum Hydrocarbons		
TPH - Gasoline Range Organics		ND	U	50	ug/L	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			102 %	87-110%		"	"	"	
Sample ID: NM-030-DUP							Extractable Petroleum Hydrocarbons		
TPH - Diesel Range Organics		ND	U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			73 %	47-130%		"	"	"	
Sample ID: NM-030-DUP							Semivolatile Organic Compounds by EPA Method 8270D		
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			82 %	54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>			84 %	54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			84 %	60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			73 %	38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			80 %	26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			82 %	57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			79 %	46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>			114 %	47-130%		"	"	"	
Sample ID: NM-030-DUP							Conventional Chemistry Parameters by APHA/EPA Methods		



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-08

Water - Sampled: 07/24/18 09:20

Sample ID: NM-030-DUP

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity		48		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		290		10	"	"	"	"	SM2320
Total Alkalinity		340		10	"	"	"	"	SM2320
Chloride	RE1	4.0		1	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	27		0.50	"	"	"	"	300.0
Total Dissolved Solids		460		20	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-09

Water - Sampled: 07/24/18 10:45

Sample ID: NM-008

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE1	100,000		1,000	"	B18H001	08/01/18	08/09/18	200.7
Magnesium		16,000		500	"	"	"	08/09/18	200.7
Potassium		8,400		2,000	"	"	"	"	200.7
Sodium	RE1	1,000,000		5,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.3	Cl, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		2.9		1	"	"	"	"	200.8
Selenium		2.3		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8

Sample ID: NM-008

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-09

Water - Sampled: 07/24/18 10:45

Sample ID: NM-008

Volatile Organic Compounds by EPA Method 524.2

trans-1,2-Dichloroethene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-09

Water - Sampled: 07/24/18 10:45

Sample ID: NM-008

Volatile Organic Compounds by EPA Method 524.2

Bromoform		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		102 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		98 %		74-113%		"	"	"	

Sample ID: NM-008

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		"	"	"	

Sample ID: NM-008

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	A2, J, U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	A2, J, U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		74 %		47-130%		"	"	"	

Sample ID: NM-008

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	A2, J, U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	A2, J, U	1	"	"	"	"	8270D



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Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-09

Water - Sampled: 07/24/18 10:45

Sample ID: NM-008

Semivolatile Organic Compounds by EPA Method 8270D

1-Methylnaphthalene		ND	J, A2, U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Hexachlorocyclopentadiene		ND	A2, J, U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	J, A2, U	1	"	"	"	"	8270D
Acenaphthylene		ND	U, J, A2	1	"	"	"	"	8270D
Acenaphthene		ND	J, A2, U	1	"	"	"	"	8270D
Fluorene		ND	A2, J, U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	A2, J, U	1	"	"	"	"	8270D
Anthracene		ND	U, J, A2	1	"	"	"	"	8270D
Fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U, J, A2	1	"	"	"	"	8270D
Chrysene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	J, A2, U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	J, A2, U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	A2, J, U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	A2, J, U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	A2, J, U	1	"	"	"	"	8270D

Surrogate: 2-Fluorophenol

80 % 54-110%

" " "

Surrogate: Phenol-d5

83 % 54-110%

" " "

Surrogate: 2-Chlorophenol-d4

83 % 60-110%

" " "

Surrogate: 1,2-Dichlorobenzene-d4

70 % 38-110%

" " "

Surrogate: Nitrobenzene-d5

80 % 26-134%

" " "

Surrogate: 2-Fluorobiphenyl

81 % 57-110%

" " "

Surrogate: 2,4,6-Tribromophenol

74 % 46-136%

" " "

Surrogate: Terphenyl-d14

118 % 47-130%

" " "

Sample ID: NM-008

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U, A2, J	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity		ND	U, A2, J	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		260	A2, J	10	"	"	"	"	SM2320
Total Alkalinity		260	A2, J	10	"	"	"	"	SM2320
Chloride	RE1	220	A2, J	20	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		2,100	A2, J	25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids		3,700		80	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-10

Water - Sampled: 07/24/18 11:55

Sample ID: NM-017

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
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United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-10		Water - Sampled: 07/24/18 11:55							
Sample ID: NM-017		Total Metals by EPA 200 Series Methods							
Calcium	RE2	2,600		100	ug/L	B18H001	08/01/18	08/10/18	200.7
Magnesium		470	C1, J	500	"	"	"	08/09/18	200.7
Potassium		1,300	C1, J	2,000	"	"	"	"	200.7
Sodium	RE1	170,000		1,000	"	"	"	08/09/18	200.7
Arsenic		1.8		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		ND	U	2	"	"	"	"	200.8
Lead		0.59	C1, J	1	"	"	"	"	200.8
Nickel		ND	U	1	"	"	"	"	200.8
Selenium		ND	U	1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		0.13	C1, J	0.25	"	"	"	08/02/18	200.8
Zinc		3.0	C1, J	5	"	"	"	"	200.8
Sample ID: NM-017		Volatile Organic Compounds by EPA Method 524.2							
Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-10

Water - Sampled: 07/24/18 11:55

Sample ID: NM-017

Volatile Organic Compounds by EPA Method 524.2

Chloroform		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-10

Water - Sampled: 07/24/18 11:55

Sample ID: NM-017

Volatile Organic Compounds by EPA Method 524.2

tert-Butylbenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			99 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			101 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			96 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			97 %	74-113%		"	"	"	

Sample ID: NM-017

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	

Sample ID: NM-017

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		130	C1, F13, J	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			64 %	47-130%		"	"	"	

Sample ID: NM-017

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/31/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-10

Water - Sampled: 07/24/18 11:55

Sample ID: NM-017

Semivolatile Organic Compounds by EPA Method 8270D

Pyrene		ND	U	1	ug/L	B18G061	07/25/18	07/31/18	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		81 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>		83 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		84 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		70 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		79 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		80 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		83 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>		120 %		47-130%		"	"	"	

Sample ID: NM-017

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity		21		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		180		10	"	"	"	"	SM2320
Total Alkalinity		200		10	"	"	"	"	SM2320
Chloride	RE2	39		2	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	RE1	130		5	"	"	"	07/31/18	300.0
Total Dissolved Solids		470		20	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-11

Water - Sampled: 07/24/18 13:00

Sample ID: NM-019

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	66,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		15,000		500	"	"	"	08/09/18	200.7
Potassium		11,000		2,000	"	"	"	"	200.7
Sodium	RE1	1,300,000		5,000	"	"	"	08/09/18	200.7
Arsenic		ND	U	0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		1.3	Cl, J	2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Nickel		2.0		1	"	"	"	"	200.8



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1807034-11							Water - Sampled: 07/24/18 13:00	
Sample ID:	NM-019							Total Metals by EPA 200 Series Methods	
Selenium		3.0		1	ug/L	B18H002	08/01/18	08/02/18	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		ND	U	0.25	"	"	"	08/02/18	200.8
Zinc		ND	U	5	"	"	"	"	200.8
Sample ID:	NM-019							Volatile Organic Compounds by EPA Method 524.2	
Dichlorodifluoromethane		ND	U	0.5	"	B18G062	07/25/18	07/25/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-11

Water - Sampled: 07/24/18 13:00

Sample ID: NM-019

Volatile Organic Compounds by EPA Method 524.2

Dibromomethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-11		Water - Sampled: 07/24/18 13:00							
Sample ID: NM-019		Volatile Organic Compounds by EPA Method 524.2							
1,2,4-Trichlorobenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl		0.7	N TIC, J		"	"	"	"	524.2
Butane, methyl		1.0	N TIC, J		"	"	"	"	524.2
Cyclohexane, methyl		0.8	N TIC, J		"	"	"	"	524.2
Pentane, dimethyl		0.7	N TIC, J		"	"	"	"	524.2
Pentane, methyl		1.4	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			102 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			99 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			97 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			99 %	74-113%		"	"	"	
Sample ID: NM-019		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		29	C1, F13, J	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			101 %	87-110%		"	"	"	
Sample ID: NM-019		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G069	07/26/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %	47-130%		"	"	"	
Sample ID: NM-019		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	08/01/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D



United States Environmental Protection Agency Region 9 Laboratory

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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-11

Water - Sampled: 07/24/18 13:00

Sample ID: NM-019

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Benzo(k)fluoranthene	ND	U	1	ug/L	B18G061	07/25/18	08/01/18	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>	83 %		54-110%		"	"	"	
<i>Surrogate: Phenol-d5</i>	85 %		54-110%		"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>	85 %		60-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	66 %		38-110%		"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>	82 %		26-134%		"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>	81 %		57-110%		"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>	81 %		46-136%		"	"	"	
<i>Surrogate: Terphenyl-d14</i>	87 %		47-130%		"	"	"	

Sample ID: NM-019

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H023	08/03/18	08/03/18	SM2320
Carbonate Alkalinity	ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity	300		10	"	"	"	"	SM2320
Total Alkalinity	300		10	"	"	"	"	SM2320
Chloride	200	RE2	20	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	2,500	RE1	50	"	"	"	07/31/18	300.0
Total Dissolved Solids	4,500		80	"	B18G066	07/26/18	07/26/18	2540C

Lab ID: 1807034-12

Water - Sampled: 07/24/18 12:00

Sample ID: TB-002

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane	ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Chloromethane	ND	U	0.5	"	"	"	"	524.2
Vinyl chloride	ND	U	0.5	"	"	"	"	524.2
Bromomethane	ND	C3, J, U	0.5	"	"	"	"	524.2
Chloroethane	ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane	ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene	ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"	"	"	"	524.2
Acetone	ND	U	4	"	"	"	"	524.2
Carbon disulfide	ND	U	0.5	"	"	"	"	524.2
Dichloromethane	ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol	ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene	ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)	ND	U	2	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807034-12

Water - Sampled: 07/24/18 12:00

Sample ID: TB-002

Volatile Organic Compounds by EPA Method 524.2

1,1-Dichloroethane		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807034-12								Water - Sampled: 07/24/18 12:00	
Sample ID: TB-002									Volatile Organic Compounds by EPA Method 524.2
Bromobenzene		ND	U	0.5	ug/L	B18G062	07/25/18	07/25/18	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			103 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			104 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			96 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			98 %	74-113%		"	"	"	



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G060 - 5030 P&T TPH-G - TPH - Purgeable

Prepared & Analyzed: 07/25/18
Purgeable Petroleum Hydrocarbons - Quality Control

Blank (B18G060-BLK1)

TPH - Gasoline Range Organics	ND	U		50 ug/L						
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	127			"	125		101	87-110		
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LCS (B18G060-BS1)

TPH - Gasoline Range Organics	541			ug/L	500		108	81-119		
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	129			"	125		103	87-110		
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Matrix Spike (B18G060-MS2) Source: 1807034-05

TPH - Gasoline Range Organics	563			ug/L	500	13	110	66-148		
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	130			"	125		104	87-110		
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Matrix Spike Dup (B18G060-MSD2) Source: 1807034-05

TPH - Gasoline Range Organics	586			ug/L	500	13	115	66-148	4	5
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	129			"	125		103	87-110		
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Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18
Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G061-BLK1)

Hexachloroethane	ND	U		1 ug/L						
Hexachlorobutadiene	ND	U		1 "						
1-Methylnaphthalene	ND	U		1 "						
Hexachlorocyclopentadiene	ND	U		5 "						
2-Chloronaphthalene	ND	U		1 "						
Acenaphthylene	ND	U		1 "						
Acenaphthene	ND	U		1 "						
Fluorene	ND	U		1 "						
Hexachlorobenzene	ND	U		1 "						
Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	42.2			"	50.0		84	54-110		
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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G061-BLK1)

<i>Surrogate: Phenol-d5</i>	42.8			"	50.0		86	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	43.1			"	50.0		86	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	37.7			"	50.0		75	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.2			"	50.0		80	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	41.0			"	50.0		82	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	31.0			"	50.0		62	46-136		
<i>Surrogate: Terphenyl-d14</i>	53.4			"	50.0		107	47-130		

LCS (B18G061-BS1)

Hexachloroethane	4.93			1 ug/L	10.0		49	22-110		
Hexachlorobutadiene	4.39			1 "	10.0		44	22-110		
1-Methylnaphthalene	7.9			1 "	10.0		79	70-130		
Hexachlorocyclopentadiene	20.2			5 "	50.0		40	20-110		
2-Chloronaphthalene	7.69			1 "	10.0		77	43-110		
Acenaphthylene	7.91			1 "	10.0		79	46-110		
Acenaphthene	11.4			1 "	10.0		114	84-135		
Fluorene	9.09			1 "	10.0		91	60-110		
Hexachlorobenzene	8.86			1 "	10.0		89	52-112		
Anthracene	9.88			1 "	10.0		99	57-117		
Fluoranthene	9.97			1 "	10.0		100	68-119		
Pyrene	8.44			1 "	10.0		84	65-120		
Benzo(a)anthracene	9.44			1 "	10.0		94	67-110		
Chrysene	9.58			1 "	10.0		96	67-111		
Benzo(b)fluoranthene	9.31			1 "	10.0		93	60-110		
Benzo(k)fluoranthene	9.68			1 "	10.0		97	65-117		
Benzo(a)pyrene	8.38			1 "	10.0		84	56-110		
Indeno(1,2,3-cd)pyrene	10.1			1 "	10.0		101	62-110		
Dibenz(a,h)anthracene	10.4			1 "	10.0		104	59-119		
Benzo(g,h,i)perylene	10.4			1 "	10.0		104	64-110		

<i>Surrogate: 2-Fluorophenol</i>	39.7			"	50.0		79	54-110		
<i>Surrogate: Phenol-d5</i>	42.7			"	50.0		85	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	42.2			"	50.0		84	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	36.2			"	50.0		72	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.3			"	50.0		81	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	43.1			"	50.0		86	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	57.2			"	50.0		114	46-136		
<i>Surrogate: Terphenyl-d14</i>	50.3			"	50.0		101	47-130		

Matrix Spike (B18G061-MS1)

Source: 1807034-05

Hexachloroethane	5.75			1 ug/L	9.64	ND	60	70-130		
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United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Matrix Spike (B18G061-MS1)

Source: 1807034-05

Hexachlorobutadiene	5.82			1 "	9.64	ND	60	70-130		
1-Methylnaphthalene	7.46			1 "	9.64	ND	77	70-130		
Hexachlorocyclopentadiene	19.8			5 "	48.2	ND	41	70-130		
2-Chloronaphthalene	7.32			1 "	9.64	ND	76	70-130		
Acenaphthylene	7.77			1 "	9.64	ND	81	70-130		
Acenaphthene	11.2			1 "	9.64	ND	116	70-130		
Fluorene	8.95			1 "	9.64	ND	93	70-130		
Hexachlorobenzene	9.08			1 "	9.64	ND	94	70-130		
Anthracene	10			1 "	9.64	ND	104	70-130		
Fluoranthene	10.1			1 "	9.64	ND	105	66-126		
Pyrene	9.02			1 "	9.64	ND	94	65-125		
Benzo(a)anthracene	9.57			1 "	9.64	ND	99	60-120		
Chrysene	9.96			1 "	9.64	ND	103	60-120		
Benzo(b)fluoranthene	9.35			1 "	9.64	ND	97	59-119		
Benzo(k)fluoranthene	10.7			1 "	9.64	ND	111	59-119		
Benzo(a)pyrene	8.8			1 "	9.64	ND	91	46-110		
Indeno(1,2,3-cd)pyrene	10.2			1 "	9.64	ND	106	53-113		
Dibenz(a,h)anthracene	10.4			1 "	9.64	ND	108	60-120		
Benzo(g,h,i)perylene	10.5			1 "	9.64	ND	109	55-115		

<i>Surrogate: 2-Fluorophenol</i>	38.6			"	50.0		77	54-110		
<i>Surrogate: Phenol-d5</i>	40.8			"	50.0		82	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	40.1			"	50.0		80	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	32.5			"	50.0		65	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	38.2			"	50.0		76	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	39.4			"	50.0		79	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	56.7			"	50.0		113	46-136		
<i>Surrogate: Terphenyl-d14</i>	52.2			"	50.0		104	47-130		

Matrix Spike Dup (B18G061-MSD1)

Source: 1807034-05

Hexachloroethane	5.86			1 ug/L	9.60	ND	61	70-130	2	20
Hexachlorobutadiene	5.89			1 "	9.60	ND	61	70-130	1	20
1-Methylnaphthalene	7.24			1 "	9.60	ND	75	70-130	3	20
Hexachlorocyclopentadiene	21.7			5 "	48.0	ND	45	70-130	9	20
2-Chloronaphthalene	7.2			1 "	9.60	ND	75	70-130	2	20
Acenaphthylene	7.74			1 "	9.60	ND	81	70-130	0.4	20
Acenaphthene	11.2			1 "	9.60	ND	117	70-130	0.6	20
Fluorene	8.84			1 "	9.60	ND	92	70-130	1	20
Hexachlorobenzene	8.9			1 "	9.60	ND	93	70-130	2	20
Anthracene	9.55			1 "	9.60	ND	99	70-130	5	20
Fluoranthene	9.93			1 "	9.60	ND	103	66-126	2	20
Pyrene	9.07			1 "	9.60	ND	94	65-125	0.5	20



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Matrix Spike Dup (B18G061-MSD1)

Source: 1807034-05

Benzo(a)anthracene	9.53			1 "	9.60	ND	99	60-120	0.5	20
Chrysene	9.44			1 "	9.60	ND	98	60-120	5	20
Benzo(b)fluoranthene	9.65			1 "	9.60	ND	100	59-119	3	20
Benzo(k)fluoranthene	9.69			1 "	9.60	ND	101	59-119	10	20
Benzo(a)pyrene	8.45			1 "	9.60	ND	88	46-110	4	20
Indeno(1,2,3-cd)pyrene	9.81			1 "	9.60	ND	102	53-113	4	20
Dibenz(a,h)anthracene	10.1			1 "	9.60	ND	105	60-120	3	20
Benzo(g,h,i)perylene	10			1 "	9.60	ND	104	55-115	5	20

<i>Surrogate: 2-Fluorophenol</i>	<i>40.7</i>			<i>"</i>	<i>50.0</i>		<i>81</i>	<i>54-110</i>		
<i>Surrogate: Phenol-d5</i>	<i>42.7</i>			<i>"</i>	<i>50.0</i>		<i>85</i>	<i>54-110</i>		
<i>Surrogate: 2-Chlorophenol-d4</i>	<i>42.8</i>			<i>"</i>	<i>50.0</i>		<i>86</i>	<i>60-110</i>		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>34.5</i>			<i>"</i>	<i>50.0</i>		<i>69</i>	<i>38-110</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>40.1</i>			<i>"</i>	<i>50.0</i>		<i>80</i>	<i>26-134</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>41.0</i>			<i>"</i>	<i>50.0</i>		<i>82</i>	<i>57-110</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>58.0</i>			<i>"</i>	<i>50.0</i>		<i>116</i>	<i>46-136</i>		
<i>Surrogate: Terphenyl-d14</i>	<i>54.0</i>			<i>"</i>	<i>50.0</i>		<i>108</i>	<i>47-130</i>		

Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G062-BLK1)

Dichlorodifluoromethane	ND	U		0.5 ug/L						
Chloromethane	ND	U		0.5 "						
Vinyl chloride	ND	U		0.5 "						
Bromomethane	ND	C3, J, U		0.5 "						
Chloroethane	ND	U		0.5 "						
Trichlorofluoromethane	ND	U		0.5 "						
1,1-Dichloroethene	ND	U		0.5 "						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5 "						
Acetone	ND	U		4 "						
Carbon disulfide	ND	U		0.5 "						
Dichloromethane	ND	U		0.5 "						
tert-Butyl alcohol	ND	U		10 "						
trans-1,2-Dichloroethene	ND	U		0.5 "						
tert-Butyl methyl ether (MTBE)	ND	U		2 "						
1,1-Dichloroethane	ND	U		0.5 "						
Diisopropyl ether	ND	U		2 "						
Ethyl tert-butyl ether	ND	U		2 "						
2,2-Dichloropropane	ND	U		0.5 "						
cis-1,2-Dichloroethene	ND	U		0.5 "						
2-Butanone (MEK)	ND	U		4 "						
Bromochloromethane	ND	U		0.5 "						



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G062-BLK1)

Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
tert-Amyl methyl ether	ND	U	2	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
4-Methyl-2-pentanone (MIBK)	ND	U	4	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/15/18 08:06
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G062-BLK1)

1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.92			"	5.00		98	83-116		
<i>Surrogate: Toluene-d8</i>	5.20			"	5.00		104	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	4.75			"	5.00		95	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.80			"	5.00		96	74-113		

LCS (B18G062-BS1)

Dichlorodifluoromethane	4.2		0.5	ug/L	5.00		84	70-128		
Chloromethane	3.84		0.5	"	5.00		77	63-123		
Vinyl chloride	4.17		0.5	"	5.00		83	70-130		
Bromomethane	3.92		0.5	"	5.00		78	31-150		
Chloroethane	4.19		0.5	"	5.00		84	74-119		
Trichlorofluoromethane	4.36		0.5	"	5.00		87	72-123		
1,1-Dichloroethene	4.15		0.5	"	5.00		83	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	4.46		0.5	"	5.00		89	73-129		
Acetone	29.3		4	"	40.0		73	61-114		
Carbon disulfide	4.1		0.5	"	5.00		82	0-200		
Dichloromethane	4.14		0.5	"	5.00		83	70-130		
tert-Butyl alcohol	82.1		10	"	100		82	0-200		
trans-1,2-Dichloroethene	4.09		0.5	"	5.00		82	70-130		
tert-Butyl methyl ether (MTBE)	16.4		2	"	20.0		82	62-117		
1,1-Dichloroethane	4.12		0.5	"	5.00		82	74-115		
Diisopropyl ether	16.3		2	"	20.0		82	0-200		
Ethyl tert-butyl ether	15.8		2	"	20.0		79	0-200		
2,2-Dichloropropane	5.28		0.5	"	5.00		106	64-144		
cis-1,2-Dichloroethene	4.72		0.5	"	5.00		94	70-130		
2-Butanone (MEK)	36.3		4	"	40.0		91	57-121		
Bromochloromethane	4.95		0.5	"	5.00		99	71-122		
Chloroform	4.73		0.5	"	5.00		95	70-130		
1,1,1-Trichloroethane	4.8		0.5	"	5.00		96	70-130		
Carbon tetrachloride	4.97		0.5	"	5.00		99	70-130		
1,1-Dichloropropene	4.71		0.5	"	5.00		94	71-119		
Benzene	4.84		0.5	"	5.00		97	70-130		
1,2-Dichloroethane	4.84		0.5	"	5.00		97	70-130		
tert-Amyl methyl ether	18.2		2	"	20.0		91	0-200		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G062-BS1)

Trichloroethene	4.75		0.5	"	5.00		95	70-130		
1,2-Dichloropropane	4.77		0.5	"	5.00		95	70-130		
Dibromomethane	4.87		0.5	"	5.00		97	72-121		
Bromodichloromethane	4.88		0.5	"	5.00		98	70-130		
cis-1,3-Dichloropropene	4.95		0.5	"	5.00		99	68-120		
4-Methyl-2-pentanone (MIBK)	38.6		4	"	40.0		97	0-200		
Toluene	5.05		0.5	"	5.00		101	70-130		
trans-1,3-Dichloropropene	5.25		0.5	"	5.00		105	64-126		
1,1,2-Trichloroethane	5.13		0.5	"	5.00		103	70-130		
Tetrachloroethene	5.13		0.5	"	5.00		103	70-130		
1,3-Dichloropropane	5.21		0.5	"	5.00		104	80-114		
2-Hexanone	39.7		4	"	40.0		99	0-200		
Chlorodibromomethane	5.41		0.5	"	5.00		108	70-130		
1,2-Dibromoethane (EDB)	5.08		0.5	"	5.00		102	80-115		
Chlorobenzene	5.13		0.5	"	5.00		103	70-130		
1,1,1,2-Tetrachloroethane	5.29		0.5	"	5.00		106	82-116		
Ethylbenzene	5.12		0.5	"	5.00		102	70-130		
m&p-Xylene	10.4		1	"	10.0		104	70-130		
o-Xylene	5.22		0.5	"	5.00		104	70-130		
Styrene	5.18		0.5	"	5.00		104	70-130		
Bromoform	5.34		0.5	"	5.00		107	70-130		
Isopropylbenzene	5.17		0.5	"	5.00		103	86-114		
Bromobenzene	5.19		0.5	"	5.00		104	84-110		
1,1,2,2-Tetrachloroethane	5.24		0.5	"	5.00		105	81-113		
1,2,3-Trichloropropane	5.2		0.5	"	5.00		104	81-114		
Propylbenzene	5.14		0.5	"	5.00		103	87-115		
2-Chlorotoluene	5.09		0.5	"	5.00		102	84-111		
4-Chlorotoluene	5.1		0.5	"	5.00		102	82-112		
1,3,5-Trimethylbenzene	5.11		0.5	"	5.00		102	85-113		
tert-Butylbenzene	5.21		0.5	"	5.00		104	86-114		
1,2,4-Trimethylbenzene	5.08		0.5	"	5.00		102	84-114		
sec-Butylbenzene	5.15		0.5	"	5.00		103	87-119		
1,3-Dichlorobenzene	5.18		0.5	"	5.00		104	85-110		
p-Isopropyltoluene	5.13		0.5	"	5.00		103	86-117		
1,4-Dichlorobenzene	5.16		0.5	"	5.00		103	70-130		
1,2-Dichlorobenzene	5.16		0.5	"	5.00		103	70-130		
Butylbenzene	4.72		0.5	"	5.00		94	85-118		
1,2-Dibromo-3-chloropropane	21.4		2	"	20.0		107	54-133		
1,2,4-Trichlorobenzene	5.12		0.5	"	5.00		102	70-130		
Hexachlorobutadiene	5.27		0.5	"	5.00		105	66-113		
Naphthalene	4.87		0.5	"	5.00		97	58-126		
1,2,3-Trichlorobenzene	5.17		0.5	"	5.00		103	65-119		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G062-BS1)

Surrogate: 1,2-Dichloroethane-d4	4.94			"	5.00		99	83-116		
Surrogate: Toluene-d8	5.15			"	5.00		103	81-112		
Surrogate: 4-Bromofluorobenzene	5.03			"	5.00		101	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.03			"	5.00		101	74-113		

Matrix Spike (B18G062-MS1)

Source: 1807034-05

Dichlorodifluoromethane	4.75				0.5 ug/L	5.00	ND	95	62-142	
Chloromethane	3.8				0.5 "	5.00	ND	76	54-144	
Vinyl chloride	4.89				0.5 "	5.00	ND	98	62-141	
Bromomethane	2.29				0.5 "	5.00	ND	46	32-150	
Chloroethane	5.18				0.5 "	5.00	ND	104	68-136	
Trichlorofluoromethane	5.25				0.5 "	5.00	ND	105	66-142	
1,1-Dichloroethene	5.13				0.5 "	5.00	ND	103	73-134	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.04				0.5 "	5.00	ND	101	65-148	
Acetone	53				4 "	40.0	ND	132	20-150	
Carbon disulfide	5.31				0.5 "	5.00	ND	106	0-200	
Dichloromethane	4.92				0.5 "	5.00	ND	98	65-126	
tert-Butyl alcohol	113				10 "	100	ND	113	0-200	
trans-1,2-Dichloroethene	5.05				0.5 "	5.00	ND	101	70-134	
tert-Butyl methyl ether (MTBE)	21.4				2 "	20.0	ND	107	56-128	
1,1-Dichloroethane	5.16				0.5 "	5.00	ND	103	67-134	
Diisopropyl ether	20.7				2 "	20.0	ND	104	0-200	
Ethyl tert-butyl ether	22.1				2 "	20.0	ND	110	0-200	
2,2-Dichloropropane	4.77				0.5 "	5.00	ND	95	41-150	
cis-1,2-Dichloroethene	5.03				0.5 "	5.00	ND	101	63-137	
2-Butanone (MEK)	48.3				4 "	40.0	ND	121	48-142	
Bromochloromethane	5.16				0.5 "	5.00	ND	103	70-132	
Chloroform	5.13				0.5 "	5.00	ND	103	65-141	
1,1,1-Trichloroethane	5.19				0.5 "	5.00	ND	104	69-116	
Carbon tetrachloride	5.35				0.5 "	5.00	ND	107	65-130	
1,1-Dichloropropene	5.09				0.5 "	5.00	ND	102	71-116	
Benzene	5.23				0.5 "	5.00	ND	105	77-115	
1,2-Dichloroethane	5.18				0.5 "	5.00	ND	104	71-112	
tert-Amyl methyl ether	23.3				2 "	20.0	ND	116	0-200	
Trichloroethene	5.26				0.5 "	5.00	ND	105	65-124	
1,2-Dichloropropane	5.13				0.5 "	5.00	ND	103	73-118	
Dibromomethane	5.17				0.5 "	5.00	ND	103	65-123	
Bromodichloromethane	5.35				0.5 "	5.00	ND	107	72-118	
cis-1,3-Dichloropropene	5.16				0.5 "	5.00	ND	103	69-113	
4-Methyl-2-pentanone (MIBK)	46				4 "	40.0	ND	115	0-200	
Toluene	5.01				0.5 "	5.00	ND	100	84-115	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike (B18G062-MS1)

Source: 1807034-05

trans-1,3-Dichloropropene	5.37		0.5	"	5.00	ND	107	67-117		
1,1,2-Trichloroethane	5.16		0.5	"	5.00	ND	103	81-115		
Tetrachloroethene	5.04		0.5	"	5.00	ND	101	81-115		
1,3-Dichloropropane	5.23		0.5	"	5.00	ND	105	82-113		
2-Hexanone	57.4		4	"	40.0	ND	144	0-200		
Chlorodibromomethane	5.52		0.5	"	5.00	ND	110	82-116		
1,2-Dibromoethane (EDB)	5.19		0.5	"	5.00	ND	104	83-115		
Chlorobenzene	5.1		0.5	"	5.00	ND	102	82-110		
1,1,1,2-Tetrachloroethane	5.18		0.5	"	5.00	ND	104	77-116		
Ethylbenzene	5.08		0.5	"	5.00	ND	102	85-112		
m&p-Xylene	10.2		1	"	10.0	ND	102	84-113		
o-Xylene	5.19		0.5	"	5.00	ND	104	82-110		
Styrene	5.05		0.5	"	5.00	ND	101	25-150		
Bromoform	5.58		0.5	"	5.00	ND	112	69-121		
Isopropylbenzene	5.13		0.5	"	5.00	ND	103	80-117		
Bromobenzene	5.08		0.5	"	5.00	ND	102	84-110		
1,1,2,2-Tetrachloroethane	5.16		0.5	"	5.00	ND	103	77-117		
1,2,3-Trichloropropane	5.25		0.5	"	5.00	ND	105	78-115		
Propylbenzene	5.08		0.5	"	5.00	ND	102	83-116		
2-Chlorotoluene	5.05		0.5	"	5.00	ND	101	83-110		
4-Chlorotoluene	5		0.5	"	5.00	ND	100	82-110		
1,3,5-Trimethylbenzene	5.08		0.5	"	5.00	ND	102	82-112		
tert-Butylbenzene	5.12		0.5	"	5.00	ND	102	81-115		
1,2,4-Trimethylbenzene	5		0.5	"	5.00	ND	100	81-113		
sec-Butylbenzene	5.03		0.5	"	5.00	ND	101	79-122		
1,3-Dichlorobenzene	5.05		0.5	"	5.00	ND	101	82-110		
p-Isopropyltoluene	4.92		0.5	"	5.00	ND	98	78-120		
1,4-Dichlorobenzene	5.13		0.5	"	5.00	ND	103	81-110		
1,2-Dichlorobenzene	5.06		0.5	"	5.00	ND	101	82-110		
Butylbenzene	4.35		0.5	"	5.00	ND	87	72-122		
1,2-Dibromo-3-chloropropane	23.6		2	"	20.0	ND	118	47-131		
1,2,4-Trichlorobenzene	4.9		0.5	"	5.00	ND	98	62-115		
Hexachlorobutadiene	4.86		0.5	"	5.00	ND	97	51-116		
Naphthalene	4.99		0.5	"	5.00	ND	100	47-137		
1,2,3-Trichlorobenzene	5.08		0.5	"	5.00	ND	102	62-117		

Surrogate: 1,2-Dichloroethane-d4	5.16			"	5.00		103	83-116		
Surrogate: Toluene-d8	4.97			"	5.00		99	81-112		
Surrogate: 4-Bromofluorobenzene	5.05			"	5.00		101	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	5.22			"	5.00		104	74-113		

Matrix Spike Dup (B18G062-MSD1)

Source: 1807034-05



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/15/18 08:06
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B18G062-MSD1)

Source: 1807034-05

Dichlorodifluoromethane	5.24		0.5	ug/L	5.00	ND	105	62-142	10	21
Chloromethane	3.82		0.5	"	5.00	ND	76	54-144	0.5	20
Vinyl chloride	5.14		0.5	"	5.00	ND	103	62-141	5	19
Bromomethane	2.92		0.5	"	5.00	ND	58	32-150	24	20
Chloroethane	5.51		0.5	"	5.00	ND	110	68-136	6	17
Trichlorofluoromethane	5.61		0.5	"	5.00	ND	112	66-142	7	19
1,1-Dichloroethene	5.29		0.5	"	5.00	ND	106	73-134	3	18
1,1,2-Trichloro-1,2,2-trifluoroethane	5.49		0.5	"	5.00	ND	110	65-148	9	19
Acetone	42		4	"	40.0	ND	105	20-150	23	31
Carbon disulfide	5.44		0.5	"	5.00	ND	109	0-200	2	200
Dichloromethane	5.01		0.5	"	5.00	ND	100	65-126	2	16
tert-Butyl alcohol	103		10	"	100	ND	103	0-200	9	200
trans-1,2-Dichloroethene	5.22		0.5	"	5.00	ND	104	70-134	3	19
tert-Butyl methyl ether (MTBE)	22.7		2	"	20.0	ND	113	56-128	6	22
1,1-Dichloroethane	5.26		0.5	"	5.00	ND	105	67-134	2	19
Diisopropyl ether	21.1		2	"	20.0	ND	106	0-200	2	200
Ethyl tert-butyl ether	24.9		2	"	20.0	ND	125	0-200	12	200
2,2-Dichloropropane	5.5		0.5	"	5.00	ND	110	41-150	14	40
cis-1,2-Dichloroethene	5.54		0.5	"	5.00	ND	111	63-137	10	46
2-Butanone (MEK)	53.3		4	"	40.0	ND	133	48-142	10	34
Bromochloromethane	5.66		0.5	"	5.00	ND	113	70-132	9	21
Chloroform	5.64		0.5	"	5.00	ND	113	65-141	9	23
1,1,1-Trichloroethane	5.8		0.5	"	5.00	ND	116	69-116	11	14
Carbon tetrachloride	5.96		0.5	"	5.00	ND	119	65-130	11	14
1,1-Dichloropropene	5.68		0.5	"	5.00	ND	114	71-116	11	15
Benzene	5.45		0.5	"	5.00	ND	109	77-115	4	13
1,2-Dichloroethane	5.65		0.5	"	5.00	ND	113	71-112	9	14
tert-Amyl methyl ether	27.6		2	"	20.0	ND	138	0-200	17	200
Trichloroethene	5.78		0.5	"	5.00	ND	116	65-124	9	15
1,2-Dichloropropane	5.62		0.5	"	5.00	ND	112	73-118	9	14
Dibromomethane	5.67		0.5	"	5.00	ND	113	65-123	9	16
Bromodichloromethane	5.77		0.5	"	5.00	ND	115	72-118	8	16
cis-1,3-Dichloropropene	5.65		0.5	"	5.00	ND	113	69-113	9	19
4-Methyl-2-pentanone (MIBK)	48.5		4	"	40.0	ND	121	0-200	5	200
Toluene	5.16		0.5	"	5.00	ND	103	84-115	3	15
trans-1,3-Dichloropropene	5.5		0.5	"	5.00	ND	110	67-117	2	19
1,1,2-Trichloroethane	5.16		0.5	"	5.00	ND	103	81-115	0	20
Tetrachloroethene	4.98		0.5	"	5.00	ND	100	81-115	1	14
1,3-Dichloropropane	5.29		0.5	"	5.00	ND	106	82-113	1	18
2-Hexanone	65.3		4	"	40.0	ND	163	0-200	13	200
Chlorodibromomethane	5.41		0.5	"	5.00	ND	108	82-116	2	18
1,2-Dibromoethane (EDB)	5.11		0.5	"	5.00	ND	102	83-115	2	20



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G062 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B18G062-MSD1)

Source: 1807034-05

Chlorobenzene	4.99		0.5	"	5.00	ND	100	82-110	2	13
1,1,1,2-Tetrachloroethane	5.15		0.5	"	5.00	ND	103	77-116	0.6	17
Ethylbenzene	5.1		0.5	"	5.00	ND	102	85-112	0.4	13
m&p-Xylene	10.2		1	"	10.0	ND	102	84-113	0.3	13
o-Xylene	5.2		0.5	"	5.00	ND	104	82-110	0.2	13
Styrene	5.19		0.5	"	5.00	ND	104	25-150	3	29
Bromoform	5.26		0.5	"	5.00	ND	105	69-121	6	17
Isopropylbenzene	5.22		0.5	"	5.00	ND	104	80-117	2	14
Bromobenzene	5.11		0.5	"	5.00	ND	102	84-110	0.6	14
1,1,2,2-Tetrachloroethane	5.3		0.5	"	5.00	ND	106	77-117	3	15
1,2,3-Trichloropropane	5.53		0.5	"	5.00	ND	111	78-115	5	13
Propylbenzene	5.22		0.5	"	5.00	ND	104	83-116	3	12
2-Chlorotoluene	5.17		0.5	"	5.00	ND	103	83-110	2	12
4-Chlorotoluene	5.16		0.5	"	5.00	ND	103	82-110	3	12
1,3,5-Trimethylbenzene	5.3		0.5	"	5.00	ND	106	82-112	4	13
tert-Butylbenzene	5.28		0.5	"	5.00	ND	106	81-115	3	16
1,2,4-Trimethylbenzene	5.35		0.5	"	5.00	ND	107	81-113	7	13
sec-Butylbenzene	5.25		0.5	"	5.00	ND	105	79-122	4	14
1,3-Dichlorobenzene	5.19		0.5	"	5.00	ND	104	82-110	3	12
p-Isopropyltoluene	5.18		0.5	"	5.00	ND	104	78-120	5	13
1,4-Dichlorobenzene	5.2		0.5	"	5.00	ND	104	81-110	1	11
1,2-Dichlorobenzene	5.23		0.5	"	5.00	ND	105	82-110	3	12
Butylbenzene	4.78		0.5	"	5.00	ND	96	72-122	9	10
1,2-Dibromo-3-chloropropane	24.9		2	"	20.0	ND	125	47-131	6	15
1,2,4-Trichlorobenzene	5.21		0.5	"	5.00	ND	104	62-115	6	13
Hexachlorobutadiene	5.08		0.5	"	5.00	ND	102	51-116	4	14
Naphthalene	5.53		0.5	"	5.00	ND	111	47-137	10	16
1,2,3-Trichlorobenzene	5.43		0.5	"	5.00	ND	109	62-117	7	17

<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.59			"	5.00		112	83-116		
<i>Surrogate: Toluene-d8</i>	5.15			"	5.00		103	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.15			"	5.00		103	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.36			"	5.00		107	74-113		

Batch B18G066 - - General Biology - Solids, Total

Prepared & Analyzed: 07/26/18

Dissolved

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G066-BLK1)

Total Dissolved Solids	ND	U		20	mg/L					
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LCS (B18G066-BS1)

Total Dissolved Solids	201			mg/L	206		98	85-115		
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Duplicate (B18G066-DUP1)

Source: 1807034-05

Total Dissolved Solids	9,280			400	mg/L		9,440		2	5
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United States Environmental Protection Agency Region 9 Laboratory

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G069 - 3520C CLLE - TPH - Extractable

Prepared: 07/26/18 Analyzed: 07/30/18
Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18G069-BLK1)

TPH - Diesel Range Organics	ND	U		150 ug/L						
TPH - Oil Range Organics	ND	U		600 "						

<i>Surrogate: Hexacosane</i>	36.7			"	50.0		73	47-130		
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LCS (B18G069-BS1)

TPH - Diesel Range Organics	1,360			150 ug/L	1500		91	59-109		
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<i>Surrogate: Hexacosane</i>	34.5			"	50.0		69	47-130		
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Matrix Spike (B18G069-MS1)

Source: 1807034-05

TPH - Diesel Range Organics	1,390			150 ug/L	1480	ND	94	50-126		
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<i>Surrogate: Hexacosane</i>	34.1			"	50.0		68	47-130		
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Matrix Spike Dup (B18G069-MSD1)

Source: 1807034-05

TPH - Diesel Range Organics	1,340			150 ug/L	1440	ND	93	50-126	4	37
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<i>Surrogate: Hexacosane</i>	31.7			"	50.0		63	47-130		
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Batch B18G088 - - General Inorganic - Anions

Prepared & Analyzed: 07/30/18
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G088-BLK1)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G088-BLK2)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

LCS (B18G088-BS1)

Chloride	9.85			mg/L	10.0		98	90-110		
Sulfate	10.3			"	10.0		103	90-110		

Duplicate (B18G088-DUP2)

Source: 1807034-05

Chloride	498			50 mg/L		502			0.8	20
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Batch B18G096 - - General Inorganic - Anions

Prepared & Analyzed: 07/31/18
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G096-BLK1)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G096-BLK2)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G096-BLK3)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G096 - - General Inorganic - Anions

Prepared & Analyzed: 07/31/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G096-BLK3)

Blank (B18G096-BLK4)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

LCS (B18G096-BS1)

Chloride	9.96			mg/L	10.0		100	90-110		
Sulfate	10.3			"	10.0		103	90-110		

LCS (B18G096-BS2)

Chloride	10.1			mg/L	10.0		101	90-110		
Sulfate	10.5			"	10.0		105	90-110		

Duplicate (B18G096-DUP2)

Source: 1807034-05RE1

Sulfate	5,690			100 mg/L		5,750			1	20
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Batch B18H001 - 200 Series Digest - Metals by 200.7,Total

Prepared: 08/01/18 Analyzed: 08/09/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H001-BLK1)

Calcium	ND	U		100 ug/L						
Magnesium	ND	U		500 "						
Potassium	ND	U		2,000 "						
Sodium	ND	U		500 "						

Blank (B18H001-BLK2)

Calcium	ND	U		100 ug/L						
Sodium	ND	U		500 "						

LCS (B18H001-BS1)

Calcium	1,020			100 ug/L	1000		102	85-115		
Magnesium	2,020			500 "	2000		101	85-115		
Potassium	10,200			2,000 "	10000		102	85-115		

LCS (B18H001-BS2)

Sodium	3,020			500 ug/L	3000		101	85-115		
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Matrix Spike (B18H001-MS2)

Source: 1807034-05

Magnesium	10,700	Q10		500 ug/L	2000	8,370	116	70-130		
Potassium	37,200			2,000 "	10000	22,100	151	70-130		

Matrix Spike (B18H001-MS4)

Source: 1807034-05RE1

Sodium	2,720,000	Q10		10,000 ug/L	3000	2,700,000	561	70-130		
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Matrix Spike (B18H001-MS5)

Source: 1807034-05RE2

Calcium	232,000	Q10		100 ug/L	1000	230,000	121	70-130		
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Matrix Spike Dup (B18H001-MSD2)

Source: 1807034-05

Magnesium	10,800	Q10		500 ug/L	2000	8,370	123	70-130	1	20
Potassium	37,900			2,000 "	10000	22,100	157	70-130	2	20

Matrix Spike Dup (B18H001-MSD4)

Source: 1807034-05RE1

Sodium	2,670,000	Q10		10,000 ug/L	3000	2,700,000	NR	70-130	2	20
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Matrix Spike Dup (B18H001-MSD5)

Source: 1807034-05RE2



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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/15/18 08:06
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H001 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/10/18

Total Metals by EPA 200 Series Methods - Quality Control

Matrix Spike Dup (B18H001-MSD5)

Source: 1807034-05RE2

Calcium	222,000	Q10	100	ug/L	1000	230,000	NR	70-130	4	20
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Batch B18H002 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/02/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H002-BLK1)

Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						
Chromium	ND	U	1	"						
Copper	ND	U	2	"						
Lead	ND	U	1	"						
Nickel	ND	U	1	"						
Selenium	ND	U	1	"						
Silver	ND	U	0.25	"						
Thorium	ND	U	1	"						
Uranium	ND	U	0.25	"						
Zinc	ND	U	5	"						

LCS (B18H002-BS1)

Arsenic	39.8		0.5	ug/L	40.0		100	85-115		
Cadmium	39.8		0.4	"	40.0		100	85-115		
Chromium	40		1	"	40.0		100	85-115		
Copper	41.4		2	"	40.0		104	85-115		
Lead	40.1		1	"	40.0		100	85-115		
Nickel	39.8		1	"	40.0		100	85-115		
Selenium	40.2		1	"	40.0		101	85-115		
Silver	39.9		0.25	"	40.0		100	85-115		
Thorium	38.9		1	"	40.0		97	85-115		
Uranium	41.2		0.25	"	40.0		103	85-115		
Zinc	37.7		5	"	40.0		94	85-115		

Matrix Spike (B18H002-MS2)

Source: 1807034-05

Cadmium	30.5		0.4	ug/L	40.0	ND	76	70-130		
Copper	29.1		2	"	40.0	2.32	67	70-130		
Lead	27.5		1	"	40.0	ND	69	70-130		
Nickel	36.3		1	"	40.0	5.87	76	70-130		
Selenium	48.1		1	"	40.0	5.78	106	70-130		
Silver	36.9		0.25	"	40.0	ND	92	70-130		
Uranium	32.2		0.25	"	40.0	ND	80	70-130		
Zinc	27.1		5	"	40.0	3.76	58	70-130		

Matrix Spike (B18H002-MS4)

Source: 1807034-05RE2

Arsenic	51.1		1	ug/L	40.0	5.95	113	70-130		
Chromium	42.8		2	"	40.0	ND	107	70-130		
Thorium	36.4		2	"	40.0	ND	91	70-130		

Matrix Spike Dup (B18H002-MSD2)

Source: 1807034-05



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H002 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/02/18

Total Metals by EPA 200 Series Methods - Quality Control

Matrix Spike Dup (B18H002-MSD2)

Source: 1807034-05

Cadmium	29.2			0.4 ug/L	40.0	ND	73	70-130	4	20
Copper	27.8			2 "	40.0	2.32	64	70-130	5	20
Lead	26.2			1 "	40.0	ND	65	70-130	5	20
Nickel	34.6			1 "	40.0	5.87	72	70-130	5	20
Selenium	45.5			1 "	40.0	5.78	99	70-130	6	20
Silver	36.5			0.25 "	40.0	ND	91	70-130	1	20
Uranium	30.1			0.25 "	40.0	ND	75	70-130	7	20
Zinc	26			5 "	40.0	3.76	56	70-130	4	20

Matrix Spike Dup (B18H002-MSD4)

Source: 1807034-05RE2

Arsenic	49.3			1 ug/L	40.0	5.95	108	70-130	3	20
Chromium	41			2 "	40.0	ND	102	70-130	4	20
Thorium	36.5			2 "	40.0	ND	91	70-130	0.4	20

Batch B18H014 - Alkalinity - Alkalinity

Prepared & Analyzed: 08/02/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18H014-BLK1)

Hydroxide Alkalinity	ND	U		10 mg/L						
Carbonate Alkalinity	ND	U		10 "						
Bicarbonate Alkalinity	ND	U		10 "						
Total Alkalinity	ND	U		10 "						

LCS (B18H014-BS1)

Total Alkalinity	47.8			10 mg/L	48.7		98	85-115		
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Duplicate (B18H014-DUP2)

Source: 1807034-05

Hydroxide Alkalinity	ND	U		10 mg/L		ND				20
Carbonate Alkalinity	ND	U		10 "		ND				20
Bicarbonate Alkalinity	106			10 "		104			2	20
Total Alkalinity	106			10 "		104			2	20

Batch B18H023 - Alkalinity - Alkalinity

Prepared & Analyzed: 08/03/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18H023-BLK1)

Hydroxide Alkalinity	ND	U		10 mg/L						
Carbonate Alkalinity	ND	U		10 "						
Bicarbonate Alkalinity	ND	U		10 "						
Total Alkalinity	ND	U		10 "						

LCS (B18H023-BS1)

Total Alkalinity	49.8			10 mg/L	48.7		102	85-115		
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Batch B18H026 - 245.1 Hg Prep. - Mercury by 245.1 (total)

Prepared: 08/06/18 Analyzed: 08/07/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H026-BLK1)

Mercury	ND	U		0.03 ug/L						
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LCS (B18H026-BS1)

Mercury	0.197			0.03 ug/L	0.200		98	85-115		
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Project Number: R18E03	75 Hawthorne Street	Reported: 08/15/18 08:06
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H026 - 245.1 Hg Prep. - Mercury by 245.1 (total)

Prepared: 08/06/18 Analyzed: 08/07/18

Total Metals by EPA 200 Series Methods - Quality Control

Matrix Spike (B18H026-MS2)

Source: 1807034-05

Mercury	0.186		0.03	ug/L	0.200	ND	93	70-130		
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Matrix Spike Dup (B18H026-MSD2)

Source: 1807034-05

Mercury	0.183		0.03	ug/L	0.200	ND	91	70-130	2	20
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Batch B18H030 - 3520C CLLE - SVOCs

Prepared: 08/06/18 Analyzed: 08/07/18

Semivolatle Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18H030-BLK1)

Hexachloroethane	ND	U		1	ug/L					
Hexachlorobutadiene	ND	Q3, J, U		1	"					
1-Methylnaphthalene	ND	U		1	"					
Hexachlorocyclopentadiene	ND	U		5	"					
2-Chloronaphthalene	ND	U		1	"					
Acenaphthylene	ND	U		1	"					
Acenaphthene	ND	U		1	"					
Fluorene	ND	U		1	"					
Hexachlorobenzene	ND	U		1	"					
Anthracene	ND	U		1	"					
Fluoranthene	ND	U		1	"					
Pyrene	ND	U		1	"					
Benzo(a)anthracene	ND	U		1	"					
Chrysene	ND	U		1	"					
Benzo(b)fluoranthene	ND	U		1	"					
Benzo(k)fluoranthene	ND	U		1	"					
Benzo(a)pyrene	ND	U		1	"					
Indeno(1,2,3-cd)pyrene	ND	U		1	"					
Dibenz(a,h)anthracene	ND	U		1	"					
Benzo(g,h,i)perylene	ND	U		1	"					

Surrogate: 2-Fluorophenol	39.3			"	50.0		79	54-110		
Surrogate: Phenol-d5	39.2			"	50.0		78	54-110		
Surrogate: 2-Chlorophenol-d4	40.6			"	50.0		81	60-110		
Surrogate: 1,2-Dichlorobenzene-d4	32.5			"	50.0		65	38-110		
Surrogate: Nitrobenzene-d5	40.0			"	50.0		80	26-134		
Surrogate: 2-Fluorobiphenyl	39.6			"	50.0		79	57-110		
Surrogate: 2,4,6-Tribromophenol	39.2			"	50.0		78	46-136		
Surrogate: Terphenyl-d14	72.6			"	50.0		145	47-130		



United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon

Project Number: R18E03

Project: Navajo Discharging Wells July 2018

Enforcement Division, Water Section 1

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18205A

Reported: 08/15/18 08:06

Qualifiers and Comments

- Q7 Surrogate spike recoveries for this sample were outside control limits.
 - Q6 Matrix spike/matrix spike duplicate precision criteria were not met for this analyte (see MS/MSD results for this batch in QC summary).
 - Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
 - Q3 The quantitation limit standard did not meet recovery criteria for this analyte.
 - Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
 - N TIC Tentatively Identified Compound - This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
 - F13 Fuel or Product Type: mixed or unknown
 - C3 The initial calibration for this analyte did not meet calibration criteria.
 - C1 The reported concentration for this analyte is below the quantitation limit.
 - A2 The sample was received above the recommended temperature range.
 - U Not Detected
 - NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 8/14/2018

Subject: Analytical Testing Results - Project R18E03
SDG: 18205A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Elizabeth Aubuchon
Enforcement Division, Water Section 1
ENF-3-1

Attached are the results from the analysis of samples from the **Navajo Discharging Wells July 2018** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Alkalinity	Anions by Ion Chromatography
Mercury by CVAA	Metals by ICP
Metals by ICP/MS	PAHs by GC/MS SIM
Total Dissolved Solids	Semivolatile Organic Compounds by GC/MS
Semivolatile Organic Compounds by GC/MS	Extractable Petroleum Hydrocarbons by GC/FID
Purgeable Petroleum Hydrocarbons by GC/FID	Purgeable Petroleum Hydrocarbons by GC/FID
Volatile Organic Compounds by GC/MS	



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
NM-022	1807030-01	Water	07/23/18 10:15	07/24/18 09:00
NM-014	1807030-02	Water	07/23/18 10:44	07/24/18 09:00
NM-014-FD	1807030-03	Water	07/23/18 11:00	07/24/18 09:00
NM-023	1807030-04	Water	07/23/18 11:15	07/24/18 09:00
TB-001	1807030-05	Water	07/23/18 12:00	07/24/18 09:00



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-01

Water - Sampled: 07/23/18 10:15

Sample ID: NM-022

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium		44,000		100	"	B18H001	08/01/18	08/09/18	200.7
Magnesium		10,000		500	"	"	"	"	200.7
Potassium		10,000		2,000	"	"	"	"	200.7
Sodium	RE1	1,200,000		5,000	"	"	"	08/09/18	200.7
Arsenic		6.2		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		16		2	"	"	"	"	200.8
Lead		15	J, Q4	1	"	"	"	"	200.8
Nickel		1.9		1	"	"	"	"	200.8
Selenium		2.2		1	"	"	"	"	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium		ND	U	1	"	"	"	"	200.8
Uranium		0.97		0.25	"	"	"	"	200.8
Zinc		11	J, Q4	5	"	"	"	"	200.8

Sample ID: NM-022

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G054	07/24/18	07/24/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-01

Water - Sampled: 07/23/18 10:15

Sample ID: NM-022

Volatile Organic Compounds by EPA Method 524.2

Chloroform		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
1,1,1-Trichloroethane		ND	J, Q4, Q6, U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	J, Q4, U	1	"	"	"	"	524.2
o-Xylene		ND	J, Q4, U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	J, Q4, Q6, U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
Bromobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	J, Q4, U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807030-01		Water - Sampled: 07/23/18 10:15							
Sample ID: NM-022		Volatile Organic Compounds by EPA Method 524.2							
tert-Butylbenzene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
1,2,4-Trimethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	J, Q6, U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	J, Q6, U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	J, Q4, Q6, U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>			101 %	83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>			94 %	81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			105 %	80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			96 %	74-113%		"	"	"	
Sample ID: NM-022		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>			96 %	87-110%		"	"	"	
Sample ID: NM-022		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G056	07/24/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>			75 %	47-130%		"	"	"	
Sample ID: NM-022		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-01

Water - Sampled: 07/23/18 10:15

Sample ID: NM-022

Semivolatile Organic Compounds by EPA Method 8270D

Pyrene		ND	U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			86 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>			87 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			87 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			76 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			83 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			87 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			80 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>			118 %		47-130%	"	"	"	

Sample ID: NM-022

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity		ND	U	10	"	"	"	"	SM2320
Bicarbonate Alkalinity		310		10	"	"	"	"	SM2320
Total Alkalinity		310		10	"	"	"	"	SM2320
Chloride		760		50	"	B18G088	07/30/18	07/30/18	300.0
Sulfate		1,700		25	"	"	"	"	300.0
Total Dissolved Solids		3,900		80	"	B18G065	07/26/18	07/26/18	2540C

Lab ID: 1807030-02

Water - Sampled: 07/23/18 10:44

Sample ID: NM-014

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	57,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		13,000		500	"	"	"	08/09/18	200.7
Potassium		22,000		2,000	"	"	"	"	200.7
Sodium	RE1	2,500,000		10,000	"	"	"	08/09/18	200.7
Arsenic		2.4		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		ND	U	1	"	"	"	"	200.8
Copper		3.0		2	"	"	"	"	200.8
Lead	RE2	ND	U	2	"	"	"	08/07/18	200.8
Nickel		2.6		1	"	"	"	08/02/18	200.8



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-02

Water - Sampled: 07/23/18 10:44

Sample ID: NM-014

Total Metals by EPA 200 Series Methods

Selenium		11		1	ug/L	B18H002	08/01/18	08/02/18	200.8
Silver		ND	U	0.25	"	"	"	"	200.8
Thorium	RE2	ND	U	2	"	"	"	08/07/18	200.8
Uranium	RE2	ND	U	0.50	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	08/02/18	200.8

Sample ID: NM-014

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G054	07/24/18	07/24/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		42		10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-02

Water - Sampled: 07/23/18 10:44

Sample ID: NM-014

Volatile Organic Compounds by EPA Method 524.2

Bromodichloromethane		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-02

Water - Sampled: 07/23/18 10:44

Sample ID: NM-014

Volatile Organic Compounds by EPA Method 524.2

Hexachlorobutadiene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl		4.2	N TIC, J		"	"	"	"	524.2
Butane, methyl		18	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (01)		2.6	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (02)		3.0	N TIC, J		"	"	"	"	524.2
Cyclohexane, trimethyl		2.7	N TIC, J		"	"	"	"	524.2
Cyclopentane, dimethyl (01)		1.5	N TIC, J		"	"	"	"	524.2
Cyclopentane, dimethyl (02)		1.3	N TIC, J		"	"	"	"	524.2
Isobutane		9.0	N TIC, J		"	"	"	"	524.2
Pentane, dimethyl		2.5	N TIC, J		"	"	"	"	524.2
Pentane, methyl		4.8	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		96 %		74-113%		"	"	"	

Sample ID: NM-014

Purgeable Petroleum Hydrocarbons

TPH - Gasoline Range Organics		110	F13	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		"	"	"	

Sample ID: NM-014

Extractable Petroleum Hydrocarbons

TPH - Diesel Range Organics		ND	U	150	"	B18G056	07/24/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		71 %		47-130%		"	"	"	

Sample ID: NM-014

Semivolatile Organic Compounds by EPA Method 8270D

Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-02

Water - Sampled: 07/23/18 10:44

Sample ID: NM-014

Semivolatile Organic Compounds by EPA Method 8270D

Benzo(a)anthracene		ND	U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>			83 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>			85 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>			85 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			62 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>			80 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>			78 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>			96 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>			118 %		47-130%	"	"	"	

Sample ID: NM-014

Conventional Chemistry Parameters by APHA/EPA Methods

Hydroxide Alkalinity		ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity		42		10	"	"	"	"	SM2320
Bicarbonate Alkalinity		600		10	"	"	"	"	SM2320
Total Alkalinity		640		10	"	"	"	"	SM2320
Chloride	RE1	3,400		100	"	B18G096	07/31/18	07/31/18	300.0
Sulfate		630		25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids		7,000		200	"	B18G065	07/26/18	07/26/18	2540C

Lab ID: 1807030-03

Water - Sampled: 07/23/18 11:00

Sample ID: NM-014-FD

Total Metals by EPA 200 Series Methods

Mercury		ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	RE2	56,000		100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium		13,000		500	"	"	"	08/09/18	200.7
Potassium		23,000		2,000	"	"	"	"	200.7
Sodium	RE1	2,500,000		10,000	"	"	"	08/09/18	200.7
Arsenic		2.2		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium		ND	U	0.40	"	"	"	"	200.8
Chromium		0.60	CI, J	1	"	"	"	"	200.8
Copper		3.5		2	"	"	"	"	200.8
Lead	RE2	ND	U	2	"	"	"	08/07/18	200.8
Nickel		2.5		1	"	"	"	08/02/18	200.8
Selenium		11		1	"	"	"	"	200.8



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807030-03								Water - Sampled: 07/23/18 11:00	
Sample ID: NM-014-FD								Total Metals by EPA 200 Series Methods	
Silver		ND	U	0.25	ug/L	B18H002	08/01/18	08/02/18	200.8
Thorium	RE2	ND	U	2	"	"	"	08/07/18	200.8
Uranium	RE2	ND	U	0.50	"	"	"	"	200.8
Zinc		ND	U	5	"	"	"	08/02/18	200.8
Sample ID: NM-014-FD								Volatile Organic Compounds by EPA Method 524.2	
Dichlorodifluoromethane		ND	U	0.5	"	B18G054	07/24/18	07/24/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		48		10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-03

Water - Sampled: 07/23/18 11:00

Sample ID: NM-014-FD

Volatile Organic Compounds by EPA Method 524.2

Bromodichloromethane		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807030-03		Water - Sampled: 07/23/18 11:00							
Sample ID: NM-014-FD		Volatile Organic Compounds by EPA Method 524.2							
Hexachlorobutadiene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butane, dimethyl		4.4	N TIC, J		"	"	"	"	524.2
Butane, methyl		18	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (01)		2.9	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (02)		3.2	N TIC, J		"	"	"	"	524.2
Cyclohexane, dimethyl (03)		1.2	N TIC, J		"	"	"	"	524.2
Cyclohexane, trimethyl		3.0	N TIC, J		"	"	"	"	524.2
Cyclopentane, dimethyl		3.3	N TIC, J		"	"	"	"	524.2
Isobutane		9.6	N TIC, J		"	"	"	"	524.2
Pentane, dimethyl		2.5	N TIC, J		"	"	"	"	524.2
Pentane, methyl		5.1	N TIC, J		"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		98 %		74-113%		"	"	"	
Sample ID: NM-014-FD		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		100	F13	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		87-110%		"	"	"	
Sample ID: NM-014-FD		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G056	07/24/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>		68 %		47-130%		"	"	"	
Sample ID: NM-014-FD		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-03

Water - Sampled: 07/23/18 11:00

Sample ID: NM-014-FD

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Benzo(a)anthracene	ND	U	1	ug/L	B18G061	07/25/18	07/27/18	8270D
Chrysene	ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene	ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene	ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene	ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene	ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>		104 %		54-110%	"	"	"	
<i>Surrogate: Phenol-d5</i>		106 %		54-110%	"	"	"	
<i>Surrogate: 2-Chlorophenol-d4</i>		106 %		60-110%	"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		84 %		38-110%	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		99 %		26-134%	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		98 %		57-110%	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenyl</i>		104 %		46-136%	"	"	"	
<i>Surrogate: Terphenyl-d14</i>		122 %		47-130%	"	"	"	

Sample ID: NM-014-FD

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity	110		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	530		10	"	"	"	"	SM2320
Total Alkalinity	640		10	"	"	"	"	SM2320
Chloride	3,500	RE1	100	"	B18G096	07/31/18	07/31/18	300.0
Sulfate	630		25	"	B18G088	07/30/18	07/30/18	300.0
Total Dissolved Solids	7,100		200	"	B18G065	07/26/18	07/26/18	2540C

Lab ID: 1807030-04

Water - Sampled: 07/23/18 11:15

Sample ID: NM-023

Total Metals by EPA 200 Series Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Mercury	ND	U	0.030	ug/L	B18H026	08/06/18	08/07/18	245.1
Calcium	46,000	RE2	100	"	B18H001	08/01/18	08/10/18	200.7
Magnesium	11,000		500	"	"	"	08/09/18	200.7
Potassium	12,000		2,000	"	"	"	"	200.7
Sodium	1,300,000	RE1	5,000	"	"	"	08/09/18	200.7
Arsenic	5.5		0.50	"	B18H002	08/01/18	08/02/18	200.8
Cadmium	ND	U	0.40	"	"	"	"	200.8
Chromium	ND	U	1	"	"	"	"	200.8
Copper	1.7	C1, J	2	"	"	"	"	200.8
Lead	ND	U	1	"	"	"	"	200.8
Nickel	1.5		1	"	"	"	"	200.8
Selenium	3.2		1	"	"	"	"	200.8



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-04

Water - Sampled: 07/23/18 11:15

Sample ID: NM-023

Total Metals by EPA 200 Series Methods

Silver		ND	U	0.25	ug/L	B18H002	08/01/18	08/02/18	200.8
Thorium	RE1	ND	U	1	"	"	"	08/06/18	200.8
Uranium		1.0		0.25	"	"	"	08/02/18	200.8
Zinc		2.5	CI, J	5	"	"	"	"	200.8

Sample ID: NM-023

Volatile Organic Compounds by EPA Method 524.2

Dichlorodifluoromethane		ND	U	0.5	"	B18G054	07/24/18	07/24/18	524.2
Chloromethane		ND	U	0.5	"	"	"	"	524.2
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2
Bromomethane		ND	U	0.5	"	"	"	"	524.2
Chloroethane		ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2
Acetone		ND	U	4	"	"	"	"	524.2
Carbon disulfide		ND	U	0.5	"	"	"	"	524.2
Dichloromethane		ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol		ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether		ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether		ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2
Chloroform		ND	U	0.5	"	"	"	"	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-04

Water - Sampled: 07/23/18 11:15

Sample ID: NM-023

Volatile Organic Compounds by EPA Method 524.2

cis-1,3-Dichloropropene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807030-04		Water - Sampled: 07/23/18 11:15							
Sample ID: NM-023		Volatile Organic Compounds by EPA Method 524.2							
Naphthalene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>				89 %			"	"	"
<i>Surrogate: Toluene-d8</i>				101 %			"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>				103 %			"	"	"
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>				100 %			"	"	"
Sample ID: NM-023		Purgeable Petroleum Hydrocarbons							
TPH - Gasoline Range Organics		ND	U	50	"	B18G060	07/25/18	07/25/18	8015C
<i>Surrogate: a,a,a-Trifluorotoluene</i>				102 %			"	"	"
Sample ID: NM-023		Extractable Petroleum Hydrocarbons							
TPH - Diesel Range Organics		ND	U	150	"	B18G056	07/24/18	07/30/18	8015C
TPH - Oil Range Organics		ND	U	600	"	"	"	"	8015C
<i>Surrogate: Hexacosane</i>				71 %			"	"	"
Sample ID: NM-023		Semivolatile Organic Compounds by EPA Method 8270D							
Hexachloroethane		ND	U	1	"	B18G061	07/25/18	07/27/18	8270D
Hexachlorobutadiene		ND	U	1	"	"	"	"	8270D
1-Methylnaphthalene		ND	U	1	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U	5	"	"	"	"	8270D
2-Chloronaphthalene		ND	U	1	"	"	"	"	8270D
Acenaphthylene		ND	U	1	"	"	"	"	8270D
Acenaphthene		ND	U	1	"	"	"	"	8270D
Fluorene		ND	U	1	"	"	"	"	8270D
Hexachlorobenzene		ND	U	1	"	"	"	"	8270D
Anthracene		ND	U	1	"	"	"	"	8270D
Fluoranthene		ND	U	1	"	"	"	"	8270D
Pyrene		ND	U	1	"	"	"	"	8270D
Benzo(a)anthracene		ND	U	1	"	"	"	"	8270D
Chrysene		ND	U	1	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U	1	"	"	"	"	8270D
Benzo(a)pyrene		ND	U	1	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U	1	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U	1	"	"	"	"	8270D
Benzo(g,h,i)perylene		ND	U	1	"	"	"	"	8270D
<i>Surrogate: 2-Fluorophenol</i>				89 %			"	"	"



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-04

Water - Sampled: 07/23/18 11:15

Sample ID: NM-023

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Surrogate: Phenol-d5	90 %		54-110%		B18G061	07/25/18	07/27/18	
Surrogate: 2-Chlorophenol-d4	91 %		60-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4	65 %		38-110%		"	"	"	
Surrogate: Nitrobenzene-d5	86 %		26-134%		"	"	"	
Surrogate: 2-Fluorobiphenyl	83 %		57-110%		"	"	"	
Surrogate: 2,4,6-Tribromophenol	75 %		46-136%		"	"	"	
Surrogate: Terphenyl-d14	121 %		47-130%		"	"	"	

Sample ID: NM-023

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Hydroxide Alkalinity	ND	U	10	mg/L	B18H014	08/02/18	08/02/18	SM2320
Carbonate Alkalinity	17		10	"	"	"	"	SM2320
Bicarbonate Alkalinity	280		10	"	"	"	"	SM2320
Total Alkalinity	290		10	"	"	"	"	SM2320
Chloride	740		50	"	B18G088	07/30/18	07/30/18	300.0
Sulfate	1,600		25	"	"	"	"	300.0
Total Dissolved Solids	3,900		80	"	B18G065	07/26/18	07/26/18	2540C

Lab ID: 1807030-05

Water - Sampled: 07/23/18 12:00

Sample ID: TB-001

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane	ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
Chloromethane	ND	U	0.5	"	"	"	"	524.2
Vinyl chloride	ND	U	0.5	"	"	"	"	524.2
Bromomethane	ND	U	0.5	"	"	"	"	524.2
Chloroethane	ND	U	0.5	"	"	"	"	524.2
Trichlorofluoromethane	ND	U	0.5	"	"	"	"	524.2
1,1-Dichloroethene	ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"	"	"	"	524.2
Acetone	ND	U	4	"	"	"	"	524.2
Carbon disulfide	ND	U	0.5	"	"	"	"	524.2
Dichloromethane	ND	U	0.5	"	"	"	"	524.2
tert-Butyl alcohol	ND	U	10	"	"	"	"	524.2
trans-1,2-Dichloroethene	ND	U	0.5	"	"	"	"	524.2
tert-Butyl methyl ether (MTBE)	ND	U	2	"	"	"	"	524.2
1,1-Dichloroethane	ND	U	0.5	"	"	"	"	524.2
Diisopropyl ether	ND	U	2	"	"	"	"	524.2
Ethyl tert-butyl ether	ND	U	2	"	"	"	"	524.2
2,2-Dichloropropane	ND	U	0.5	"	"	"	"	524.2
cis-1,2-Dichloroethene	ND	U	0.5	"	"	"	"	524.2
2-Butanone (MEK)	ND	U	4	"	"	"	"	524.2
Bromochloromethane	ND	U	0.5	"	"	"	"	524.2



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
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Lab ID: 1807030-05

Water - Sampled: 07/23/18 12:00

Sample ID: TB-001

Volatile Organic Compounds by EPA Method 524.2

Chloroform		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
Benzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2
tert-Amyl methyl ether		ND	U	2	"	"	"	"	524.2
Trichloroethene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
Dibromomethane		ND	U	0.5	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
4-Methyl-2-pentanone (MIBK)		ND	U	4	"	"	"	"	524.2
Toluene		ND	U	0.5	"	"	"	"	524.2
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2
2-Hexanone		ND	U	4	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.5	"	"	"	"	524.2
Styrene		ND	U	0.5	"	"	"	"	524.2
Bromoform		ND	U	0.5	"	"	"	"	524.2
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2
Bromobenzene		ND	U	0.5	"	"	"	"	524.2
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2
Propylbenzene		ND	U	0.5	"	"	"	"	524.2
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1807030-05								Water - Sampled: 07/23/18 12:00	
Sample ID: TB-001									Volatile Organic Compounds by EPA Method 524.2
tert-Butylbenzene		ND	U	0.5	ug/L	B18G054	07/24/18	07/24/18	524.2
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Butylbenzene		ND	U	0.5	"	"	"	"	524.2
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2
Naphthalene		ND	U	0.5	"	"	"	"	524.2
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95 %		83-116%		"	"	"	
<i>Surrogate: Toluene-d8</i>		94 %		81-112%		"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %		80-110%		"	"	"	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		97 %		74-113%		"	"	"	



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G054-BLK1)

Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Carbon disulfide	ND	U	0.5	"						
Dichloromethane	ND	U	0.5	"						
tert-Butyl alcohol	ND	U	10	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
Diisopropyl ether	ND	U	2	"						
Ethyl tert-butyl ether	ND	U	2	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
tert-Amyl methyl ether	ND	U	2	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
4-Methyl-2-pentanone (MIBK)	ND	U	4	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
2-Hexanone	ND	U	4	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						



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Region 9 Laboratory**

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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G054-BLK1)

Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.91			"	5.00		98	83-116		
<i>Surrogate: Toluene-d8</i>	4.84			"	5.00		97	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.03			"	5.00		101	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.69			"	5.00		94	74-113		

Blank (B18G054-BLK2)

Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G054-BLK2)

1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		0.5	"					
Acetone	ND	U		4	"					
Carbon disulfide	ND	U		0.5	"					
Dichloromethane	ND	U		0.5	"					
tert-Butyl alcohol	ND	U		10	"					
trans-1,2-Dichloroethene	ND	U		0.5	"					
tert-Butyl methyl ether (MTBE)	ND	U		2	"					
1,1-Dichloroethane	ND	U		0.5	"					
Diisopropyl ether	ND	U		2	"					
Ethyl tert-butyl ether	ND	U		2	"					
2,2-Dichloropropane	ND	U		0.5	"					
cis-1,2-Dichloroethene	ND	U		0.5	"					
2-Butanone (MEK)	ND	U		4	"					
Bromochloromethane	ND	U		0.5	"					
Chloroform	ND	U		0.5	"					
1,1,1-Trichloroethane	ND	U		0.5	"					
Carbon tetrachloride	ND	U		0.5	"					
1,1-Dichloropropene	ND	U		0.5	"					
Benzene	ND	U		0.5	"					
1,2-Dichloroethane	ND	U		0.5	"					
tert-Amyl methyl ether	ND	U		2	"					
Trichloroethene	ND	U		0.5	"					
1,2-Dichloropropane	ND	U		0.5	"					
Dibromomethane	ND	U		0.5	"					
Bromodichloromethane	ND	U		0.5	"					
cis-1,3-Dichloropropene	ND	U		0.5	"					
4-Methyl-2-pentanone (MIBK)	ND	U		4	"					
Toluene	ND	U		0.5	"					
trans-1,3-Dichloropropene	ND	U		0.5	"					
1,1,2-Trichloroethane	ND	U		0.5	"					
Tetrachloroethene	ND	U		0.5	"					
1,3-Dichloropropane	ND	U		0.5	"					
2-Hexanone	ND	U		4	"					
Chlorodibromomethane	ND	U		0.5	"					
1,2-Dibromoethane (EDB)	ND	U		0.5	"					
Chlorobenzene	ND	U		0.5	"					
1,1,1,2-Tetrachloroethane	ND	U		0.5	"					
Ethylbenzene	ND	U		0.5	"					
m&p-Xylene	ND	U		1	"					
o-Xylene	ND	U		0.5	"					
Styrene	ND	U		0.5	"					
Bromoform	ND	U		0.5	"					



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Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B18G054-BLK2)

Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.01</i>			<i>"</i>	<i>5.00</i>		<i>100</i>	<i>83-116</i>		
<i>Surrogate: Toluene-d8</i>	<i>4.86</i>			<i>"</i>	<i>5.00</i>		<i>97</i>	<i>81-112</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>5.27</i>			<i>"</i>	<i>5.00</i>		<i>105</i>	<i>80-110</i>		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>5.30</i>			<i>"</i>	<i>5.00</i>		<i>106</i>	<i>74-113</i>		

LCS (B18G054-BS1)

Dichlorodifluoromethane	5.97		0.5	ug/L	5.00		119	70-128		
Chloromethane	5.53		0.5	"	5.00		111	63-123		
Vinyl chloride	5.67		0.5	"	5.00		113	70-130		
Bromomethane	5.68		0.5	"	5.00		114	31-150		
Chloroethane	5.57		0.5	"	5.00		111	74-119		
Trichlorofluoromethane	5.71		0.5	"	5.00		114	72-123		
1,1-Dichloroethene	5.64		0.5	"	5.00		113	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.93		0.5	"	5.00		119	73-129		
Acetone	35.5		4	"	40.0		89	61-114		
Dichloromethane	5.3		0.5	"	5.00		106	70-130		
trans-1,2-Dichloroethene	5.6		0.5	"	5.00		112	70-130		
tert-Butyl methyl ether (MTBE)	20		2	"	20.0		100	62-117		
1,1-Dichloroethane	5.42		0.5	"	5.00		108	74-115		
2,2-Dichloropropane	5.66		0.5	"	5.00		113	64-144		



**United States Environmental Protection Agency
Region 9 Laboratory**

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G054-BS1)

cis-1,2-Dichloroethene	5.47		0.5	"	5.00		109	70-130		
2-Butanone (MEK)	37.6		4	"	40.0		94	57-121		
Bromochloromethane	5.6		0.5	"	5.00		112	71-122		
Chloroform	5.36		0.5	"	5.00		107	70-130		
1,1,1-Trichloroethane	5.57		0.5	"	5.00		111	70-130		
Carbon tetrachloride	6.57		0.5	"	5.00		131	70-130		
1,1-Dichloropropene	5.46		0.5	"	5.00		109	71-119		
Benzene	5.44		0.5	"	5.00		109	70-130		
1,2-Dichloroethane	5.22		0.5	"	5.00		104	70-130		
Trichloroethene	5.54		0.5	"	5.00		111	70-130		
1,2-Dichloropropane	5.55		0.5	"	5.00		111	70-130		
Dibromomethane	5.56		0.5	"	5.00		111	72-121		
Bromodichloromethane	5.66		0.5	"	5.00		113	70-130		
cis-1,3-Dichloropropene	5.31		0.5	"	5.00		106	68-120		
Toluene	5.53		0.5	"	5.00		111	70-130		
trans-1,3-Dichloropropene	5.01		0.5	"	5.00		100	64-126		
1,1,2-Trichloroethane	5.49		0.5	"	5.00		110	70-130		
Tetrachloroethene	5.66		0.5	"	5.00		113	70-130		
1,3-Dichloropropane	5.33		0.5	"	5.00		107	80-114		
Chlorodibromomethane	5.91		0.5	"	5.00		118	70-130		
1,2-Dibromoethane (EDB)	5.47		0.5	"	5.00		109	80-115		
Chlorobenzene	5.48		0.5	"	5.00		110	70-130		
1,1,1,2-Tetrachloroethane	5.64		0.5	"	5.00		113	82-116		
Ethylbenzene	5.66		0.5	"	5.00		113	70-130		
m&p-Xylene	11.2		1	"	10.0		112	70-130		
o-Xylene	5.45		0.5	"	5.00		109	70-130		
Styrene	5.56		0.5	"	5.00		111	70-130		
Bromoform	6.12		0.5	"	5.00		122	70-130		
Isopropylbenzene	5.48		0.5	"	5.00		110	86-114		
Bromobenzene	5.47		0.5	"	5.00		109	84-110		
1,1,2,2-Tetrachloroethane	5.26		0.5	"	5.00		105	81-113		
1,2,3-Trichloropropane	5.19		0.5	"	5.00		104	81-114		
Propylbenzene	5.58		0.5	"	5.00		112	87-115		
2-Chlorotoluene	5.3		0.5	"	5.00		106	84-111		
4-Chlorotoluene	5.23		0.5	"	5.00		105	82-112		
1,3,5-Trimethylbenzene	5.25		0.5	"	5.00		105	85-113		
tert-Butylbenzene	5.28		0.5	"	5.00		106	86-114		
1,2,4-Trimethylbenzene	5.24		0.5	"	5.00		105	84-114		
sec-Butylbenzene	5.35		0.5	"	5.00		107	87-119		
1,3-Dichlorobenzene	5.24		0.5	"	5.00		105	85-110		
p-Isopropyltoluene	5.28		0.5	"	5.00		106	86-117		
1,4-Dichlorobenzene	5.22		0.5	"	5.00		104	70-130		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G054-BS1)

1,2-Dichlorobenzene	5.11		0.5	"	5.00		102	70-130		
Butylbenzene	5.31		0.5	"	5.00		106	85-118		
1,2-Dibromo-3-chloropropane	20.2		2	"	20.0		101	54-133		
1,2,4-Trichlorobenzene	4.97		0.5	"	5.00		99	70-130		
Hexachlorobutadiene	4.95		0.5	"	5.00		99	66-113		
Naphthalene	4.71		0.5	"	5.00		94	58-126		
1,2,3-Trichlorobenzene	4.76		0.5	"	5.00		95	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.64</i>			"	<i>5.00</i>		<i>93</i>	<i>83-116</i>		
<i>Surrogate: Toluene-d8</i>	<i>5.13</i>			"	<i>5.00</i>		<i>103</i>	<i>81-112</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>5.08</i>			"	<i>5.00</i>		<i>102</i>	<i>80-110</i>		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>4.72</i>			"	<i>5.00</i>		<i>94</i>	<i>74-113</i>		

LCS (B18G054-BS2)

Dichlorodifluoromethane	6		0.5	ug/L	5.00		120	70-128		
Chloromethane	5.71		0.5	"	5.00		114	63-123		
Vinyl chloride	5.55		0.5	"	5.00		111	70-130		
Bromomethane	5.72		0.5	"	5.00		114	31-150		
Chloroethane	5.62		0.5	"	5.00		112	74-119		
Trichlorofluoromethane	5.72		0.5	"	5.00		114	72-123		
1,1-Dichloroethene	5.7		0.5	"	5.00		114	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	6.08		0.5	"	5.00		122	73-129		
Acetone	38.2		4	"	40.0		96	61-114		
Dichloromethane	5.29		0.5	"	5.00		106	70-130		
trans-1,2-Dichloroethene	5.55		0.5	"	5.00		111	70-130		
tert-Butyl methyl ether (MTBE)	19.5		2	"	20.0		98	62-117		
1,1-Dichloroethane	5.03		0.5	"	5.00		101	74-115		
2,2-Dichloropropane	6.25		0.5	"	5.00		125	64-144		
cis-1,2-Dichloroethene	5.4		0.5	"	5.00		108	70-130		
2-Butanone (MEK)	32.4		4	"	40.0		81	57-121		
Bromochloromethane	5.53		0.5	"	5.00		111	71-122		
Chloroform	5.28		0.5	"	5.00		106	70-130		
1,1,1-Trichloroethane	6.26		0.5	"	5.00		125	70-130		
Carbon tetrachloride	7.5		0.5	"	5.00		150	70-130		
1,1-Dichloropropene	5.14		0.5	"	5.00		103	71-119		
Benzene	5.3		0.5	"	5.00		106	70-130		
1,2-Dichloroethane	4.6		0.5	"	5.00		92	70-130		
Trichloroethene	5.1		0.5	"	5.00		102	70-130		
1,2-Dichloropropane	5.45		0.5	"	5.00		109	70-130		
Dibromomethane	4.95		0.5	"	5.00		99	72-121		
Bromodichloromethane	5.25		0.5	"	5.00		105	70-130		
cis-1,3-Dichloropropene	4.55		0.5	"	5.00		91	68-120		



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

LCS (B18G054-BS2)

Toluene	5.4		0.5	"	5.00		108	70-130		
trans-1,3-Dichloropropene	4.11		0.5	"	5.00		82	64-126		
1,1,2-Trichloroethane	5.02		0.5	"	5.00		100	70-130		
Tetrachloroethene	5.55		0.5	"	5.00		111	70-130		
1,3-Dichloropropane	4.73		0.5	"	5.00		95	80-114		
Chlorodibromomethane	5.67		0.5	"	5.00		113	70-130		
1,2-Dibromoethane (EDB)	4.89		0.5	"	5.00		98	80-115		
Chlorobenzene	5.27		0.5	"	5.00		105	70-130		
1,1,1,2-Tetrachloroethane	5.77		0.5	"	5.00		115	82-116		
Ethylbenzene	5.81		0.5	"	5.00		116	70-130		
m&p-Xylene	11.7		1	"	10.0		117	70-130		
o-Xylene	5.69		0.5	"	5.00		114	70-130		
Styrene	5.64		0.5	"	5.00		113	70-130		
Bromoform	6.4		0.5	"	5.00		128	70-130		
Isopropylbenzene	5.72		0.5	"	5.00		114	86-114		
Bromobenzene	5.51		0.5	"	5.00		110	84-110		
1,1,2,2-Tetrachloroethane	5.33		0.5	"	5.00		107	81-113		
1,2,3-Trichloropropane	5.27		0.5	"	5.00		105	81-114		
Propylbenzene	5.92		0.5	"	5.00		118	87-115		
2-Chlorotoluene	5.54		0.5	"	5.00		111	84-111		
4-Chlorotoluene	5.46		0.5	"	5.00		109	82-112		
1,3,5-Trimethylbenzene	5.47		0.5	"	5.00		109	85-113		
tert-Butylbenzene	5.08		0.5	"	5.00		102	86-114		
1,2,4-Trimethylbenzene	5.47		0.5	"	5.00		109	84-114		
sec-Butylbenzene	5.46		0.5	"	5.00		109	87-119		
1,3-Dichlorobenzene	5.41		0.5	"	5.00		108	85-110		
p-Isopropyltoluene	5.51		0.5	"	5.00		110	86-117		
1,4-Dichlorobenzene	5.42		0.5	"	5.00		108	70-130		
1,2-Dichlorobenzene	5.29		0.5	"	5.00		106	70-130		
Butylbenzene	5.65		0.5	"	5.00		113	85-118		
1,2-Dibromo-3-chloropropane	21		2	"	20.0		105	54-133		
1,2,4-Trichlorobenzene	5.06		0.5	"	5.00		101	70-130		
Hexachlorobutadiene	4.98		0.5	"	5.00		100	66-113		
Naphthalene	4.9		0.5	"	5.00		98	58-126		
1,2,3-Trichlorobenzene	4.88		0.5	"	5.00		98	65-119		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.54			"	5.00		91	83-116		
<i>Surrogate: Toluene-d8</i>	5.17			"	5.00		103	81-112		
<i>Surrogate: 4-Bromofluorobenzene</i>	5.28			"	5.00		106	80-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.02			"	5.00		100	74-113		

Matrix Spike (B18G054-MS1)

Source: 1807030-01



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike (B18G054-MS1)

Source: 1807030-01

Dichlorodifluoromethane	6.29			0.5 ug/L	5.00	ND	126	62-142		
Chloromethane	5.93			0.5 "	5.00	ND	119	54-144		
Vinyl chloride	6			0.5 "	5.00	ND	120	62-141		
Bromomethane	5.88			0.5 "	5.00	ND	118	32-150		
Chloroethane	5.82			0.5 "	5.00	ND	116	68-136		
Trichlorofluoromethane	5.94			0.5 "	5.00	ND	119	66-142		
1,1-Dichloroethene	5.87			0.5 "	5.00	ND	117	73-134		
1,1,2-Trichloro-1,2,2-trifluoroethane	6.23			0.5 "	5.00	ND	125	65-148		
Acetone	48.3			4 "	40.0	ND	121	20-150		
Dichloromethane	5.33			0.5 "	5.00	ND	107	65-126		
trans-1,2-Dichloroethene	5.81			0.5 "	5.00	ND	116	70-134		
tert-Butyl methyl ether (MTBE)	19.5			2 "	20.0	ND	97	56-128		
1,1-Dichloroethane	5.35			0.5 "	5.00	ND	107	67-134		
2,2-Dichloropropane	6.32			0.5 "	5.00	ND	126	41-150		
cis-1,2-Dichloroethene	5.6			0.5 "	5.00	ND	112	63-137		
2-Butanone (MEK)	39.4			4 "	40.0	ND	99	48-142		
Bromochloromethane	5.71			0.5 "	5.00	ND	114	70-132		
Chloroform	5.5			0.5 "	5.00	ND	110	65-141		
1,1,1-Trichloroethane	6.2			0.5 "	5.00	ND	124	69-116		
Carbon tetrachloride	7.28			0.5 "	5.00	ND	146	65-130		
1,1-Dichloropropene	5.46			0.5 "	5.00	ND	109	71-116		
Benzene	5.57			0.5 "	5.00	ND	111	77-115		
1,2-Dichloroethane	4.96			0.5 "	5.00	ND	99	71-112		
Trichloroethene	5.47			0.5 "	5.00	ND	109	65-124		
1,2-Dichloropropane	5.5			0.5 "	5.00	ND	110	73-118		
Dibromomethane	5.28			0.5 "	5.00	ND	106	65-123		
Bromodichloromethane	5.35			0.5 "	5.00	ND	107	72-118		
cis-1,3-Dichloropropene	4.48			0.5 "	5.00	ND	90	69-113		
Toluene	5.58			0.5 "	5.00	ND	112	84-115		
trans-1,3-Dichloropropene	3.96			0.5 "	5.00	ND	79	67-117		
1,1,2-Trichloroethane	5.17			0.5 "	5.00	ND	103	81-115		
Tetrachloroethene	5.76			0.5 "	5.00	ND	115	81-115		
1,3-Dichloropropane	4.92			0.5 "	5.00	ND	98	82-113		
Chlorodibromomethane	5.35			0.5 "	5.00	ND	107	82-116		
1,2-Dibromoethane (EDB)	5.11			0.5 "	5.00	ND	102	83-115		
Chlorobenzene	5.41			0.5 "	5.00	ND	108	82-110		
1,1,1,2-Tetrachloroethane	5.69			0.5 "	5.00	ND	114	77-116		
Ethylbenzene	5.96			0.5 "	5.00	ND	119	85-112		
m&p-Xylene	11.9			1 "	10.0	ND	119	84-113		
o-Xylene	5.73			0.5 "	5.00	ND	115	82-110		
Styrene	5.73			0.5 "	5.00	ND	115	25-150		
Bromoform	5.2			0.5 "	5.00	ND	104	69-121		



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/25/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike (B18G054-MS1)

Source: 1807030-01

Isopropylbenzene	5.82			0.5 "	5.00	ND	116	80-117		
Bromobenzene	5.62			0.5 "	5.00	ND	112	84-110		
1,1,2,2-Tetrachloroethane	5.2			0.5 "	5.00	ND	104	77-117		
1,2,3-Trichloropropane	5.21			0.5 "	5.00	ND	104	78-115		
Propylbenzene	6.03			0.5 "	5.00	ND	121	83-116		
2-Chlorotoluene	5.61			0.5 "	5.00	ND	112	83-110		
4-Chlorotoluene	5.57			0.5 "	5.00	ND	111	82-110		
1,3,5-Trimethylbenzene	5.57			0.5 "	5.00	ND	111	82-112		
tert-Butylbenzene	5.33			0.5 "	5.00	ND	107	81-115		
1,2,4-Trimethylbenzene	5.58			0.5 "	5.00	ND	112	81-113		
sec-Butylbenzene	5.64			0.5 "	5.00	ND	113	79-122		
1,3-Dichlorobenzene	5.53			0.5 "	5.00	ND	111	82-110		
p-Isopropyltoluene	5.66			0.5 "	5.00	ND	113	78-120		
1,4-Dichlorobenzene	5.48			0.5 "	5.00	ND	110	81-110		
1,2-Dichlorobenzene	5.28			0.5 "	5.00	ND	106	82-110		
Butylbenzene	5.8			0.5 "	5.00	ND	116	72-122		
1,2-Dibromo-3-chloropropane	18.8			2 "	20.0	ND	94	47-131		
1,2,4-Trichlorobenzene	5.11			0.5 "	5.00	ND	102	62-115		
Hexachlorobutadiene	5.07			0.5 "	5.00	ND	101	51-116		
Naphthalene	4.82			0.5 "	5.00	ND	96	47-137		
1,2,3-Trichlorobenzene	4.83			0.5 "	5.00	ND	97	62-117		

Surrogate: 1,2-Dichloroethane-d4	4.90			"	5.00		98	83-116		
Surrogate: Toluene-d8	5.07			"	5.00		101	81-112		
Surrogate: 4-Bromofluorobenzene	5.30			"	5.00		106	80-110		
Surrogate: 1,2-Dichlorobenzene-d4	4.99			"	5.00		100	74-113		

Matrix Spike Dup (B18G054-MSD1)

Source: 1807030-01

Dichlorodifluoromethane	6.48			0.5 ug/L	5.00	ND	130	62-142	3	21
Chloromethane	6.06			0.5 "	5.00	ND	121	54-144	2	20
Vinyl chloride	6.18			0.5 "	5.00	ND	124	62-141	3	19
Bromomethane	6.01			0.5 "	5.00	ND	120	32-150	2	20
Chloroethane	5.96			0.5 "	5.00	ND	119	68-136	2	17
Trichlorofluoromethane	6.11			0.5 "	5.00	ND	122	66-142	3	19
1,1-Dichloroethene	6.09			0.5 "	5.00	ND	122	73-134	4	18
1,1,2-Trichloro-1,2,2-trifluoroethane	6.28			0.5 "	5.00	ND	126	65-148	0.8	19
Acetone	42.3			4 "	40.0	ND	106	20-150	13	31
Dichloromethane	5.54			0.5 "	5.00	ND	111	65-126	4	16
trans-1,2-Dichloroethene	6.02			0.5 "	5.00	ND	120	70-134	4	19
tert-Butyl methyl ether (MTBE)	22			2 "	20.0	ND	110	56-128	12	22
1,1-Dichloroethane	5.48			0.5 "	5.00	ND	110	67-134	2	19
2,2-Dichloropropane	6.23			0.5 "	5.00	ND	125	41-150	1	40



United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B18G054-MSD1)

Source: 1807030-01

cis-1,2-Dichloroethene	5.81			0.5 "	5.00	ND	116	63-137	4	46
2-Butanone (MEK)	36.1			4 "	40.0	ND	90	48-142	9	34
Bromochloromethane	5.93			0.5 "	5.00	ND	119	70-132	4	21
Chloroform	5.75			0.5 "	5.00	ND	115	65-141	4	23
1,1,1-Trichloroethane	6.53			0.5 "	5.00	ND	131	69-116	5	14
Carbon tetrachloride	7.66			0.5 "	5.00	ND	153	65-130	5	14
1,1-Dichloropropene	5.63			0.5 "	5.00	ND	113	71-116	3	15
Benzene	5.58			0.5 "	5.00	ND	112	77-115	0.2	13
1,2-Dichloroethane	5			0.5 "	5.00	ND	100	71-112	0.8	14
Trichloroethene	5.43			0.5 "	5.00	ND	109	65-124	0.7	15
1,2-Dichloropropane	5.63			0.5 "	5.00	ND	113	73-118	2	14
Dibromomethane	5.35			0.5 "	5.00	ND	107	65-123	1	16
Bromodichloromethane	5.47			0.5 "	5.00	ND	109	72-118	2	16
cis-1,3-Dichloropropene	4.81			0.5 "	5.00	ND	96	69-113	7	19
Toluene	5.56			0.5 "	5.00	ND	111	84-115	0.4	15
trans-1,3-Dichloropropene	4.38			0.5 "	5.00	ND	88	67-117	10	19
1,1,2-Trichloroethane	5.29			0.5 "	5.00	ND	106	81-115	2	20
Tetrachloroethene	5.78			0.5 "	5.00	ND	116	81-115	0.3	14
1,3-Dichloropropane	5.06			0.5 "	5.00	ND	101	82-113	3	18
Chlorodibromomethane	5.79			0.5 "	5.00	ND	116	82-116	8	18
1,2-Dibromoethane (EDB)	5.31			0.5 "	5.00	ND	106	83-115	4	20
Chlorobenzene	5.53			0.5 "	5.00	ND	111	82-110	2	13
1,1,1,2-Tetrachloroethane	6.03			0.5 "	5.00	ND	121	77-116	6	17
Ethylbenzene	6.02			0.5 "	5.00	ND	120	85-112	1	13
m&p-Xylene	12			1 "	10.0	ND	120	84-113	0.9	13
o-Xylene	5.99			0.5 "	5.00	ND	120	82-110	4	13
Styrene	5.97			0.5 "	5.00	ND	119	25-150	4	29
Bromoform	6.43			0.5 "	5.00	ND	129	69-121	21	17
Isopropylbenzene	5.96			0.5 "	5.00	ND	119	80-117	2	14
Bromobenzene	6			0.5 "	5.00	ND	120	84-110	7	14
1,1,2,2-Tetrachloroethane	5.91			0.5 "	5.00	ND	118	77-117	13	15
1,2,3-Trichloropropane	5.74			0.5 "	5.00	ND	115	78-115	10	13
Propylbenzene	6.12			0.5 "	5.00	ND	122	83-116	1	12
2-Chlorotoluene	5.82			0.5 "	5.00	ND	116	83-110	4	12
4-Chlorotoluene	5.73			0.5 "	5.00	ND	115	82-110	3	12
1,3,5-Trimethylbenzene	5.71			0.5 "	5.00	ND	114	82-112	2	13
tert-Butylbenzene	5.27			0.5 "	5.00	ND	105	81-115	1	16
1,2,4-Trimethylbenzene	5.8			0.5 "	5.00	ND	116	81-113	4	13
sec-Butylbenzene	5.74			0.5 "	5.00	ND	115	79-122	2	14
1,3-Dichlorobenzene	5.87			0.5 "	5.00	ND	117	82-110	6	12
p-Isopropyltoluene	5.76			0.5 "	5.00	ND	115	78-120	2	13
1,4-Dichlorobenzene	5.88			0.5 "	5.00	ND	118	81-110	7	11



**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G054 - 5030 P&T VOA - VOCs

Prepared & Analyzed: 07/24/18

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B18G054-MSD1)

Source: 1807030-01

1,2-Dichlorobenzene	5.82			0.5 "	5.00	ND	116	82-110	10	12
Butylbenzene	5.9			0.5 "	5.00	ND	118	72-122	2	10
1,2-Dibromo-3-chloropropane	23.2			2 "	20.0	ND	116	47-131	21	15
1,2,4-Trichlorobenzene	5.76			0.5 "	5.00	ND	115	62-115	12	13
Hexachlorobutadiene	5.14			0.5 "	5.00	ND	103	51-116	1	14
Naphthalene	5.9			0.5 "	5.00	ND	118	47-137	20	16
1,2,3-Trichlorobenzene	5.91			0.5 "	5.00	ND	118	62-117	20	17

Surrogate: 1,2-Dichloroethane-d4

4.70

"

5.00

94

83-116

Surrogate: Toluene-d8

5.05

"

5.00

101

81-112

Surrogate: 4-Bromofluorobenzene

5.45

"

5.00

109

80-110

Surrogate: 1,2-Dichlorobenzene-d4

5.35

"

5.00

107

74-113

Batch B18G056 - 3520C CLLE - TPH - Extractable

Prepared: 07/24/18 Analyzed: 07/30/18

Extractable Petroleum Hydrocarbons - Quality Control

Blank (B18G056-BLK1)

TPH - Diesel Range Organics	ND	U		150 ug/L						
TPH - Oil Range Organics	ND	U		600 "						

Surrogate: Hexacosane

108

"

150

72

47-130

LCS (B18G056-BS1)

TPH - Diesel Range Organics	1,410			150 ug/L	1500		94	59-109		
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Surrogate: Hexacosane

104

"

150

69

47-130

Matrix Spike (B18G056-MS1)

Source: 1807030-01

TPH - Diesel Range Organics	1,260			150 ug/L	1430	ND	88	50-126		
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Surrogate: Hexacosane

94.1

"

143

66

47-130

Matrix Spike Dup (B18G056-MSD1)

Source: 1807030-01

TPH - Diesel Range Organics	1,370			150 ug/L	1440	ND	95	50-126	8	37
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Surrogate: Hexacosane

99.6

"

144

69

47-130

Batch B18G060 - 5030 P&T TPH-G - TPH - Purgeable

Prepared & Analyzed: 07/25/18

Purgeable Petroleum Hydrocarbons - Quality Control

Blank (B18G060-BLK1)

TPH - Gasoline Range Organics	ND	U		50 ug/L						
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Surrogate: a,a,a-Trifluorotoluene

127

"

125

101

87-110

LCS (B18G060-BS1)

TPH - Gasoline Range Organics	541			ug/L	500		108	81-119		
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**United States Environmental Protection Agency
Region 9 Laboratory**

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Elizabeth Aubuchon	Enforcement Division, Water Section 1	SDG: 18205A
Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G060 - 5030 P&T TPH-G - TPH - Purgeable

Prepared & Analyzed: 07/25/18
Purgeable Petroleum Hydrocarbons - Quality Control

LCS (B18G060-BS1)

Surrogate: a,a,a-Trifluorotoluene 129 " 125 103 87-110

Matrix Spike (B18G060-MS1) Source: 1807030-01

TPH - Gasoline Range Organics 620 ug/L 500 2.47 123 66-148

Surrogate: a,a,a-Trifluorotoluene 129 " 125 104 87-110

Matrix Spike Dup (B18G060-MSD1) Source: 1807030-01

TPH - Gasoline Range Organics 599 ug/L 500 2.47 119 66-148 3 5

Surrogate: a,a,a-Trifluorotoluene 129 " 125 103 87-110

Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18
Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G061-BLK1)

Hexachloroethane	ND	U		1 ug/L						
Hexachlorobutadiene	ND	U		1 "						
1-Methylnaphthalene	ND	U		1 "						
Hexachlorocyclopentadiene	ND	U		5 "						
2-Chloronaphthalene	ND	U		1 "						
Acenaphthylene	ND	U		1 "						
Acenaphthene	ND	U		1 "						
Fluorene	ND	U		1 "						
Hexachlorobenzene	ND	U		1 "						
Anthracene	ND	U		1 "						
Fluoranthene	ND	U		1 "						
Pyrene	ND	U		1 "						
Benzo(a)anthracene	ND	U		1 "						
Chrysene	ND	U		1 "						
Benzo(b)fluoranthene	ND	U		1 "						
Benzo(k)fluoranthene	ND	U		1 "						
Benzo(a)pyrene	ND	U		1 "						
Indeno(1,2,3-cd)pyrene	ND	U		1 "						
Dibenz(a,h)anthracene	ND	U		1 "						
Benzo(g,h,i)perylene	ND	U		1 "						

<i>Surrogate: 2-Fluorophenol</i>	42.2			"	50.0		84	54-110		
<i>Surrogate: Phenol-d5</i>	42.8			"	50.0		86	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	43.1			"	50.0		86	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	37.7			"	50.0		75	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.2			"	50.0		80	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	41.0			"	50.0		82	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	31.0			"	50.0		62	46-136		



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Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G061 - 3520C CLLE - SVOCs

Prepared: 07/25/18 Analyzed: 07/27/18

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control

Blank (B18G061-BLK1)

<i>Surrogate: Terphenyl-d14</i>	53.4			"	50.0		107	47-130		
LCS (B18G061-BS1)										
Hexachloroethane	4.93			1 ug/L	10.0		49	22-110		
Hexachlorobutadiene	4.39			1 "	10.0		44	22-110		
1-Methylnaphthalene	7.9			1 "	10.0		79	70-130		
Hexachlorocyclopentadiene	20.2			5 "	50.0		40	20-110		
2-Chloronaphthalene	7.69			1 "	10.0		77	43-110		
Acenaphthylene	7.91			1 "	10.0		79	46-110		
Acenaphthene	11.4			1 "	10.0		114	84-135		
Fluorene	9.09			1 "	10.0		91	60-110		
Hexachlorobenzene	8.86			1 "	10.0		89	52-112		
Anthracene	9.88			1 "	10.0		99	57-117		
Fluoranthene	9.97			1 "	10.0		100	68-119		
Pyrene	8.44			1 "	10.0		84	65-120		
Benzo(a)anthracene	9.44			1 "	10.0		94	67-110		
Chrysene	9.58			1 "	10.0		96	67-111		
Benzo(b)fluoranthene	9.31			1 "	10.0		93	60-110		
Benzo(k)fluoranthene	9.68			1 "	10.0		97	65-117		
Benzo(a)pyrene	8.38			1 "	10.0		84	56-110		
Indeno(1,2,3-cd)pyrene	10.1			1 "	10.0		101	62-110		
Dibenz(a,h)anthracene	10.4			1 "	10.0		104	59-119		
Benzo(g,h,i)perylene	10.4			1 "	10.0		104	64-110		

<i>Surrogate: 2-Fluorophenol</i>	39.7			"	50.0		79	54-110		
<i>Surrogate: Phenol-d5</i>	42.7			"	50.0		85	54-110		
<i>Surrogate: 2-Chlorophenol-d4</i>	42.2			"	50.0		84	60-110		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	36.2			"	50.0		72	38-110		
<i>Surrogate: Nitrobenzene-d5</i>	40.3			"	50.0		81	26-134		
<i>Surrogate: 2-Fluorobiphenyl</i>	43.1			"	50.0		86	57-110		
<i>Surrogate: 2,4,6-Tribromophenol</i>	57.2			"	50.0		114	46-136		
<i>Surrogate: Terphenyl-d14</i>	50.3			"	50.0		101	47-130		

Batch B18G065 - - General Biology - Solids, Total

Prepared & Analyzed: 07/26/18

Dissolved

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G065-BLK1)

Total Dissolved Solids	ND	U		20 mg/L						
LCS (B18G065-BS1)										
Total Dissolved Solids	204			mg/L	206		99	85-115		
Duplicate (B18G065-DUP1)										
Total Dissolved Solids	3,940			80 mg/L		3,910		0.8	5	



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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18G088 - - General Inorganic - Anions

Prepared & Analyzed: 07/30/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G088-BLK1)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G088-BLK2)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

LCS (B18G088-BS1)

Chloride	9.85			mg/L	10.0		98	90-110		
Sulfate	10.3			"	10.0		103	90-110		

Duplicate (B18G088-DUP1)

Source: 1807030-01

Chloride	757			50 mg/L		761			0.5	20
Sulfate	1,650			25 "		1,670			0.7	20

Batch B18G096 - - General Inorganic - Anions

Prepared & Analyzed: 07/31/18

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Blank (B18G096-BLK1)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G096-BLK2)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G096-BLK3)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

Blank (B18G096-BLK4)

Chloride	ND	U		1 mg/L						
Sulfate	ND	U		0.5 "						

LCS (B18G096-BS1)

Chloride	9.96			mg/L	10.0		100	90-110		
Sulfate	10.3			"	10.0		103	90-110		

LCS (B18G096-BS2)

Chloride	10.1			mg/L	10.0		101	90-110		
Sulfate	10.5			"	10.0		105	90-110		

Batch B18H001 - 200 Series Digest - Metals by 200.7,Total

Prepared: 08/01/18 Analyzed: 08/09/18

Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H001-BLK1)

Calcium	ND	U		100 ug/L						
Magnesium	ND	U		500 "						
Potassium	ND	U		2,000 "						
Sodium	ND	U		500 "						

Blank (B18H001-BLK2)

Calcium	ND	U		100 ug/L						
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Project Number: R18E03	75 Hawthorne Street	Reported: 08/14/18 13:58
Project: Navajo Discharging Wells July 2018	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B18H001 - 200 Series Digest - Metals by 200.7, Total

Prepared: 08/01/18 Analyzed: 08/09/18
Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H001-BLK2)

Sodium	ND	U	500	"						
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LCS (B18H001-BS1)

Calcium	1,020		100	ug/L	1000		102	85-115		
Magnesium	2,020		500	"	2000		101	85-115		
Potassium	10,200		2,000	"	10000		102	85-115		

LCS (B18H001-BS2)

Sodium	3,020		500	ug/L	3000		101	85-115		
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Matrix Spike (B18H001-MS1)

Source: 1807030-01

Calcium	46,500	Q10	100	ug/L	1000	44,200	232	70-130		
Magnesium	12,400	Q10	500	"	2000	10,200	113	70-130		
Potassium	21,800		2,000	"	10000	10,200	116	70-130		

Matrix Spike (B18H001-MS3)

Source: 1807030-01RE1

Sodium	1,270,000	Q10	5,000	ug/L	3000	1,240,000	NR	70-130		
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Matrix Spike Dup (B18H001-MSD1)

Source: 1807030-01

Calcium	46,900	Q10	100	ug/L	1000	44,200	276	70-130	1	20
Magnesium	12,400	Q10	500	"	2000	10,200	111	70-130	0.3	20
Potassium	21,900		2,000	"	10000	10,200	117	70-130	0.5	20

Matrix Spike Dup (B18H001-MSD3)

Source: 1807030-01RE1

Sodium	1,250,000	Q10	5,000	ug/L	3000	1,240,000	398	70-130	1	20
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Batch B18H002 - 200 Series Digest - Metals, ICP/MS, Total

Prepared: 08/01/18 Analyzed: 08/02/18
Total Metals by EPA 200 Series Methods - Quality Control

Blank (B18H002-BLK1)

Arsenic	ND	U	0.5	ug/L						
Cadmium	ND	U	0.4	"						
Chromium	ND	U	1	"						
Copper	ND	U	2	"						
Lead	ND	U	1	"						
Nickel	ND	U	1	"						
Selenium	ND	U	1	"						
Silver	ND	U	0.25	"						
Thorium	ND	U	1	"						
Uranium	ND	U	0.25	"						
Zinc	ND	U	5	"						

LCS (B18H002-BS1)

Arsenic	39.8		0.5	ug/L	40.0		100	85-115		
Cadmium	39.8		0.4	"	40.0		100	85-115		
Chromium	40		1	"	40.0		100	85-115		
Copper	41.4		2	"	40.0		104	85-115		
Lead	40.1		1	"	40.0		100	85-115		
Nickel	39.8		1	"	40.0		100	85-115		
Selenium	40.2		1	"	40.0		101	85-115		



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Project Manager: Elizabeth Aubuchon Project Number: R18E03 Project: Navajo Discharging Wells July 2018	Enforcement Division, Water Section 1 75 Hawthorne Street San Francisco CA, 94105	SDG: 18205A Reported: 08/14/18 13:58
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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H002 - 200 Series Digest - Metals, ICP/MS, Total										
							Prepared: 08/01/18 Analyzed: 08/02/18			
Total Metals by EPA 200 Series Methods - Quality Control										
LCS (B18H002-BS1)										
Silver	39.9		0.25	"	40.0		100	85-115		
Thorium	38.9		1	"	40.0		97	85-115		
Uranium	41.2		0.25	"	40.0		103	85-115		
Zinc	37.7		5	"	40.0		94	85-115		
Matrix Spike (B18H002-MS1) Source: 1807030-01										
Arsenic	46.6		0.5	ug/L	40.0	6.2	101	70-130		
Cadmium	33.6		0.4	"	40.0	ND	84	70-130		
Chromium	41.4		1	"	40.0	ND	104	70-130		
Copper	50.4		2	"	40.0	15.9	86	70-130		
Lead	40.6		1	"	40.0	14.7	65	70-130		
Nickel	33.9		1	"	40.0	1.87	80	70-130		
Selenium	36.3		1	"	40.0	2.16	85	70-130		
Silver	35.8		0.25	"	40.0	ND	90	70-130		
Thorium	28.6		1	"	40.0	ND	72	70-130		
Uranium	30.4		0.25	"	40.0	0.967	74	70-130		
Zinc	37.5		5	"	40.0	11.2	66	70-130		
Matrix Spike Dup (B18H002-MSD1) Source: 1807030-01										
Arsenic	45.6		0.5	ug/L	40.0	6.2	98	70-130	2	20
Cadmium	32.7		0.4	"	40.0	ND	82	70-130	3	20
Chromium	40.9		1	"	40.0	ND	102	70-130	1	20
Copper	49.5		2	"	40.0	15.9	84	70-130	2	20
Lead	40.4		1	"	40.0	14.7	64	70-130	0.6	20
Nickel	33		1	"	40.0	1.87	78	70-130	3	20
Selenium	35.3		1	"	40.0	2.16	83	70-130	3	20
Silver	35.4		0.25	"	40.0	ND	88	70-130	1	20
Thorium	28.4		1	"	40.0	ND	71	70-130	0.8	20
Uranium	31.1		0.25	"	40.0	0.967	75	70-130	2	20
Zinc	35.8		5	"	40.0	11.2	62	70-130	4	20
Batch B18H014 - Alkalinity - Alkalinity										
							Prepared & Analyzed: 08/02/18			
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Blank (B18H014-BLK1)										
Hydroxide Alkalinity	ND	U			10 mg/L					
Carbonate Alkalinity	ND	U			10 "					
Bicarbonate Alkalinity	ND	U			10 "					
Total Alkalinity	ND	U			10 "					
LCS (B18H014-BS1)										
Total Alkalinity	47.8				10 mg/L	48.7	98	85-115		
Duplicate (B18H014-DUP1) Source: 1807030-01										
Hydroxide Alkalinity	ND	U			10 mg/L		ND			20
Carbonate Alkalinity	ND	U			10 "		ND			20
Bicarbonate Alkalinity	308				10 "		311		0.7	20



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18H014 - Alkalinity - Alkalinity										
Prepared & Analyzed: 08/02/18										
Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control										
Duplicate (B18H014-DUP1)										
Source: 1807030-01										
Total Alkalinity	308		10	"		311			0.7	20
Batch B18H026 - 245.1 Hg Prep. - Mercury by 245.1 (total)										
Prepared: 08/06/18 Analyzed: 08/07/18										
Total Metals by EPA 200 Series Methods - Quality Control										
Blank (B18H026-BLK1)										
Mercury	ND	U	0.03	ug/L						
LCS (B18H026-BS1)										
Mercury	0.197		0.03	ug/L	0.200		98	85-115		
Matrix Spike (B18H026-MS1)										
Source: 1807030-01										
Mercury	0.193		0.03	ug/L	0.200	ND	96	70-130		
Matrix Spike Dup (B18H026-MSD1)										
Source: 1807030-01										
Mercury	0.193		0.03	ug/L	0.200	ND	96	70-130	0.1	20



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Project: Navajo Discharging Wells July 2018

Enforcement Division, Water Section 1

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18205A

Reported: 08/14/18 13:58

Qualifiers and Comments

- Q6 Matrix spike/matrix spike duplicate precision criteria were not met for this analyte (see MS/MSD results for this batch in QC summary).
 - Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
 - Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
 - N TIC Tentatively Identified Compound - This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
 - F13 Fuel or Product Type: mixed or unknown
 - C1 The reported concentration for this analyte is below the quantitation limit.
 - U Not Detected
 - NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.