Alternative Water Solutions Program
2014 Annual Report

North Pole, Alaska

Prepared for
Flint Hills Resources Alaska, LLC

February 25, 2015

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Alternative Water Solutions Program
2014 Annual Report

North Pole, Alaska

February 25, 2015

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List of Abbreviations and Acronyms

ADEC	Alaska Department of Environmental Conservation
AHL	Arctic Home Living
ARCADIS	ARCADIS, US, Inc.
AWS	alternative water solutions
AWS-MP	Alternative Water Solutions Program-Management Plan
Barr	Barr Engineering Company
COC	contaminants of concern
FHRA	Flint Hills Resources Alaska, LLC
FS	feasibility study
GAC	granular activated carbon
IRMs	interim remediation measures
NPR	North Pole Refinery
POE	Point-of-Entry
PWS	public water system
PW-ID	private well identification number
QA	quality assurance
QC	quality control
SWI	Shannon & Wilson, Inc.
The City	The City of North Pole, Alaska
WQA	Water Quality Association

1.0 Introduction

On behalf of Flint Hills Resources Alaska, LLC (FHRA), Barr Engineering Co. (Barr) prepared this Alternative Water Solutions Program – 2014 Annual Report (annual report). This annual report has been prepared in accordance with the Alternative Water Solutions Program-Management Plan (AWS-MP, Barr 2014), to document identification, installation, and maintenance of alternative water solutions (AWS) in the North Pole area in 2014.

Previous investigations conducted by FHRA have determined that a plume of dissolved-phase sulfolane exists in the groundwater downgradient of the North Pole Refinery (NPR) in North Pole, Alaska. Working closely with ADEC, FHRA has initiated a comprehensive response plan which includes delineation of the extent of the sulfolane plume and implementation of onsite remediation measures. In addition to this response, FHRA has continued its commitment to the community in 2014 to providing these AWS to the affected and potentially affected community while ADEC reviews scientific information to determine a safe sulfolane drinking water cleanup level. These AWS options include long-term delivery of bottled water, bulk water tank systems, and Point-of-Entry (POE) in-home water treatment systems.

The data, analyses, and conclusions in this report are part of a collaborative effort among FHRA's consulting team members. The team that provided assistance related to the AWS program includes qualified professionals from Shannon & Wilson, Inc. (SWI), ARCADIS U.S., Inc. (ARCADIS), and Barr. FHRA has engaged these consulting firms to perform various tasks on the project. This report, therefore, encompasses contributions from professionals from each firm in the text, tables, and figures presented.

1.1 Current Extent of Sulfolane Plume

FHRA has installed a total of 159 active offsite monitoring wells to characterize the nature and extent of sulfolane impacts and permafrost depths offsite. The total numbers of wells reported above is different than in previous reports as monitoring wells in the MW-148 well nest are now being accounted as onsite wells. Since November 2009, groundwater samples have been collected from 852 private wells (667 inside search limits and 185 outside search limits) and analyzed for sulfolane. The approximate extent of dissolved sulfolane in offsite monitoring wells and private wells is shown on Figure 1.

1.1.1 Buffer Zone

As described in the AWS-MP (Barr 2014), a Buffer Zone of properties with private wells has been established around the perimeter of the sulfolane plume. These properties have not had detections in their wells, but are located adjacent to or near properties with sulfolane detections. Due to their proximity to properties with sulfolane detections, the properties located within the designated Buffer Zone are provided interim bottled water and their wells are sampled annually. The Buffer Zone properties as determined for 2015 are shown on Figure 2. In addition to the Buffer Zone properties, Figure 2 also includes the 2015 planned annual resampling locations. FHRA has elected in 2015 to expand resampling to include several residences that are outside of the designated Buffer Zone. The AWS-MP (Barr 2014) describes search areas which are also included on Figure 2.

Locations with first detections of sulfolane in drinking water wells in 2014 are shown on Figure 2. These locations were either 1) offered interim bottled water, 2) were already on interim bottled water, or 3) a long-term AWS was selected as shown on Figure 3. One location remains vacant at this time.

There are several locations without detectable sulfolane that are within the plume and Buffer Zone areas but do not receive interim bottled water (see Figure 2). These locations are part of the annual resampling and FHRA has provided or offered bottled water to all these locations. The reasons for not receiving interim bottled water at present include the following: the residence is vacant (seasonally in some cases), the well is no longer active, the property owner has refused, the well is not used as a drinking-water source, or the property owner is providing their own water.

1.2 Annual Newsletter

The AWS-MP (Barr 2014) specifies that an annual direct communication newsletter is to be distributed during the first quarter of each year to affected property owners with an AWS, and property owners within the Buffer Zone. FHRA distributed three newsletters in the first quarter of 2014 and they are provided as Attachment A. FHRA also gave a presentation to the Greater Fairbanks Board of Realtors in February 2014 as another means to ensure that potential property owners in the area have been advised of the AWS program.

1.3 Annual Report Organization

This plan includes the following sections:

- *Section 1 – Introduction*: Provides an overview and background of the report including introduction of the current extent of the sulfolane plume and the Buffer Zone.
- *Section 2 – AWS Program Data Summary:* Provides a summary of the locations with an AWS, the results of monitoring at each well, and the source and delivery schedules for selected AWS. Also includes water usage at a greenhouse with an AWS and monitoring data for the City of North Pole.
- *Section 3 – AWS Program Updates:* Provides a summary of the issues that occurred within the year and FHRA's mitigation activities. Also includes proposed changes for 2015.
- *Section 4 – Summary:* Provides a conclusion for the AWS program in 2014.
- *Section 5 – References*.

2.0 AWS Program Data Summary

2.1 AWS Property Information

Through 2014, FHRA has provided 343 long-term AWS at 320 properties as shown in Table 1 (note that some properties have more than one AWS). New AWS installed in 2014 include 5 POE treatment systems, 4 bulk water tanks, and 1 long-term bottled water option. A map showing AWS installed to date, as listed below, is included on Figure 3.

- 165 POE treatment systems
- 117 bulk water tanks
- 33 long-term bottled water options

In 2010, 28 residences were connected to City water (Table 1).

In addition to the long-term solutions provided above, FHRA is currently providing interim bottled water to 236 addresses (some addresses have multiple residences) that are either affected properties inside the plume that have not selected a long-term AWS, properties that have not had a detection of sulfolane, or properties that are located within or near the Buffer Zone of the plume. FHRA has also provided 50 garden tanks to affected properties that do not have a City water connection.

As described in the AWS-MP (Barr 2014), currently FHRA conducts a series of tasks on a routine basis to identify new construction or property transactions within the plume or Buffer Zone area. Table 2 provides a summary of property transactions that were noted by FHRA in 2014.

2.2 Private Well Water Data Summary

In 2014, FHRA completed monitoring of private wells through the following programs:

- Annual sampling of private wells within the Buffer Zone and resampling program;
- Initial sampling of private wells inside and outside the sulfolane plume that have never been sampled;
- Quarterly sampling of private wells that are part of the Deep Residential Well monitoring program;
- POE treatment system sampling during scheduled granular activated carbon (GAC) changeouts; and
- Focused sampling such as extended search areas or call-in requests from homeowners.

Results and/or laboratory reports for this monitoring were provided to ADEC in the routine quarterly groundwater monitoring reports.

As noted above, FHRA completes monitoring of private wells with POE systems during each GAC changeout. Table 3 provides a summary of monitoring results for sulfolane in private wells with POE systems. A summary map of private well locations was provided as Appendix B of the Fourth Quarter 2014 Offsite Groundwater Monitoring Reporting (ARCADIS, 2015). Included in Table 3 are results for raw water (Port A) and treated water (Port C or Port D), and commercial locations have been noted. Analytical laboratory reports and ADEC quality assurance/quality control (QA/QC) checklists for 2014 have been previously provided to ADEC in the quarterly groundwater monitoring reports submitted by FHRA, and are not duplicated in this report. Below are points of clarification for the results presented in Table 3:

- In some instances a raw water sample was collected without a treated water sample on the same date. These instances are related to collection of a raw water sample for a different purpose, such as the deep residential well monitoring program, outside of the POE system maintenance.
- High-frequency sampling was completed at select locations (PW-IDs 0157, 0225, 0232, 0657, 1098) in 2010 and 2011 as part of POE in-home pilot testing. These results have been submitted in previous reports including Appendix B of the AWS-MP (Barr 2014) and are not repeated in this report.
- In POE system monitoring results prior to 2012, FHRA was in development of the sampling protocol and sampled either Port C or Port D to confirm removal of sulfolane. Port C is located after the primary GAC vessel(s) and Port D is located after the redundant GAC vessel.
- In some locations (e.g., PW-IDs 0511, 1155, 1395) one raw water sample result is shown during each monitoring event, but multiple treated water results are shown (i.e. 1-C, 2-C, 3-C, 1-D, 2-D, and 3-D). This is due to the presence of multiple POE treatment systems, so the treated water is sampled at Port C and Port D of each system.

As further described in Section 3.2, in 2014 FHRA began collection of additional samples during each GAC vessel changeout that are referred to as C1, C2, D1, and D2. C1 and D1 samples are collected from sample ports C (primary vessel effluent) and D (treatment system effluent), respectively, prior to system maintenance activities. C2 and D2 samples are also collected from sample ports C and D, respectively, following system maintenance activities. D2 samples are only analyzed in the event of a C2 sample sulfolane detection. Samples marked as "D" will continue to be collected; D samples represent effluent conditions prior to a maintenance event where the redundant tank is not replaced.

This annual report includes data received approximately two weeks prior to the end of the fourth quarter 2014 (through December 15, 2014). The purpose of this data cut-off date is to allow appropriate time for data review and validation prior to submittal of results and laboratory data packets with the quarterly groundwater monitoring reports. This same data cut-off is used for this annual report to maintain consistency with data already submitted to ADEC.

2.3 POE System Performance

FHRA has installed POE treatment systems which use sediment filters, a softener, UV filter, and GAC vessels to remove sulfolane. The POE treatment systems also include a water meter that transmits a

remote signal to allow tracking of the water usage to schedule routine maintenance, and a series of sampling ports that will allow sampling of the raw water and treated water during service visits. Arctic Home Living (AHL) of Fairbanks has been contracted by FHRA to provide maintenance of the POE treatment systems.

As noted in Section 2.2, data included within this report were received from the laboratory prior to December 15, 2014. However, FHRA is noting that after December 15, 2014, but prior to submittal of this report, results were received for two locations that had detectable concentrations of sulfolane in samples collected from sample port D, as described in the following section.

2.3.1 Treatment System Performance

As shown in Table 3, the sulfolane results in the treated water samples have been below detection limits during each monitoring event in each POE system through December 15, 2014. These data verify that the POE systems are properly treating the groundwater and performing as designed. The data also confirm that proper operation and maintenance of the systems are being performed. As noted above, two sulfolane detections in treated water samples were received prior to submittal of this report. In each case, as described below, the concentrations reported were low-level and quickly mitigated.

The first sulfolane detection was reported in the D port sample collected from PW-0162 on 12/8/2014 (4.4 J µg/L). Upon receipt of the results FHRA immediately conducted interviews with the tenants and determined that the system was exhausted prior to regularly scheduled maintenance due to an unreported water leak that had previously occurred within the house, which resulted in excessive water usage and throughput through the GAC system. The primary GAC tank had been replaced during the planned maintenance activities on 12/8/2014. Upon receiving the results, the redundant GAC vessel was immediately replaced on 12/19/2014. Follow up samples from port D did not have detectable concentrations of sulfolane and these results will be included in the 2015 annual report. Note that the leak in the home was related to a non-POE system water pipe, and the leak was repaired by the homeowner.

The second noted detection occurred at 3.2 J µg/L in the D2 sample (collected immediately after GAC vessel changeout, as noted above) from PW-0648 on 12/09/2014. Upon evaluation it appears the detection was due to limited carbon-settling time and bedding of the vessel for the recently installed tanks. Follow up samples from port D did not have detectable concentrations of sulfolane. These results will be included in the 2015 annual report.

2.3.2 Volume of Water Treated

Water usage monitoring was performed on a monthly basis at each POE system in 2014 to confirm water usage rates and to determine the GAC replacement schedule. This monitoring is completed via remote reading of a flow totalizer unit by AHL personnel. Water usage rates were calculated and compared to the treatment volumes included in the Water Quality Association (WQA) certification, as described in the AWS-MP (Barr 2014), and used to schedule GAC vessel replacements. Water usage in 2014 for each POE system is summarized in Table 4, and totals to approximately 7,800,000 gallons for 2014.

Through 2014, the POE systems have treated approximately 23,000,000 gallons of water.

2.3.3 GAC Usage

As noted in Section 2.3.1, scheduling of GAC changeout is determined by the water usage rate and raw water sulfolane concentration in accordance with the WQA certification. In 2014, changeout was completed for 514 carbon vessels. Each vessel contains 2.5 cubic feet of GAC, for a total changeout of 1,285 cubic feet of GAC in 2014.

2.4 Bottled and Bulk Water Supply Information

As described in Section 2.1, FHRA currently provides bottled or bulk water for residents who have selected these options as their AWS or are on interim bottled water. Additionally, water is provided to residences with a garden tank. The following sections provide a summary of the source and delivery schedule for the bottled and bulk water supplies.

2.4.1 Bottled Water

In 2014, bottled water delivery was provided on a weekly basis by Spring Alaska. Spring Alaska receives the water from Twin Springs Water (Alaska Public Water System (PWS) ID # AK312813).

Spring Alaska contacts residents weekly to confirm the number of bottles required in advance of delivery. This allows residents receiving this service to manage delivery to their individual needs from week to week. In 2014, 105,675 gallons of water were delivered to these locations. This water volume is estimated based on water delivery invoiced in 2014. Currently, residents of 33 properties have selected long-term bottled water as their long-term AWS. FHRA is also currently providing interim bottled water to 236 residences that are either affected properties inside the plume that have not selected a long-term AWS or have not had a detection of sulfolane, or are located within or near the Buffer Zone of the plume.

2.4.2 Bulk Water Tanks

In 2014, water deliveries for bulk tanks were completed by two local suppliers who are permitted by the State of Alaska; Pioneer Wells Inc. (Pioneer Wells) and H20 2 U, LLC (Water Wagon). Pioneer Wells sources their water from either a well in Fairbanks and treats the water in a water softener system prior to delivery to affected residents (PWS ID #AK2310714), or an untreated well (upon request from homeowners) located at Fox Spring (PWS ID #AK2312156). Water Wagon sources treated water from College Utilities in Fairbanks (PWS ID# AK2310900). Homeowners have the option of receiving water from Pioneer Wells or Water Wagon, depending upon their preference. There are currently 117 bulk water tanks installed, and FHRA provided a total of 3,319,741 gallons to these locations in 2014. Water volumes provided are estimated based on water deliveries invoiced in 2014.

The delivery schedule for commercial properties in 2014 was weekly depending upon usage. For residential properties, the delivery schedule was weekly or twice-monthly depending upon usage.

2.4.3 Garden Tanks

For residents that have selected to have a garden tank installed, FHRA has provided up to 2,000 gallons per season. In 2014, the water was supplied by Pioneer Wells, with water sourced from an untreated well located at Fox Spring (PWS ID# AK2312156), untreated well located in Fairbanks (PWS ID# A2310714), or treated water from Fairbanks (PWS ID# AK2110714). There are currently 50 garden tanks installed, and FHRA provided a total of 27,607 gallons to these locations in 2014.

2.5 Commercial Greenhouse Locations

There is currently one commercial greenhouse located within the impacted area; Hawks Greenhouse at 2260 Old Richardson Highway. FHRA has installed four bulk water tanks at this location with a total storage capacity of 10,000 gallons. The bulk water tanks are filled by Pioneer Wells, with water sourced from an untreated well located at Fox Spring (PWS ID# AK2312156). In 2014, the bulk water supplier, contracted by FHRA, provided a total of 93,165 gallons to this location. The delivery schedule was two or three times per week, dependent upon water usage, from April through August.

2.6 City of North Pole Water Supply

The City of North Pole samples its water supply wells routinely and analyzes for sulfolane on a semi-annual basis (PWS ID# AK2310675). The City is responsible for submittal of the results to ADEC.

Water quality for the City of North Pole wells can be obtained through the ADEC website (http://dec.alaska.gov:8080/DWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=3699&tinwsys_st_code=AK&wsnumber=AK2310675); however, FHRA is not aware of the results as the website does not currently provide the source water sulfolane results.

3.0 AWS Program Updates

3.1 Description of Issues, Problems or Complaints

FHRA has asked affected residents to contact the FHRA Groundwater Office if they have any problems or concerns with their chosen AWS. In 2014 very few complaints were made. A few complaints were received from individuals not receiving all the bottled water they requested. This was due to those individuals not returning all their empty bottles; issues have been resolved with personal contacts between the homeowners and the water delivery company.

In February 2014, one report of copper staining was reported and resolved by replacing the accessible copper pipe at the residence, after which there were no further complaints.

FHRA also learned some residents shut off power to their POE systems during high ground water events in the summer so that backwash would not add water to flooded septic systems. Upon learning this information, FHRA instructed AHL to contact the property owners, schedule and perform system wellness checks, and restart the systems. During that time, a few property owners commented to AHL about an odor issue, but did not contact FHR; no additional comments have been received regarding odor.

One bulk water customer was concerned about cloudy conditions in their tap water. Upon receiving notice of this issue, bottled water was provided by FHRA. To investigate, samples for visual observation were collected of the delivered water from Pioneer, the bulk tank water at the outlet of the domestic water pump, and at the tap. While the delivered water and the water in the bulk tank (collected at the pump) were clear, the tap water was perceived to be slightly cloudy. After review of the samples, the homeowner agreed that there was no information to indicate the water was not safe to use. Bottle service was discontinued and no complaints regarding that issue have been reported since then.

3.2 AWS Program Changes

FHRA evaluated the sampling program in 2014 for potential data gaps. The sampling program was modified on November 12, 2014 to provide additional assurances that the POE systems are operating as designed immediately before and after GAC vessel changeouts. The samples added include C1 and D1 samples, which are collected from sample ports C and D, respectively, prior to system maintenance activities. Collection of C2 and D2 samples was also added following changeout of a GAC vessel. The D2 samples are only collected following a redundant tank change out and analyzed if there is detection of sulfolane in the C2 sample. Samples reported as D will continue to be collected; D samples represent effluent conditions prior to a maintenance event where the redundant tank is not replaced.

4.0 Summary

In 2014, FHRA provided sulfolane-free drinking water to impacted residents and businesses of North Pole through delivery of bottled water (on an interim or long-term basis), delivery of bulk water, and operation of POE treatment systems. The following is a summary of the total volumes of clean water provided by alternative water solutions in 2014:

- 105,675 gallons of bottled water through delivery of bottled water on an interim or long-term basis.
- 3,440,513 gallons of bulk water, including delivery to residences, businesses, a greenhouse, and garden tanks.
- Treatment of approximately 7,800,000 gallons of water through POE treatment systems, with all sampling results reported through December 15, 2014, confirming non-detectable sulfolane concentrations in all treated water samples. Since initial installation, the POE treatment systems have treated approximately 23,000,000 gallons of water with non-detectable sulfolane concentrations in all treated water sampling results reported through December 15, 2014.

5.0 References

Alaska Department of Environmental Conservation. 2015. Division of Environmental Health, Drinking Water Program. http://dec.alaska.gov:8080/DWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=3699&tinwsys_st_code=AK&wsnumber=AK2310675

ARCADIS, 2015. Fourth Quarter 2014 Offsite Groundwater Monitoring Report, North Pole Refinery, Flint Hills Resources Alaska, LLC, January 2015.

Barr Engineering Company, 2014. Alternative Water Solutions Program – Management Plan, Flint Hills Resources Alaska, LLC, October 2014.

Tables

Table 1
AWS Installation Summary
Alternative Water Solutions Program - 2014 Annual Report
North Pole, Alaska

	Number of Solutions per Installation Year					
	2010	2011	2012	2013	2014	Totals (through 2014)
Bulk Water	7	78	18	10	4	117
Long-Term Bottled Water	--	24	5	3	1	33
POE Treatment System	--	126	28	6	5	165
Total AWS						**315**
Connection to City Water	28	--	--	--	--	28
Grand Total						**343**

Table 2
2014 Property Transactions
Flint Hills Resources Alaska, LLC
North Pole, Alaska

	Private Well Identification Number (PW ID #)
1	466
2	542
3	543
4	546
5	561
6	637
7	701
8	725
9	734
10	735
11	745
12	746
13	748
14	768
15	769
16	795
17	801
18	853
19	856
20	938
21	948
22	1156
23	1157
24	1162
25	1172
26	1206
27	1232

Table 3
POE Treatment Systems Analytical Data Summary
Alternative Water Solutions Program - 2014 Annual Report
North Pole, Alaska

Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0157	11/17/2014	37.1			<2.40	<2.40	<2.40	<2.40														
	08/18/2014	44.0	47.8		<2.40	<2.40		<2.40														
	05/23/2014	52.9			<2.00	<2.00		<2.00														
	03/03/2014	53.3	54.1		<3.00	<3.00		<3.00J*														
	11/26/2013	53.6			<3.10	<3.10		<3.10														
	08/30/2013	68.9J*			<3.10J*	<3.10J*		<3.10J*														
	04/05/2013	78.5J*			<3.10J*	<3.10J*		<3.10J*														
	12/19/2012	103JH*			<3.10J*	<3.10J*		<3.10J*														
	07/02/2012	110JL*			<3.10J*	<3.10J*		<3.10J*														
	01/25/2012	114J*			<3.10J*	<3.10J*		<3.10J*														
	12/12/2011	115J*				<3.10J*		<3.10J*														
	08/17/2011	129J*		3.40J*																		
	01/04/2010	95.4	90.6																			
0158	11/14/2014	52.6			<2.40	<2.40		<2.40														
	10/06/2014				<2.40	<2.40																
	09/15/2014	51.0			<2.40	3.10J		<2.40														
	07/30/2013	94.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/09/2011	202J*			<3.10J*	<3.10J*		<3.10J*														
	07/28/2011	213J*		<3.10J*																		
	01/20/2010	217																				
0159	09/30/2014	43.7	44.9		<2.40	<2.40		<2.40														
	08/26/2014	50.7	50.7		<2.40	<2.40		<2.40														
	06/02/2014	71.3	69.7		<2.00	<2.00		<2.00														
	03/14/2014	65.3			<3.00	<3.00		<3.00														
	01/17/2014	81.3	74.8		<3.00	<3.00		<3.00														
	11/19/2013	71.6	66.2		<3.10	<3.10		<3.10														
	09/27/2013	70.0	71.6		<3.10	<3.10		<3.10														
	08/20/2013	77.5J*			<3.10J*	<3.10J*		<3.10J*														
	05/28/2013	96.1J*			<3.10J*	<3.10J*		<3.10J*														
	03/12/2013	119J*			<3.10J*	<3.10J*		<3.10J*														
	12/18/2012	124JH*			<3.10J*	<3.10J*		<3.10J*														
	10/22/2012	115J*			<3.10J*	<3.10J*		<3.10J*														
	08/06/2012	141J*			<3.10J*	<3.10J*		<3.10J*														
	06/11/2012			<3.10				<3.10														
	05/25/2012	152J*			<3.10J*	26.4J*		<3.10J*														
	02/03/2012	167J*			<3.10J*	<3.10J*		<3.10J*														
	07/27/2011	233J*		<3.10J*																		
	01/09/2010	255																				
0160	07/01/2014	157			<2.40	<2.40		<2.40														
	02/03/2014	164			<3.00	<3.00		<3.00														
	04/12/2013	255J*			<3.10J*	<3.10J*		<3.10J*														
	01/25/2012	360J*			<3.10J*	<3.10J*		<3.10J*														
	08/17/2011	326J*		<3.10J*																		
	03/12/2011	21.2																				

Table 3
POE Treatment Systems Analytical Data Summary
Alternative Water Solutions Program - 2014 Annual Report
North Pole, Alaska

Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0161	11/04/2014	80.3			<2.40	<2.40		<2.40														
	08/29/2014	84.9	88.1		<2.40	<2.40		<2.40														
	05/30/2014	118	115		<2.00	<2.00		<2.00														
	02/17/2014	129			<3.00	<3.00		<3.00														
	11/22/2013	106	110		<3.10	<3.10		<3.10														
	09/13/2013	110			<3.10	<3.10		<3.10														
	06/14/2013	159J*			<3.10J*	<3.10J*		<3.10J*														
	03/29/2013	191J*			<3.10J*	<3.10J*		<3.10J*														
	01/08/2013	155J*			<3.10J*	<3.10J*		<3.10J*														
	10/16/2012	186J*			<3.10J*	<3.10J*		<3.10J*														
	06/28/2012	223J*			<3.10J*	<3.10J*		<3.10J*														
	03/15/2012	236J*			<3.10J*	<3.10J*		<3.10J*														
	11/02/2011	190J*		<3.10J*				<3.10J*														
	06/21/2011	254J*		<0.790J*																		
	01/23/2010	303	277																			
0162	10/21/2014	53.2			<2.40	<2.40	<2.40	<2.40														
	03/10/2014	71.2	67.6		<3.00	<3.00		<3.00														
	04/02/2013	102J*			<3.10J*	<3.10J*		<3.10J*														
	12/13/2011	166J*			<3.10J*	<3.10J*		<3.10J*														
	07/18/2011	210J*		<0.790J*																		
	02/01/2010	248																				
0164	08/12/2014	67.7	75.0		<2.40	<2.40		<2.40														
	12/27/2013	97.7	84.9		<3.00	<3.00		<3.00														
	07/26/2013	114J*			<3.10J*	<3.10J*		<3.10J*														
	01/14/2013	143J*			<3.10J*	<3.10J*		<3.10J*														
	08/10/2011	220J*		<3.10J*																		
	02/11/2010	255																				
0217	11/12/2014	148																				
	08/26/2014	145	147																			
	05/27/2014	147																				
	03/10/2014	156																				
	03/07/2014	138	150		<3.00	<3.00		<3.00														
	11/19/2013	153																				
	09/05/2013	152																				
	06/05/2013	163																				
		164																				
	05/17/2013	164J*			<3.10J*	<3.10J*		<3.10J*														
	03/11/2013	173																				
	07/18/2012	169J*			<3.10J*	<3.10J*		<3.10J*														
	09/22/2011	211J*						<3.10J*														
	04/14/2011	217JL*		<5.00J*																		
	03/10/2011	154																				
	01/06/2010	108																				
0219	07/18/2014	136	128		<2.40	<2.40		<2.40														
	07/26/2013	131J*			<3.10J*	<3.10J*		<3.10J*														
	06/28/2012	65.1J*			<3.10J*	<3.10J*		<3.10J*														
	01/06/2010	89.8																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0221	09/11/2014	129	133		<2.40	<2.40		<2.40														
	03/31/2014	120	126		<2.00	<2.00		<2.00														
	08/13/2013	115J*			<3.10J*	<3.10J*		<3.10J*														
	03/15/2013	155J*			<3.10J*	<3.10J*		<3.10J*														
	07/19/2012	149J*			<3.10J*	<3.10J*		<3.10J*														
	11/04/2011	162J*		<3.10J*																		
	02/04/2010	152																				
0225	07/22/2014	23.9	24.2		<2.40	<2.40		<2.40														
	04/14/2014	26.4	26.8		<2.00	<2.00		<2.00														
	01/14/2014	24.4	27.9		<3.00	<3.00		<3.00														
	09/17/2013	28.3	26.8		<3.10	<3.10		<3.10														
	06/14/2013	30.9J*			<3.10J*	<3.10J*		<3.10J*														
	03/08/2013	36.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/17/2012	47.3J*			<3.10J*	<3.10J*		<3.10J*														
	10/08/2012	45.8J*			<3.10J*	<3.10J*		<3.10J*														
	07/12/2012	51.8J*			<3.10J*	<3.10J*		<3.10J*														
	04/23/2012	59.4J*			<3.10J*	<3.10J*		<3.10J*														
	01/25/2012	62.4J*			<3.10J*	<3.10J*		<3.10J*														
	11/14/2011	64.9J*		<3.10J*				<3.10J*														
	05/23/2011	109J*		<5.00J*																		
	11/14/2009	156																				
0232	04/18/2014	44.6	48.3		<2.00	<2.00		<2.00J*														
	04/29/2013	49.4J*			<3.10J*	<3.10J*		<3.10J*														
	08/30/2012	55.9J*			<3.10J*	<3.10J*		<3.10J*														
	12/02/2011	48.4J*			<3.10J*	<3.10J*		<3.10J*														
	06/24/2011	41.0J*		<0.790J*																		
	02/12/2010	43.7																				
0295	11/11/2014	10.1			<2.40	<2.40		<2.40														
	01/20/2014	9.60J	9.20J		<3.00	<3.00		<3.00														
	04/03/2013	9.80J*		<3.10J*																		
	09/21/2012	9.60J*			<3.10J*	<3.10J*		<3.10J*														
	10/21/2011	8.70J*		<3.10J*																		
	08/26/2011	7.89J																				
	04/15/2010	<10.0																				
0296	11/19/2014	10.4																				
	11/18/2014	11.3			<2.40	<2.40		<2.40														
	06/04/2014	10.4	10.4																			
	03/24/2014	11.6																				
	03/17/2014	11.2	10.1		<3.00	<3.00		<3.00														
	12/04/2013	11.5																				
	11/15/2013	10.6J*	10.5		<3.10	<3.10		<3.10														
	09/12/2013	11.2																				
	07/16/2013	11.6J*			<3.10J*	<3.10J*		<3.10J*														
	06/13/2013	13.4	12.5																			
		12.6																				
	03/21/2013	11.9																				
	01/02/2013	9.60J*			<3.10J*	<3.10J*		<3.10J*														
	08/14/2012	12.5J*			<3.10J*	<3.10J*		<3.10J*														
	05/21/2012	10.6J*			<3.10J*	<3.10J*		<3.10J*														
	02/13/2012	9.50J*			<3.10J*	<3.10J*		<3.10J*														
	09/08/2011	6.90J*		<3.10J*																		
	08/05/2011	7.17J																				
	03/27/2010	<10.6	<10.6																			

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0298	09/16/2014	14.8			<2.40	<2.40		<2.40														
	12/23/2013	11.1	9.90J		<3.00	<3.00		<3.00														
	04/16/2013	10.2J*			<3.10J*	<3.10J*		<3.10J*														
	10/26/2012	8.80J*			<3.10J*	<3.10J*		<3.10J*														
	04/19/2012	7.60J*			<3.10J*	<3.10J*		<3.10J*														
	09/13/2011	8.20J*		<3.10J*																		
	07/26/2011	8.64J																				
	03/07/2011	<10.2																				
	03/23/2010	<10.3																				
0299	09/02/2014	16.4	16.0		<2.40	<2.40		<2.40														
	08/20/2013	8.40J*			<3.10J*	<3.10J*		<3.10J*														
	06/16/2012	8.00J*			<3.10J*	<3.10J*		<3.10J*														
	02/06/2012	7.90J*			<3.10J*	<3.10J*		<3.10J*														
	08/03/2011	<3.10J*		<3.10J*																		
	07/17/2011	7.00J																				
	04/15/2010	<10.3																				
0300	09/22/2014	17.4			<2.40	<2.40		<2.40														
	02/03/2014	13.5	14.2		<3.00	<3.00		<3.00														
	09/23/2013	12.6	10.0J		<3.10	<3.10		<3.10														
	04/22/2013	10.3J*			<3.10J*	<3.10J*		<3.10J*														
	10/08/2012	9.80J*			<3.10J*	<3.10J*		<3.10J*														
	02/06/2012	8.70J*			<3.10J*	<3.10J*		<3.10J*														
	07/28/2011	9.80J*		<3.10J*																		
	07/21/2011	8.26J																				
	02/23/2010	<10.9																				
0301	08/01/2014	14.1	13.2		<2.40	<2.40		<2.40														
	08/26/2013	8.20J*			<3.10J*	<3.10J*		<3.10J*														
	09/26/2012	9.30J*		<3.10J*																		
	08/04/2011	8.64J																				
	05/12/2010	<10.4																				
0302	08/12/2014	13.9	14.3		<2.40	<2.40		<2.40														
	08/27/2013	11.4J*			<3.10J*	<3.10J*		<3.10J*														
	09/18/2012	7.30J*			<3.10J*	<3.10J*		<3.10J*														
	10/26/2011	6.90J*																				
		<3.10J*																				
	09/22/2011	<3.10J*																				
		6.90J*																				
	08/01/2011	6.77J																				
	04/15/2010	<10.9																				
0303	09/30/2014	15.2			<2.40	<2.40		<2.40														
	02/11/2014	15.0	13.9		<3.00	<3.00J*		<3.00														
	06/24/2013	14.1J*			<3.10J*	<3.10J*		<3.10J*														
	01/15/2013	11.4J*			<3.10J*	<3.10J*		<3.10J*														
	05/25/2012	12.2J*			<3.10J*	<3.10J*			<3.10J*	<3.10J*												
	02/15/2012	11.2J*			<3.10J*	<3.10J*		<3.10J*														
	08/26/2011	10.8J*		<3.10J*																		
	07/12/2011	12.6																				
	03/16/2010	<10.3																				
	12/21/2009	<10.3																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0304	10/10/2014	26.1			<2.40	<2.40		<2.40														
	03/10/2014	22.4	24.6		<3.00	<3.00		<3.00J*														
	08/23/2013	19.6J*			<3.10J*	<3.10J*		<3.10J*														
	11/26/2012	23.4J*			<3.10J*	<3.10J*		<3.10J*														
	04/18/2012	19.7J*		<3.10J*																		
	02/26/2010	13.9																				
0305	06/27/2014	22.4			<2.40	<2.40		<2.40														
	02/03/2014	17.5	19.1		<3.00	<3.00		<3.00J*														
	07/16/2013	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	02/01/2013	13.7J*			<3.10J*	<3.10J*		<3.10J*														
	10/26/2012	15.2J*			<3.10J*	<3.10J*		<3.10J*														
	07/13/2012	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2011	14.5J*		<3.10J*																		
	08/19/2011	16.2																				
	05/01/2010	<10.0																				
0307	11/10/2014	17.8			<2.40	<2.40		<2.40														
	08/08/2014	18.4			<2.40	<2.40		<2.40														
	05/09/2014	17.4			<2.00	<2.00		<2.00														
	01/31/2014	16.7	16.1		<3.00	<3.00		<3.00J*														
	10/14/2013	12.2	12.3		<3.10	<3.10		<3.10														
	07/08/2013	13.5J*			<3.10J*	<3.10J*		<3.10J*														
	03/29/2013	16.8J*			<3.10J*	<3.10J*		<3.10J*														
	12/11/2012	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	08/29/2012	13.7J*			<3.10J*	<3.10J*		<3.10J*														
	03/19/2012	13.7J*			<3.10J*	<3.10J*		<3.10J*														
	09/20/2011	11.4J*		<3.10J*																		
	07/26/2011	12.3																				
	05/05/2010	<10.5																				
0308	09/26/2014	4.90J	4.80J		<2.40	<2.40		<2.40														
	05/16/2014	3.10J	3.10J		<2.00	<2.00		<2.00														
	08/23/2013	5.50J*			<3.10J*	<3.10J*		<3.10J*														
	03/08/2013	7.20J*			<3.10J*	<3.10J*		<3.10J*														
	09/10/2012	7.20J*			<3.10J*	<3.10J*		<3.10J*														
	05/24/2012	7.10J*		<3.10J*																		
	09/16/2011	7.19J																				
	04/16/2010	<10.0																				
0309	06/09/2014	10.5	10.4		<2.40	<2.40		<2.40														
	01/31/2014	9.70J*																				
	11/15/2013	9.70J			<3.10	<3.10		<3.10														
	09/24/2013	8.60J	8.80J		<3.10	<3.10		<3.10														
	07/09/2013			<3.10J*				<3.10J*														
	06/25/2013	10.2JL*			<3.10J*	<3.10J*		<3.10J*														
	04/22/2013	9.00J*			<3.10J*	<3.10J*		<3.10J*														
	01/29/2013	7.60J*			<3.10J*	<3.10J*		<3.10J*														
	11/16/2012	9.90J*			<3.10J*	<3.10J*		<3.10J*														
	06/11/2012	8.40J*			<3.10J*	<3.10J*		<3.10J*														
	04/23/2012	8.70J*			<3.10J*	<3.10J*		<3.10J*														
	10/18/2011	7.70J*		<3.10J*																		
	08/29/2011	7.28J																				
	04/19/2010	<10.0																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0311	07/28/2014	12.5	12.1			<2.40		<2.40														
						<2.40																
	02/28/2014	12.1	12.4		<3.00	<3.00		<3.00														
	10/07/2013	10.0			<3.10	<3.10		<3.10														
	03/04/2013	10.0J*			<3.10J*	<3.10J*		<3.10J*														
	07/11/2012	10.0J*			<3.10J*	<3.10J*		<3.10J*														
	09/09/2011	7.80J*		<3.10J*																		
	07/25/2011	7.55J																				
	04/19/2010	<10.0																				
0312	06/27/2014	17.1	15.7		<2.40	<2.40		<2.40														
	02/07/2014	15.2	12.4		<3.00	<3.00		<3.00														
	06/14/2013	12.7J*			<3.10J*	<3.10J*		<3.10J*														
	08/30/2012	12.5J*		<3.10J*																		
	08/31/2011	10.9																				
	03/27/2010	<10.8																				
0347	04/21/2014	<2.00	<2.00		<2.00	<2.00		<2.00														
	07/30/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	12/03/2012	5.10JH*			<3.10J*	<3.10J*		<3.10J*														
	01/31/2012	6.10J*		<3.10J*																		
	10/28/2011	5.16J																				
	02/13/2010	<10.3																				
0348	09/22/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	06/09/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	01/14/2014	<3.00	<3.00		<3.00	<3.00		<3.00														
	09/23/2013	<3.10			<3.10	<3.10		<3.10														
	02/26/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/16/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	11/03/2011	<3.10J*		<3.10J*																		
	08/19/2011	3.37J	3.98J																			
	02/22/2010	<10.9																				
0364	10/17/2014	<2.40			<2.40	<2.40	<2.40	<2.40														
	05/21/2014	<2.00	<2.00		<2.00	<2.00		<2.00														
	01/03/2014	<3.00			<3.00	<3.00		<3.00														
	09/09/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	01/07/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	05/07/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	08/30/2011	4.60J*		<3.10J*																		
	07/22/2011	4.19J																				
	02/13/2010	<10.4																				
0365 §	09/22/2014	<2.40			<2.40	<2.40		<2.40														
	07/11/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	04/11/2014	<2.00			<2.00	<2.00		<2.00														
	12/20/2013	<3.00J*	<3.00J*		<3.00	<3.00		<3.00														
	09/20/2013	<3.10	<3.10		<3.10	<3.10		<3.10														
	07/02/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	04/16/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	01/18/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/23/2012	<3.10J*		<3.10J*																		
	08/09/2011	<6.20																				
	02/23/2010	<11.0																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0376	10/13/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	08/15/2014	2.50J	2.50J		<2.40	<2.40		<2.40														
	05/02/2014	<2.00	<2.00		<2.00	<2.00		<2.00														
	02/18/2014	<3.00	<3.00		<3.00	<3.00		<3.00														
	01/07/2014	<3.00	3.40JH*		<3.00	<3.00		<3.00														
	11/18/2013	<3.10	<3.10		<3.10	<3.10J*		<3.10														
						<3.10																
	09/03/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/18/2013	<3.10J*			<3.10J*			<3.10J*														
	05/06/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	03/18/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	01/25/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	11/16/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/09/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	04/10/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2011	<3.10J*		<3.10J*																		
	05/26/2011	4.49J																				
	02/16/2010	<10.3																				
0377	10/13/2014	5.20J			<2.40	<2.40		<2.40														
	06/09/2014	6.40J			<2.40	<2.40		<2.40														
	05/02/2014	6.90J			<2.00	<2.00J*		<2.00														
	03/17/2014	7.10J	5.60J		<3.00	<3.00		<3.00J*														
	11/18/2013	6.00J	6.60J		<3.10	<3.10		<3.10														
	09/03/2013	9.00JL*			<3.10J*	<3.10J*		<3.10J*														
	05/06/2013	8.70J*			<3.10J*	<3.10J*		<3.10J*														
	12/18/2012	16.8JH*			<3.10J*	<3.10J*		<3.10J*														
	08/30/2012	9.10J*			<3.10J*	<3.10J*		<3.10J*														
	04/02/2012	10.8J*			<3.10J*	<3.10J*		<3.10J*														
	12/20/2011	10.3J*			<3.10J*	<3.10J*		<3.10J*														
	08/12/2011	12.5J*		<3.10J*																		
	02/16/2010	11.9																				
0378	08/29/2014	4.10J			<2.40	<2.40		<2.40														
	06/10/2014	<2.40			<2.40	<2.40		<2.40														
	05/02/2014	4.00J	4.00J		<2.00	<2.00		<2.00														
	02/18/2014	<3.00			<3.00	<3.00		<3.00														
	11/18/2013	4.00J			<3.10	<3.10		<3.10														
	09/03/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/18/2013	4.50J*			<3.10J*	<3.10J*		<3.10J*														
	04/05/2013	5.60J*			<3.10J*	<3.10J*		<3.10J*														
	12/03/2012	6.40JH*			<3.10J*	<3.10J*		<3.10J*														
	07/09/2012	6.40J*			<3.10J*	<3.10J*		<3.10J*														
	12/19/2011	7.00J*		<3.10J*																		
	06/16/2011	7.65J																				
0390	07/25/2014	7.10J	7.30J		<2.40	<2.40		<2.40														
	09/17/2013	8.30J			<3.10	<3.10		<3.10														
	06/05/2013	9.70J*			<3.10J*	<3.10J*		<3.10J*														
	03/11/2013	9.00J*			<3.10J*	<3.10J*		<3.10J*														
	01/22/2013	7.20J*			<3.10J*	<3.10J*		<3.10J*														
	07/13/2012	8.60J*			<3.10J*	<3.10J*		<3.10J*														
	12/09/2011	6.30J*		<3.10J*																		
	10/15/2011	7.25J																				
	02/25/2010	<10.9																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0391	02/28/2014	<3.00	<3.00		<3.00	<3.00		<3.00														
	07/25/2013	3.80J*		<3.10J*																		
	05/29/2012	<6.20																				
	07/22/2011	<6.20																				
	02/27/2010	<10.9																				
0393	08/25/2014	27.0			<2.40	<2.40		<2.40														
	09/13/2013	19.9J*			<3.10J*	<3.10J*		<3.10J*														
	04/15/2013	19.5J*			<3.10J*	<3.10J*		<3.10J*														
	11/13/2012	19.0J*			<3.10J*	<3.10J*		<3.10J*														
	06/07/2012	16.6J*			<3.10J*	<3.10J*		<3.10J*														
	11/04/2011	14.2J*		<3.10J*																		
	09/08/2011	14.8	14.9																			
	02/17/2010	<10.4																				
0394	09/16/2014	15.4	15.1		<2.40	<2.40		<2.40														
	08/06/2013	11.8J*			<3.10J*	<3.10J*		<3.10J*														
	08/07/2012	12.3J*			<3.10J*	<3.10J*		<3.10J*														
	12/27/2011	9.10J*		<3.10J*																		
	11/04/2011	9.88J																				
	04/21/2010	<10.4																				
0439	08/08/2014	21.7	22.1		<2.40	<2.40		<2.40														
	02/10/2014	14.3JL*			<3.00J*	<3.00J*		<3.00J*														
	09/30/2013	14.7	14.9		<3.10	<3.10		<3.10														
	06/05/2013	13.6J*			<3.10J*	<3.10J*		<3.10J*														
	01/29/2013	11.9J*			<3.10J*	<3.10J*		<3.10J*														
	10/16/2012	14.7J*			<3.10J*	<3.10J*		<3.10J*														
	06/11/2012	14.6J*			<3.10J*	<3.10J*		<3.10J*														
	09/20/2011	14.3J*		<3.10J*																		
	06/08/2011	10.6																				
	02/11/2010	<10.3																				
0442	11/24/2014	39.3			<2.40	<2.40	<2.40		<2.40													
	02/07/2014	32.8	34.8		<3.00	<3.00		<3.00														
	07/09/2013	27.4J*			<3.10J*			<3.10J*														
	06/25/2013	31.5J*			<3.10J*	<3.10J*		<3.10J*														
	09/12/2012	27.3J*			<3.10J*	<3.10J*		<3.10J*														
	06/16/2011	19.2J*		<0.790J*																		
	02/13/2010	14.3																				
0453	11/18/2014				<2.40																	
	10/20/2014	62.8			<2.40	2.80J	2.80J	<2.40														
	01/07/2014	74.2			<3.00	<3.00		<3.00														
	05/13/2013	55.8J*			4.90J*	<3.10J*		<3.10J*														
	10/22/2012	47.7J*			<3.10J*	<3.10J*		<3.10J*														
	04/23/2012	50.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/15/2011	37.1J*		<3.10J*				17.3J*														
	04/27/2011	38.0J*		<5.00J*																		
	02/08/2010	12.2																				
0454	07/25/2014	52.7JL*			<2.40	<2.40		<2.40														
	08/09/2013	38.9J*			<3.10J*	<3.10J*		<3.10J*														
	11/15/2011	38.8J*		<3.10J*				<3.10J*														
	04/29/2011	43.2J*		<5.00J*																		
	02/08/2010	21.9																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0456	10/03/2014	3.60J			<2.40	<2.40		<2.40														
	06/30/2014	6.10J			<2.40	<2.40		<2.40														
	03/17/2014	14.9			<3.00	<3.00		<3.00														
	01/03/2014	12.4	7.00J*		<3.00	<3.00J*		<3.00														
	09/02/2013	11.4JL*			<3.10J*	<3.10J*		<3.10J*														
	05/14/2013	15.5J*		<3.10J*																		
	07/18/2011	9.17J																				
	02/10/2010	<10.6																				
0463	11/11/2014	49.2																				
	09/09/2014	45.0																				
	08/15/2014	44.2			<2.40	<2.40		<2.40														
	05/29/2014	40.4																				
	03/28/2014	39.9	32.7		<2.00	<2.00		<2.00														
	03/11/2014	36.2																				
	12/16/2013	33.0			<3.10	<3.10		<3.10														
	11/25/2013	39.4																				
	09/12/2013	34.7																				
	08/16/2013	26.6J*			<3.10J*	<3.10J*		<3.10J*														
	06/27/2013	33.2																				
		33.3																				
	04/08/2013	29.0J*			<3.10J*	<3.10J*		<3.10J*														
	04/04/2013	27.9																				
	12/14/2012	35.1J*			<3.10J*	<3.10J*		<3.10J*														
	08/17/2012	29.4J*			<3.10J*	<3.10J*		<3.10J*														
	03/15/2012	27.1J*			<3.10J*	<3.10J*		<3.10J*														
	11/28/2011	26.7J*		<3.10J*				<3.10J*														
	05/18/2011	25.8J*		<5.00J*																		
	02/10/2010	25.1																				
0466	11/12/2014	32.8																				
	09/11/2014	33.2	33.3		<2.40	<2.40		<2.40														
	09/10/2014	31.1																				
	06/19/2014	30.4	31.4																			
	03/11/2014	33.0																				
	12/16/2013	31.4																				
	11/01/2013	25.9	26.8		<3.10	<3.10		<3.10														
	09/09/2013	29.5	29.0																			
	06/12/2013	26.8																				
		26.6																				
	04/18/2013	23.1	23.9																			
	10/17/2012	20.6J*		<3.10J*																		
	09/07/2011	14.4																				
	02/09/2010	<10.7																				
0480	08/29/2014	63.9			<2.40	<2.40		<2.40														
	07/23/2013	83.5J*			<3.10J*	<3.10J*		<3.10J*														
	07/10/2012	116J*			<3.10J*	<3.10J*		<3.10J*														
	03/19/2012	111J*			<3.10J*	<3.10J*		<3.10J*														
	09/26/2011	115J*		<3.10J*																		
	02/03/2010	78.7																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0483	05/19/2014	61.7	61.0		<2.00	<2.00		<2.00														
	08/16/2013	69.7J*			<3.10J*	<3.10J*		<3.10J*														
	07/10/2012	122J*			<3.10J*	<3.10J*		<3.10J*														
	09/22/2011	118J*						<3.10J*														
	04/05/2011	159		<5.00																		
	01/23/2010	114																				
0484	09/12/2014	47.0	50.4		<2.40	<2.40		<2.40														
	06/13/2014	59.0			<2.40	<2.40		<2.40														
	02/17/2014	66.1	61.5		<3.00	<3.00		<3.00J*														
	11/04/2013	61.3	62.4		<3.10	<3.10		<3.10														
	08/05/2013	56.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/10/2013	75.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/11/2012	106J*			<3.10J*	<3.10J*		<3.10J*														
	07/12/2012	108J*			3.20J*	<3.10J*		<3.10J*														
	12/21/2011	106J*			<3.10J*	<3.10J*		<3.10J*														
	08/24/2011	110J*		<3.10J*																		
	02/03/2010	85.8																				
0487	07/07/2014	81.5	87.7		<2.40	<2.40		<2.40														
	02/11/2014			<3.00																		
	01/20/2014	97.0			<3.00	3.20J		<3.00														
	06/25/2013	112JL*			<3.10J*	<3.10J*		<3.10J*														
	09/21/2012	139J*			<3.10J*	<3.10J*		<3.10J*														
	11/16/2011	153J*		<3.10J*				<3.10J*														
	04/05/2011	187		<5.00																		
	01/27/2010	138																				
0488	09/15/2014	93.3	96.1	<2.40																		
	06/14/2012	102J*			<3.10J*	<3.10J*		<3.10J*														
	09/23/2011	103J*						<3.10J*														
								<3.10J*														
	04/15/2011	178J*		<5.00J*																		
	01/27/2010	96.2																				
0489	08/01/2014	93.8			<2.40	<2.40		<2.40														
	07/30/2013	122J*			<3.10J*	<3.10J*		<3.10J*														
	12/14/2011	167J*			<3.10J*	<3.10J*		<3.10J*														
	07/08/2011	177J*		<0.790J*																		
	01/27/2010	113																				
0498	08/01/2014	99.1	96.8		<2.40	<2.40		<2.40														
	05/27/2014	100			<2.00	<2.00		<2.00														
	06/14/2013	128J*			<3.10J*	<3.10J*		<3.10J*														
	12/15/2011	160J*			<3.10J*	<3.10J*		<3.10J*														
	07/08/2011	157J*		<0.790J*																		
	01/27/2010	108																				
0502	08/04/2014	52.5	50.6		<2.40	<2.40		<2.40														
	09/06/2013	60.6J*			<3.10J*	<3.10J*		<3.10J*														
	09/28/2012	101J*			<3.10J*	<3.10J*		<3.10J*														
	11/14/2011	96.3J*		<3.10J*																		
0503	09/12/2014	85.0	86.4		<2.40	<2.40		<2.40														
	06/06/2014	97.3			<2.00	<2.00		<2.00														
	12/30/2013	89.2	81.0		<3.00	<3.00		<3.00														
	09/27/2013	80.3			<3.10	<3.10		<3.10														
	09/12/2012	110J*			<3.10J*	<3.10J*		<3.10J*														
	09/12/2011	82.8J*		<3.10J*				<3.10J*														
	03/09/2010	56.1																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0504	05/09/2014	55.1	55.2		<2.00	<2.00		<2.00														
	09/20/2013	54.9	54.2		<3.10J*	<3.10		<3.10														
	09/05/2012	76.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/30/2011	94.6J*			<3.10J*	<3.10J*		<3.10J*														
	06/16/2011	103J*		<0.790J*																		
	01/07/2010	65.3																				
0506 §	10/03/2014	97.3	97.9		<2.40	<2.40		<2.40														
	02/01/2012	116J*			<3.10J*	<3.10J*		<3.10J*														
	08/02/2011	124J*		<3.10J*																		
	03/21/2011	94.2																				
0511 §	09/29/2014	4.40J									<2.40			<2.40			<2.40			<2.40	<2.40	<2.40
	05/30/2014	<2.00										<2.00	<2.00		<2.00	<2.00		<2.00	<2.00	<2.00	<2.00	<2.00
	11/01/2013	<3.10										<3.10	<3.10		<3.10	<3.10		<3.10	<3.10	<3.10	<3.10	<3.10
	08/02/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	07/26/2013	<3.10J*									<3.10J*			<3.10J*			<3.10J*			<3.10J*	<3.10J*	<3.10J*
	07/02/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	06/10/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	05/07/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10
	04/12/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	03/15/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	02/15/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	01/18/2013	<3.10J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*	<3.10J*
	12/10/2012	<3.10J*									<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*		<3.10J*	<3.10J*	<3.10J*	<3.10J*
	10/22/2012	3.90J*									<3.10J*			<3.10J*			<3.10J*					
	08/11/2011	4.07J	4.27J																			
	02/23/2010	<10.6																				
0514	08/19/2014	9.80JL*	10.3JL*		<2.40J*	<2.40J*		<2.40J*														
	05/06/2014	6.80J*	6.20J		<2.00	<2.00		<2.00														
	01/20/2014	<3.00X*	6.50J		<3.00	6.40X*		<3.00														
	10/22/2013	5.20J			<3.10	<3.10		<3.10														
	07/30/2013	4.90J*			<3.10J*	<3.10J*		<3.10J*														
	06/21/2013	3.90J*			<3.10J*	<3.10J*		<3.10J*														
	04/12/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	01/15/2013	6.50J*			<3.10J*	<3.10J*		<3.10J*														
	10/23/2012	6.80J*			<3.10J*	<3.10J*		<3.10J*														
	07/18/2012	6.60J*			<3.10J*	<3.10J*		<3.10J*														
	04/09/2012	5.40J*			<3.10J*	<3.10J*		<3.10J*														
	08/19/2011	6.60J*		<3.10J*																		
	07/21/2011	7.42J																				
	04/15/2010	<10.4																				
0515	06/02/2014	3.80J			<2.00	<2.00		<2.00														
	10/21/2013	4.00J			<3.10	<3.10		<3.10														
	04/08/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	08/08/2012	6.60J*			<3.10J*	<3.10J*		<3.10J*														
	02/01/2012	8.10J*			<3.10J*	<3.10J*		<3.10J*														
	08/19/2011	7.80J*		<3.10J*																		
	07/18/2011	6.74J																				
	04/13/2010	<10.0	<10.0																			

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0542	07/14/2014	20.7	19.5		<2.40	<2.40		<2.40														
	01/27/2014	15.2	17.0		<3.00	<3.00		<3.00														
	07/29/2013	18.1J*			<3.10J*	<3.10J*		<3.10J*														
	02/05/2013	17.1J*			<3.10J*	<3.10J*		<3.10J*														
	08/30/2012	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	02/15/2012	14.7J*			<3.10J*	<3.10J*		<3.10J*														
	08/01/2011	15.7J*		<3.10J*																		
	04/09/2010	11.3																				
0544	09/19/2014	15.4	15.4		<2.40	<2.40		<2.40														
	05/19/2014	15.1			<2.00	<2.00		<2.00														
	01/17/2014	16.2			<3.00	<3.00		<3.00														
	08/19/2013	20.2J*			<3.10J*	<3.10J*		<3.10J*														
	04/01/2013	15.4J*			<3.10J*	<3.10J*		<3.10J*														
	10/19/2012	13.6J*			<3.10J*	<3.10J*		<3.10J*														
	05/22/2012	12.1J*		<3.10J*																		
	04/30/2012	12.0J*			<3.10J*	<3.10J*		<3.10J*														
	12/02/2011	11.5J*		<3.10J*																		
	06/06/2011	8.65J																				
	04/18/2010	<10.0																				
0550	11/03/2014				<2.40	<2.40																
	10/10/2014	18.5	18.1		<2.40	4.10J		<2.40														
	12/20/2013	14.1			<3.00	<3.00		<3.00														
	07/09/2013	17.4J*			<3.10J*	<3.10J*		<3.10J*														
	01/16/2013	12.8J*			<3.10J*	<3.10J*		<3.10J*														
	04/03/2012	14.9J*			<3.10J*	<3.10J*		<3.10J*														
	09/06/2011	13.8J*		<3.10J*																		
	04/10/2010	13.4																				
0553	09/23/2014	19.7	19.6		<2.40	<2.40		<2.40														
	06/20/2014	21.5	21.1		<2.40	<2.40		<2.40														
	02/25/2014	19.2			<3.00	<3.00		<3.00														
	11/05/2013	18.3	17.5		<3.10	<3.10		<3.10														
	06/10/2013	17.9J*			<3.10J*	<3.10J*		<3.10J*														
	01/03/2013	16.2J*			<3.10J*	<3.10J*		<3.10J*														
	10/12/2012	19.6J*			<3.10J*	<3.10J*		<3.10J*														
	07/24/2012	20.2J*			<3.10J*	<3.10J*		<3.10J*														
	05/04/2012	18.0J*			<3.10J*	<3.10J*		<3.10J*														
	01/23/2012	18.6J*			<3.10J*	<3.10J*		<3.10J*														
	08/02/2011	18.6J*		<3.10J*																		
	06/10/2011	18.3																				
	04/10/2010	<10.4																				
0554	04/15/2014	14.0	17.9		<2.00	<2.00		<2.00														
	05/31/2013	14.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/19/2012	16.5J*		<3.10J*																		
	07/08/2011	14.0																				
	04/17/2010	<10.0																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0556	05/06/2014	5.00J			<2.00	<2.00		<2.00														
	03/07/2014	6.80J			<3.00	<3.00		<3.00														
	11/19/2013	5.80J			<3.10	<3.10		<3.10														
	07/26/2013	5.00J*			<3.10J*	<3.10J*		<3.10J*														
	04/16/2013	5.00J*			<3.10J*	<3.10J*		<3.10J*														
	01/07/2013	5.80J*			<3.10J*	<3.10J*		<3.10J*														
	10/19/2012	7.40J*			<3.10J*	<3.10J*		<3.10J*														
	07/16/2012	8.10J*			<3.10J*	<3.10J*		<3.10J*														
	03/15/2012	7.50J*		<3.10J*																		
	09/02/2011	8.02J																				
	04/15/2010	<10.4																				
0557	11/11/2014	17.0			<2.40	<2.40		<2.40														
	06/10/2014	14.0	15.4		<2.40	<2.40		<2.40														
	12/30/2013	12.2			<3.00	<3.00		<3.00														
	05/31/2013	11.1J*			<3.10J*	<3.10J*		<3.10J*														
	11/27/2012	17.8J*			<3.10J*	<3.10J*		<3.10J*														
	02/22/2012	13.1J*			<3.10J*	<3.10J*		<3.10J*														
	08/05/2011	14.9JL*		<3.10J*																		
	07/08/2011	12.9																				
	09/29/2010	<11.1																				
0558	05/09/2014	20.5	20.1		<2.00	<2.00		<2.00														
	07/29/2013	18.6J*			<3.10J*	<3.10J*		<3.10J*														
	01/14/2013	17.2J*			<3.10J*	<3.10J*		<3.10J*														
	02/20/2012	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	08/08/2011	19.5J*		<3.10J*																		
	04/14/2010	11.5																				
0559	09/05/2014	18.8	16.8		<2.40	<2.40		<2.40														
	05/23/2014	15.8	16.0		<2.00	<2.00		<2.00														
	01/13/2014	15.3			<3.00	<3.00		<3.00														
	08/26/2013	12.5J*			<3.10J*	<3.10J*		<3.10J*														
	04/29/2013	16.1J*			<3.10J*	<3.10J*		<3.10J*														
	12/17/2012	16.7J*			<3.10J*	<3.10J*		<3.10J*														
	08/08/2012	15.4J*			<3.10J*	<3.10J*		<3.10J*														
	03/15/2012	14.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/28/2011	13.4J*		<3.10J*				<3.10J*														
	06/06/2011	13.0J*		<0.790J*																		
	04/15/2010	13.4																				
0560	07/07/2014	23.0			<2.40	<2.40		<2.40														
	01/27/2014	18.5			<3.00	<3.00		<3.00														
	08/20/2013	18.4J*			<3.10J*	<3.10J*		<3.10J*														
	03/08/2013	18.6J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2012	15.8J*			<3.10J*	<3.10J*		<3.10J*														
	04/24/2012	19.8J*			<3.10J*	<3.10J*		<3.10J*														
	11/14/2011	13.7J*		<3.10J*				<3.10J*														
	04/25/2011	20.5J*		<5.00J*																		
	04/14/2010	12.4																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0561	04/04/2014	28.1			<2.00	<2.00		<2.00														
	12/27/2013	27.1			<3.00	<3.00		<3.00														
	09/02/2013	25.1JL*			<3.10J*	<3.10J*		<3.10J*														
	05/24/2013	23.1J*			<3.10J*	<3.10J*		<3.10J*														
	01/30/2013	21.3J*			<3.10J*	<3.10J*		<3.10J*														
	10/30/2012	24.3J*			<3.10J*	<3.10J*		<3.10J*														
	05/16/2012	24.0J*			<3.10J*	<3.10J*		<3.10J*														
	10/31/2011	<3.10J*		<3.10J*				<3.10J*														
	05/11/2011	20.0J*		<5.00J*																		
	04/24/2010	17.8																				
0562	05/12/2014	16.7			<2.00	<2.00		<2.00														
	05/03/2013	18.7J*			<3.10J*	<3.10J*		<3.10J*														
	06/07/2011	14.1J*		<0.790J*																		
	04/14/2010	11.1																				
0563	10/28/2014	17.5			<2.40	<2.40	<2.40	<2.40														
	06/03/2014	18.0	18.3		<2.40	<2.40		<2.40														
	12/09/2013	15.4	15.3		<3.10	<3.10		<3.10														
	05/28/2013	18.7J*		<3.10J*																		
	09/01/2011	17.9																				
	04/18/2010	<10.6																				
0564	10/31/2014	21.7		<2.40																		
	05/16/2014	9.00J			<2.00	<2.00		<2.00														
	11/15/2013	11.8	12.1		<3.10	<3.10		<3.10														
	04/01/2013	14.6J*			<3.10J*	<3.10J*		<3.10J*														
	08/20/2012	18.4J*			<3.10J*	<3.10J*		<3.10J*														
	11/28/2011	15.6J*		<3.10J*				<3.10J*														
	06/07/2011	14.1J*		<0.790J*																		
	04/14/2010	11.4	11.2																			
0565	10/27/2014	8.30J			<2.40	<2.40	<2.40	<2.40														
	04/28/2014	2.90JH*	<2.00		<2.00	<2.00		<2.00														
	08/12/2013	4.70J*			<3.10J*	<3.10J*		<3.10J*														
	11/30/2012	9.30JH*		<3.10J*																		
	02/17/2012	5.50J*			<3.10J*	<3.10J*		<3.10J*														
	08/12/2011	7.90J*		<3.10J*																		
	07/09/2011	7.49J																				
	04/16/2010	<10.4	<10.0																			
0566	10/03/2014	19.5	20.0		<2.40	<2.40		<2.40														
	06/23/2014	12.5	12.6		<2.40	<2.40		<2.40														
	01/28/2014	12.5	11.8		<3.00	<3.00		<3.00														
	09/02/2013	13.3JL*			<3.10J*	<3.10J*		<3.10J*														
	04/23/2013	7.40J*			<3.10J*	<3.10J*		<3.10J*														
	12/18/2012	16.4JH*			<3.10J*	<3.10J*		<3.10J*														
	08/06/2012	14.9J*			<3.10J*	<3.10J*		<3.10J*														
	06/07/2012	10.7J*			<3.10J*	<3.10J*		<3.10J*														
	03/16/2012	10.3J*			<3.10J*	<3.10J*		<3.10J*														
	12/20/2011	12.4J*			<3.10J*	<3.10J*		<3.10J*														
	08/31/2011	16.7J*		<3.10J*																		
	07/08/2011	12.3	12.1																			
	04/07/2010	<10.5																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0567	07/29/2014	9.80J	9.00J		<2.40	<2.40		<2.40														
	01/06/2014	7.80J	8.00J		<3.00	<3.00		<3.00														
	08/06/2013	5.10J*			<3.10J*	<3.10J*		<3.10J*														
	04/02/2013	4.40J*			<3.10J*	<3.10J*		<3.10J*														
	09/10/2012	9.40J*			<3.10J*	<3.10J*		<3.10J*														
	02/20/2012	7.50J*			<3.10J*	<3.10J*		<3.10J*														
	08/18/2011	8.90J*		<3.10J*																		
	07/08/2011	8.09J																				
	04/07/2010	<10.6																				
0568	11/18/2014	15.5			<2.40	<2.40		<2.40														
	09/05/2014	17.6			<2.40	<2.40		<2.40														
	06/20/2014	18.8			<2.40	<2.40		<2.40														
	04/14/2014	15.9	15.8		<2.00	<2.00		<2.00														
	04/19/2013	14.6J*			<3.10J*	<3.10J*		<3.10J*														
	06/14/2012	19.6J*			<3.10J*	<3.10J*		<3.10J*														
	02/02/2012	17.0J*			<3.10J*	<3.10J*		<3.10J*														
	07/29/2011	20.1J*		<3.10J*																		
	04/24/2010	13.0	16.1																			
0570	08/22/2014	19.1			<2.40	<2.40		<2.40														
	05/02/2014	15.0			<2.00	<2.00		<2.00														
	05/14/2013	13.6J*			<3.10J*	<3.10J*		<3.10J*														
	09/12/2012	13.8J*			<3.10J*	<3.10J*		<3.10J*														
	12/07/2011	11.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/31/2011	14.8J*		<5.00J*																		
	05/18/2011	14.4J*		14.0J*																		
	01/23/2010	10.6																				
0586	08/19/2014	12.6JL*			<2.40J*	<2.40J*		<2.40J*														
	05/23/2014	11.1	10.2		<2.00	<2.00		<2.00														
	01/28/2014	<3.00			<3.00	<3.00		<3.00														
	10/22/2013	8.00J	8.20J		<3.10	<3.10		<3.10														
	05/20/2013	9.10J*			<3.10J*	<3.10J*		<3.10J*														
	01/28/2013	7.30J*			<3.10J*	<3.10J*		<3.10J*														
	08/14/2012	8.40J*			<3.10J*	<3.10J*		<3.10J*														
	03/16/2012	8.20J*			<3.10J*	<3.10J*		<3.10J*														
	10/11/2011	6.40J*		<3.10J*																		
	08/19/2011	7.97J																				
	04/17/2010	<10.0																				
0597 §	10/28/2014				<2.40	<2.40																
	09/19/2014	82.8			<2.40	3.90J		<2.40														
	07/22/2014	90.5			5.80J	<2.40		<2.40														
	06/06/2014	89.7	88.0		<2.00	<2.00		<2.00														
	01/21/2014	89.8	91.6		<3.00	<3.00		<3.00														
	12/31/2013	89.4		<3.00				<3.00														
	08/06/2013	70.7J*			<3.10J*	<3.10J*		<3.10J*														
	06/27/2013	96.5JL*		<3.10J*				<3.10J*														
	06/06/2013	88.3J*			6.80J*	<3.10J*		<3.10J*														
	12/07/2012	123J*			<3.10J*	<3.10J*		<3.10J*														
	07/16/2012	111J*			<3.10J*	<3.10J*		<3.10J*														
	10/26/2011	95.5J*		<3.10J*																		
	12/30/2009	49.7																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0598	08/04/2014	149			<2.40	<2.40		<2.40														
	08/12/2013	135J*			<3.10J*	<3.10J*		<3.10J*														
	11/27/2012	192J*			<3.10J*	<3.10J*		<3.10J*														
	06/08/2012	241																				
	04/10/2012	182J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2011	183J*		<3.10J*				<3.10J*														
	04/15/2011	206J*		<5.00J*																		
	01/07/2010	140																				
0599	08/18/2014	116			<2.40	<2.40		<2.40														
	03/14/2014	153	142		<3.00	<3.00		<3.00														
	10/25/2013	140	135		<3.10	<3.10		<3.10														
	06/10/2013	148J*			<3.10J*	<3.10J*		<3.10J*														
	07/03/2012	241JL*		<3.10J*																		
0606	09/15/2014	66.4		<2.40				<2.40														
	08/18/2014	70.7			4.40J	4.80J		<2.40														
	12/03/2013	62.5			<3.10	<3.10		<3.10														
	08/20/2013	70.1J*			<3.10J*	<3.10J*		<3.10J*														
	12/26/2012	58.9J*			<3.10J*	<3.10J*		<3.10J*														
	07/10/2012	70.6J*			<3.10J*	<3.10J*		<3.10J*														
	12/13/2011	58.0J*			<3.10J*	<3.10J*		<3.10J*														
	07/13/2011	55.8J*		<0.790J*																		
	02/28/2010	27.3																				
0607	11/04/2014	110			<2.40	<2.40		<2.40														
	09/23/2014	116			<2.40	<2.40		<2.40														
	07/14/2014	147	136		<2.40	<2.40		<2.40														
	05/15/2014	184	191		<2.00	<2.00		<2.00														
	02/18/2014	216	210J*		<3.00	<3.00		<3.00														
	12/13/2013	152	158		<3.10	<3.10		<3.10														
	03/11/2013	225J*			<3.10J*	<3.10J*		<3.10J*														
	09/15/2012	221J*			<3.10J*	<3.10J*		<3.10J*														
	03/27/2012	249J*		<3.10J*																		
	02/01/2010	169	134																			
0608	10/31/2014	86.1			<2.40	<2.40	<2.40	<2.40														
	07/08/2014	96.0			<2.40	<2.40		<2.40														
	03/14/2014	89.4	100		<3.00	<3.00		<3.00														
	10/21/2013	87.3	88.5		<3.10	<3.10		<3.10														
	06/19/2013	104J*			<3.10J*	<3.10J*		<3.10J*														
	01/14/2013	91.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/21/2012	108J*			<3.10J*	<3.10J*		<3.10J*														
	03/07/2012	97.2J*			4.70J*	<3.10J*		<3.10J*														
	08/16/2011	87.6J*		<3.10J*																		
	03/07/2010	57.8																				
0609	08/29/2014				<2.40	<2.40																
	07/21/2014	84.3	82.4		<2.40	4.70J		<2.40														
	08/19/2013	82.7JL*			<3.10J*	<3.10		<3.10														
	09/05/2012	99.5J*			<3.10J*	<3.10J*		<3.10J*														
	06/11/2012	94.0J*			<3.10J*	<3.10J*		<3.10J*														
	03/12/2012	104J*			<3.10J*	<3.10J*		<3.10J*														
	09/16/2011	71.1J*		<3.10J*																		

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0610	08/25/2014	32.8	31.7		<2.40	<2.40		<2.40														
	08/16/2013	28.4J*			<3.10J*	<3.10J*		<3.10J*														
	11/30/2012	37.0JH*			<3.10J*	<3.10J*		<3.10J*														
	11/28/2011	31.8J*		<3.10J*				<3.10J*														
	06/01/2011	30.0J*		<0.790J*																		
	03/07/2010	24.3																				
0615	07/11/2014	114	122		<2.40	<2.40		<2.40														
	02/14/2014	148			<3.00	<3.00		<3.00														
	10/14/2013	115			<3.10	<3.10		<3.10														
	05/03/2013	142J*			<3.10J*	<3.10J*		<3.10J*														
	12/19/2012	176JH*			<3.10J*	<3.10J*		<3.10J*														
	08/17/2012	143J*			<3.10J*	<3.10J*		<3.10J*														
	03/16/2012	126J*			<3.10J*	<3.10J*		<3.10J*														
	09/30/2011	121J*		<3.10J*				<3.10J*														
	04/28/2011	116J*		<10.0J*																		
	03/29/2011	120J*																				
	03/04/2010	65.3	60.5																			
0617	08/22/2014	146			<2.40	<2.40		<2.40														
	10/15/2013	143			<3.10	<3.10		<3.10														
	11/09/2012	168J*			<3.10J*	<3.10J*		<3.10J*														
	02/07/2012	145J*			<3.10J*	<3.10J*		<3.10J*														
	07/20/2011	144J*		<3.10J*																		
	03/04/2010	56.4																				
0618	11/17/2014	40.9			<2.40	<2.40		<2.40														
	07/21/2014	56.7			<2.40	<2.40		<2.40														
	02/14/2014	10.2	9.70J		<3.00J*	<3.00		<3.00														
	09/16/2013	33.7			<3.10	<3.10		<3.10														
	05/03/2013	36.6J*			<3.10J*	<3.10J*		<3.10J*														
	11/02/2012	25.6J*			<3.10J*	<3.10J*		<3.10J*														
	05/21/2012	48.2J*		<3.10J*																		
	04/27/2012	39.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/17/2011	16.0J*		<3.10J*				<3.10J*														
	05/19/2011	43.8J*		<5.00J*																		
	02/22/2010	29.5																				
0620	04/07/2014	92.8	93.0		<2.00	<2.00		<2.00														
	12/13/2013	99.8			<3.10	<3.10		<3.10														
	09/09/2013	89.5J*			<3.10J*	<3.10J*		<3.10J*														
	03/29/2013	94.8J*			<3.10J*	<3.10J*		<3.10J*														
	08/20/2012	66.4J*			<3.10J*	<3.10J*		<3.10J*														
	05/25/2012	58.5J*		<3.10J*																		
	04/30/2012	56.8J*			<3.10J*	<3.10J*		<3.10J*														
	12/13/2011	49.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/13/2011	46.0J*		<0.790J*																		
	03/08/2010	33.3																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0622	10/20/2014	7.40J			<2.40	<2.40	<2.40	<2.40														
	08/22/2014	7.90J	8.00J		<2.40	<2.40		<2.40														
	07/01/2014	7.20J	7.20J		<2.40	<2.40		<2.40														
	04/18/2014	<2.00			<2.00	<2.00		<2.00														
	02/04/2014	<3.00	<3.00		<3.00	<3.00		<3.00J*														
	11/25/2013	6.80J	6.60J		<3.10	<3.10		<3.10														
	09/23/2013	7.90J	8.30J		<3.10	<3.10		<3.10														
	07/15/2013	8.20J*			<3.10J*	<3.10J*		<3.10J*														
	04/29/2013	6.30J*			<3.10J*	<3.10J*		<3.10J*														
	01/08/2013	<3.10J*			<3.10J*	<3.10		<3.10J*														
	11/16/2012	8.80J*			<3.10J*	<3.10J*		<3.10J*														
	09/04/2012	11.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/07/2012	9.60J*			<3.10J*	<3.10J*		<3.10J*														
	02/20/2012	6.40J*			<3.10J*	<3.10J*		<3.10J*														
	10/13/2011	9.40J*		<3.10J*																		
	08/19/2011	11.4																				
	01/14/2010	<10.6J*																				
	01/04/2010	<10.5																				
0624	11/18/2014	38.1			<2.40	<2.40	<2.40	<2.40														
	04/22/2014	26.1	23.7		<2.00	<2.00		<2.00														
	07/08/2013	31.3J*			<3.10J*	<3.10J*		<3.10J*														
	09/28/2012	35.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/16/2012	32.6J*		<3.10J*																		
	04/27/2012	35.1J*			<3.10J*	<3.10J*		<3.10J*														
	10/25/2011	28.9J*		<3.10J*				<3.10J*														
	05/05/2011	29.0J*		<5.00J*																		
	03/05/2010	16.2																				
0625	03/28/2014	23.0		<2.00																		
	12/14/2012	32.5J*			<3.10J*	<3.10J*		<3.10J*														
	10/27/2011			<3.10				<3.10														
	05/10/2011	23.0J*		<5.00J*																		
	03/06/2010	20.1																				
0636	10/14/2014	147	146		<2.40	<2.40		<2.40														
	06/03/2014	186			<2.40	<2.40		<2.40														
	08/12/2013	153J*			<3.10J*	<3.10J*		<3.10J*														
	11/26/2012	198J*			<3.10J*	<3.10J*		<3.10J*														
	04/24/2012	181J*			<3.10J*	<3.10J*		<3.10J*														
	10/11/2011	158J*		<3.10J*																		
	04/26/2011	190J*		<5.00J*																		
	04/21/2011	180J*		<5.00J*																		
	12/17/2009	153JL*	139JL*																			
0646	05/16/2014	24.6	31.7		<2.00	<2.00		<2.00														
	08/19/2013	65.0J*			<3.10J*	<3.10J*		<3.10J*														
	12/19/2012	87.2JH*			<3.10J*	<3.10J*		<3.10J*														
	05/29/2012	87.6J*			<3.10J*	<3.10J*		<3.10J*														
	01/27/2012	81.5J*			<3.10J*	<3.10J*		<3.10J*														
	05/03/2011	84.0J*		<5.00J*																		
	02/13/2010	49.9																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0647	09/08/2014	92.3			<2.40	<2.40		<2.40														
	04/04/2014	62.2	69.7		<2.00	<2.00		<2.00														
	11/12/2013	60.4	61.0		<3.10	<3.10		<3.10														
	07/15/2013					<3.10J*																
	06/21/2013	53.9J*			<3.10J*	22.4J*		<3.10J*														
	02/01/2013	43.8J*		<3.10J*																		
	08/06/2012	43.1J*			<3.10J*	<3.10J*		<3.10J*														
	12/07/2011	35.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/12/2011	28.1J*		<5.00J*																		
	02/07/2010	22.4																				
0648	09/05/2014				<2.40	<2.40																
	06/30/2014	116	114		<10.0	3.70J		<10.0														
	11/22/2013	87.3			<3.10	3.30J		<3.10														
	04/19/2013	87.4J*			<3.10J*	<3.10J*		<3.10J*														
	12/11/2012	97.6J*			<3.10J*	<3.10J*		<3.10J*														
	08/29/2012	93.9J*			<3.10J*	<3.10J*		<3.10J*														
	04/24/2012	76.7J*			<3.10J*	<3.10J*		<3.10J*														
	12/08/2011	62.7J*			<3.10J*	<3.10J*		<3.10J*														
	07/12/2011	63.7J*		<0.790J*																		
	02/09/2010	42.4																				
0649	09/11/2014	55.6			<2.40	<2.40		<2.40														
	11/11/2013	42.6	41.9		<3.10	<3.10		<3.10														
	01/21/2013	31.4J*			<3.10J*	<3.10J*		<3.10J*														
	03/14/2012	30.5J*			<3.10J*	<3.10J*		<3.10J*														
	08/11/2011	23.4J*		<3.10J*																		
	03/12/2011	11.8																				
	02/07/2010	<10.9																				
0651	06/17/2014	107	106		3.70J	<2.40		<2.40														
	06/10/2013	52.1J*			<3.10J*	<3.10J*		<3.10J*														
	11/15/2011	68.4J*		<3.10J*																		
	01/14/2010	36.9JL*																				
0653	08/22/2014	103	106		<2.40	<2.40		<2.40														
	12/16/2013	87.0		<3.10																		
	01/16/2010	33.8	33.9																			
0656	11/11/2013	97.8			<3.10	<3.10		<3.10														
	11/28/2011	82.5J*		<3.10J*																		
	02/07/2010	47.0																				
0657	09/12/2014	100			<2.40	<2.40		<2.40														
	06/13/2014	99.1JH*	102		<2.40	<2.40		<2.40														
	03/04/2014	86.7			<3.00	<3.00		<3.00														
	12/09/2013	73.9			<3.10	<3.10		<3.10														
	10/18/2013	72.5	74.6		<3.10	<3.10		<3.10														
	07/15/2013	81.2J*			<3.10J*	<3.10J*		<3.10J*														
	04/19/2013	81.1J*			<3.10J*	<3.10J*		<3.10J*														
	01/02/2013	70.0J*			<3.10J*	<3.10J*		<3.10J*														
	10/12/2012	73.8J*			<3.10J*	<3.10J*		<3.10J*														
	07/09/2012	74.8J*			<3.10J*	<3.10J*		<3.10J*														
	02/17/2012	56.0J*		<3.10J*																		
	11/22/2009	39.4																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0658	11/11/2014	60.8																				
	08/19/2014	63.4																				
	06/06/2014	65.1	63.5		<2.00	<2.00		<2.00														
	05/28/2014	59.4																				
	03/19/2014	58.4																				
	12/03/2013	57.0																				
	09/11/2013	63.7																				
	06/21/2013	62.0J*			<3.10J*	<3.10J*		<3.10J*														
	06/12/2013	51.1																				
		54.0																				
	03/18/2013	48.4																				
	09/18/2012	61.6J*			<3.10J*	<3.10J*		<3.10J*														
	12/06/2011	58.3J*			<10.0J*	<10.0J*		<10.0J*														
	06/14/2011	51.8J*		<0.790J*																		
	02/07/2010	39.0																				
0660	09/23/2014				<2.40	<2.40																
	07/29/2014	88.7			<2.40	4.90J		<2.40														
	05/27/2014	85.4	88.5		<2.00	<2.00		<2.00														
	11/26/2013	86.4	81.5		<3.10	<3.10		<3.10														
	07/09/2013	92.5J*			<3.10J*	<3.10J*		<3.10J*														
	02/26/2013	95.0J*			<3.10J*	<3.10J*		<3.10J*														
	09/04/2012	121J*			<3.10J*	<3.10J*		<3.10J*														
	04/20/2012	115J*			<3.10J*	4.00J*		<3.10J*														
	11/01/2011	107J*		<3.10J*				<3.10J*														
	05/18/2011	107J*		<5.00J*																		
	12/03/2009	45.5																				
0754 †	05/31/2012	3.55J																				
	07/25/2011	<6.20																				
	11/19/2010	<10.3	<10.6																			
2199	10/28/2014	<2.40			<2.40	<2.40		<2.40														
	07/10/2014	<2.40		<2.40																		
	06/02/2014	<5.15																				
0755	09/08/2014	5.80J			<2.40	<2.40		<2.40														
	04/21/2014	4.80J			<2.00	<2.00		<2.00														
	10/07/2013	6.30J	6.50J		<3.10	<3.10		<3.10														
	06/07/2013	6.20J*			<3.10J*	<3.10J*		<3.10J*														
	12/03/2012	7.70JH*			<3.10J*	<3.10J*		<3.10J*														
	10/15/2012	5.70J*			<3.10J*	<3.10J*		<3.10J*														
	01/24/2012	6.00J*		<3.10J*																		
	09/06/2011	5.56J																				
	02/10/2011	<11.2																				
0757	06/23/2014	12.4	11.6		<2.40	<2.40		<2.40														
	08/30/2013	13.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/30/2012	12.7J*			<3.10J*	<3.10J*		<3.10J*														
	04/24/2012	9.30J*		<3.10J*																		
	08/19/2011	10.7																				
	01/06/2011	<14.1																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0758	07/08/2014	21.3	17.7		<2.40	<2.40		<2.40														
	12/03/2013	15.7	14.7		<3.10	<3.10		<3.10														
	04/19/2013	17.4J*			<3.10J*	<3.10J*		<3.10J*														
	07/24/2012	17.0J*			<3.10J*	<3.10J*		<3.10J*														
	12/07/2011	13.8J*			<3.10J*	<3.10J*		<3.10J*														
	06/24/2011	13.6J*		<0.790J*																		
	01/06/2011	11.6																				
0773	06/10/2014	3.20J	<2.40		<2.40	<2.40		<2.40														
	02/06/2014	6.40J	7.80J		<3.00	<3.00		<3.00														
	08/27/2013	5.00J*			<3.10J*	<3.10J*		<3.10J*														
	10/23/2012	3.20J*			<3.10J*	<3.10J*		<3.10J*														
	12/07/2011	3.40J*		<3.10J*																		
	09/03/2011	3.92J																				
	10/30/2010	<10.8																				
0929	09/26/2014	20.9			<2.40	<2.40		<2.40														
	04/14/2014	20.0			<2.00	<2.00		<2.00														
	02/07/2014	21.3			<3.00	<3.00		<3.00														
	10/15/2013	15.3	16.3		<3.10	<3.10		<3.10														
	06/18/2013	17.2J*			<3.10J*	<3.10J*		<3.10J*														
	01/28/2013	15.2J*			<3.10J*	<3.10J*		<3.10J*														
	11/02/2012	16.3J*			<3.10J*	<3.10J*		<3.10J*														
	07/20/2012	16.5J*			<3.10J*	<3.10J*		<3.10J*														
	03/13/2012	15.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/09/2011			13.6J*																		
	11/08/2011	14.0J*						<3.10J*														
	05/24/2011	15.7J*		<5.00J*																		
	05/11/2011	11.8J*																				
	02/27/2010	14.4																				
0931	07/07/2014	26.8	25.7		<2.40	<2.40		<2.40														
	08/13/2013	20.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/09/2012	21.5J*			<3.10J*	<3.10J*		<3.10J*														
	11/09/2011	20.3J*		<3.10J*																		
	11/08/2011							<3.10J*														
	04/15/2011	21.6J*		<5.00J*																		
	02/26/2010	14.7																				
0932	11/18/2014	14.2																				
	09/23/2014	13.8	13.5		<2.40	<2.40		<2.40														
	09/11/2014	12.7																				
	05/29/2014	11.7																				
	04/03/2014	9.30J	9.89J																			
	02/24/2014	10.1	10.2		<3.00	<3.00		<3.00														
	11/26/2013	8.80J	9.00J																			
	09/16/2013	8.05J																				
	08/06/2013	5.80J*			<3.10J*	<3.10J*		<3.10J*														
	06/19/2013	5.04J																				
		6.80J																				
	06/18/2013	7.00J*			<3.10J*	<3.10J*		<3.10J*														
	03/20/2013	5.09J																				
	12/26/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/27/2012	4.60J*		<3.10J*																		
	05/24/2012	<6.32	3.37J																			
	07/14/2011	<6.66																				
	02/25/2010	<10.0	<10.4																			

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0933	08/12/2014	21.8			<2.40	<2.40		<2.40														
	01/10/2014	18.0			<3.00	<3.00		<3.00														
	05/06/2013	14.6J*			<3.10J*	<3.10J*		<3.10J*														
	10/23/2012	14.1J*			<3.10J*	<3.10J*		<3.10J*														
	03/13/2012	10.9J*			<3.10J*	<3.10J*		<3.10J*														
	08/23/2011	13.4J*		<3.10J*																		
	07/09/2011	10.8																				
	02/27/2010	<11.4																				
0936	06/30/2014	47.0		<2.40																		
	10/15/2013	30.2		<3.10																		
	06/18/2013	33.5J*		<3.10J*																		
	06/14/2012	21.2J*		<3.10J*																		
	06/08/2011	18.2J*		<0.790J*																		
	02/28/2010	14.7																				
0937	09/02/2014	26.0			<2.40	<2.40		<2.40														
	02/25/2014	21.7	21.1		<3.00	<3.00		<3.00														
	09/19/2013	18.2	19.3		<3.10	<3.10		<3.10														
	04/15/2013	17.3J*			<3.10J*	<3.10J*		<3.10J*														
	10/08/2012	16.6J*			<3.10J*	<3.10J*		<3.10J*														
	05/22/2012	15.5J*			<3.10J*	<3.10J*		<3.10J*														
	02/08/2012	15.3J*			<3.10J*	<3.10J*		<3.10J*														
	09/07/2011	14.2J*		<3.10J*																		
	07/08/2011	14.6																				
	02/26/2010	<10.5																				
0938	07/22/2014	12.0	12.4		<2.40	<2.40		<2.40														
	03/04/2014	10.2	10.5		<3.00	<3.00		<3.00														
	11/05/2013	10.2			<3.10	<3.10		<3.10														
	03/18/2013	8.90J*			<3.10J*	<3.10J*		<3.10J*														
	02/07/2013	9.00J*		<3.10J*																		
	06/04/2012	8.20J*			<3.10J*	<3.10J*		<3.10J*														
	11/18/2011	8.40J*		<3.10J*																		
	07/11/2011	9.02J																				
	03/02/2010	<10.3																				
0940	04/03/2014	30.3		<2.00																		
	01/28/2013	20.6J*			<3.10J*	<3.10J*		<3.10J*														
	10/11/2011	19.5J*		<3.10J*																		
	02/26/2010	15.1	15.6																			
0942	07/14/2014	50.0			2.80J	<2.40		<2.40														
	02/24/2014	44.0			<3.00	<3.00		<3.00														
	10/08/2013	39.5	37.3		<3.10	<3.10		<3.10														
	05/13/2013	40.5J*			3.70J*	<3.10J*		<3.10J*														
	04/20/2012	30.2J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2011	24.7J*		<3.10J*				<3.10J*														
	05/06/2011	26.3J*		<5.00J*																		
	02/26/2010	17.0																				

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0943	11/04/2014	40.6																				
	08/19/2014	35.3																				
	06/04/2014	33.9																				
	05/13/2014	36.1	37.5		2.40J	<2.00		<2.00														
	03/03/2014	32.9																				
	11/26/2013	29.6																				
	10/12/2013	26.5	26.1		<3.10	<3.10		<3.10														
	09/11/2013	30.3																				
	06/06/2013	25.8	25.6																			
		24.4																				
	04/19/2013	25.1J*			<3.10J*	<3.10J*		<3.10J*														
	03/12/2013	25.7																				
	01/02/2013	23.8J*			<3.10J*	<3.10J*		<3.10J*														
	09/21/2012	25.0J*			<3.10J*	<3.10J*		<3.10J*														
	04/11/2012	21.4J*		<3.10J*																		
	10/03/2011	21.4																				
	03/07/2010	<10.0																				
0944	11/17/2014	26.2			<2.40	<2.40		<2.40														
	05/12/2014	19.5	19.7		<2.00	<2.00		<2.00														
	12/13/2013	18.4	19.7		<3.10	<3.10		<3.10														
	07/23/2013	18.4J*			<3.10J*	<3.10J*		<3.10J*														
	06/05/2013	15.8J*			<3.10J*	<3.10J*		<3.10J*														
	02/18/2013	14.3J*			<3.10J*	<3.10J*		<3.10J*														
	08/17/2012	19.7J*			<3.10J*	<3.10J*		<3.10J*														
	04/05/2012	15.5J*			<3.10J*	<3.10J*		<3.10J*														
	10/27/2011	17.8J*		<3.10J*																		
	09/07/2011	18.4																				
	03/05/2010	<10.5																				
0945	08/04/2014	15.4	15.9		<2.40	<2.40		<2.40														
	06/17/2014	14.3			<2.40	<2.40		<2.40														
	11/22/2013	9.60J	10.1		<3.10	<3.10		<3.10														
	10/19/2012	9.40J*			<3.10J*	<3.10J*		<3.10J*														
	10/21/2011	8.70J*		<3.10J*																		
	07/25/2011	7.01J																				
	02/26/2010	<10.6																				
0946	10/04/2014	30.8	29.0		<2.40	<2.40		<2.40														
	09/21/2013	22.3	24.0		<3.10	<3.10		<3.10J*														
	12/10/2011	17.5J*			<3.10J*	<3.10J*		<3.10J*														
	06/20/2011	18.7J*		<0.790J*																		
	03/19/2010	18.3																				
0947	04/21/2014	13.4	11.3		<2.00	<2.00		<2.00														
	09/17/2013	11.0	12.1		<3.10	<3.10		<3.10														
	01/25/2013	10.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/12/2012	10.4J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2011	9.90J*		<3.10J*																		
	05/26/2011	9.08J																				
	02/11/2010	<10.4																				
0948	09/22/2014	14.2	14.3		<2.40	<2.40		<2.40														
	09/17/2013	11.2			<3.10	<3.10		<3.10														
	10/19/2011	9.00J*		<3.10J*																		
	05/26/2011	9.44J																				
	02/11/2010	<10.0																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
0988	05/27/2014	64.4	65.6		<2.00	<2.00		<2.00														
	11/11/2013	72.5	71.0		<3.10	<3.10		<3.10														
	06/24/2013	101J*			<3.10J*	<3.10J*		<3.10J*														
	01/22/2013	86.8J*			<3.10J*	<3.10J*		<3.10J*														
	09/10/2012	125J*			<3.10J*	<3.10J*		<3.10J*														
	04/20/2012	145J*			<3.10J*	<3.10J*		<3.10J*														
	12/09/2011	146J*			<3.10J*	<3.10J*		<3.10J*														
	07/12/2011	164J*		<0.790J*																		
	02/07/2010	157																				
0996	09/26/2014	7.40J	7.80J		<2.40	<2.40		<2.40														
	05/19/2014	9.40J	9.30J		<2.00	<2.00		<2.00														
	11/12/2013	9.10J	9.80J		<3.10	<3.10		<3.10														
	07/09/2013	10.9J*			<3.10J*	<3.10J*		<3.10J*														
	01/07/2013	12.1J*			<3.10J*	<3.10J*		<3.10J*														
	07/11/2012	14.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/02/2011	14.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/15/2011	15.0J*		<0.790J*																		
	03/11/2010	16.7																				
0997 §	07/28/2014	4.10J			<2.40	<2.40		<2.40														
	08/12/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	11/01/2011	4.80J*		<3.10J*																		
	07/08/2011	4.06J																				
	02/26/2010	<10.4																				
1086	06/20/2014				<2.40	<2.40																
	05/13/2014	97.3			<2.00	2.10J		<2.00														
	10/07/2013	85.7	88.8		<3.10	<3.10		<3.10														
	04/02/2013	92.5J*			<3.10J*	<3.10J*		<3.10J*														
	10/05/2012	89.0J*			6.20J*	<3.10J*		<3.10J*														
	02/17/2012	83.6J*			5.10J*	<3.10J*		<3.10J*														
	08/09/2011	87.6J*		<3.10J*																		
	03/06/2010	46.8																				
1095	09/29/2014	201	204		<2.40	<2.40		<2.40														
	05/15/2014	282			<2.00	<2.00		<2.00														
	09/30/2013	288			<3.10	<3.10		<3.10														
	05/21/2013	346J*			<3.10J*	<3.10J*		<3.10J*														
	11/27/2012	463J*			<3.10J*	<3.10J*		<3.10J*														
	07/11/2012	421J*			<3.10J*	<3.10J*		<3.10J*														
	07/21/2011	402J*		<3.10J*																		
	01/04/2010	117																				
1096	07/29/2013	296J*			<3.10J*	<3.10J*		<3.10J*														
	12/15/2011	348J*			<3.10J*	<3.10J*		<3.10J*														
	07/20/2011	440J*		<3.10J*																		
	06/06/2011	327																				
1097	07/11/2014	245			<2.40	<2.40		<2.40														
	12/20/2013	278	273		<3.00	<3.00		<3.00														
	05/20/2013	353J*			<3.10J*	<3.10J*		<3.10J*														
	11/02/2012	358J*		<3.10J*																		
	01/07/2010	87.0	98.9																			

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Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1099	11/18/2014	91.5	89.8																			
	08/26/2014	101			<2.40	<2.40		<2.40														
	08/18/2014	94.4																				
	06/02/2014	96.8																				
	03/24/2014	94.9																				
	03/03/2014	99.5			<3.00	<3.00		<3.00														
	12/02/2013	113																				
	09/26/2013	97.2	104																			
	09/24/2013	91.5	89.6		<3.10	<3.10		<3.10														
	06/04/2013	97.4																				
		103																				
	03/12/2013	107	105																			
	03/01/2013	98.9J*			<3.10J*	<3.10J*		<3.10J*														
	09/10/2012	96.8J*		<3.10J*																		
1100	05/15/2014	196	210		<2.00	<2.00		<2.00														
	09/06/2013	238J*			<3.10J*	<3.10J*		<3.10J*														
	02/04/2013	267J*			<3.10J*	<3.10J*		<3.10J*														
	08/23/2012	313J*		<3.10J*																		
	05/24/2010	185																				
1101	06/30/2014	25.9	24.9		<2.40	<2.40		<2.40														
	08/26/2013	16.7J*			<3.10J*	<3.10J*		<3.10J*														
	05/01/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/15/2012	16.1J*			<3.10J*	<3.10J*		<3.10J*														
	05/02/2012	13.2J*		<3.10J*																		
	09/02/2011	15.1																				
	02/27/2010	<11.4	<10.0																			
1103	06/23/2014	44.1			3.50J	<2.40		<2.40														
	01/10/2014	40.1	41.3		<3.00	<3.00		<3.00														
	08/26/2013	30.3J*			<3.10J*	<3.10J*		<3.10J*														
	04/09/2013	26.0J*			<3.10J*	<3.10J*		<3.10J*														
	08/07/2012	28.8J*		<3.10J*																		
1104	11/10/2014	63.9			<2.40	<2.40		<2.40														
	11/25/2013	52.7	49.5		<3.10	<3.10		<3.10														
	05/08/2012	40.9J*		<3.10J*																		
	02/27/2010	27.3																				
1105	09/08/2014	7.40J	7.10J		<2.40	<2.40		<2.40														
	11/12/2013	7.90J			<3.10	<3.10		<3.10														
	08/01/2013	6.10J*			<3.10J*	<3.10J*		<3.10J*														
	05/10/2013	7.90J*			<3.10J*	<3.10J*		<3.10J*														
	11/14/2012	6.20J*			<3.10J*	<3.10J*		<3.10J*														
	05/11/2012	7.30J*		<3.10J*																		
	09/02/2011	6.72J																				
	03/27/2010	<10.3																				
1106 §	06/16/2014	9.20J			<2.40	<2.40		<2.40														
	01/06/2014	10.4		<3.00																		
	02/24/2010	10.6																				
1107 §	08/26/2014	22.0	21.4		<2.40	<2.40		<2.40														
	06/16/2014	26.5	25.0		<2.40	<2.40		<2.40														
	02/28/2014	27.1			<3.00	<3.00		<3.00														
	12/20/2013	24.3		<3.10																		
	08/24/2011	13.4																				
	02/24/2010	<10.4																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1108 §	11/11/2014	58.7			<2.40	<2.40		<2.40														
	08/15/2014	63.8	63.3		<2.40	<2.40		<2.40														
	04/21/2014	54.4			<2.00	<2.00		<2.00														
	01/22/2014	59.1		<3.00																		
	02/25/2010	19.3																				
1109	11/25/2014	22.6																				
	09/16/2014	28.9	26.8		<2.40	<2.40		<2.40														
	08/21/2014	25.7																				
	06/03/2014	25.5																				
	03/18/2014	28.2																				
	12/17/2013	27.3																				
	09/09/2013	26.2																				
	08/09/2013	23.2J*			<3.10J*	<3.10J*		<3.10J*														
	06/05/2013	25.6																				
		26.5																				
	03/13/2013	24.6																				
	06/01/2012	20.6J*		<3.10J*																		
	08/29/2011	18.3																				
	02/27/2010	<11.4																				
1110	09/05/2014	5.70J	5.20J		<2.40	<2.40		<2.40														
	08/19/2013	4.70J*			<3.10J*	<3.10J*		<3.10J*														
	08/15/2012	5.20J*		<3.10J*																		
	01/27/2012	4.31J																				
1111 ‡	08/23/2012	28.9	25.7																			
1114	07/18/2014	51.7			4.70J	<2.40		<2.40														
	02/10/2014	50.0JL*	49.4JL*		<3.00J*	<3.00J*		<3.00J*														
	09/16/2013	42.4	40.6		<3.10	<3.10		<3.10														
	03/05/2013	39.4J*			<3.10J*	<3.10J*		<3.10J*														
	08/07/2012	40.1J*			<3.10J*	<3.10J*		<3.10J*														
	12/01/2011	35.4J*			<3.10J*	<3.10J*		<3.10J*														
	07/27/2011	40.7J*		<3.10J*																		
	02/25/2010	22.2																				
1116	11/14/2014	30.8			<2.40	<2.40	<2.40	<2.40														
	06/17/2014	33.4	27.1		<2.40	<2.40		<2.40														
	12/16/2013	26.5			<3.10	<3.10		<3.10														
	04/08/2013	27.3J*			<3.10J*	<3.10J*		<3.10J*														
	06/12/2012	26.1J*		<3.10J*																		
	06/21/2010	20.8	23.2																			
1118	06/30/2014	12.3			<2.40	<2.40		<2.40														
	04/15/2014	9.90J			<2.00	<2.00		<2.00														
	01/31/2014	10.5			<3.00	<3.00		<3.00														
	03/12/2013	12.0J*			<3.10J*	<3.10J*		<3.10J*														
	11/13/2012	7.40J*			<3.10J*	<3.10J*		<3.10J*														
	08/07/2012	8.20J*			<3.10J*	<3.10J*		<3.10J*														
	04/13/2012	8.70J*			<3.10J*	<3.10J*		<3.10J*														
	09/28/2011	7.80J*		<3.10J*																		
	07/08/2011	8.63J																				
	03/09/2010	<10.0																				

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Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1155 §	11/18/2014										<2.40											
	11/04/2014	169																				
	11/03/2014	174										<2.40	2.50J		<2.40	<2.40				<2.40	<2.40	
	08/25/2014	193									<2.40									<2.40	<2.40	
																					<2.40	
	08/18/2014	180																				
	05/28/2014	181																				
	04/11/2014	190	190									2.90J	<2.00		8.70J	<2.00				<2.00	<2.00	
	03/10/2014	173																				
	03/07/2014	184									<3.00			3.60J						<3.00	<3.00	
	12/13/2013	156									<3.10			<3.10						<3.10	<3.10	
	11/25/2013	173																				
	09/11/2013	172																				
	09/02/2013	144JL*									<3.10J*			<3.10J*						<3.10J*	<3.10J*	
	06/10/2013	163J*									<3.10J*			<3.10J*						<3.10J*	<3.10J*	
	06/05/2013	166																				
		159																				
	04/26/2013	155J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*				<3.10J*	<3.10J*	
	03/18/2013	162																				
	03/01/2013	143J*									<3.10J*			<3.10J*						<3.10J*	<3.10J*	
	09/12/2012	151J*									<10.0J*			<10.0J*						<10.0J*	<10.0J*	
	07/10/2012	146J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*				<3.10J*	<3.10J*	
	04/09/2012	143J*			<3.10J*	<3.10J*			<3.10J*	<3.10J*												
	10/20/2011	118J*			<3.10J*	<3.10J*																
	02/13/2010	55.4																				
1186 §	10/31/2014	15.1			<2.40	<2.40	<2.40	<2.40														
	09/08/2014	16.0	16.6		<2.40	<2.40		<2.40														
	07/21/2014	15.6	15.9		<2.40	<2.40		<2.40														
	05/13/2014	15.1	15.1		<2.00	<2.00		<2.00														
	02/04/2014	18.3			<3.00	<3.00		<3.00														
	09/20/2013	13.3			<3.10	<3.10		<3.10														
	07/16/2013	10.9J*			<3.10J*	<3.10J*		<3.10J*														
	04/19/2013	7.60J*			<3.10J*	<3.10J*		<3.10J*														
	02/05/2013	13.0J*			<3.10J*	<3.10J*		<3.10J*														
	12/04/2012	20.8JH*			<3.10J*	<3.10J*		<3.10J*														
	08/20/2012	15.9J*			<3.10J*	<3.10J*		<3.10J*														
	04/13/2012	15.2J*			<3.10J*	<3.10J*		<3.10J*														
	12/14/2011	15.7J*		<3.10J*																		
	08/31/2011	16.3																				
	05/10/2010	<10.5																				
	04/18/2010	<10.0J*																				
1190	04/07/2014	8.50J			<2.00	<2.00		<2.00														
	11/08/2013			<3.10				<3.10														
	09/16/2013	6.60J	6.60J		<3.10	<3.10		<3.10														
	01/30/2013	6.20J*			<3.10J*	<3.10J*		<3.10J*														
	06/26/2012	7.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/27/2011	6.00J*		<3.10J*																		
	08/29/2011	5.92J																				
	04/15/2010	<10.0																				

Table 3
POE Treatment Systems Analytical Data Summary
Alternative Water Solutions Program - 2014 Annual Report
North Pole, Alaska

Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1276	07/28/2014	3.90J	4.10J		<2.40	<2.40		<2.40														
	02/10/2014	<3.00J*	<3.00J*		<3.00J*	<3.00J*		<3.00J*														
	08/27/2013	4.60J*			<3.10J*	<3.10J*		<3.10J*														
	02/28/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/17/2012	6.50J*			<3.10J*																	
	08/29/2011	5.47J																				
	04/13/2010	<10.0																				
1314	10/27/2014	162			<2.40	<2.40	<2.40	<2.40														
	12/09/2013	162	174		<3.10	<3.10		<3.10														
	07/02/2013	168J*			<3.10J*	<3.10J*		<3.10J*														
	12/07/2012	188J*			<3.10J*	<3.10J*		<3.10J*														
	05/04/2012	141J*			<3.10J*	<3.10J*		<3.10J*														
	11/07/2011	119J*		<3.10J*				<3.10J*														
	05/12/2011	94.8J*		<5.00J*																		
	04/19/2011	101JL*		<5.00J*																		
	03/09/2010	69.7																				
1315	10/21/2014	191			<2.40	<2.40	<2.40	<2.40														
	08/08/2014	157	157		<2.40	<2.40		<2.40														
	03/10/2014	164			<3.00	<3.00		<3.00														
	11/08/2013	169	174		<3.10	<3.10		<3.10														
	07/15/2013	147J*			<3.10J*	<3.10J*		<3.10J*														
	04/01/2013	189J*			<3.10J*	<3.10J*		<3.10J*														
	11/23/2012			<3.10																		
	11/09/2012	78.0J*			<3.10J*	63.0J*		<3.10J*														
	07/18/2012	129J*			<3.10J*	<3.10J*		<3.10J*														
	02/28/2012	118J*			<3.10J*	<3.10J*		<3.10J*														
	09/15/2011	49.8J*		<3.10J*				<3.10J*														
	04/05/2011	110		<5.00																		
	03/06/2010	72.0																				
1374	05/21/2014	140	143		<2.00	<2.00		<2.00														
	05/20/2013	118J*			<3.10J*	<3.10J*		<3.10J*														
	12/17/2012	120J*			8.60J*	<3.10J*		<3.10J*														
	06/28/2012	107J*			<3.10J*	<3.10J*		<3.10J*														
	01/23/2012	96.1J*			<3.10J*	<3.10J*		<3.10J*														
	09/14/2011	66.8J*		<3.10J*				<3.10J*														
	05/18/2011	76.3J*		<5.00J*																		
	03/04/2010	51.0																				
1375	10/17/2014	124			<2.40	<2.40	<2.40	<2.40														
	02/11/2014	105			<3.00	<3.00		<3.00														
	05/10/2013	92.1J*			<3.10J*	<3.10J*		<3.10J*														
	06/26/2012	83.6J*			<3.10J*	<3.10J*		<3.10J*														
	01/23/2012	79.7J*			<3.10J*	<3.10J*		<3.10J*														
	09/22/2011	63.8J*		<3.10J*																		
	05/18/2011	60.7J*		<5.00J*																		
	03/06/2010	42.7																				
1394	02/18/2013	20.6J*			<3.10J*	<3.10J*		<3.10J*														
	09/28/2012	22.6J*			<3.10J*	<3.10J*		<3.10J*														
	04/19/2012	22.7J*			<3.10J*	<3.10J*		<3.10J*														
	11/09/2011	22.1J*		<3.10J*																		
	09/07/2011	23.9																				
	04/18/2010	<10.0J*																				

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North Pole, Alaska

Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1395 §	09/19/2014	28.4									<2.40			<2.40						<2.40	<2.40	
	05/21/2014	25.8										<2.00	<2.00		<2.00	<2.00				<2.00	<2.00	
	02/14/2014	26.3	27.0									<3.00	<3.00		<3.00	<3.00				<3.00	<3.00	
	12/13/2013	24.2									<3.10			<3.10						<3.10	<3.10	
	09/03/2013	28.0JL*									<3.10J*			<3.10J*						<3.10J*	<3.10J*	
	06/10/2013	24.0J*										<3.10J*			<3.10J*					<3.10J*	<3.10J*	
	05/14/2013	25.7J*										<3.10J*	<3.10J*		<3.10J*	<3.10J*				<3.10J*	<3.10J*	
	03/15/2013	29.4J*									<3.10J*			<3.10J*								
	05/10/2010	20.0																				
	04/09/2010	<10.6																				
1404	07/25/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	11/05/2013	<3.10	<3.10		<3.10	<3.10		<3.10														
	03/05/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	07/13/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	06/29/2011	<0.790J*		<0.790J*																		
	11/14/2009	3.26J	4.00J																			
1406	09/15/2014	<2.40	<2.40		<2.40	<2.40		<2.40														
	11/25/2013	<3.10			<3.10	<3.10		<3.10														
	03/12/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	05/22/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	09/07/2011	3.50J*		<3.10J*																		
	07/26/2011	3.44J																				
	02/27/2010	<10.5																				
1407	01/14/2014	<3.00			<3.00	<3.00		<3.00														
	08/05/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/19/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	12/27/2011	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	06/28/2011	<0.790J*		<0.790J*																		
	11/13/2009	9.04J																				
1408	06/10/2014	<2.40			<2.40	<2.40		2.40J*														
	08/16/2013	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	10/16/2012	<3.10J*			<3.10J*	<3.10J*		<3.10J*														
	11/18/2011	<3.10J*		<3.10J*				<3.10J*														
	05/25/2011	<5.00J*		<5.00J*																		
	11/14/2009	4.46J																				
1435	08/29/2014	30.1	30.3		<2.40	<2.40		<2.40														
	01/13/2014	28.6	28.6		<3.00	<3.00		<3.00														
	04/02/2013	27.3J*			<3.10J*	<3.10J*		<3.10J*														
	03/20/2012	27.9J*		<3.10J*																		
	02/12/2010	26.8																				
1436	06/09/2014	15.9			<2.40	<2.40		<2.40														
	01/21/2014	15.3			<3.00	<3.00		<3.00														
	09/03/2013	13.5JL*			<3.10J*	<3.10J*		<3.10J*														
	04/23/2013	11.6J*			<3.10J*	<3.10J*		<3.10J*														
	12/26/2012	9.50J*			<3.10J*	<3.10J*		<3.10J*														
	09/05/2012	14.0J*			<3.10J*	<3.10J*		<3.10J*														
	05/21/2012	11.6J*		<3.10J*																		
	04/30/2012	11.8J*			<3.10J*	<3.10J*		<3.10J*														
	01/31/2012	11.2J*			<3.10J*	<3.10J*		<3.10J*														
	10/04/2011	12.5J*		<3.10J*																		
	08/23/2011	12.4																				
	04/17/2010	<10.0																				

Table 3
POE Treatment Systems Analytical Data Summary
Alternative Water Solutions Program - 2014 Annual Report
North Pole, Alaska

Sample Port		A		C	C1	C2		D	D1	D2	1-C	1-C1	1-C2	2-C	2-C1	2-C2	3-C	3-C1	3-C2	1-D	2-D	3-D
Duplicates			DUP				DUP															
PW-ID	Sample Date	Sulfolane (µg/l)																				
1437	09/02/2014	22.6			<2.40																	
	06/26/2012	11.9J*			<3.10J*	<3.10J*		<3.10J*														
	11/14/2011	10.3J*		<3.10J*																		
	08/29/2011	10.9																				
	04/16/2010	<10.9																				
1459	05/22/2014	18.0		<2.00																		
	06/28/2013	15.7	15.7																			

Notes:

PW-ID Private-well identification number.
§ Commercial location
† System has been deactivated and moved to treating the new well for this location
‡ System has been installed but has not been activated due to vacant structure

Flags
J Estimated concentration; sulfolane was detected below the laboratory limit of quanitation (LOQ) and above the detection limit (DL). Flag applied by laboratory.
J* Estimated concentration. Flag applied by Shannon & Wilson, Inc. due to quality control failures and/or lack of field duplicates (for older data).
JL* Estimated concentration, biased low. Flag applied by Shannon & Wilson, Inc. due to quality control failures.
JH* Estimated concentration, biased high. Flag applied by Shannon & Wilson, Inc. due to quality control failures.
X* Sample switch suspected; however, not confirmed due to inability to confirm original results.
< Sample not detected above concentration listed.

Sample Ports
A Influent water directly from private-well
C Post primary treatment sample port (after two tanks on a duplex system or one tank on a simplex system); these samples are typically collected at system startup.
C1 Sample collected from sample port "C" prior to a carbon tank change out.
C2 Sample collected from sample port "C" after a carbon tank change out.
D Post redundant treatment sample port
D1 Sample collected from sample port "D" prior to a redundant tank change out.
D2 Sample collected from sample port "D" after a redundant tank change out.
1-X Unit 1 sample, where "X" indicates sample port; some locations may run several treatment units in parallel.
2-X Unit 2 sample, where "X" indicates sample port; some locations may run several treatment units in parallel.
3-X Unit 3 sample, where "X" indicates sample port; some locations may run several treatment units in parallel.

Table 4
POE Treatment Systems Water Usage Summary
Flint Hills Resources Alaska, LLC
North Pole, Alaska

	Private Well Indentification Number (PW ID#)	Gallons of Water treated in 2014 (Approximate)
1	0615	63,480
2	0503	46,540
3	1314	55,510
4	1315	72,140
5	0618	61,150
6	0232	36,620
7	0217	32,200
8	0598	22,780
9	0636	46,800
10	0219	27,440
11	0625	15,820
12	0157	95,390
13	0624	32,760
14	1374	35,580
15	1375	60,870
16	1099	37,290
17	0488	31,510
18	0487	54,500
19	1097	31,820
20	0483	30,770
21	0648	29,030
22	0931	46,130
23	1086	24,770
24	0657	93,200
25	0942	62,520
26	0647	45,350
27	0453	26,720
28	0646	67,630
29	0225	88,210
30	0454	10,540
31	0660	32,380
32	0560	50,300
33	0561	60,530
34	0564	45,670
35	0570	49,320
36	0929	75,830
37	1408	42,100
38	0463	66,390
39	0936	22,100
40	0559	68,020
41	0562	18,070
42	0610	19,570
43	1404	33,720
44	0442	31,580
45	0946	8,080
46	1114	54,330
47	0996	47,810
48	0658	28,440
49	1407	32,390
50	0504	41,590
51	0162	56,530
52	0161	69,900
53	0988	33,960
54	0758	36,790
55	0489	15,190
56	0498	43,150
57	0617	32,660
58	0159	83,000
59	0620	44,430

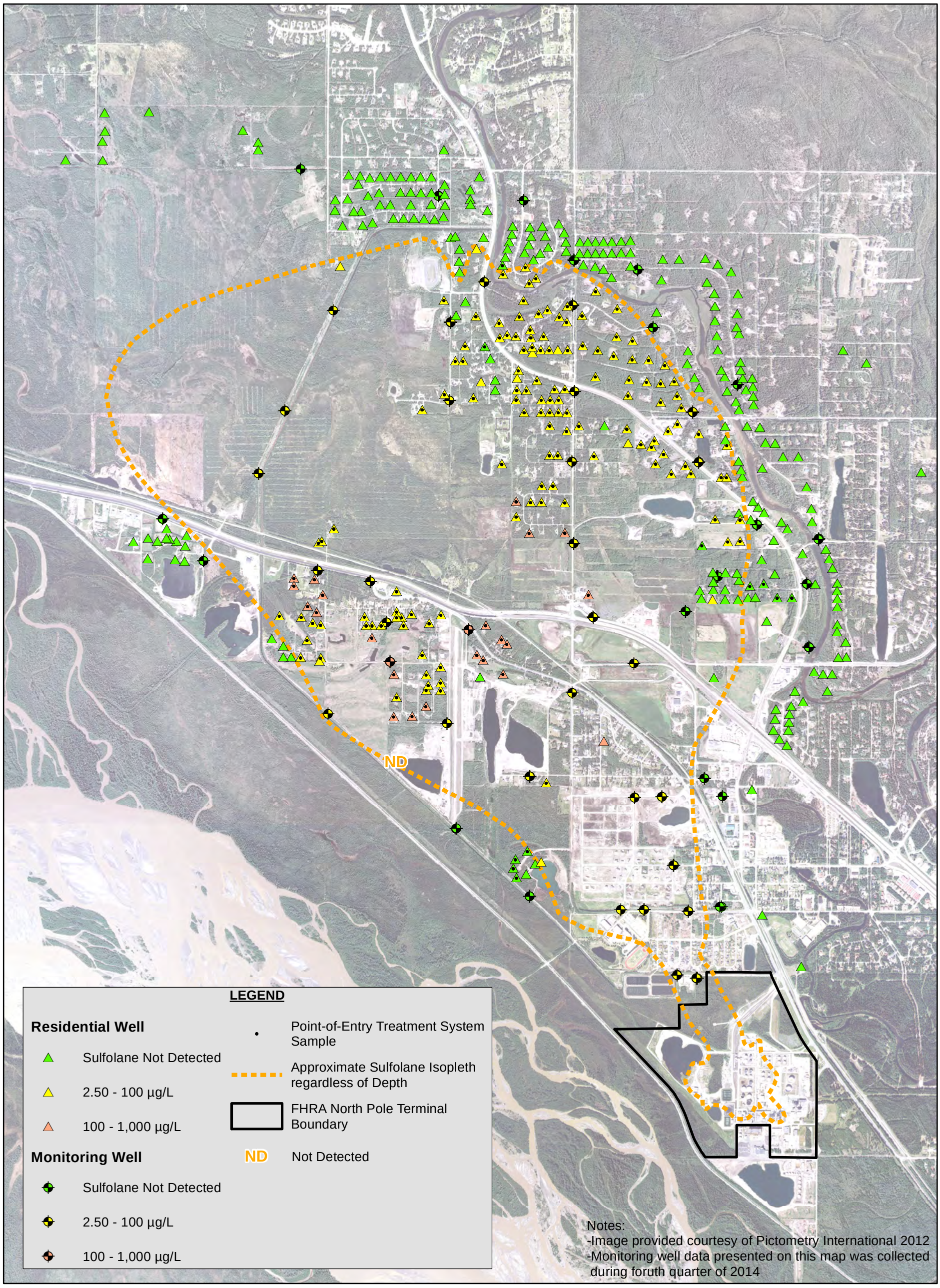
Table 4
POE Treatment Systems Water Usage Summary
Flint Hills Resources Alaska, LLC
North Pole, Alaska

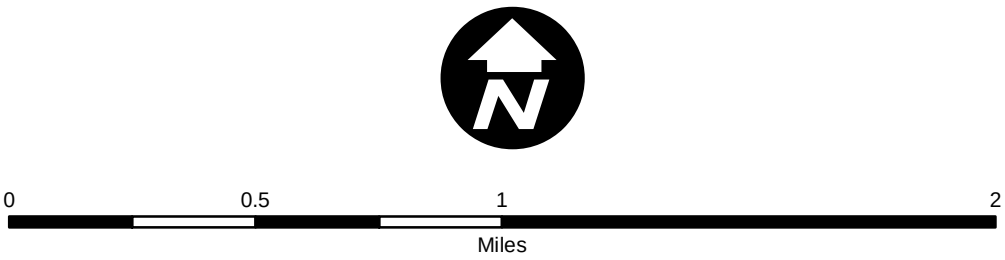
	Private Well Indentification Number (PW ID#)	Gallons of Water treated in 2014 (Approximate)
60	0164	33,470
61	0158	25,930
62	0300	36,840
63	0553	68,520
64	0542	43,270
65	0568	81,170
66	0550	34,630
67	0558	44,520
68	0299	14,770
69	0557	49,550
70	0377	87,840
71	0506	9,240
72	0606	38,660
73	1096	1,080
74	1095	33,050
75	0565	38,570
76	0649	26,410
77	0608	37,000
78	0567	43,690
79	0484	87,270
80	0502	8,000
81	0514	75,270
82	0515	32,690
83	0933	38,090
84	0303	33,130
85	0160	40,470
86	0364	51,170
87	0298	31,280
88	0566	127,180
89	0997	5,930
90	1394	0
91	0937	48,880
92	1406	29,890
93	0311	49,070
94	0296	40,340
95	0305	54,470
96	0609	11,330
97	0307	79,180
98	0439	45,270
99	0947	36,380
100	0948	14,070
101	0378	90,060
102	0302	18,890
103	1190	34,420
104	0945	47,620
105	0295	34,460
106	0597	77,860
107	1155	47,890
108	0944	48,580
109	0586	69,490
110	0622	105,260
111	1436	51,450
112	0309	29,650
113	0938	41,440
114	0656	24,530
115	1186	106,330
116	0651	23,830
117	0348	56,790
118	0308	45,360

Table 4
POE Treatment Systems Water Usage Summary
Flint Hills Resources Alaska, LLC
North Pole, Alaska

	Private Well Indentification Number (PW ID#)	Gallons of Water treated in 2014 (Approximate)
119	0607	98,690
120	0544	64,040
121	0390	23,450
122	0773	48,500
123	0304	40,320
124	0394	14,780
125	0376	94,710
126	0943	40,130
127	0221	57,360
128	0940	4,820
129	1437	5,680
130	0393	11,860
131	0347	30,890
132	0755	47,660
133	0480	6,780
134	1118	62,760
135	0556	85,690
136	1435	73,860
137	0757	33,630
138	1109	22,290
139	1101	25,760
140	1103	41,980
141	1105	61,260
142	1104	26,820
143	1116	53,840
144	0554	51,970
145	0599	27,800
146	1276	40,310
147	0932	38,190
148	0312	96,070
149	1110	37,870
150	1100	24,060
151	0301	36,760
152	0466	34,210
153	0511	69,950
154	0365	186,920
155	1395	96,870
156	0456	72,800
157	0563	51,060
158	0391	27,350
159	0653	50,310
160	1107	176,844
161	1108	143,760
162	1106	102,190
163	1459	41,050
164	1111	0
165	0754	0
	2199	41,880
Total		**7,796,164**

Figures





Alternative Water Solutions Program-
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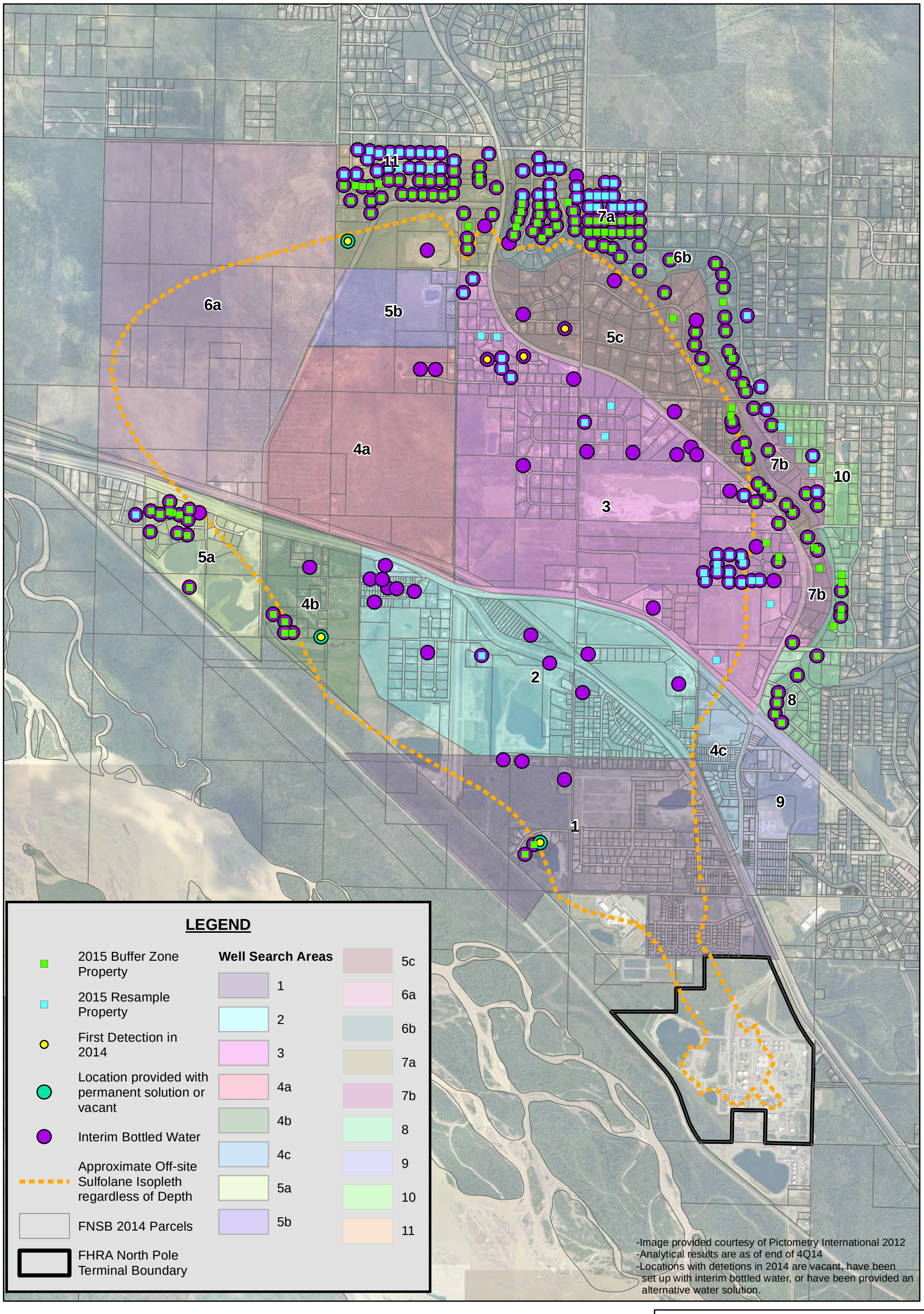
North Pole, Alaska

2014 SULFOLANE PLUME AND MONITORING RESULTS

February 2015 31-1-11751-001

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1



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2015 BUFFER ZONE AND RESAMPLING AREA

February 2015 31-1-11751-001

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 2

Figure 3
Potable Water Solutions Provided by Flint Hills Resources

Legend

- Sulfolane Not Detected
- 2.50 - 100 µg/L
- 100 - 1,000 µg/L
- Monitoring Well
- City Water Solutions
- Long Term Alternative Water Solution - Residential Property
- Long Term Alternative Water Solution - Commercial Property
- Interim Bottled Water Solution
- Water Tank Listed As Water Source During Survey (Outside City Limits)
- Auxiliary Well Sample, City Water Listed As Drinking Water Source During Survey
- City of North Pole Fire Wells
- New NP City Wells
- Water Main New City Wells
- North Pole City Boundary

ppb = parts per billion
1 ppb = 1 µg/L (microgram per liter)
1 µg/L = 0.000000001 g/L (gram per liter)

*The latest sulfolane result for a well is presented on this map.

0 1
Miles

Private Well Results and Solutions as of December 31, 2014

MW-311-15/46
MW-335-41
MW-328-15/151
MW-189A/B
MW-181A/B/C
MW-314-15/150
MW-352-15/40
MW-308-15/30
MW-346-15/65/150
MW-167A/B
MW-172A/B
MW-168A/B
MW-182A/B
MW-166A/B
MW-185A/B/C
MW-339-15/50
MW-347-20/65/150
MW-194A/B
MW-165A/B
MW-190A/BR/150
MW-340-15/65/150
MW-164A/B/C
MW-191A/B
MW-183A/B
MW-329-15/66
MW-332-15/41/75/110/150
MW-325-18/150
MW-350-15/50
MW-343-15/50
MW-341-15/40
MW-353-15/65/100
MW-357-15/65/150
MW-16115/30/50
MW-163A/B
MW-171A/B
MW-162A/B
MW-187
MW-342-15/65
MW-349-15/45
MW-338-15/50
MW-316-15/56
MW-157A/B
MW-184
MW-160AR/B
MW-156A/B
MW-323-15/50
MW-169A/B/C
MW-158A/B
MW-159A/B/C
MW-193A/B
MW-155A/B
MW-152A/B/C
MW-317-15/71
MW-150A/B/C/D
MW-151A/B/C
MW-170A/B/C/D
MW-318-20/135
MW-153A/B
MW-148A/B/C/D
Tanana River

Attachment A

2014 Newsletters to Homeowners

ABOUT

Welcome to the first issue of "Be in the Know. North Pole." The purpose of this monthly newsletter is to educate and inform the residents of North Pole on sulfolane in the community. We will send regular newsletters to keep the residents of North Pole in the know about sulfolane and how it affects us all.

Learn more and subscribe to our email newsletter at **www.northpolegroundwater.com**

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THIS ISSUE:

Homeowner water solutions

In this issue, we will focus on the options FHRA has offered affected homeowners through 2013. These options included:

Bottled Water Delivery: FHRA provides bottled water delivery to homes until wells test below the state regulated limit for sulfolane. There is no cost to the homeowner for these deliveries. The homeowner is responsible for preventing damage to the water dispenser and jugs.

Bulk water: A bulk water tank system generally consists of a buried 2,000 gallon insulated water tank, pump and pressure tank that is connected to domestic water supply lines in the home. FHRA provides and pays for 60 gallons per day for each resident in the home, and maintenance for the system, until the well tests below the state regulated limit for sulfolane. Homeowners are responsible for preventing damage to the system and paying for the cost of water above 60 gallons per resident per day.

Water Treatment: The water treatment system uses your home's existing well and treats water for sulfolane. While homeowners are responsible for preventing damage to the system, FHRA (through a contracted vendor) maintains this system (including providing filters, salt for the softener, and carbon replacement) until the well tests below the state regulated limit for sulfolane.

FHRA RESULTS:

In 2013, FHRA:

Delivered 2,208,937 gallons of water to commercial and residential bulk tanks.

Treated just over **7,000,000** gallons of water in residential and commercial treatment systems.

Collected 669 water samples from monitoring wells and private wells for testing.

Supplied 104,525 gallons of bottled water to residents on long term and interim bottled water plans.

Performed in excess of **650** service visits to maintain treatment systems.

To date, FHRA:

Installed 161 water treatment systems, **113** bulk tanks, **32** long term bottled water dispensers, and **48** garden tanks.

Spent $70 million to address a problem that happened prior to FHRA ownership.

HERE TO HELP:

FHRA's North Pole Groundwater Office is located in Polar Plaza, next to the North Pole Post Office, at 201 Santa Claus Lane. The staff can send you the most recent copy of your sulfolane test results and answer any questions you have about sulfolane in North Pole.

You can call FHRA at 488-0723. Or reach Marisa Sharrah, Community Relations Manager at 488-5103 or Marisa.sharrah@kochps.com.

To reach ADEC, contact Tamara Cardona, Project Manager, Alaska Dept of Environmental Conservation, at 451-2192.

Please remember: When selling your home in or near the affected area, homeowners are responsible for disclosure of the sulfolane issue. A licensed Realtor is a great resource for assistance through that process.

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THIS ISSUE:

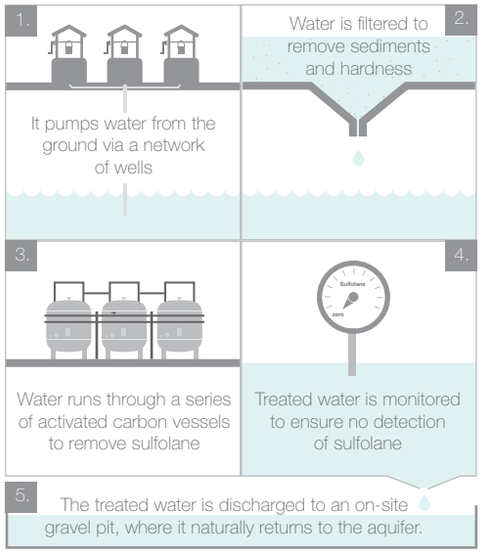
Pump and Treat System

In this issue, we will focus on our pump and treat system. In 2013 alone, this system treated about 200 million gallons of water. This year, we plan to do even more by expanding the existing pump and treat system.

This system:

- Is coming online this summer
- Is almost identical in technology to the proven system we brought online in June 2011
- Will further capture and remove sulfolane in groundwater under the refinery
- Will increase current gallons of water treated per day from about 500,000 to 800,000

The pump and treat system is actually quite simple. Here's how it works:



FHRA TODAY:

The Flint Hills Resources North Pole Refinery is being decommissioned. However, we will continue to work on the North Pole groundwater project, which will include resampling buffer-zones and adding to the on-site remediation system this summer. Buffer-zone testing will be conducted during that time on over 200 private wells to monitor the properties on the leading edge of the plume. We will also be providing alternative water to those residents and businesses affected by sulfolane.

The Flint Hills North Pole Terminal will still be operating as well - offloading fuels from the Flint Hills Anchorage Terminal for distribution to our Interior Alaska retail customers.

While we know the sulfolane contamination occurred when Williams Companies owned the refinery and the State of Alaska owned the land, neither of those parties has taken any responsibility for responding to this situation. As always, please contact FHRA to request your most recent sulfolane test results or to put in a request for testing. We're here to answer your questions about sulfolane in North Pole.

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THIS ISSUE:

FHRA History

TIMELINE

1977	North Pole refinery produces its first barrel of product (refinery owned by Earth Resources). The property on which the refinery is located is owned by the State of Alaska.
1980	Earth Resources sells a majority of its stock to MAPCO
1985	Sulfolane first used at North Pole refinery
1998	Williams Companies acquires MAPCO
2000-02	Sulfolane first discovered in on-site groundwater monitoring well
2002	ADEC determined that sufolane was not considered to be a regulated contaminant and not a compound of concern for the site
2004	Flint Hills Resources Alaska acquires the refinery as well as the property on which the refinery is located, and submits a Corrective Action Plan to address the on-site contamination ADEC determined that sufolane will be a regulated contaminant and that its groundwater cleanup standard would be350 parts per billion (ppb)
Oct. 2009	FHRA discovers sulfolane had migrated off site and immediately alerts city/ADEC/local media FHRA states they would provide testing and bottled water while working on a long-term plan for remediation
Nov. 2009	FHRA conducts first town hall meeting to discuss concerns of the community investigation and remediation plans of the company
2009-Now	FHRA collected and analyzed samples from 815 private wells
Jan. 2010	FHRA develops a method with Ecowater Systems to remove sulfolane from water
Aug. 2010	FHRA spends $5 million to connect 29 homes to city water FHRA starts work on two new city wells
Jan. 2011	Two new city wells become operational and are donated by FHRA to the City of North Pole
2011-Now	FHRA installs 75 offsite monitoring wells to track the plume FHRA provides solutions to 306 homes in the affected area FHRA continues to monitor and test quarterly FHRA analyzes 454 samples taken from the 184 active monitoring wells FHRA collected and analyzed 669 private well samples FHRA conducted an aerial survey to better understand the depth and thickness of permafrost in the plume area
Dec. 2013	FHRA submits on-site and off-site characterization reports to ADEC

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