



# Department of Pesticide Regulation



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Director

## MEMORANDUM

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DATE: June 27, 2017

SUBJECT: Methyl Isothiocyanate (MITC) --- Calculation of Intermediate (1-month) and Annual Residential Exposures and Risk Using Measured Air Concentrations from the Ambient Air Monitoring Network

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### I. Purpose

The purpose of this memorandum is twofold: (1) to clarify the calculation of intermediate-term (“seasonal”) and annual residential exposures to pesticides from weekly air concentration data collected by the Department of Pesticide Regulation’s (DPR) Environmental Monitoring Branch via the Ambient Air Monitoring Network; and (2) to provide the seasonal and annual margins of exposure (MOEs) for MITC using 1-month and 1-year rolling average air concentrations.

### II. Background

In February 2011, the Department of Pesticide Regulation (DPR) implemented a multi-year statewide ambient air monitoring network (AMN) to measure pesticides in various agricultural communities. The AMN goals are to provide data to assess potential health risks, develop measures to mitigate those risks, and to measure the effectiveness of regulatory requirements.

DPR monitors a total of 32 pesticides and five pesticide breakdown products in three California communities, Salinas, Shafter, and Ripon, CA. These communities were selected based on total use of the monitored pesticides. The pesticides were selected primarily for their potential to adversely impact human health. The AMN collects 24-hr air samples of pesticides once a week



on a randomly chosen day within that week. For MITC, the current data set consists of six years of weekly measurements each from Salinas, Shafter, and Ripon.

DPR has developed health screening levels or regulatory target concentrations for acute, intermediate and annual exposures for the monitored pesticides in order to examine the results in a health-based context (DPR, 2017). This document utilizes seasonal and annual reference concentrations, target margins of exposure, seasonal and annual use data, and air monitoring results to determine whether there are residential exposures of concern. DPR defines intermediate-term exposure in terms of mean air concentrations during periods of frequent exposure lasting more than seven days but less than a year, regardless of whether the exposure is constant or intermittent during that period (Andrews, 2001). In general, it is assumed that the average daily exposure occurs each day within an intermediate-term period. However, if the exposure is intermittent or sporadic during the period, the exposure may be amortized over the total period (Andrews, 2001). DPR defines annual exposure in terms of mean air concentrations during an entire year of potential exposure.

The seasonal exposure term differs for each of the 37 compounds monitored by the AMN. The DPR Worker Health and Safety Branch generally defines the seasonal term based on periods of peak use of an active ingredient as reported in the Pesticide Use Reporting (PUR) database. By using the PUR database, one can determine the heaviest use regions as well as when the bulk of the applications occur.

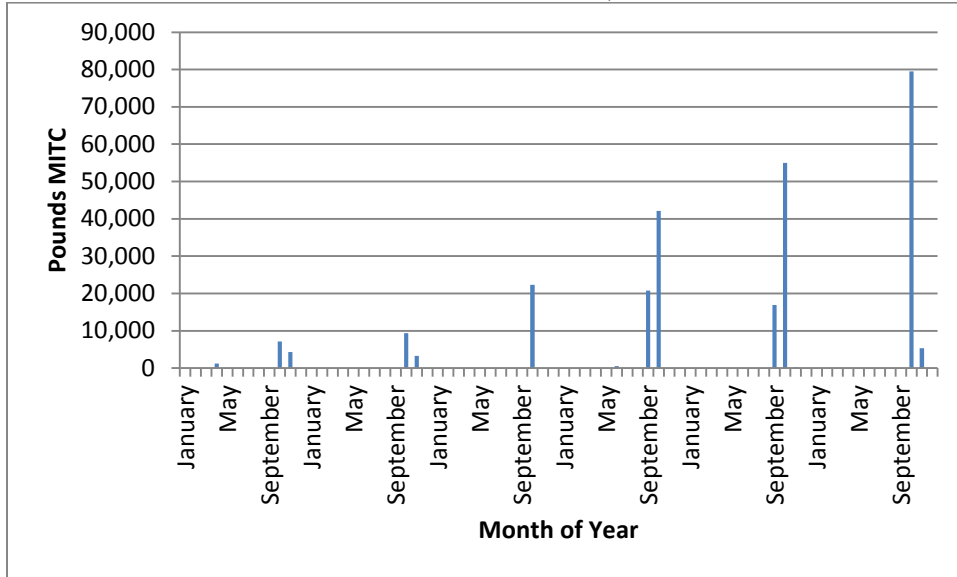
### **III. Methyl Isothiocyanate (MITC)**

#### **A. Use of MITC generating compounds**

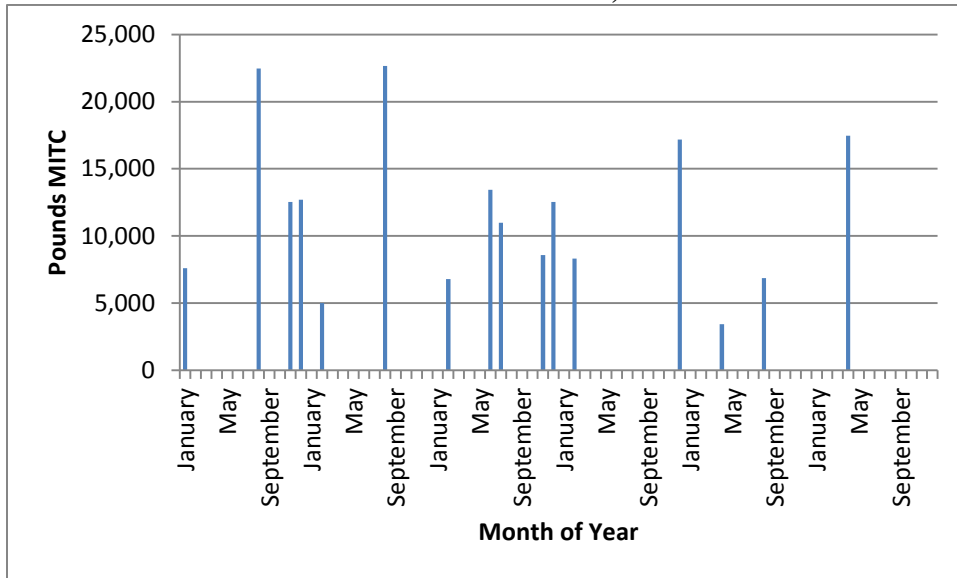
“MITC use”, defined as the summation of the use of the three major MITC generators---metam sodium, metam potassium and dazomet---appears for Salinas, Shafter and Ripon locations in Figures 1, 2 and 3, respectively. These data were extracted and graphed by DPR’s Environmental Monitoring Branch using data from the Pesticide Use Report.

**Figure 1. Use of MITC generator compounds near the Salinas (A), Shafter (B) and Ripon (C) monitoring sites – 2011-2016<sup>a</sup>**

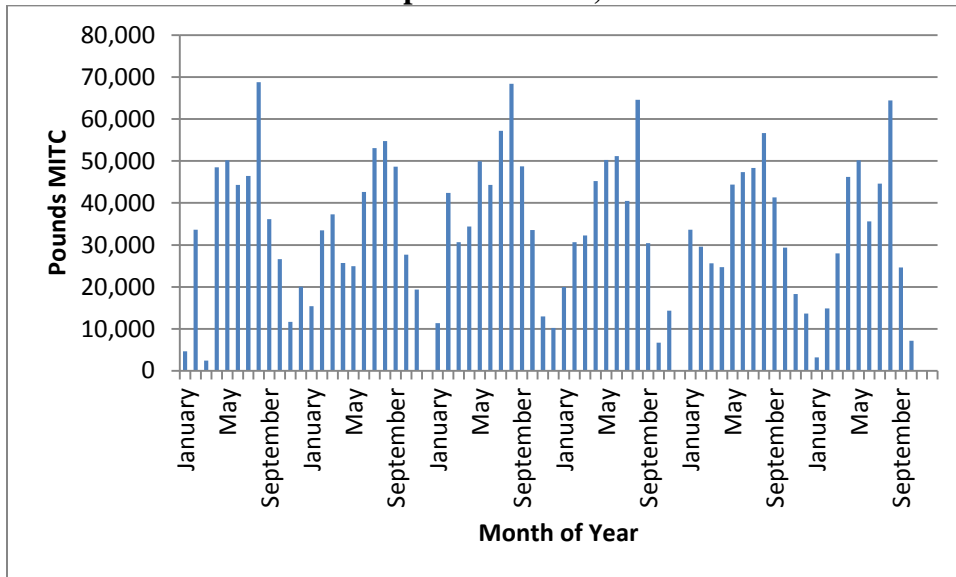
**A. MITC use near the Salinas AMN site, 2011-2016**



**B. MITC use near the Shafter AMN site, 2011-2016**



### C. MITC use near the Ripon AMN site, 2011-2016



<sup>a</sup> Results are averaged over the 5 years of monitoring between January 2011 and December 2016. MITC generators include metam sodium, metam potassium and dazomet

### B. Intermediate exposure and risk

The following section provides an analysis of the health implications of the AMN-determined air levels of MITC using the seasonal toxicological endpoint defined in the DPR's risk characterization document (DPR, 2003a) and 1-month rolling averages of intermediate exposure concentrations. These concentrations were determined in weekly measurements in the locations described above (Salinas, Ripon and Shafter) between February 2011 and December 2016.

DPR defined the critical intermediate-term NOEL for MITC to be 100 ppb based on nasal epithelial atrophy observed after 1 month of daily exposure to MITC gas (Klimisch *et al.*, 1987). Calculation of this value was described on page 74 of the RCD as follows (DPR, 2003a):

A 6-hour/day, 5-days/week LOEL of 1700 ppb (1.7 ppm) based on nasal epithelial atrophy was identified in the 4-week rat inhalation study of Klimisch *et al.* (1987). To convert this LOEL to the more useful 24 hour/day, 7 days/week value, an extrapolation utilizing Haber's Law was invoked (for further discussion of the use of Haber's Law in this instance, see section XIII.D.1. of the RCD):

1. An equivalent human 6-hour subchronic inhalation LOEL was estimated by multiplying the rat LOEL (1700 ppb) by 5/7 to correct for the 5 days/week exposure regimen. Thus,

$$(1700 \text{ ppb}) \times (5 \text{ days} / 7 \text{ days}) = 1214 \text{ ppb}$$

2. A 24-hour subchronic inhalation LOEL was calculated from the 6-hour value by invoking Haber's Law, with n set to a default value of 1,

$$C^n \times T = K, \text{ Haber's Law}$$

C = concentration, n = chemical-specific adjustment factor set arbitrarily at 1 [an empirical value is not known], T = exposure time, K = constant

$$\begin{aligned} 1214 \text{ ppb} \times 6 \text{ hr} &= 7284 \\ C^1 \times 24 \text{ hr} &= 7284 \\ C &= 304 \text{ ppb} = \text{LOEL} [\approx 300 \text{ ppb}] \end{aligned}$$

This study did not define a NOEL. Applying the uncertainty factor of 3 to the LOEL of 300 ppb, the estimated critical NOEL for subchronic toxicity was **100 ppb**. This value was used in the evaluation of risks inherent in seasonal exposure to MITC in residents and bystanders. Discussion on the critical endpoint (nasal epithelial atrophy) and the selection of an uncertainty factor are detailed in the RCD (DPR 2003a).

Margins of Exposure (MOEs), calculated by dividing the critical estimated NOEL by the exposure concentration, were used to evaluate the human health risks associated with intermediate-term exposure to MITC at the air concentrations measured by the AMN. In order to calculate MOEs, the estimated critical NOEL in ppb was converted to  $\text{ng}/\text{m}^3$  (the units used in the air monitoring analyses) using the conversion factor of  $0.0003346 \text{ ng}/\text{m}^3$ :

$$\text{Critical seasonal NOEL in ng-MITC}/\text{m}^3 = 100 \text{ ppb} / 0.0003346 = \underline{298,864 \text{ ng}/\text{m}^3}$$

A combined uncertainty factor of 100 (10x intraspecies, 10x interspecies) was applied to determine the intermediate-term target MOE of 100. MOEs less than 100 are considered to pose a potential health risk to human populations.

One-month rolling average MITC concentrations were used instead of 3- or 4-month values to represent intermediate-term exposures for two reasons:

- The 1-month study by Klimisch et al. (1987) was used to set the intermediate-term critical NOEL. Thus the exposure and toxicology values were precisely matched with respect to duration.
- 1-month values generally provide higher exposure values than 3- or 4-month values, making them more health-protective.

Weekly measured MITC air concentrations over the 6-year period between January 2011 and December 2016 for all three CA sites are found in Appendix 1. In addition, the 1-month rolling

averages and calculated MOE values are provided. Based on empirical monitoring data, none of the calculated MOEs approached the level of concern (*i.e.*, 100). The lowest intermediate-term MOEs (530 – 940) were observed in Shafter in December 2011. The vast majority of the remaining MOEs at all three sites were greater than 1000. Based on these data, we conclude that MITC did not present an intermediate-term health risk to human populations in Salinas, Ripon or Shafter during 2011-2016.

### **C. Annual exposure and risk**

The following section provides an analysis of the health implications of the AMN-determined air levels of MITC using the chronic toxicological endpoint defined in the DPR's risk characterization document (DPR, 2003a) and 1-year rolling averages of annual exposure concentrations. These concentrations were determined using the same weekly measurements in the locations described above (Salinas, Ripon and Shafter) between February 2011 and December 2016.

Due to the lack of a chronic inhalation toxicity study, the critical chronic NOEL for MITC was derived by dividing the subchronic NOEL of 100 ppb by a database uncertainty factor of 10, resulting in a chronic NOEL of 10 ppb, or 29,886 ng/m<sup>3</sup> (DPR, 2003a).

A combined uncertainty factor of 100 (10x intraspecies, 10x interspecies) was applied to determine the annual-term target MOE of 100. MOEs less than 100 were considered to pose a potential health risk to human populations.

One-year rolling averages were calculated for the 2011-2016 period in order to maximize the possibility of capturing high exposures. The resultant values appear in Appendix I. All annual MOEs were higher than the target of 100. Of the three monitored sites, the lowest annual MOE (331) was calculated for Shafter for the periods of May-June, 2011 and September-October, 2011. Based on these data, we conclude that MITC did not present an annual-term health risk to human populations in Salinas, Ripon or Shafter during 2011-2016.

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*References*

Andrews, C. 2001. Worker Health and Safety Branch Policy on the Estimation of Short-Term, Intermediate-Term, Annual, and Lifetime Exposures. HSM-01014. Worker Health and Safety Branch, Department of Pesticide Regulation, California Environmental Protection Agency, Sacramento, CA

DPR. 2003a. Risk Characterization Document: Methyl Isothiocyanate (MITC) Following the Agricultural Use of Metam Sodium. Medical Toxicology Branch, Department of Pesticide Regulation, California Environmental Protection Agency, Sacramento, CA  
[http://www.cdpr.ca.gov/docs/risk/rcd/mitc\\_sb950.pdf](http://www.cdpr.ca.gov/docs/risk/rcd/mitc_sb950.pdf)

DPR. 2003b. Estimation of Exposure of Persons in California to Methyl Isothiocyanate. Worker Health and Safety Branch, Department of Pesticide Regulation, California Environmental Protection Agency, Sacramento, CA <http://www.cdpr.ca.gov/docs/whs/pdf/hs1806.pdf>

DPR. 2017. Air Monitoring Network Study during 2017-2018: Ambient Air Monitoring for Pesticides in Multiple California Communities, Study #257. Environmental Monitoring Branch, Department of Pesticide Regulation, California Environmental Protection Agency, Sacramento, CA. [http://www.cdpr.ca.gov/docs/emon/airinit/air\\_monitoring\\_protocol\\_2017.pdf](http://www.cdpr.ca.gov/docs/emon/airinit/air_monitoring_protocol_2017.pdf)

Klimisch, H.-J., K. Deckardt, K. Hasenohrl and B. Hildebrand. 1987. Study on the subchronic inhalation toxicity of methyl isothiocyanate in Wistar rats (4-week study). BASF project #4OI0231/8539. DPR Vol. 50334-024 #178893

Powell, S. 2004. Evaluation of the Need to Revise the Occupational Exposure Assessment for 1,3-Dichloropropene. HSM-04014. Sacramento, CA: Worker Health and Safety Branch, Department of Pesticide Regulation, California Environmental Protection Agency

**APPENDIX I: Weekly MITC air concentrations, rolling averages and associated intermediate (4-week) and annual margins of exposure for Salinas (A), Shafter (B) and Ripon (C), 2011-2016**

**A. Salinas**

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	02/01/11	2.8	2.80	106737	5.58	5359
Salinas	02/09/11	2.8	2.80	106737	5.58	5359
Salinas	02/16/11	2.8	2.80	106737	5.58	5359
Salinas	02/22/11	2.8	2.80	106737	5.58	5359
Salinas	03/02/11	2.8	7.96	37568	5.58	5359
Salinas	03/07/11	2.8	7.96	37568	5.58	5359
Salinas	03/16/11	2.8	7.96	37568	5.58	5359
Salinas	03/21/11	23.4	7.96	37568	5.58	5359
Salinas	03/29/11	2.8	2.80	106737	5.16	5796
Salinas	04/04/11	2.8	2.80	106737	5.16	5796
Salinas	04/13/11	2.8	2.80	106737	5.16	5796
Salinas	04/19/11	2.8	2.80	106737	5.16	5796
Salinas	04/25/11	2.8	2.80	106737	5.16	5796
Salinas	05/04/11	2.8	2.80	106737	5.16	5796
Salinas	05/09/11	2.8	2.80	106737	5.16	5796
Salinas	05/18/11	2.8	2.80	106737	5.16	5796
Salinas	05/23/11	2.8	2.80	106737	5.16	5796
Salinas	06/01/11	2.8	2.80	106737	5.16	5796
Salinas	06/06/11	2.8	2.80	106737	5.16	5796
Salinas	06/08/11	2.8	8.52	35062	5.16	5796
Salinas	06/16/11	2.8	8.52	35062	5.16	5796
Salinas	06/20/11	2.8	8.52	35062	5.16	5796
Salinas	06/29/11	25.7	8.52	35062	5.16	5796
Salinas	07/05/11	2.8	2.80	106737	4.69	6374
Salinas	07/11/11	2.8	2.80	106737	4.69	6374
Salinas	07/20/11	2.8	2.80	106737	4.69	6374
Salinas	07/25/11	2.8	2.80	106737	4.69	6374
Salinas	08/04/11	2.8	2.80	106737	4.69	6374
Salinas	08/08/11	2.8	2.80	106737	4.69	6374
Salinas	08/15/11	2.8	2.80	106737	4.69	6374
Salinas	08/24/11	2.8	2.80	106737	4.69	6374
Salinas	08/29/11	2.8	2.80	106737	4.69	6374
Salinas	09/06/11	2.8	2.80	106737	4.69	6374
Salinas	09/14/11	2.8	8.02	37262	4.69	6374
Salinas	09/19/11	2.8	8.02	37262	4.69	6374
Salinas	09/27/11	2.8	8.02	37262	4.69	6374



Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	10/03/11	23.7	8.02	37262	4.69	6374
Salinas	10/11/11	2.8	14.73	20286	4.26	7011
Salinas	10/20/11	2.8	14.73	20286	4.26	7011
Salinas	10/25/11	2.8	14.73	20286	4.26	7011
Salinas	11/03/11	50.5	14.73	20286	4.26	7011
Salinas	11/08/11	2.8	2.80	106737	3.29	9087
Salinas	11/17/11	2.8	8.79	34007	3.29	9087
Salinas	11/21/11	2.8	8.79	34007	4.33	6899
Salinas	12/01/11	2.8	8.79	34007	4.33	6899
Salinas	12/05/11	26.8	8.79	34007	7.99	3743
Salinas	12/11/11	2.8	2.80	106737	8.36	3573
Salinas	12/18/11	2.8	2.80	106737	8.36	3573
Salinas	12/28/11	2.8	2.80	106737	8.36	3573
Salinas	01/03/12	2.8	2.80	106737	8.36	3573
Salinas	01/09/12	2.8	2.80	106737	8.36	3573
Salinas	01/19/12	2.8	2.80	106737	8.36	3573
Salinas	01/25/12	2.8	2.80	106737	8.36	3573
Salinas	01/29/12	2.8	2.80	106737	8.36	3573
Salinas	02/07/12	2.8	2.80	106737	8.36	3573
Salinas	02/12/12	2.8	2.80	106737	8.36	3573
Salinas	02/22/12	2.8	2.80	106737	8.36	3573
Salinas	02/28/12	2.8	2.80	106737	8.36	3573
Salinas	03/08/12	2.8	2.80	106737	8.36	3573
Salinas	03/12/12	2.8	2.80	106737	9.33	3202
Salinas	03/20/12	2.8	2.80	106737	9.33	3202
Salinas	03/26/12	2.8	2.80	106737	9.33	3202
Salinas	04/02/12	2.8	2.80	106737	9.33	3202
Salinas	04/08/12	2.8	2.80	106737	9.33	3202
Salinas	04/19/12	2.8	2.80	106737	9.33	3202
Salinas	04/25/12	2.8	2.80	106737	9.33	3202
Salinas	04/30/12	2.8	2.80	106737	9.33	3202
Salinas	05/07/12	2.8	2.80	106737	9.33	3202
Salinas	05/14/12	2.8	2.80	106737	9.33	3202
Salinas	05/23/12	2.8	2.80	106737	9.33	3202
Salinas	05/31/12	2.8	2.80	106737	9.33	3202
Salinas	06/06/12	2.8	2.80	106737	9.33	3202
Salinas	06/12/12	2.8	2.80	106737	9.33	3202
Salinas	06/18/12	2.8	2.80	106737	9.33	3202
Salinas	06/24/12	2.8	2.80	106737	9.33	3202
Salinas	07/05/12	2.8	2.80	106737	9.33	3202
Salinas	07/10/12	2.8	2.80	106737	9.33	3202

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	07/18/12	2.8	2.80	106737	9.33	3202
Salinas	07/23/12	2.8	2.80	106737	9.33	3202
Salinas	07/30/12	2.8	2.80	106737	9.33	3202
Salinas	08/06/12	2.8	2.80	106737	9.33	3202
Salinas	08/09/12	2.8	2.80	106737	9.33	3202
Salinas	08/24/12	2.8	2.80	106737	9.33	3202
Salinas	08/29/12	2.8	2.80	106737	9.33	3202
Salinas	09/05/12	2.8	2.80	106737	9.33	3202
Salinas	09/11/12	2.8	2.80	106737	9.33	3202
Salinas	09/17/12	2.8	2.80	106737	9.33	3202
Salinas	09/25/12	2.8	2.80	106737	9.33	3202
Salinas	10/03/12	2.8	15.58	19181	9.33	3202
Salinas	10/11/12	2.8	15.58	19181	9.33	3202
Salinas	10/17/12	2.8	60.33	4954	9.33	3202
Salinas	10/22/12	53.9	70.96	4212	9.33	3202
Salinas	10/29/12	2.8	58.17	5137	8.77	3408
Salinas	11/04/12	181.8	58.17	5137	9.00	3319
Salinas	11/14/12	45.3	13.42	22267	5.35	5585
Salinas	11/19/12	2.8	2.80	106737	9.20	3249
Salinas	12/04/12	2.8	2.80	106737	11.26	2654
Salinas	12/10/12	2.8	2.80	106737	11.26	2654
Salinas	12/18/12	2.8	2.80	106737	11.26	2654
Salinas	12/28/12	2.8	2.80	106737	11.26	2654
Salinas	01/02/13	2.8	2.80	106737	11.26	2654
Salinas	01/09/13	2.8	2.80	106737	11.26	2654
Salinas	01/15/13	2.8	2.80	106737	11.50	2599
Salinas	01/24/13	2.8	2.80	106737	11.73	2547
Salinas	01/29/13	2.8	14.68	20363	12.42	2406
Salinas	02/04/13	2.8	14.68	20363	12.42	2406
Salinas	02/13/13	2.8	14.68	20363	12.42	2406
Salinas	02/19/13	50.3	14.68	20363	12.88	2321
Salinas	02/25/13	2.8	2.80	106737	11.91	2510
Salinas	03/07/13	2.8	2.80	106737	11.91	2510
Salinas	03/10/13	2.8	2.80	106737	11.91	2510
Salinas	03/22/13	2.8	2.80	106737	11.91	2510
Salinas	03/26/13	2.8	2.80	106737	11.91	2510
Salinas	04/03/13	2.8	2.80	106737	11.91	2510
Salinas	04/08/13	2.8	2.80	106737	11.91	2510
Salinas	04/15/13	2.8	2.80	106737	11.91	2510
Salinas	04/25/13	2.8	2.80	106737	11.91	2510
Salinas	04/30/13	2.8	2.80	106737	11.91	2510

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	05/09/13	2.8	2.80	106737	11.91	2510
Salinas	05/14/13	2.8	2.80	106737	11.91	2510
Salinas	05/20/13	2.8	2.80	106737	11.91	2510
Salinas	05/29/13	2.8	2.80	106737	11.91	2510
Salinas	06/07/13	2.8	2.80	106737	11.91	2510
Salinas	06/13/13	2.8	2.80	106737	11.91	2510
Salinas	06/16/13	2.8	2.80	106737	11.91	2510
Salinas	06/25/13	2.8	2.80	106737	11.91	2510
Salinas	07/01/13	2.8	2.80	106737	11.91	2510
Salinas	07/08/13	2.8	2.80	106737	12.14	2461
Salinas	07/17/13	2.8	2.80	106737	12.14	2461
Salinas	07/26/13	2.8	2.80	106737	12.14	2461
Salinas	07/28/13	2.8	2.80	106737	12.14	2461
Salinas	08/07/13	2.8	2.80	106737	12.14	2461
Salinas	08/13/13	2.8	2.80	106737	12.14	2461
Salinas	08/18/13	2.8	2.80	106737	12.14	2461
Salinas	08/28/13	2.8	2.80	106737	12.14	2461
Salinas	09/03/13	2.8	2.80	106737	12.14	2461
Salinas	09/09/13	2.8	2.80	106737	12.14	2461
Salinas	09/18/13	2.8	8.66	34499	12.14	2461
Salinas	09/23/13	2.8	11.55	25874	12.14	2461
Salinas	09/29/13	2.8	11.55	25874	12.14	2461
Salinas	10/06/13	26.3	69.29	4313	12.14	2461
Salinas	10/15/13	14.4	88.73	3368	11.66	2562
Salinas	10/21/13	2.8	85.84	3482	11.43	2615
Salinas	10/30/13	233.8	85.84	3482	11.43	2615
Salinas	11/04/13	104.0	28.10	10636	6.71	4451
Salinas	11/13/13	2.8	2.80	106737	4.88	6118
Salinas	11/19/13	2.8	2.80	106737	6.30	4747
Salinas	11/25/13	2.8	5.69	52548	6.86	4356
Salinas	12/02/13	2.8	8.58	34853	6.86	4356
Salinas	12/10/13	2.8	16.99	17594	7.57	3948
Salinas	12/16/13	14.4	16.99	17594	7.57	3948
Salinas	12/22/13	14.4	14.10	21197	7.33	4075
Salinas	12/29/13	36.4	16.79	17802	7.10	4210
Salinas	01/09/14	2.8	8.38	35679	6.41	4661
Salinas	01/13/14	2.8	8.38	35679	6.41	4661
Salinas	01/22/14	25.1	8.38	35679	6.41	4661
Salinas	01/26/14	2.8	2.80	106737	5.96	5017
Salinas	02/03/14	2.8	2.80	106737	5.96	5017
Salinas	02/12/14	2.8	2.80	106737	5.96	5017

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	02/18/14	2.8	2.80	106737	7.38	4047
Salinas	02/24/14	2.8	2.80	106737	7.38	4047
Salinas	03/03/14	2.8	2.80	106737	7.62	3922
Salinas	03/11/14	2.8	2.80	106737	7.62	3922
Salinas	03/17/14	2.8	2.80	106737	7.86	3804
Salinas	03/27/14	2.8	2.80	106737	7.86	3804
Salinas	04/03/14	2.8	2.80	106737	7.86	3804
Salinas	04/07/14	2.8	2.80	106737	7.86	3804
Salinas	04/16/14	2.8	2.80	106737	7.86	3804
Salinas	04/20/14	2.8	2.80	106737	7.86	3804
Salinas	04/30/14	2.8	2.80	106737	7.86	3804
Salinas	05/07/14	2.8	2.80	106737	7.86	3804
Salinas	05/14/14	2.8	2.80	106737	7.86	3804
Salinas	05/19/14	2.8	5.69	52548	7.86	3804
Salinas	05/27/14	2.8	5.69	52548	7.86	3804
Salinas	06/01/14	2.8	5.69	52548	7.86	3804
Salinas	06/09/14	14.4	5.69	52548	7.86	3804
Salinas	06/15/14	2.8	2.80	106737	7.62	3922
Salinas	06/28/14	2.8	2.80	106737	7.62	3922
Salinas	06/30/14	2.8	2.80	106737	7.62	3922
Salinas	07/08/14	2.8	2.80	106737	7.62	3922
Salinas	07/18/14	2.8	2.80	106737	7.62	3922
Salinas	07/21/14	2.8	2.80	106737	7.62	3922
Salinas	07/27/14	2.8	2.80	106737	7.62	3922
Salinas	08/04/14	2.8	2.80	106737	7.62	3922
Salinas	08/11/14	2.8	2.80	106737	7.62	3922
Salinas	08/21/14	2.8	2.80	106737	7.62	3922
Salinas	08/25/14	2.8	2.80	106737	7.62	3922
Salinas	09/03/14	2.8	2.80	106737	7.62	3922
Salinas	09/11/14	2.8	2.80	106737	7.62	3922
Salinas	09/15/14	2.8	2.80	106737	7.62	3922
Salinas	09/25/14	2.8	5.69	52548	7.62	3922
Salinas	09/29/14	2.8	22.97	13012	7.62	3922
Salinas	10/07/14	2.8	29.89	9998	7.62	3922
Salinas	10/13/14	14.4	29.89	9998	7.62	3922
Salinas	10/19/14	71.9	35.70	8371	7.38	4047
Salinas	10/29/14	30.5	18.42	16224	5.97	5003
Salinas	11/03/14	2.8	11.50	25996	5.41	5525
Salinas	11/12/14	37.6	11.50	25996	5.41	5525
Salinas	11/18/14	2.8	2.80	106737	4.70	6360
Salinas	11/24/14	2.8	2.80	106737	4.70	6360

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	11/30/14	2.8	2.80	106737	4.70	6360
Salinas	12/08/14	2.8	2.80	106737	4.70	6360
Salinas	12/15/14	2.8	2.80	106737	4.70	6360
Salinas	12/22/14	2.8	2.80	106737	4.70	6360
Salinas	12/29/14	2.8	20.29	14731	5.79	5159
Salinas	01/05/15	2.8	20.29	14731	5.79	5159
Salinas	01/11/15	2.8	23.18	12896	5.79	5159
Salinas	01/22/15	72.8	23.18	12896	5.79	5159
Salinas	01/27/15	2.8	8.58	34853	4.37	6846
Salinas	02/04/15	14.4	8.58	34853	4.37	6846
Salinas	02/09/15	2.8	5.69	52548	4.13	7237
Salinas	02/17/15	14.4	5.69	52548	4.13	7237
Salinas	02/26/15	2.8	2.80	106737	3.89	7675
Salinas	03/02/15	2.8	2.80	106737	3.89	7675
Salinas	03/12/15	2.8	2.80	106737	3.89	7675
Salinas	03/18/15	2.8	2.80	106737	3.89	7675
Salinas	03/22/15	2.8	2.80	106737	3.89	7675
Salinas	03/30/15	2.8	2.80	106737	3.89	7675
Salinas	04/08/15	2.8	2.80	106737	3.89	7675
Salinas	04/13/15	2.8	2.80	106737	3.89	7675
Salinas	04/22/15	2.8	2.80	106737	3.89	7675
Salinas	04/29/15	2.8	2.80	106737	3.89	7675
Salinas	05/03/15	2.8	2.80	106737	3.89	7675
Salinas	05/12/15	2.8	2.80	106737	3.89	7675
Salinas	05/18/15	2.8	2.80	106737	3.89	7675
Salinas	05/27/15	2.8	2.80	106737	3.89	7675
Salinas	06/02/15	2.8	2.80	106737	3.89	7675
Salinas	06/10/15	2.8	2.80	106737	3.89	7675
Salinas	06/16/15	2.8	2.80	106737	3.89	7675
Salinas	06/22/15	2.8	2.80	106737	3.89	7675
Salinas	07/02/15	2.8	2.80	106737	3.89	7675
Salinas	07/09/15	2.8	2.80	106737	3.89	7675
Salinas	07/13/15	2.8	2.80	106737	3.89	7675
Salinas	07/20/15	2.8	2.80	106737	3.89	7675
Salinas	07/26/15	2.8	2.80	106737	3.89	7675
Salinas	08/03/15	2.8	2.80	106737	3.89	7675
Salinas	08/09/15	2.8	2.80	106737	3.89	7675
Salinas	08/17/15	2.8	2.80	106737	3.89	7675
Salinas	08/26/15	2.8	2.80	106737	3.89	7675
Salinas	08/30/15	2.8	2.80	106737	3.89	7675
Salinas	09/10/15	2.8	2.80	106737	3.89	7675

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	09/16/15	2.8	2.80	106737	3.89	7675
Salinas	09/21/15	2.8	2.80	106737	3.89	7675
Salinas	09/28/15	2.8	2.80	106737	3.89	7675
Salinas	10/07/15	2.8	2.80	106737	3.89	7675
Salinas	10/13/15	2.8	2.80	106737	3.89	7675
Salinas	10/19/15	2.8	2.80	106737	3.89	7675
Salinas	10/27/15	2.8	2.80	106737	3.89	7675
Salinas	11/02/15	2.8	2.80	106737	3.89	7675
Salinas	11/08/15	2.8	16.20	18445	3.89	7675
Salinas	11/18/15	2.8	16.20	18445	3.89	7675
Salinas	11/23/15	2.8	16.20	18445	3.89	7675
Salinas	12/01/15	56.4	16.20	18445	3.89	7675
Salinas	12/07/15	2.8	2.80	106737	3.28	9112
Salinas	12/13/15	2.8	2.80	106737	3.28	9112
Salinas	12/21/15	2.8	2.80	106737	3.28	9112
Salinas	12/29/15	2.8	2.80	106737	3.28	9112
Salinas	01/06/16	2.8	2.80	106737	5.62	5317
Salinas	01/11/16	2.8	2.80	106737	5.62	5317
Salinas	01/20/16	2.8	2.80	106737	4.28	6991
Salinas	01/26/16	2.8	2.80	106737	4.28	6991
Salinas	02/01/16	2.8	2.80	106737	4.05	7374
Salinas	02/09/16	2.8	2.80	106737	4.05	7374
Salinas	02/17/16	2.8	2.80	106737	3.83	7801
Salinas	02/23/16	2.8	2.80	106737	3.83	7801
Salinas	03/01/16	2.8	2.80	106737	3.83	7801
Salinas	03/09/16	2.8	2.80	106737	3.83	7801
Salinas	03/14/16	2.8	2.80	106737	3.83	7801
Salinas	03/20/16	2.8	2.80	106737	3.83	7801
Salinas	03/29/16	2.8	2.80	106737	3.83	7801
Salinas	04/04/16	2.8	2.80	106737	3.83	7801
Salinas	04/10/16	2.8	2.80	106737	3.83	7801
Salinas	04/20/16	2.8	2.80	106737	3.83	7801
Salinas	04/27/16	2.8	2.80	106737	3.83	7801
Salinas	05/04/16	2.8	2.80	106737	3.83	7801
Salinas	05/09/16	2.8	2.80	106737	3.83	7801
Salinas	05/16/16	2.8	2.80	106737	3.83	7801
Salinas	05/26/16	2.8	2.80	106737	3.83	7801
Salinas	06/01/16	2.8	2.80	106737	3.83	7801
Salinas	06/08/16	2.8	2.80	106737	3.83	7801
Salinas	06/16/16	2.8	2.80	106737	3.83	7801
Salinas	06/22/16	2.8	2.80	106737	3.83	7801

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Salinas	06/28/16	2.8	2.80	106737	3.83	7801
Salinas	07/05/16	2.8	2.80	106737	3.83	7801
Salinas	07/10/16	2.8	2.80	106737	3.83	7801
Salinas	07/19/16	2.8	2.80	106737	3.83	7801
Salinas	07/27/16	2.8	2.80	106737	3.83	7801
Salinas	08/01/16	2.8	2.80	106737	3.83	7801
Salinas	08/08/16	2.8	2.80	106737	3.83	7801
Salinas	08/18/16	2.8	2.80	106737	3.83	7801
Salinas	08/23/16	2.8	2.80	106737	3.83	7801
Salinas	08/30/16	2.8	2.80	106737	3.83	7801
Salinas	09/08/16	2.8	2.80	106737	3.83	7801
Salinas	09/12/16	2.8	2.80	106737	3.83	7801
Salinas	09/19/16	2.8	2.80	106737	3.83	7801
Salinas	09/27/16	2.8	2.80	106737	3.83	7801
Salinas	10/03/16	2.8	2.80	106737	3.83	7801
Salinas	10/11/16	2.8	2.80	106737	3.83	7801
Salinas	10/17/16	2.8	8.68	34441	3.83	7801
Salinas	10/25/16	2.8	8.68	34441	3.83	7801
Salinas	11/01/16	2.8	8.68	34441	3.83	7801
Salinas	11/07/16	26.3	8.68	34441	4.28	6978
Salinas	11/13/16	2.8	2.80	106737	4.28	6978
Salinas	11/21/16	2.8	2.80	106737	4.28	6978
Salinas	11/29/16	2.8	5.69	52548	3.25	9190
Salinas	12/05/16	2.8	5.69	52548	3.25	9190
Salinas	12/13/16	2.8	6.65	44942	3.25	9190
Salinas	12/20/16	14.4	8.58	34853	3.47	8602
Salinas	12/27/16	2.8	2.80	106737	3.47	8602

**B. SHAFTER**

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	02/09/11	95.0	37.34	8004	72.95	410
Shafter	02/16/11	2.8	14.29	20913	75.74	395
Shafter	02/23/11	2.8	28.10	10634	81.55	366
Shafter	02/28/11	48.8	28.10	10634	82.56	362
Shafter	03/09/11	2.8	16.61	17989	82.32	363
Shafter	03/14/11	58.1	22.36	13368	84.16	355
Shafter	03/23/11	2.8	14.58	20494	85.40	350
Shafter	03/28/11	2.8	14.58	20494	86.35	346
Shafter	04/06/11	25.8	14.58	20494	86.99	344
Shafter	04/12/11	27.0	8.84	33807	88.53	338
Shafter	04/19/11	2.8	2.80	106737	88.75	337
Shafter	04/25/11	2.8	2.80	106737	88.75	337
Shafter	05/03/11	2.8	2.80	106737	89.27	335
Shafter	05/09/11	2.8	2.80	106737	89.27	335
Shafter	05/18/11	2.8	2.80	106737	89.76	333
Shafter	05/24/11	2.8	2.80	106737	90.30	331
Shafter	06/01/11	2.8	13.59	21995	90.30	331
Shafter	06/06/11	2.8	13.59	21995	90.30	331
Shafter	06/14/11	2.8	13.59	21995	90.30	331
Shafter	06/20/11	46.0	13.59	21995	90.30	331
Shafter	06/29/11	2.8	2.80	106737	89.38	334
Shafter	07/05/11	2.8	58.60	5100	89.38	334
Shafter	07/13/11	2.8	58.60	5100	89.38	334
Shafter	07/18/11	2.8	58.60	5100	89.38	334
Shafter	07/26/11	226.0	67.66	4417	89.38	334
Shafter	08/01/11	2.8	17.72	16864	84.63	353
Shafter	08/10/11	2.8	17.72	16864	84.63	353
Shafter	08/16/11	39.0	17.72	16864	84.63	353
Shafter	08/22/11	26.2	8.66	34509	84.96	352
Shafter	08/30/11	2.8	2.80	106737	85.94	348
Shafter	09/06/11	2.8	2.80	106737	85.94	348
Shafter	09/13/11	2.8	2.80	106737	89.74	333
Shafter	09/21/11	2.8	17.92	16678	90.41	331
Shafter	09/26/11	2.8	48.38	6178	90.41	331
Shafter	10/03/11	2.8	48.38	6178	90.41	331
Shafter	10/10/11	63.3	48.38	6178	90.41	331
Shafter	10/20/11	124.6	33.26	8987	89.12	335
Shafter	10/25/11	2.8	44.88	6659	86.53	345
Shafter	11/03/11	2.8	51.48	5805	86.53	345
Shafter	11/08/11	2.8	79.16	3775	89.03	336



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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	11/16/11	171.1	141.70	2109	89.03	336
Shafter	11/21/11	29.2	186.63	1601	86.83	344
Shafter	11/30/11	113.5	411.93	726	89.05	336
Shafter	12/05/11	253.0	563.52	530	87.16	343
Shafter	12/15/11	350.8	556.80	537	83.35	359
Shafter	12/19/11	930.4	537.99	556	80.23	373
Shafter	12/28/11	719.8	317.98	940	67.81	441
Shafter	01/04/12	226.1	147.34	2028	54.23	551
Shafter	01/12/12	275.6	113.19	2640	50.46	592
Shafter	01/17/12	50.4	73.36	4074	45.69	654
Shafter	01/23/12	37.3	72.69	4111	44.68	669
Shafter	02/01/12	89.5	71.51	4179	43.94	680
Shafter	02/09/12	116.2	73.70	4055	42.10	710
Shafter	02/13/12	47.8	53.97	5537	40.37	740
Shafter	02/22/12	32.5	42.74	6993	42.91	696
Shafter	02/27/12	98.2	41.38	7223	44.33	674
Shafter	03/07/12	37.4	17.52	17057	47.53	629
Shafter	03/12/12	2.8	14.66	20391	47.48	630
Shafter	03/21/12	27.1	20.95	14263	52.23	572
Shafter	03/27/12	2.8	14.87	20094	53.46	559
Shafter	04/04/12	25.9	14.87	20094	55.29	541
Shafter	04/10/12	28.0	9.10	32855	56.39	530
Shafter	04/19/12	2.8	2.80	106737	55.85	535
Shafter	04/23/12	2.8	2.80	106737	55.85	535
Shafter	05/01/12	2.8	2.80	106737	57.81	517
Shafter	05/08/12	2.8	2.80	106737	59.42	503
Shafter	05/17/12	2.8	2.80	106737	59.42	503
Shafter	05/24/12	2.8	2.80	106737	59.42	503
Shafter	05/30/12	2.8	2.80	106737	60.34	495
Shafter	06/05/12	2.8	2.80	106737	60.34	495
Shafter	06/12/12	2.8	2.80	106737	60.34	495
Shafter	06/18/12	2.8	15.81	18906	60.34	495
Shafter	06/27/12	2.8	33.09	9032	60.34	495
Shafter	07/02/12	2.8	33.09	9032	60.34	495
Shafter	07/12/12	54.8	77.79	3842	60.34	495
Shafter	07/17/12	71.9	72.65	4114	59.23	505
Shafter	07/24/12	2.8	55.37	5398	57.76	517
Shafter	08/01/12	181.6	55.37	5398	57.76	517
Shafter	08/09/12	34.3	10.67	27998	53.96	554
Shafter	08/13/12	2.8	2.80	106737	53.29	561
Shafter	08/21/12	2.8	2.80	106737	53.89	555

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	08/29/12	2.8	2.80	106737	53.89	555
Shafter	09/06/12	2.8	32.12	9305	53.89	555
Shafter	09/10/12	2.8	32.12	9305	54.14	552
Shafter	09/19/12	2.8	48.43	6171	54.14	552
Shafter	09/25/12	120.1	81.11	3685	55.13	542
Shafter	10/01/12	2.8	57.28	5218	52.64	568
Shafter	10/08/12	68.0	74.98	3986	52.64	568
Shafter	10/15/12	133.5	109.04	2741	51.49	580
Shafter	10/23/12	24.7	162.30	1841	48.71	614
Shafter	10/30/12	73.6	176.58	1693	48.24	619
Shafter	11/05/12	204.3	170.31	1755	46.74	639
Shafter	11/14/12	346.6	132.14	2262	42.70	700
Shafter	11/19/12	81.9	46.20	6469	35.63	839
Shafter	11/27/12	48.5	26.43	11309	34.61	863
Shafter	12/03/12	51.6	15.00	19927	34.62	863
Shafter	12/12/12	2.8	10.91	27397	36.03	830
Shafter	12/17/12	2.8	51.98	5750	39.78	751
Shafter	12/26/12	2.8	76.01	3932	42.18	708
Shafter	01/02/13	35.2	137.48	2174	43.73	683
Shafter	01/08/13	167.1	137.41	2175	44.92	665
Shafter	01/14/13	98.9	152.21	1963	44.18	676
Shafter	01/22/13	248.7	148.65	2010	47.57	628
Shafter	01/29/13	35.0	108.75	2748	58.50	511
Shafter	02/04/13	226.3	119.39	2503	60.37	495
Shafter	02/12/13	84.7	63.53	4705	56.87	526
Shafter	02/19/13	89.1	43.05	6941	56.95	525
Shafter	02/25/13	77.6	44.44	6725	55.77	536
Shafter	03/06/13	2.8	44.70	6686	55.47	539
Shafter	03/11/13	2.8	44.70	6686	57.80	517
Shafter	03/19/13	94.6	44.70	6686	58.62	510
Shafter	03/27/13	78.6	32.57	9177	57.92	516
Shafter	04/03/13	2.8	13.61	21953	57.49	520
Shafter	04/09/13	2.8	13.61	21953	57.49	520
Shafter	04/18/13	46.1	13.61	21953	58.26	513
Shafter	04/22/13	2.8	2.80	106737	57.34	521
Shafter	04/29/13	2.8	2.80	106737	58.08	515
Shafter	05/07/13	2.8	2.80	106737	58.08	515
Shafter	05/15/13	2.8	2.80	106737	58.08	515
Shafter	05/21/13	2.8	2.80	106737	58.08	515
Shafter	05/28/13	2.8	2.80	106737	58.08	515
Shafter	06/03/13	2.8	2.80	106737	58.08	515

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	06/12/13	2.8	2.80	106737	58.08	515
Shafter	06/18/13	2.8	9.92	30125	58.08	515
Shafter	06/27/13	2.8	9.92	30125	58.08	515
Shafter	07/01/13	2.8	9.92	30125	58.08	515
Shafter	07/10/13	31.3	12.81	23333	58.08	515
Shafter	07/16/13	2.8	5.69	52548	57.47	520
Shafter	07/22/13	2.8	17.32	17252	57.47	520
Shafter	07/30/13	14.4	17.32	17252	57.47	520
Shafter	08/08/13	2.8	14.44	20703	57.23	522
Shafter	08/12/13	49.3	17.32	17252	57.23	522
Shafter	08/21/13	2.8	5.69	52548	56.23	531
Shafter	08/27/13	2.8	5.69	52548	56.23	531
Shafter	09/05/13	14.4	5.69	52548	56.23	531
Shafter	09/09/13	2.8	5.69	52548	55.99	534
Shafter	09/18/13	2.8	8.58	34853	55.99	534
Shafter	09/23/13	2.8	16.42	18205	55.99	534
Shafter	09/30/13	14.4	27.88	10721	55.99	534
Shafter	10/08/13	14.4	53.76	5559	55.74	536
Shafter	10/16/13	34.2	94.92	3149	56.08	533
Shafter	10/22/13	48.6	115.39	2590	55.42	539
Shafter	10/31/13	117.9	122.08	2448	54.44	549
Shafter	11/06/13	179.0	115.43	2589	51.99	575
Shafter	11/14/13	116.0	103.79	2880	48.49	616
Shafter	11/18/13	75.4	139.33	2145	46.32	645
Shafter	11/25/13	91.3	311.06	961	45.47	657
Shafter	12/02/13	132.4	318.94	937	43.59	686
Shafter	12/12/13	258.2	301.26	992	41.08	728
Shafter	12/17/13	762.4	258.85	1155	36.62	816
Shafter	12/26/13	122.8	76.64	3900	20.71	1443
Shafter	12/30/13	61.7	61.77	4838	18.88	1583
Shafter	01/08/14	88.6	74.49	4012	19.41	1539
Shafter	01/14/14	33.5	62.71	4766	17.83	1676
Shafter	01/23/14	63.3	69.70	4288	18.38	1626
Shafter	01/28/14	112.6	68.45	4366	17.09	1749
Shafter	02/05/14	41.4	41.00	7290	15.00	1992
Shafter	02/10/14	61.5	40.47	7385	15.65	1909
Shafter	02/20/14	58.3	25.80	11586	15.24	1962
Shafter	02/25/14	2.8	20.54	14552	15.87	1883
Shafter	03/05/14	39.3	20.54	14552	16.76	1783
Shafter	03/10/14	2.8	11.41	26200	18.69	1599
Shafter	03/20/14	37.2	11.41	26200	21.17	1412

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	03/25/14	2.8	2.80	106737	21.13	1414
Shafter	04/03/14	2.8	2.80	106737	21.25	1406
Shafter	04/07/14	2.8	2.80	106737	21.25	1406
Shafter	04/14/14	2.8	2.80	106737	21.25	1406
Shafter	04/23/14	2.8	2.80	106737	21.70	1377
Shafter	04/28/14	2.8	2.80	106737	21.70	1377
Shafter	05/05/14	2.8	2.80	106737	21.70	1377
Shafter	05/14/14	2.8	2.80	106737	21.70	1377
Shafter	05/20/14	2.8	2.80	106737	21.70	1377
Shafter	05/29/14	2.8	2.80	106737	21.70	1377
Shafter	06/03/14	2.8	2.80	106737	21.70	1377
Shafter	06/11/14	2.8	2.80	106737	21.70	1377
Shafter	06/16/14	2.8	2.80	106737	21.70	1377
Shafter	06/24/14	2.8	2.80	106737	21.70	1377
Shafter	06/30/14	2.8	2.80	106737	21.70	1377
Shafter	07/09/14	2.8	2.80	106737	21.70	1377
Shafter	07/14/14	2.8	2.80	106737	21.70	1377
Shafter	07/24/14	2.8	2.80	106737	21.70	1377
Shafter	07/28/14	2.8	2.80	106737	21.70	1377
Shafter	08/06/14	2.8	2.80	106737	23.72	1260
Shafter	08/12/14	2.8	9.67	30902	23.72	1260
Shafter	08/20/14	2.8	9.67	30902	23.72	1260
Shafter	08/25/14	2.8	9.67	30902	23.72	1260
Shafter	09/02/14	30.3	9.67	30902	23.72	1260
Shafter	09/08/14	2.8	5.69	52548	23.38	1278
Shafter	09/18/14	2.8	8.58	34853	23.38	1278
Shafter	09/23/14	2.8	16.71	17886	23.38	1278
Shafter	10/02/14	14.4	16.71	17886	23.38	1278
Shafter	10/06/14	14.4	16.71	17886	23.14	1292
Shafter	10/15/14	35.3	25.32	11801	22.89	1306
Shafter	10/21/14	2.8	20.08	14885	22.20	1346
Shafter	10/30/14	14.4	28.65	10431	22.20	1346
Shafter	11/04/14	48.8	46.72	6397	22.66	1319
Shafter	11/12/14	14.4	38.11	7843	21.68	1379
Shafter	11/17/14	37.1	49.29	6064	21.68	1379
Shafter	11/24/14	86.6	40.71	7341	20.95	1427
Shafter	12/03/14	14.4	22.64	13199	19.17	1559
Shafter	12/09/14	59.1	37.09	8059	19.17	1559
Shafter	12/16/14	2.8	32.77	9119	17.97	1663
Shafter	12/22/14	14.4	54.09	5525	17.97	1663
Shafter	12/29/14	72.1	61.64	4849	22.60	1323

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	01/05/15	41.8	76.16	3924	23.89	1251
Shafter	01/13/15	88.1	95.52	3129	24.21	1234
Shafter	01/22/15	44.5	82.34	3630	26.65	1121
Shafter	01/26/15	130.2	73.34	4075	25.77	1160
Shafter	02/03/15	119.3	41.49	7204	23.71	1260
Shafter	02/10/15	35.3	12.37	24168	21.24	1407
Shafter	02/18/15	8.5	9.50	31466	20.54	1455
Shafter	02/23/15	2.8	8.06	37071	20.67	1446
Shafter	03/03/15	2.8	8.06	37071	22.92	1304
Shafter	03/09/15	23.8	8.06	37071	22.92	1304
Shafter	03/18/15	2.8	2.80	106737	22.48	1330
Shafter	03/24/15	2.8	2.80	106737	22.94	1303
Shafter	04/01/15	2.8	2.80	106737	22.94	1303
Shafter	04/07/15	2.8	2.80	106737	23.65	1264
Shafter	04/15/15	2.8	2.80	106737	25.86	1156
Shafter	04/20/15	2.8	2.80	106737	25.86	1156
Shafter	04/27/15	2.8	2.80	106737	26.10	1145
Shafter	05/04/15	2.8	2.80	106737	26.64	1122
Shafter	05/13/15	2.8	2.80	106737	26.89	1111
Shafter	05/19/15	2.8	2.80	106737	26.89	1111
Shafter	05/27/15	2.8	2.80	106737	26.89	1111
Shafter	06/01/15	2.8	26.55	11257	26.89	1111
Shafter	06/08/15	2.8	26.55	11257	26.89	1111
Shafter	06/16/15	2.8	26.55	11257	26.89	1111
Shafter	06/22/15	97.8	26.55	11257	26.89	1111
Shafter	06/30/15	2.8	2.80	106737	24.87	1202
Shafter	07/07/15	2.8	5.69	52548	24.87	1202
Shafter	07/13/15	2.8	5.69	52548	24.87	1202
Shafter	07/21/15	2.8	5.69	52548	24.87	1202
Shafter	07/28/15	14.4	5.69	52548	24.87	1202
Shafter	08/03/15	2.8	2.80	106737	24.62	1214
Shafter	08/10/15	2.8	2.80	106737	24.62	1214
Shafter	08/18/15	2.8	2.80	106737	24.62	1214
Shafter	08/25/15	2.8	2.80	106737	25.85	1156
Shafter	09/02/15	2.8	11.09	26937	25.85	1156
Shafter	09/08/15	2.8	11.09	26937	26.09	1145
Shafter	09/14/15	2.8	13.98	21375	26.09	1145
Shafter	09/22/15	36.0	13.98	21375	26.34	1135
Shafter	09/29/15	2.8	5.69	52548	25.63	1166
Shafter	10/06/15	14.4	8.58	34853	25.63	1166
Shafter	10/13/15	2.8	5.69	52548	25.39	1177

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	10/19/15	2.8	5.69	52548	25.39	1177
Shafter	10/28/15	14.4	62.97	4746	25.39	1177
Shafter	11/02/15	2.8	92.61	3227	25.14	1189
Shafter	11/09/15	2.8	106.16	2815	25.14	1189
Shafter	11/16/15	231.9	156.15	1914	25.14	1189
Shafter	11/23/15	132.9	98.87	3023	20.51	1457
Shafter	11/30/15	57.0	74.08	4034	17.99	1661
Shafter	12/08/15	202.8	60.53	4937	16.84	1775
Shafter	12/15/15	2.8	10.54	28358	13.39	2232
Shafter	12/21/15	33.8	13.43	22260	15.22	1964
Shafter	12/28/15	2.8	32.20	9281	15.78	1894
Shafter	01/05/16	2.8	32.20	9281	26.60	1124
Shafter	01/11/16	14.4	32.20	9281	25.18	1187
Shafter	01/19/16	108.9	34.77	8595	26.42	1131
Shafter	01/25/16	2.8	8.26	36198	23.97	1247
Shafter	02/03/16	2.8	16.59	18014	21.73	1376
Shafter	02/09/16	24.6	42.52	7028	21.52	1389
Shafter	02/17/16	2.8	37.07	8063	21.41	1396
Shafter	02/23/16	36.1	39.95	7480	22.05	1355
Shafter	03/02/16	106.5	37.98	7869	24.05	1243
Shafter	03/08/16	2.8	14.94	20010	23.64	1264
Shafter	03/17/16	14.4	14.94	20010	23.86	1252
Shafter	03/22/16	28.2	12.05	24805	24.35	1227
Shafter	03/29/16	14.4	5.69	52548	24.57	1216
Shafter	04/04/16	2.8	2.80	106737	24.57	1216
Shafter	04/13/16	2.8	2.80	106737	24.57	1216
Shafter	04/19/16	2.8	2.80	106737	24.57	1216
Shafter	04/26/16	2.8	2.80	106737	24.57	1216
Shafter	05/02/16	2.8	2.80	106737	24.57	1216
Shafter	05/11/16	2.8	2.80	106737	24.57	1216
Shafter	05/16/16	2.8	2.80	106737	24.57	1216
Shafter	05/24/16	2.8	2.80	106737	24.57	1216
Shafter	05/31/16	2.8	2.80	106737	24.57	1216
Shafter	06/08/16	2.8	2.80	106737	24.57	1216
Shafter	06/14/16	2.8	2.80	106737	24.57	1216
Shafter	06/22/16	2.8	17.18	17397	22.75	1314
Shafter	06/28/16	2.8	17.18	17397	22.75	1314
Shafter	07/06/16	2.8	20.07	14894	22.75	1314
Shafter	07/12/16	60.3	20.07	14894	23.85	1253
Shafter	07/19/16	2.8	8.58	34853	23.85	1253
Shafter	07/25/16	14.4	8.58	34853	23.85	1253

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Shafter	08/02/16	2.8	5.69	52548	23.85	1253
Shafter	08/09/16	14.4	5.69	52548	24.08	1241
Shafter	08/15/16	2.8	2.80	106737	24.08	1241
Shafter	08/23/16	2.8	2.80	106737	24.08	1241
Shafter	08/29/16	2.8	2.80	106737	24.08	1241
Shafter	09/06/16	2.8	2.80	106737	24.08	1241
Shafter	09/13/16	2.8	2.80	106737	24.08	1241
Shafter	09/19/16	2.8	5.69	52548	23.44	1275
Shafter	09/28/16	2.8	8.58	34853	23.44	1275
Shafter	10/03/16	2.8	8.58	34853	23.21	1287
Shafter	10/12/16	14.4	18.05	16553	23.44	1275
Shafter	10/17/16	14.4	36.66	8152	23.66	1263
Shafter	10/25/16	2.8	48.15	6207	23.44	1275
Shafter	11/01/16	40.7	51.04	5856	24.17	1237
Shafter	11/07/16	88.8	49.56	6031	25.82	1157
Shafter	11/15/16	60.3	30.95	9657	22.52	1327
Shafter	11/21/16	14.4	27.88	10718	20.24	1477
Shafter	11/28/16	34.8	34.68	8618	19.81	1508
Shafter	12/06/16	14.4	29.57	10106	16.19	1846
Shafter	12/12/16	48.1	34.65	8626	17.06	1752
Shafter	12/21/16	41.5	27.94	10695	17.21	1737
Shafter	12/27/16	14.4	14.35	20827	17.43	1715

**C. RIPON**

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	02/03/11	308.2	85.68	3488	35.07	852
Ripon	02/07/11	2.8	16.07	18601	29.78	1004
Ripon	02/15/11	28.9	16.07	18601	30.65	975
Ripon	02/22/11	2.8	14.70	20332	30.10	993
Ripon	03/01/11	29.7	19.92	15003	30.10	993
Ripon	03/08/11	2.8	13.19	22658	29.52	1012
Ripon	03/15/11	23.5	28.10	10635	31.03	963
Ripon	03/21/11	23.7	22.93	13033	30.59	977
Ripon	03/29/11	2.8	17.71	16875	31.16	959
Ripon	04/04/11	62.4	17.71	16875	32.14	930
Ripon	04/13/11	2.8	28.43	10510	30.87	968
Ripon	04/18/11	2.8	28.43	10510	30.87	968
Ripon	04/26/11	2.8	28.43	10510	30.87	968
Ripon	05/02/11	105.3	28.43	10510	31.60	946
Ripon	05/12/11	2.8	16.04	18637	30.04	995
Ripon	05/16/11	2.8	16.04	18637	30.04	995
Ripon	05/25/11	2.8	16.04	18637	30.04	995
Ripon	06/01/11	55.7	16.04	18637	30.04	995
Ripon	06/13/11	2.8	2.80	106737	28.91	1034
Ripon	06/22/11	2.8	2.80	106737	28.91	1034
Ripon	06/28/11	2.8	10.89	27454	28.91	1034
Ripon	07/06/11	2.8	10.89	27454	28.91	1034
Ripon	07/11/11	2.8	10.89	27454	28.91	1034
Ripon	07/19/11	35.1	10.89	27454	28.91	1034
Ripon	07/27/11	2.8	2.80	106737	28.22	1059
Ripon	08/04/11	2.8	2.80	106737	28.22	1059
Ripon	08/08/11	2.8	2.80	106737	28.22	1059
Ripon	08/17/11	2.8	2.80	106737	28.22	1059
Ripon	08/23/11	2.8	2.80	106737	28.22	1059
Ripon	08/31/11	2.8	8.68	34424	28.22	1059
Ripon	09/06/11	2.8	8.68	34424	28.22	1059
Ripon	09/14/11	2.8	15.30	19530	28.22	1059
Ripon	09/19/11	26.3	21.61	13828	28.22	1059
Ripon	09/28/11	2.8	15.73	18998	27.72	1078
Ripon	10/04/11	29.3	15.73	18998	27.72	1078
Ripon	10/12/11	28.0	9.11	32806	27.16	1100
Ripon	10/17/11	2.8	29.19	10237	26.62	1123
Ripon	10/26/11	2.8	36.88	8103	26.62	1123
Ripon	11/01/11	2.8	50.69	5896	26.62	1123
Ripon	11/09/11	108.4	60.42	4947	26.62	1123



Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	11/14/11	33.6	63.87	4679	24.38	1226
Ripon	11/22/11	58.0	66.13	4519	23.72	1260
Ripon	12/01/11	41.7	80.67	3705	22.55	1325
Ripon	12/09/11	122.2	143.64	2081	21.72	1376
Ripon	12/15/11	42.6	128.03	2334	21.04	1421
Ripon	12/20/11	116.2	128.30	2329	20.19	1480
Ripon	12/27/11	293.6	99.96	2990	19.55	1529
Ripon	01/05/12	59.8	27.27	10961	13.79	2168
Ripon	01/09/12	43.7	13.02	22950	12.58	2377
Ripon	01/18/12	2.8	20.56	14538	11.71	2553
Ripon	01/23/12	2.8	20.56	14538	12.19	2452
Ripon	02/02/12	2.8	32.38	9231	13.31	2246
Ripon	02/06/12	73.8	43.99	6795	13.31	2246
Ripon	02/15/12	2.8	26.23	11395	11.80	2533
Ripon	02/21/12	50.1	26.23	11395	11.80	2533
Ripon	02/28/12	49.2	14.41	20743	10.79	2769
Ripon	03/05/12	2.8	11.30	26446	27.88	1072
Ripon	03/15/12	2.8	18.61	16058	31.42	951
Ripon	03/19/12	2.8	18.61	16058	32.68	915
Ripon	03/28/12	36.8	18.61	16058	33.33	897
Ripon	04/02/12	32.0	10.11	29561	32.59	917
Ripon	04/11/12	2.8	2.80	106737	31.95	935
Ripon	04/15/12	2.8	2.80	106737	32.99	906
Ripon	04/24/12	2.8	2.80	106737	33.80	884
Ripon	05/02/12	2.8	2.80	106737	33.80	884
Ripon	05/10/12	2.8	2.80	106737	35.88	833
Ripon	05/15/12	2.8	2.80	106737	35.88	833
Ripon	05/23/12	2.8	2.80	106737	35.88	833
Ripon	05/29/12	2.8	2.80	106737	35.88	833
Ripon	06/06/12	2.8	2.80	106737	35.88	833
Ripon	06/14/12	2.8	2.80	106737	35.88	833
Ripon	06/19/12	2.8	2.80	106737	35.88	833
Ripon	06/28/12	2.8	2.80	106737	35.88	833
Ripon	07/05/12	2.8	2.80	106737	35.88	833
Ripon	07/09/12	2.8	2.80	106737	35.88	833
Ripon	07/18/12	2.8	2.80	106737	35.88	833
Ripon	07/22/12	2.8	2.80	106737	35.88	833
Ripon	08/02/12	2.8	2.80	106737	35.88	833
Ripon	08/07/12	2.8	2.80	106737	35.88	833
Ripon	08/15/12	2.8	2.80	106737	35.88	833
Ripon	08/19/12	2.8	2.80	106737	35.88	833

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	08/30/12	2.8	2.80	106737	35.88	833
Ripon	09/04/12	2.8	2.80	106737	35.88	833
Ripon	09/12/12	2.8	2.80	106737	35.88	833
Ripon	09/16/12	2.8	2.80	106737	35.88	833
Ripon	09/27/12	2.8	2.80	106737	35.88	833
Ripon	10/01/12	2.8	2.80	106737	35.88	833
Ripon	10/10/12	2.8	24.61	12142	35.88	833
Ripon	10/14/12	2.8	24.61	12142	35.88	833
Ripon	10/25/12	2.8	45.48	6571	35.88	833
Ripon	10/29/12	90.1	50.44	5925	35.88	833
Ripon	11/07/12	2.8	28.63	10440	33.98	880
Ripon	11/13/12	86.3	28.63	10440	33.98	880
Ripon	11/20/12	22.6	13.46	22208	32.16	929
Ripon	11/29/12	2.8	21.64	13811	31.73	942
Ripon	12/07/12	2.8	21.64	13811	31.73	942
Ripon	12/11/12	25.6	21.64	13811	34.10	877
Ripon	12/19/12	55.4	15.94	18747	40.07	746
Ripon	12/26/12	2.8	2.80	106737	38.92	768
Ripon	01/03/13	2.8	215.16	1389	38.92	768
Ripon	01/07/13	2.8	256.78	1164	38.92	768
Ripon	01/15/13	2.8	271.56	1101	38.92	768
Ripon	01/23/13	852.2	361.15	828	41.49	720
Ripon	02/01/13	169.3	78.01	3831	23.02	1298
Ripon	02/06/13	61.9	22.51	13277	19.66	1520
Ripon	02/11/13		18.74	15949	18.37	1627
Ripon	02/21/13	2.8	24.08	12413	19.06	1568
Ripon	02/26/13	2.8	24.08	12413	20.31	1471
Ripon	03/07/13	50.6	47.93	6235	24.57	1216
Ripon	03/14/13	40.1	35.98	8307	25.09	1191
Ripon	03/17/13	2.8	26.65	11213	24.30	1230
Ripon	03/29/13	98.2	26.65	11213	24.86	1202
Ripon	04/02/13	2.8	2.80	106737	22.83	1309
Ripon	04/10/13	2.8	2.80	106737	23.73	1260
Ripon	04/14/13	2.8	2.80	106737	23.73	1260
Ripon	04/24/13	2.8	2.80	106737	23.73	1260
Ripon	04/30/13	2.8	2.80	106737	23.73	1260
Ripon	05/08/13	2.8	2.80	106737	23.73	1260
Ripon	05/14/13	2.8	2.80	106737	23.73	1260
Ripon	05/23/13	2.8	2.80	106737	23.73	1260
Ripon	05/29/13	2.8	2.80	106737	25.13	1189
Ripon	06/05/13	2.8	2.80	106737	25.13	1189

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	06/09/13	2.8	2.80	106737	25.13	1189
Ripon	06/20/13	2.8	2.80	106737	25.13	1189
Ripon	06/26/13	2.8	2.80	106737	25.38	1178
Ripon	07/02/13	2.8	2.80	106737	25.38	1178
Ripon	07/08/13	2.8	2.80	106737	25.38	1178
Ripon	07/18/13	2.8	2.80	106737	25.38	1178
Ripon	07/24/13	2.8	2.80	106737	25.38	1178
Ripon	08/01/13	2.8	2.80	106737	25.38	1178
Ripon	08/05/13	2.8	2.80	106737	25.38	1178
Ripon	08/14/13	2.8	2.80	106737	25.38	1178
Ripon	08/18/13	2.8	2.80	106737	25.38	1178
Ripon	08/30/13	2.8	2.80	106737	25.38	1178
Ripon	09/05/13	2.8	2.80	106737	25.38	1178
Ripon	09/11/13	2.8	2.80	106737	25.38	1178
Ripon	09/15/13	2.8	2.80	106737	25.38	1178
Ripon	09/26/13	2.8	2.80	106737	25.38	1178
Ripon	10/01/13	2.8	2.80	106737	25.38	1178
Ripon	10/06/13	2.8	29.97	9973	25.38	1178
Ripon	10/18/13	2.8	104.31	2865	25.38	1178
Ripon	10/24/13	2.8	104.31	2865	25.38	1178
Ripon	10/28/13	111.5	104.31	2865	25.38	1178
Ripon	11/07/13	300.2	77.15	3874	23.07	1296
Ripon	11/12/13	2.8	2.80	106737	16.74	1785
Ripon	11/20/13	2.8	32.32	9246	16.74	1785
Ripon	11/25/13	2.8	32.32	9246	16.74	1785
Ripon	12/04/13	2.8	35.21	8488	16.74	1785
Ripon	12/10/13	120.9	35.21	8488	16.74	1785
Ripon	12/18/13	2.8	17.64	16942	14.47	2065
Ripon	12/26/13	14.4	32.39	9227	14.47	2065
Ripon	01/02/14	2.8	79.51	3759	15.44	1936
Ripon	01/06/14	50.6	97.64	3061	15.44	1936
Ripon	01/16/14	61.8	85.68	3488	14.42	2073
Ripon	01/24/14	202.8	77.51	3856	13.16	2270
Ripon	01/29/14	75.3	27.50	10869	8.91	3355
Ripon	02/04/14	2.8	19.93	14997	7.80	3831
Ripon	02/13/14	29.1	19.93	14997	8.23	3633
Ripon	02/19/14	2.8	13.36	22377	15.54	1923
Ripon	02/26/14	45.0	13.36	22377	16.79	1781
Ripon	03/03/14	2.8	2.80	106737	18.42	1623
Ripon	03/12/14	2.8	2.80	106737	19.33	1546
Ripon	03/21/14	2.8	2.80	106737	20.08	1489

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	03/26/14	2.8	19.33	15458	20.32	1471
Ripon	04/02/14	2.8	19.33	15458	20.32	1471
Ripon	04/09/14	2.8	19.33	15458	20.41	1464
Ripon	04/14/14	68.9	19.33	15458	20.66	1447
Ripon	04/23/14	2.8	5.69	52548	19.25	1553
Ripon	05/01/14	2.8	5.69	52548	19.25	1553
Ripon	05/08/14	2.8	5.69	52548	19.25	1553
Ripon	05/13/14	14.4	5.69	52548	19.25	1553
Ripon	05/21/14	2.8	2.80	106737	19.00	1573
Ripon	05/27/14	2.8	2.80	106737	19.00	1573
Ripon	06/04/14	2.8	2.80	106737	19.25	1553
Ripon	06/13/14	2.8	2.80	106737	19.25	1553
Ripon	06/19/14	2.8	2.80	106737	19.25	1553
Ripon	06/23/14	2.8	2.80	106737	19.25	1553
Ripon	07/02/14	2.8	2.80	106737	19.25	1553
Ripon	07/08/14	2.8	2.80	106737	19.25	1553
Ripon	07/16/14	2.8	2.80	106737	19.25	1553
Ripon	07/25/14	2.8	2.80	106737	19.25	1553
Ripon	07/30/14	2.8	2.80	106737	19.25	1553
Ripon	08/06/14	2.8	2.80	106737	19.25	1553
Ripon	08/14/14	2.8	2.80	106737	25.61	1167
Ripon	08/18/14	2.8	2.80	106737	25.61	1167
Ripon	08/27/14	2.8	2.80	106737	25.61	1167
Ripon	09/05/14	2.8	2.80	106737	25.61	1167
Ripon	09/10/14	2.8	2.80	106737	25.61	1167
Ripon	09/16/14	2.8	2.80	106737	25.61	1167
Ripon	09/24/14	2.8	2.80	106737	25.61	1167
Ripon	09/29/14	2.8	2.80	106737	25.61	1167
Ripon	10/08/14	2.8	2.80	106737	25.61	1167
Ripon	10/16/14	2.8	5.69	52548	25.61	1167
Ripon	10/22/14	2.8	5.69	52548	25.61	1167
Ripon	10/28/14	2.8	19.88	15031	25.61	1167
Ripon	11/05/14	14.4	19.88	15031	25.61	1167
Ripon	11/13/14	2.8	17.00	17585	25.36	1178
Ripon	11/19/14	59.6	17.00	17585	25.36	1178
Ripon	11/24/14	2.8	2.80	106737	25.26	1183
Ripon	12/04/14	2.8	7.92	37715	25.26	1183
Ripon	12/12/14	2.8	12.91	23141	25.26	1183
Ripon	12/17/14	2.8	105.47	2834	25.26	1183
Ripon	12/22/14	23.3	120.07	2489	25.26	1183
Ripon	12/30/14	22.8	144.68	2066	24.82	1204

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	01/06/15	373.0	150.41	1987	24.40	1225
Ripon	01/14/15	61.2	66.61	4486	16.52	1809
Ripon	01/23/15	121.7	54.91	5443	15.28	1956
Ripon	01/29/15	45.7	25.18	11871	12.75	2344
Ripon	02/02/15	37.9	15.48	19303	12.08	2474
Ripon	02/11/15	14.4	9.61	31110	11.58	2580
Ripon	02/19/15	2.8	6.72	44480	11.34	2636
Ripon	02/25/15	6.9	6.72	44480	11.34	2636
Ripon	03/05/15	14.4	5.69	52548	11.25	2657
Ripon	03/11/15	2.8	2.80	106737	11.70	2555
Ripon	03/16/15	2.8	2.80	106737	11.70	2555
Ripon	03/25/15	2.8	2.80	106737	11.94	2502
Ripon	04/01/15	2.8	5.69	52548	12.19	2452
Ripon	04/09/15	2.8	5.69	52548	13.00	2299
Ripon	04/14/15	2.8	5.69	52548	14.41	2074
Ripon	04/22/15	14.4	5.69	52548	15.23	1962
Ripon	04/28/15	2.8	2.80	106737	14.98	1995
Ripon	05/07/15	2.8	2.80	106737	14.98	1995
Ripon	05/11/15	2.8	2.80	106737	14.98	1995
Ripon	05/20/15	2.8	2.80	106737	15.56	1921
Ripon	05/26/15	2.8	2.80	106737	15.56	1921
Ripon	06/03/15	2.8	2.80	106737	16.23	1842
Ripon	06/08/15	2.8	77.50	3856	16.23	1842
Ripon	06/17/15	2.8	77.50	3856	16.23	1842
Ripon	06/25/15	2.8	77.50	3856	16.23	1842
Ripon	07/01/15	301.6	77.50	3856	16.23	1842
Ripon	07/06/15	2.8	2.80	106737	9.87	3028
Ripon	07/16/15	2.8	2.80	106737	9.87	3028
Ripon	07/21/15	2.8	2.80	106737	9.87	3028
Ripon	07/29/15	2.8	2.80	106737	9.87	3028
Ripon	08/06/15	2.8	2.80	106737	9.87	3028
Ripon	08/12/15	2.8	2.80	106737	9.87	3028
Ripon	08/20/15	2.8	2.80	106737	9.87	3028
Ripon	08/26/15	2.8	2.80	106737	9.87	3028
Ripon	09/01/15	2.8	2.80	106737	9.87	3028
Ripon	09/10/15	2.8	2.80	106737	9.87	3028
Ripon	09/16/15	2.8	2.80	106737	9.87	3028
Ripon	09/23/15	2.8	15.82	18888	9.87	3028
Ripon	09/29/15	2.8	15.82	18888	9.87	3028
Ripon	10/07/15	2.8	15.82	18888	9.87	3028
Ripon	10/15/15	54.9	15.82	18888	9.87	3028

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Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	10/21/15	2.8	2.80	106737	8.76	3411
Ripon	10/26/15	2.8	2.80	106737	8.76	3411
Ripon	11/04/15	2.8	2.80	106737	8.76	3411
Ripon	11/09/15	2.8	2.80	106737	8.76	3411
Ripon	11/18/15	2.8	2.80	106737	8.76	3411
Ripon	11/22/15	2.8	2.80	106737	8.76	3411
Ripon	12/03/15	2.8	5.69	52548	8.76	3411
Ripon	12/08/15	2.8	8.58	34853	8.76	3411
Ripon	12/16/15	2.8	8.58	34853	8.76	3411
Ripon	12/21/15	14.4	8.58	34853	8.76	3411
Ripon	12/29/15	14.4	5.69	52548	8.52	3509
Ripon	01/06/16	2.8	10.97	27251	15.65	1910
Ripon	01/14/16	2.8	10.97	27251	14.52	2058
Ripon	01/19/16	2.8	13.85	21572	12.24	2442
Ripon	01/28/16	35.5	16.74	17851	12.04	2482
Ripon	02/03/16	2.8	18.08	16534	11.37	2629
Ripon	02/11/16	14.4	34.69	8616	11.37	2629
Ripon	02/17/16	14.4	41.40	7218	11.59	2579
Ripon	02/24/16	40.8	38.52	7759	12.24	2442
Ripon	02/29/16	69.2	29.02	10300	13.30	2248
Ripon	03/09/16	41.2	12.40	24095	14.03	2130
Ripon	03/16/16	2.8	9.56	31260	14.03	2130
Ripon	03/23/16	2.8	9.56	31260	14.03	2130
Ripon	03/29/16	2.8	17.41	17162	14.03	2130
Ripon	04/06/16	29.8	17.41	17162	14.55	2053
Ripon	04/13/16	2.8	10.65	28052	14.55	2053
Ripon	04/21/16	34.2	10.65	28052	14.94	2001
Ripon	04/27/16	2.8	2.80	106737	14.94	2001
Ripon	05/04/16	2.8	2.80	106737	14.94	2001
Ripon	05/10/16	2.8	2.80	106737	14.94	2001
Ripon	05/18/16	2.8	2.80	106737	14.94	2001
Ripon	05/24/16	2.8	2.80	106737	14.94	2001
Ripon	06/02/16	2.8	2.80	106737	14.94	2001
Ripon	06/07/16	2.8	2.80	106737	14.94	2001
Ripon	06/15/16	2.8	2.80	106737	14.94	2001
Ripon	06/21/16	2.8	2.80	106737	14.94	2001
Ripon	06/30/16	2.8	2.80	106737	9.19	3252
Ripon	07/05/16	2.8	2.80	106737	9.19	3252
Ripon	07/14/16	2.8	2.80	106737	9.19	3252
Ripon	07/18/16	2.8	2.80	106737	9.19	3252
Ripon	07/27/16	2.8	2.80	106737	9.19	3252

Location	Start Date	Adjusted Concentration (ng/m <sup>3</sup> ) (using ND=1/2 MDL)	4-wk Average	4-wk MOE	Annual Average	Annual MOE
Ripon	08/02/16	2.8	2.80	106737	9.19	3252
Ripon	08/10/16	2.8	2.80	106737	9.19	3252
Ripon	08/18/16	2.8	2.80	106737	9.19	3252
Ripon	08/24/16	2.8	2.80	106737	9.19	3252
Ripon	08/29/16	2.8	2.80	106737	9.19	3252
Ripon	09/07/16	2.8	2.80	106737	9.19	3252
Ripon	09/14/16	2.8	2.80	106737	9.19	3252
Ripon	09/22/16	2.8	2.80	106737	9.19	3252
Ripon	09/27/16	2.8	2.80	106737	9.19	3252
Ripon	10/05/16	2.8	2.80	106737	9.19	3252
Ripon	10/11/16	2.8	2.80	106737	8.19	3650
Ripon	10/20/16	2.8	2.80	106737	8.19	3650
Ripon	10/26/16	2.8	2.80	106737	8.19	3650
Ripon	11/02/16	2.8	2.80	106737	8.19	3650
Ripon	11/08/16	2.8	2.80	106737	8.19	3650
Ripon	11/16/16	2.8	20.41	14642	8.19	3650
Ripon	11/22/16	2.8	28.94	10327	8.19	3650
Ripon	11/30/16	2.8	28.94	10327	8.19	3650
Ripon	12/07/16	73.2	28.94	10327	9.54	3132
Ripon	12/13/16	36.9	14.17	21086	10.20	2930
Ripon	12/19/16	2.8	2.80	106737	9.98	2995
Ripon	12/27/16	2.8	2.80	106737	9.75	3064