OhioEPA

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

March 24, 2014

Re: NPDES Permit No.: 2PE00000*MD
Pretreatment Program addition -
Pretreatment Modifications –
Streamlining Modifications

Mayor and Council
City of Lima
50 Town Square
Lima, OH, 458014948l

Ladies and Gentlemen:

This letter is to inform you that the Ohio EPA, pursuant to the requirements of Chapter 6111 of the Ohio Revised Code 3745-3-03, has determined that the application filed by the City of Lima addition of its Publicly Owned Treatment Works Pretreatment Program meets the requirements of OAC Rule 3745-3-03(C).

In accordance with OAC Rule 3745-3-03 (F), the Ohio EPA has issued a public notice of this determination which provides a public comment period concerning the submission. A copy of this notice is attached.

After the Agency evaluates the submission, together with any public comments, an official action approving or denying the submission will be issued.

If you have questions in this matter, please contact Ashley Ward of the Pretreatment Unit at (614) 644-2001

Craig W. Butler
Director

CWB/dks

CERTIFIED MAIL

cc: David L. Schnipke, Environmental Compliance Manager
Justin Williams, NWDO/DSW
Allen County Health Department
Pretreatment File

Permit Inter
Approval
Mod
Npdes
2PE00000

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

PUBLIC NOTICE NO.14-03-053-PTM
APPLICATION FOR ADDITION OF THE
PRETREATMENT PROGRAM OF CITY OF LIMA

Notice is hereby given that the Director of the Ohio Environmental Protection Agency has determined that the application submitted by City of Lima for addition of its Publicly Owned treatment Works (POTW) Pretreatment Program meets the requirements of OAC Rule 3745-3-03 (C).

Ohio EPA received a pretreatment modification request to add the required streamlining rules to the city's Sewer Use Ordinance (SUO). The modifications to the SUO have been finalized by the city.

The streamlining modification was reviewed for compliance with 40 CFR Part 403 and OAC 3745-3. The City included the language for the optional streamlining rules for Non-Significant Categorical Users.

In accordance with OAC Rule 3745-3-03(F), all interested persons are entitled to submit written comments and/or request a public hearing concerning the application. Written comments and requests for public hearing must be submitted to the Ohio EPA, at the address provided below, by the close of business on May 15, 2014, in order to be considered as part of the record of proceeding.

The Ohio EPA will review all requests for a public hearing, and determine whether there is significant public interest. If significant public interest exists, a public hearing will be scheduled. A public notice of any public hearing will be provided to allow all interested persons an opportunity to attend the meeting.

After a review of the application and of public comments submitted with respect to the application, the Director will issue an official action approving or denying the application. However, the Regional Administrator for the United States Environmental Protection Agency, Region V, may also disapprove the application under procedures for filing objections to the Application under 40 CFR 403.11(d). If the application is to be approved, procedures will be implemented to incorporate the addition to the approved pretreatment program to City of Lima National Pollutant Discharge Elimination System (NPDES) permit.

The complete application, together with supporting information, is available for public inspection at the following locations, during normal business hours (1) the Ohio EPA Hearing Clerk's Office at the address provided below, (2) Northwest District Office 347 North Dunbridge Road, Bowling Green, Ohio 43402 (3)City of Lima WWTP, 1200 Fort Amanda Rd, Lima, OH, 45804

Written comments and requests for a public hearing should be submitted to: Hearing Clerk, Ohio Environmental Protection Agency, P.O. Box 1049, 50 West Town Street, Suite 700, Columbus, OH 43216-1049, (614) 644-3037.

For additional information in this matter, please contact Ashley Ward, Ohio EPA Pretreatment Unit, at (614) 644-2001.

Williams, Justin

From: Ward, Ashley
Sent: Thursday, March 20, 2014 2:08 PM
To: David L Schnipke
Cc: Williams, Justin
Subject: RE: Lima Local Limits Resubmittal

I received it, thank you!

From: David L Schnipke [mailto:david.schnipke@cityhall.lima.oh.us]
Sent: Thursday, March 20, 2014 2:03 PM
To: Ward, Ashley
Cc: Williams, Justin
Subject: RE: Lima Local Limits Resubmittal

Ashley,

Please see attached Local Limits Technical Justification re-submittal. Since it is a rather large file, could you shoot me a quick reply to indicate you received this email and attachment properly.

Thank you.

David L. Schnipke
Environmental Manager
City of Lima, Ohio

From: Ward, Ashley [mailto:ashley.ward@epa.ohio.gov]
Sent: Monday, March 10, 2014 6:05 PM
To: David L Schnipke
Subject: RE: Lima Sewer Use Ordinance Revisions

Hi David,

Can you tell me the status of Lima's local limits technical justification report?

Thanks,
Ashley

City of Lima, Ohio
Local Limits Technical Justification

I. Introduction

The city of Lima's ("city") most recent NPDES permit (#2PE00000*MD) became effective on January 1, 2013. As part of the permit's Schedule of Compliance requirements (Part I, C – Schedules (2)), the city was required to evaluate the adequacy of local industrial user limitations to attain compliance with all conditions of the permit. This included the submittal of a comprehensive Plan of Study that identified the domestic/background and industrial pollutant contributions, treatment plant removal efficiencies, loadings discharged through the city's combined sewer overflows, and receiving water concentrations. The data was entered into an Excel spreadsheet provided by OEPA, and the resultant calculations were the basis for the new local limits.

The last full local limits study completed by the city of Lima was in 2002 using the Excel spreadsheets provided by Andrew Conway of the OEPA. Maximum allowable headworks loadings (MAHLs) were calculated (in lb/day) using a 20% safety factor and industries were given non-uniform limits based on their historical data from the past three years of sampling. For example, if Industry A's maximum measured discharge concentration of copper during the past three years was 1.0 mg/L, they were given an industrial user (IU) permit limit of 1.20 mg/L, or 20% higher than their highest measured value. That concentration was then converted to lb/day using their average daily flow, and that value was subtracted from the MAHL value for copper. After this was completed for every industry, the amount of copper left from the MAHL was put in the 'bank', which the Director of Utilities could then reallocate to other existing or potential new industrial dischargers. This process was then repeated for each pollutant of concern (POC) for which the data indicated a local limit was needed.

The city completed a technical review of the local limit study submitted in 2002 in 2008 and 2011. Neither of these reviews indicated a dramatic change in the data to justify a complete recalculation of local limits. Added to that is the fact that in 2009, Lima lost one of its metal finishing industries and two other industries have significantly reduced their production, and therefore their water usage, and the need for a new local limit study is even further decreased.

In the past ten years, Lima has had issues with only two metals – mercury and copper. Just like many other municipalities, most of the issues with mercury can be attributed to dental offices. Lima officials have met with the local dentists on several occasions to discuss this. As technology in the dental industry has changed, nearly all of Lima's dentists have gone away from the mercury amalgam fillings in favor of other, non-mercury alternatives for routine fillings. Several dentists have told Lima officials that, in rare cases, an amalgam filling is the only plausible alternative to repair a tooth. It is still the most reliable filling material available.

For all industries, the numerical mercury limit will remain at 0.001 mg/L with an additional requirement to continue to develop a mercury minimization plan for their facility. Lima feels it is better to allow the IUs to develop their own plans initially, as they are the 'subject matter experts' for their own particular industry. Rather than Lima trying to remake any industry and force it to come into compliance with what we think it is best, we will allow each industry to police itself as long as they do so in an environmentally-conscious manner to reduce their mercury contribution to the collection system. If an industry chooses to develop a plan that is blatantly inadequate, Lima will then step in to require a more stringent plan. Lima also intends to do the same thing with the local dentists, although they will have more guidance from the Ohio Dental Association.

As for copper, Lima has had only five effluent samples in the past five years exceed 10 ug/L. A majority of the time the effluent sample concentration was below detection limits. For reasons unknown at this time, Lima receives high concentrations of copper (>100 ug/L) in the WWTP influent. The majority of this is removed by the sludge process, but some will occasionally be released through the plant effluent. Sampling of the industries has not shown any industry that routinely discharges high levels of copper, but if every industry were to discharge at their higher end of a permit limit at a high flow, it is possible for the Lima WWTP to receive an abnormally high amount of copper on any given day. Lima will begin further investigation of this shortly by sampling various lift stations for copper to see if there is a point source for higher levels of copper in the collection system.

Unlike the previous formal local limits study, this one was not presented to the local industries for their evaluation and comments prior to submittal to OEPA. The city did not feel it was necessary as the MAHLs did not change significantly, so it will have little impact on the IUs. Lima will continue to use the individual allocation method based on need for distribution rather than the uniform allocation method. Several industries have negotiated with the city for a higher allocation than the data suggests they need only to allow them a slightly larger safety level to avoid violations. For instance, several local industries' data indicated they only needed a certain level of a POC, but were given a higher limit in a categorical regulation. Lima agreed to give them the same limit as their categorical limit because it was available in the 'bank' and it made it easier for enforcement if there was only one limit to enforce.

II. Facility Profile

All discharges to the sanitary and combined sewer collection system are treated at the Lima Wastewater Treatment Plant (WWTP). WWTP processes include screening, grit removal, primary clarification, activated sludge, final clarification, nitrification, chlorination, dechlorination, and anaerobic digestion. Treated water is then discharged to the Ottawa River.

Digested solids are currently converted to Lim-A-Soil through an N-Viro® process, an EPA-approved process that produces a sludge that meets 40 CFR 503 Class A requirements. In this process, digested solids with approximately 6.7% solids is mixed with polymer and applied to a belt press. The filter cake coming off the belt press is approximately 30% solids. The filter cake is then mixed with lime (or a lime substitute) and fly ash from electrical generating power plants and conveyed to a bunker to pasteurize for 72 hours. The final product, Lim-A-Soil, must have a pH greater than 12.0 and be at least 50% solids to meet the 503 regulations. The city is now using Wright Mulch to market this product to farmers and keep the storage facilities sufficiently empty for additional Lim-A-Soil.

III. Data Sources and Collection

Data for this study consisted of plant and industrial data from the last four years. During the last study, it was discovered that the necessary data to complete the study was not compiled anywhere. That has since been corrected and all industrial data now resides in an Excel spreadsheet where it is easily accessible. All plant data is in an OPERATOR 10 database and also easily accessible. Lima's average daily flow for the past forty months decreased to 12.67 MGD from 13.22 MGD in the last formal study, while the daily industrial contribution decreased to 0.57 MGD from 1.03 MGD in 2002. This dramatic decrease has occurred because of the loss of one industry and several other industries either dramatically reducing their production or changing to water-conserving practices. As a result, data prior to 2010 was not included in this local limits evaluation, since the data prior to that year is no longer representative of the current IU loading.

In evaluating the removal efficiency data, Lima has chosen to use the mean removal efficiencies (MREs) instead of the average daily removal efficiencies (ADREs). Although the ADREs are lower than the MREs, Lima feels the MRE are more representative of the plant's operations than the ADREs. Basing local limits on one set of values out of forty does not seem representative of Lima's POTW discharge.

MAHLs and MAILs (maximum allowable industrial loadings) were calculated using the Microsoft Excel spreadsheet supplied to the city by OEPA. Data for this part of the study was collected from monthly OEPA reports for the POTW for the last four years. Removal efficiencies for the plant processes (influent to effluent) were calculated from the actual plant data. Other removal efficiencies for which there were insufficient data to calculate were taken from data tables in the ***Local Limits Development Guidance Appendices, USEPA, 2004.*** All samples taken were analyzed according to the methods outlined in 40 CFR 136.

All industrial metals analyses conducted on samples collected by city personnel during the same time period were also considered in determining POCs. Once a numerical value was arrived at from the Excel spreadsheets, past data was examined to determine if the industries have been meeting that limit already. This examination indicated that there would have been occasional violations, but none of the industries would have been in significant noncompliance (SNC) for any parameter in the past five years. This would indicate that, if the industries keep their pretreatment programs operating at or above current efficiencies, the new limits are at a level that both the city and the industries can be comfortable with.

No sampling of the collection system occurred for this study. Data from the last study indicated very little value to doing so. As stated before, sampling will occur soon for copper only to attempt to find any large contributors the city is currently unaware of.

IV. Proposed Local Limits

Limits for the industries on the city's collection system were calculated using just the individual allocation method. Since the city has adopted this allocation method, the number of metals violations has decreased. The only POC for which all stakeholders will be handled uniformly will be mercury. A discussion of each POC and the amount banked will be presented in the following section.

It is the city's intention to keep the local limits concentration-based and not loadings-based. The city does not wish to impose a pounds-per-day limit on the industries. With the amount of POCs that were reserved for each metal, there is no evidence that imposing a daily loadings limit on the industries would be necessary at this point. Also, now that the data tables have been established for this study, the city intends to update them at regular intervals to insure that the MAILs calculated for this study remain valid quantities. Should their validity become questionable, the city will act to adjust them accordingly.

The Industry-Specific Local Limits and MAILs are shown on the following page.

Industry-Specific Local Limits

	40 CFR 433 Max Daily Limits (mg/L)	Ford	Joint Systems Manufacturing Center	Lima Tank Wash	Lima Memorial Hospital	Metokote	Nelson Packaging	P & G	Randall Bearing	St. Rita's Medical Center	Superior Forge & Steel	American Trim	Whemco	
Ave. Daily Flow (gpd)		71300	64200	5500	32300	35700	7400	209000	3400	93000	3960	21500	17000	
		Individualized Concentration Limits (in mg/L)												
Chromium	2.77	0.030	0.800	0.200	0.050	1.800	0.200	0.200	0.010	0.070	0.100	2.770	0.050	
Copper	3.38	0.300	1.400	0.840	0.080	0.133	0.300	0.300	0.500	0.250	0.280	0.800	0.050	
Lead	0.69	0.030	0.340	0.120	0.100	0.120	0.050	0.050	0.150	0.020	0.016	0.130	0.030	
Nickel	3.98	0.150	0.500	0.360	0.120	0.800	0.100	0.100	0.050	0.050	0.030	2.380	0.250	
Zinc	2.61	1.000	1.800	3.100	0.410	1.200	0.600	1.000	0.100	0.450	0.400	0.200	0.250	
		Resulting Pounds of POC Produced based on Average Flow												
														Total
Chromium		0.018	0.428	0.009	0.013	0.536	0.012	0.349	0.000	0.054	0.003	0.497	0.007	**1.93**
Copper		0.178	0.750	0.039	0.022	0.040	0.019	0.523	0.014	0.194	0.009	0.143	0.007	**1.94**
Lead		0.018	0.182	0.006	0.027	0.036	0.003	0.087	0.004	0.016	0.001	0.023	0.004	**0.41**
Nickel		0.089	0.268	0.017	0.032	0.238	0.006	0.174	0.001	0.039	0.001	0.427	0.035	**1.33**
Zinc		0.595	0.964	0.142	0.110	0.357	0.037	1.743	0.003	0.349	0.013	0.036	0.035	**4.38**
	Total Ave Daily Flow (gpd)													
	564,260													
	Total Lbs. To Give (2013)	**Total Lbs. Dist**	**Lbs. Banked**	**% MAIL Banked**			**2002 Study Total Lbs. To Give**	**% Increase / Decrease**						
Chromium	**24.0**	**1.93**	**22.1**	**92.0**			**67.87**	-64.6						
Copper	**12.0**	**1.94**	**10.1**	**83.9**			**12.05**	-0.4						
Lead	**5.04**	**0.41**	**4.63**	**91.9**			**3.08**	63.6						
Nickel	**8.55**	**1.33**	**7.22**	**84.5**			**9.65**	-11.4						
Zinc	**19.2**	**4.38**	**14.8**	**77.2**			**20.08**	-4.4						

V. Discussion of Each Pollutant

1. **Antimony (Sb)**
   Although there is limited data, there is no indication that a limit is needed for Sb. So far, all data for the plant, industries, and sludge have been below detection of 5.0 ug/L.

2. **Arsenic (As), Cadmium (Cd), Molybdenum (Mo), Selenium (Se), & Silver (Ag)**
   No limits will be set for any of the POCs listed above at this time. Data available at this time does not support the city's need to set limits for them, as they are rarely present in the residential sampling, nor they do not show up in significant quantities in any industrial discharges.

3. **Total Chromium (Cr)**
   Local limits for Cr will be imposed upon local industries. Currently, only one of the local industries uses Cr in their processes. This will leave the city with a Cr bank of approximately 22 lbs, or 92% of the total MAIL.

4. **Hexavalent Chromium (Cr^{6+})**
   No local limit will be set for hexavalent chromium. As the POTW is not experiencing any issues with total chromium, it stands to reason there is no issue with hexavalent chromium, a subset of total chromium. Besides, the issues that arise with sampling & analysis of hexavalent chromium (grab sampling, short hold time before analysis, etc.) cannot be justified by the current chromium data.

5. **Copper (Cu)**
   Limits for Cu will be imposed upon the local industries. Calculations show that the city will reserve about 83% of its MAIL while distributing less than two pounds to the industries.

6. **Cyanide (CN)**
   Plant data for the POTW indicates there are no issues with cyanide as all total cyanide sampling for the plant influent is below detection and only one effluent sample during the study period was above detection. As with hexavalent chromium, the cost of sampling and analysis is not justified.

7. **Lead (Pb)**
   Limits for lead will be imposed upon the local industries. Although lead has not been a real issue with the WWTP or local industries, the city will continue to enforce the limits established. The limits set allow the city to bank 91.9% of its MAIL.

8. **Mercury (Hg)**
   The city will continue its attempts to decrease Hg in the WWTP influent. Industries have already done their part to assist in this, as evidenced by sampling results. Dental offices are moving toward the elimination of amalgams whenever possible. It is the City's opinion that there is still mercury present in the collection system and Lima will have to contend with it for years to come.

9. **Nickel (Ni)**
   Limits for Ni will be imposed upon the local industries. Only 16% of the MAIL is being allocated to the industries. Limits will be adjusted for three industries to be able to bank this amount. All three industries have been contacted and agree that this should not be an issue based on their past discharge sampling. This will provide an adequate bank for the city to work with.

10. **Zinc (Zn)**
    Limits for Zn will be imposed upon the local industries. Zinc had the largest increase in allocated pounds for industry in this review. The new limit will still allow the city to bank over 65% of its MAIL.

VI. Additional Information

Appendix A contains all of the background and sampling data needed to perform the calculations for this study. Appendix B contains the Excel spreadsheets used to calculate the MAILs and the new local limits as well as the comparison of values derived from all of the available sources. Appendix C contains data from the sampling of the distribution system and from the sampling of the local industries, which was also used to calculate the limits under the individual allocation method.

VII. Comments

Other than Ni, the city does not intend to decrease the limits in any of the IUs' permits. Using the numbers in their current permits, the POTW still has sufficient levels of each POC banked to feel comfortable that no issues will evolve, while the industries have permit limits they can meet. Decreasing their limits is not justified.

The city has not taken any major steps in the regulation of dental offices beyond the initial push of BMPs through the Mercury Pollutant Minimization Plan. In 2010, USEPA announced its intentions to release new categorical regulations for dental offices in 2012. USEPA is now stating that the official policy can be expected sometime in 2014.

It appears to be in the city's best interest to keep an open dialogue with the dental offices and work with them to try to reduce their mercury discharge without taking any authoritative actions not backed up by state or federal regulations. Therefore, members of the city's staff will continue to talk to local dentists to gather and dispense information concerning mercury so that when regulations are enacted, the city can take action expeditiously.

Appendix A

Background Data for Calculating Local Limits

Lima WWTP Flows (2009 - 2013)

Month	Total Flow (MG)
January, 2009	271.17
February, 2009	485.51
March, 2009	478.71
April, 2009	584.23
May, 2009	424.15
June, 2009	312.83
July, 2009	296.76
August, 2009	278.63
September, 2009	264.75
October, 2009	382.63
November, 2009	294.19
December, 2009	367.73
January, 2010	341.63
February, 2010	321.33
March, 2010	612.07
April, 2010	366.43
May, 2010	472.30
June, 2010	473.35
July, 2010	345.01
August, 2010	346.22
September, 2010	274.97
October, 2010	286.29
November, 2010	393.02
December, 2010	343.71
January, 2011	334.78
February, 2011	511.56
March, 2011	668.66
April, 2011	631.22
May, 2011	667.76
June, 2011	309.67
July, 2011	285.41
August, 2011	368.86
September, 2011	476.53
October, 2011	471.38
November, 2011	555.65
December, 2011	724.85
January, 2012	583.60
February, 2012	444.48
March, 2012	509.36
April, 2012	356.38
May, 2012	341.65
June, 2012	297.01
July, 2012	297.55
August, 2012	361.01
September, 2012	396.24
October, 2012	478.36
November, 2012	288.29
December, 2012	433.51
January, 2013	553.86
February, 2013	413.53
March, 2013	568.82
April, 2013	617.53
May, 2013	346.20

Total Days in Time Period = 1612

Total Flow in Time Period = 22,311.33 MG

(2009-2013) Average Daily Flow = 13.84 MGD

Metals Sampling for Koop Road Lift Station (Background)
2009 - 2013

	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
01/21/09 1226	0.008	AA	AA	0.039	AA	AA	AA	0.013	0.001	AA	0.149
02/19/09 1154	0.003	AA	AA	0.017	AA	0.003	AA	0.002	0.011	AA	0.044
04/01/09 0837	0.013	0.0002	AA	0.034	AA	AA	AA	0.005	0.008	AA	0.069
04/16/09 1112	0.012	AA	AA	0.019	AA	AA	AA	AA	0.002	AA	0.005
05/21/09 1005	0.002	0.003	AA	0.031	AA	0.011	AA	0.004	0.004	0.008	0.141
06/17/09 1044	0.003	AA	AA	0.049	0.017	0.075	AA	0.012	AA	AA	0.099
07/30/09 1041	0.008	0.001	AA	0.078	AA	0.025	AA	0.016	0.001	AA	0.153
08/20/09 1839	0.009	AA	AA	0.038	AA	AA	AA	AA	0.042	AA	0.154
09/17/09 0928	0.005	AA	AA	0.043	0.003	0.011	AA	AA	0.015	AA	0.173
10/21/09 0946	0.006	AA	AA	0.041	AA	0.008	AA	AA	AA	AA	0.202
11/25/09 1049	0.008	0.003	AA	0.121	AA	0.013	AA	0.031	AA	AA	0.19
12/16/09 1129	0.005	AA	AA	0.032	AA	AA	AA	AA	AA	AA	0.081
01/21/10 1233	0.024	0.001		0.034	AA	0.009	AA	0.01	0.014		0.115
02/19/10 1047	0.014	0.002	AA	0.022	0.007	AA	AA	0.015	0.002	0.002	0.103
03/19/10 1006	AA	AA	AA	0.047	AA	AA	AA	0.006	AA	0.002	0.061
04/29/10 0901	0.002	AA	0	0.088	AA	AA	AA	0.002	0.008	0.001	0.069
5/21/10 9:30	0.0021	AA	AA	0.0066	AA	AA	AA	AA	0.0083	AA	0.157
6/23/10 8:57	0.0031	AA	0.0014	0.229	AA	AA	AA	0.011	AA	0.0019	0.169
7/29/10 17:38	0.0047	AA	AA	0.047	AA	AA	AA	0.01	0.0049	AA	0.072
8/25/10 9:49	0.0073	AA	AA	0.049	AA	AA	AA	AA	0.0034	AA	0.099
9/29/10 8:53	0.0013	0.0008	AA	0.049	AA	0.0005	AA	0.0051	0.0016	AA	0.057
10/21/10 11:40	0.0016	AA	AA	0.041	AA	0.006	AA	0.0021	AA	AA	0.086
12/2/10 10:00	0.0049	AA	AA	AA	AA	0.0054	AA	AA	0.0087	AA	0.039
12/16/10 11:37	0.0016	0.0054	AA	0.006	AA	0.0103	AA	0.013	AA	AA	0.049
2/2/11 10:02	0.0099	0.0011	AA	0.062	AA	0.021	AA	0.0064	0.0286	0.0058	0.142
2/18/11 11:46	AA	0.01	AA	0.014	AA	0.0089	AA	0.023	AA	AA	0.034
3/17/11 9:16	AA	AA	AA	0.009	AA	AA	AA	AA	AA	AA	0.064
4/20/11 10:06	AA	AA	AA	0.025	AA	0.0401	AA	AA	AA	0.00047	0.069
6/1/11 10:30	AA	AA	AA	0.013	AA	0.0039	AA	0.004	0.0008	AA	0.048
7/7/11 8:32	AA	AA	AA	0.024	AA	AA	AA	AA	AA	AA	0.071
8/03/11 1735	AA	AA	AA	0.039	AA	AA	AA	AA	0.0068	AA	0.11
08/26/11 0913	AA	AA	AA	0.02	AA	AA	AA	AA	AA	AA	0.053
09/28/11 0827	AA	AA	AA	0.026	AA	AA	AA	AA	AA	AA	0.052
11/02/11 1031	AA	AA	AA	0.029	AA	AA	AA	AA	AA	AA	0.044
11/18/11 0954	AA	AA	AA	0.016	AA	AA	AA	AA	AA	AA	0.032
12/29/11 0849	AA	AA	AA	0.015	AA	AA	AA	AA	AA	AA	0.042
02/03/12 0830	AA	AA	0.007	0.016	AA	AA	AA	AA	AA	AA	0.04
03/07/12 1045	AA	AA	AA	0.014	AA	AA	AA	AA	AA	AA	0.034
03/30/12 0907	AA	AA	0.077	0.023	AA	AA	0.0003	AA	AA	AA	0.115
04/25/12 1044	AA	AA	0.008	0.029	AA	AA	0.0002	AA	AA	AA	0.061
05/25/12 0929	AA	AA	0.027	0.062	AA	AA	AA	0.008	AA	AA	0.22
07/11/12 0934	AA	AA	0.009	0.035	AA	AA	0.0002	AA	AA	AA	0.105
08/01/12 1715	AA	0.003	AA	0.039	AA	AA	AA	AA	AA	AA	0.1
09/07/12 0920	AA	AA	0.01	0.042	AA	AA	AA	AA	AA	AA	0.124
10/12/12 1046	AA	0.004	AA	0.068	AA	AA	AA	AA	AA	AA	0.122
11/07/12 0925	AA	AA	AA	0.020	AA	AA	AA	AA	AA	AA	0.075
12/06/12 1108	AA	AA	AA	0.022	AA	AA	AA	AA	AA	AA	0.06
01/02/13 1041	AA	AA	AA	0.052	AA	AA	AA	AA	AA	AA	0.046
02/06/13 1030	AA	AA	0.014	0.019	AA	AA	AA	AA	AA	AA	0.068
03/08/13 1010	AA	AA	0.008	0.016	AA	AA	AA	AA	AA	AA	0.045
04/05/13 0947	AA	AA	AA	0.017	AA	AA	AA	AA	AA	AA	0.055
04/26/13 0922	AA	AA	0.007	0.025	AA	AA	AA	AA	AA	AA	0.052
Average	0.0066	0.0029	0.0153	0.0383	0.0090	0.0157	0.0002	0.0099	0.0090	0.0030	0.0888

Metals Sampling for Reservoir Road Lift Station (Background)
2009 - 2013

	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
01/22/09 1108	0.05	0.002	AA	0.043	AA	AA	0.0005	0.059	0.002	AA	1.89
02/25/09 1037	0.004	AA	AA	0.018	AA	AA	0.0002	AA	0.004	AA	0.175
04/02/09 0930	0.007	AA	AA	0.025	AA	AA	AA	0.007	0.01	AA	0.12
04/17/09 0916	0.005	AA	AA	0.025	AA	AA	AA	AA	0.004	0.012	0.116
06/10/09 0908	AA	AA	AA	0.026	AA	0.004	AA	AA	AA	0.024	0.201
07/01/09 0959	AA	AA	AA	0.016	AA	0.007	AA	AA	AA	AA	0.102
08/07/09 1616	0.002	0.001	AA	0.009	AA	0.021	AA	0.011	AA	AA	0.184
09/04/09 0835	AA	AA	0.002	0.232	0.014	0.009	AA	AA	0.023	AA	0.184
09/17/09 1006	AA	AA	AA	0.022	AA	0.011	AA	AA	0.011	AA	0.215
10/23/09 1145	0.009	AA	AA	0.018	0.003	AA	AA	AA	0.002	AA	0.124
11/20/09 1155	0.005	0.0006	AA	0.031	AA	AA	AA	0.003	0.014	AA	0.23
12/17/09 1108	0.044	AA	AA	0.481	AA	AA	AA	AA	0.003	AA	0.145
01/22/10 1049	0.02	AA		0.239	AA	0.002	AA	AA	0.017		0.206
02/25/10 0905	0.003	0	AA	0.006	AA	AA	AA	0.02	0.002	AA	0.186
03/17/10 0940	0.005	AA	AA	0.017	AA	AA	AA	0.009	AA	AA	0.137
04/28/10 0846	0.005	AA	AA	0.043	AA	AA	AA	0.005	0.004	AA	0.099
05/19/10 1107	0.0021	AA	0.0037	0.018	0.0025	AA	AA	AA	AA	AA	0.535
6/17/10 8:15	AA	AA	AA	0.219	AA	AA	AA	0.034	0.0012	AA	0.114
8/5/10 16:16	AA	AA	AA	0.033	AA	AA	0.0029	AA	0.0023	0.0046	0.518
08/27/10 1107	0.0015	AA	AA	0.047	0.0041	AA	AA	0.0038	AA	AA	0.122
9/23/10 9:56	AA	AA	AA	0.015	AA	AA	AA	AA	0.004	AA	0.131
10/22/10 10:03	0.0019	AA	AA	0.021	AA	0.0057	AA	0.0024	AA	AA	0.104
12/2/10 9:22	AA	AA	AA	0.011	AA	0.0048	AA	0.006	0.0558	AA	0.079
12/17/10 10:58	AA	0.0016	AA	0.195	0.0016	0.041	AA	0.044	AA	AA	0.1
2/4/11 12:18	AA	0.0026	AA	0.035	AA	0.022	AA	0.024	0.0024	AA	0.134
2/17/11 9:40	AA	AA	AA	0.014	0.015	0.009	AA	0.027	AA	0.0062	0.085
3/30/11 9:56	AA	AA	AA	0.016	AA	AA	AA	AA	AA	AA	0.13
4/29/11 10:41	AA	AA	AA	0.012	AA	AA	AA	0.004	AA	AA	0.079
6/1/11 9:42	0.0014	AA	AA	0.181	AA	0.0052	AA	AA	AA	AA	0.076
7/1/11 9:43	AA	AA	AA	0.025	AA	AA	AA	AA	AA	AA	0.103
8/03/11 1555	AA	AA	AA	0.023	AA	AA	AA	AA	AA	AA	0.086
09/01/11 1001	AA	AA	0.011	0.083	AA	AA	AA	AA	AA	AA	0.138
09/30/11 1022	AA	AA	AA	0.016	AA	AA	AA	AA	AA	AA	0.057
10/28/11 0910	AA	AA	AA	0.021	AA	AA	AA	AA	AA	AA	0.064
11/16/11 1014	AA	AA	AA	0.014	AA	AA	AA	AA	AA	AA	0.046
01/06/12 0955	AA	AA	AA	0.027	AA	AA	AA	AA	AA	AA	0.091
02/09/12 1007	AA	AA	AA	0.026	AA	AA	AA	AA	AA	AA	0.069
03/15/12 1035	AA	AA	AA	0.018	AA	AA	AA	AA	AA	AA	0.094
03/28/12 1058	AA	AA	0.042	0.014	AA	AA	AA	AA	AA	AA	0.084
05/02/12 0958	AA	AA	0.007	0.043	AA	AA	AA	AA	AA	AA	0.198
05/30/12 1110	AA	AA	0.009	0.028	AA	AA	AA	AA	AA	AA	0.133
07/12/12 1022	AA	AA	0.038	0.046	AA	AA	AA	AA	AA	AA	0.120
08/08/12 1814	AA	AA	AA	0.022	AA	AA	AA	AA	AA	AA	0.127
09/12/12 1152	AA	AA	AA	0.321	AA	AA	AA	AA	AA	AA	0.182
10/11/12 1020	AA	0.007	AA	0.023	AA	AA	AA	AA	AA	AA	0.102
11/09/12 1006	AA	AA	0.007	0.027	AA	AA	AA	AA	AA	AA	0.098
12/06/12 1021	AA	AA	AA	0.026	AA	AA	AA	AA	AA	AA	0.087
01/04/13 1007	AA	AA	AA	0.027	AA	AA	AA	AA	AA	AA	0.091
02/07/13 1051	AA	AA	AA	0.026	AA	AA	AA	AA	AA	AA	0.072
03/07/13 1128	AA	AA	AA	0.02	AA	AA	AA	AA	AA	AA	0.081
04/03/13 1023	AA	AA	AA	0.027	AA	AA	AA	AA	AA	AA	0.117
04/24/13 1110	AA	AA	AA	0.019	AA	AA	AA	AA	AA	AA	0.079
Averages	0.0104	0.0021	0.0150	0.0575	0.0067	0.0118	0.0012	0.0173	0.0095	0.0117	0.1700

WWTP Pollutants of Concern - Raw Data

Plant Influent

Month	Sb	As	Cd	Cr	Cu	CN	Pb	Hg	Mo	Ni	Se	Ag	Zn
Jan-09			5.10	AA 0.2	48.0	AA 0.01	AA 2.0	82.1		41.00			108
Feb-09			0.55	AA 0.2	29.0	AA 0.01	3.00	17		13.00			84
Mar-09			AA 0.2	AA 0.2	40.0	AA 0.01	AA 2.0	33.9		4.00			38
Apr-09			AA 0.2	AA 0.2	24.0	AA 0.01	3.00	12.1		18.00			88
May-09			4.30	AA 0.2	84.0	AA 0.01	AA 2.0	120.2		11.00			113
Jun-09			2.00	3.1	38.0	AA 0.01	AA 2.0	29.9		7.00			175
Jul-09			AA 0.2	AA 0.2	11.0	AA 0.01	4.20	154.8		12.10			107
Aug-09			0.31	4.7	13.0	AA 0.01	AA 2.0	30.9		34.00			173
Sep-09			AA 0.5	5.1	40.4	AA 0.01	2.80	24.4		3.70			183
Oct-09			2.10	1.9	53.0	AA 0.01	AA 2.0	28.2		13.00			209
Nov-09			AA 0.2	AA 0.2	31.0	AA 0.01	AA 2.0	26.3		AA 1.0			170
Dec-09			2.80	0.7	35.0	AA 0.01	3.10	59.4		38.00			179
Jan-10			AA 0.2	AA 0.2	16.0	AA 0.01	AA 2.0	17.7		16.00			112
Feb-10			1.10	4.0	39.0	AA 0.01	2.90	101.5		23.00			123
Mar-10			AA 0.2	AA 0.2	4.0	AA 0.01	AA 2.0	8.9		AA 1.0			24
Apr-10			1.60	AA 0.2	48.0	AA 0.01	AA 2.0	22.9		31.00			177
May-10			0.78	6.0	46.0	AA 0.01	13.10	18.4		2.80			223
Jun-10			3.20	AA 0.2	36.0	AA 0.01	11.10	23.4		38.00			84
Jul-10			AA 0.2	2.9	80.0	AA 0.01	AA 2.0	25.75		9.40			151
Aug-10			1.00	AA 0.2	37.0	AA 0.01	AA 2.0	19.5		8.00			62
Sep-10			AA 0.2	4.6	25.0	AA 0.01	AA 2.0	21.3		AA 1.0			144
Oct-10			0.21	AA 0.2	45.0	AA 0.01	25.80	93.3		8.40			138
Nov-10			0.98	AA 0.2	62.0	AA 0.01	3.80	24		79.00			199
Dec-10			AA 0.2	AA 0.2	12.0	AA 0.01	AA 2.0	22.4		19.00			84
Jan-11			0.81	AA 0.2	17.0	AA 0.01	AA 2.0	13.1		19.30			132
Feb-11			AA 0.2	AA 0.2	36.0	AA 0.01	AA 2.0	17.6		5.00			116
Mar-11			2.50	4.0	27.0	AA 0.01	AA 2.0	35.4		1.80			97
Apr-11			2.30	AA 0.2	14.5	AA 0.01	AA 2.0	19.1		29.60			68
May-11			1.20	12.1	36.0	AA 0.01	AA 2.0	53.1		27.00			105
Jun-11			AA 0.2	AA 0.2	20.0	AA 0.01	AA 2.0	29.2		AA 1.0			74

WWTP Pollutants of Concern - Raw Data

Jul-11			AA 0.2	AA 0.2	66.0	AA 0.01	AA 2.0	89.8		5.00			59
Aug-11			AA 0.2	AA 0.2	24.0	AA 0.01	AA 2.0	15.4		5.00			99
Sep-11			AA 3	AA 7	71.0	AA 0.01	AA 10	29		AA 8			148
Oct-11			AA 3	AA 7	40.0	AA 0.01	AA 10	13.4		AA 8			146
Nov-11			AA 3	AA 7	40.0	AA 0.01	AA 10	23.9		AA 8			120
Dec-11			AA 3	AA 7	10.0	AA 0.01	AA 10	23.5		AA 8			37
Jan-12			AA 3	AA 7	30.0	AA 0.01	AA 10	58.6		8.00			105
Feb-12			AA 3	AA 7	17.0	AA 0.01	AA 10	11.5		AA 8			40
Mar-12			AA 3	AA 7	21.0	AA 0.01	AA 10	13		AA 8			63
Apr-12			AA 3	AA 7	23.0	AA 0.01	AA 10	12.1		AA 8			65
May-12			AA 3	AA 7	24.0	AA 0.01	AA 10	53.6		AA 8			77
Jun-12			3.00	10.0	58.0	AA 0.01	20.00	22.5		11.00			193
Jul-12			3.00	8.0	35.0	AA 0.01	AA 10	27.7		8.00			120
Aug-12			AA 3	AA 7	14.0	AA 0.01	AA 14	31.6		AA 8			82
Sep-12			AA 3	20.0	55.0	AA 0.01	27.00	33.8		19.00			148
Oct-12			AA 3	10.0	22.0	AA 0.01	AA 20	11.6		AA 8			265
Nov-12			AA 3	AA 7	16.0	AA 0.01	AA 10	16.3		AA 8			55
Dec-12			AA 3	AA 7	20	AA 0.01	AA 10	82.7		AA 8			49
Jan-13	AA 5.0		AA 3.0	AA 10	25	AA 0.01	AA 10.0	8.06		19	AA 4.0		52
Feb-13	AA 5.0		AA 3	AA 7	16	AA 0.01	AA 10	12.1		AA 8	AA 4.0		65
Mar-13	AA 5.0		AA 3	AA 7	17	AA 0.01	AA 10	6.6		AA 8	AA 4.0		67
Apr-13	AA 5.0		AA 3	11	38	AA 0.01	21	126		10	AA 4.0		120
Ave.			**1.94**	**6.76**	**33.25**		**10.83**	**36.70**		**17.56**			**113.75**
Max.			**5.1**	**20**	**84**		**27**	**154.8**		**79**			**265**
All metals concentrations are in ug/L except Hg, which is ng/L													

WWTP Pollutants of Concern - Raw Data

Plant Effluent

Month	Sb	As	Cd	Cr	Cu	CN	Pb	Hg	Mo	Ni	Se	Ag	Zn
Jan-09			AA 0.2	AA 0.2	24.00	AA 0.01	AA 2.0	4.5		3.00			40
Feb-09			AA 0.2	AA 0.2	2.00	AA 0.01	AA 2.0	4.8		AA 1.0			36
Mar-09			AA 0.2	AA 0.2	16.00	AA 0.01	AA 2.0	3.1		2.00			25
Apr-09			AA 0.2	AA 0.2	3.00	AA 0.01	AA 2.0	2.3		AA 1.0			28
May-09			AA 0.2	84.00	16.00	AA 0.01	AA 2.0	3.9		1.90			44
Jun-09			AA 0.2	AA 0.2	4.00	AA 0.01	AA 2.0	1.3		AA 1.0			63
Jul-09			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	5.8		AA 1.0			28
Aug-09			AA 0.2	AA 0.2	4.00	AA 0.01	AA 2.0	2.1		3.00			48
Sep-09			AA 0.5	AA 2.0	8.00	AA 0.01	AA 2.0	3.2		AA 0.2			45
Oct-09			AA 0.2	AA 0.2	6.00	AA 0.01	AA 2.0	3		AA 1.0			39
Nov-09			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	2.4		AA 1.0			84
Dec-09			AA 0.2	AA 0.2	3	AA 0.01	AA 2.0	2.6		2			80
Jan-10			AA 0.2	AA 0.2	4	AA 0.01	AA 2.0	2.3		AA 1.0			45
Feb-10			AA 0.2	AA 0.2	4	AA 0.01	AA 2.0	3		AA 1.0			33
Mar-10			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	2.6		AA 1.0			4
Apr-10			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	2		2.6			48
May-10			AA 0.2	AA 0.2	4	AA 0.01	AA 2.0	4.9		AA 1.0			45
Jun-10			AA 0.2	AA 0.2	8	AA 0.01	AA 2.0	1.5		AA 1.0			14
Jul-10			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	6.2		AA 1.0			31
Aug-10			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	4.7		AA 1.0			26
Sep-10			AA 0.2	AA 0.2	6	AA 0.01	AA 2.0	3.8		AA 1.0			32
Oct-10			AA 0.2	AA 0.2	4	AA 0.01	AA 2.0	7.15		AA 1.0			30
Nov-10			AA 0.2	AA 0.2	3	AA 0.01	AA 2.0	5.2		2.1			37
Dec-10			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	3.7		AA 1.0			30
Jan-11			AA 0.2	AA 0.2	AA 2.0	AA 0.01	AA 2.0	4.2		AA 1.0			31
Feb-11			AA 0.2	AA 0.2	9	AA 0.01	AA 2.0	2.8		AA 1.0			32
Mar-11			AA 0.2	AA 0.2	4	AA 0.01	AA 2.0	7.55		AA 1.0			42
Apr-11			AA 0.2	AA 0.2	10	0.010	AA 2.0	6.6		AA 1.0			28
May-11			AA 0.2	AA 0.2	7	AA 0.01	AA 2.0	8.7		AA 1.0			50
Jun-11			AA 0.2	AA 0.2	5	AA 0.01	AA 2.0	3.4		AA 1.0			21

WWTP Pollutants of Concern - Raw Data

Jul-11			AA 0.2	AA 0.2	19	AA 0.01	AA 2.0	2.8		AA 1.0			113
Aug-11			AA 0.2	AA 0.2	7	AA 0.01	AA 2.0	5.7		AA 1.0			18
Sep-11			AA 3	AA 7	AA 8	AA 0.01	AA 10	6.09		AA 8			AA 10
Oct-11			AA 3	AA 7	AA 8	AA 0.01	AA 10	0.836		AA 8			15
Nov-11			AA 3	AA 7	AA 8	AA 0.01	AA 10	3.15		AA 8			16
Dec-11			AA 3	AA 7	AA 8	AA 0.01	AA 10	4.03		AA 8			14
Jan-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	1.29		AA 8			14
Feb-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	2.66		AA 8			19
Mar-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	0.556		AA 8			17
Apr-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	1.4		AA 8			14
May-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	1.84		AA 8			26
Jun-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	1.5		10			24
Jul-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	AA 0.500		AA 8			28
Aug-12			AA 3	AA 7	AA 8	AA 0.01	AA 15	AA 0.500		AA 8			AA 10
Sep-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	0.906		AA 8			17
Oct-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	0.701		AA 8			AA 10
Nov-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	1.09		AA 8			24
Dec-12			AA 3	AA 7	AA 8	AA 0.01	AA 10	0.848		AA 8			16
Jan-13	AA 5.0		AA 3.0	AA 10	AA 10	AA 0.01	AA 10.0	1.84		AA 8	AA 4.0		19
Feb-13	AA 5.0		AA 3	AA 7	AA 8	AA 0.01	AA 10	1.87		AA 8	AA 4.0		AA 10
Mar-13	AA 5.0		AA 3	AA 7	AA 8	AA 0.01	AA 10	1.04		AA 8	AA 4.0		23
Apr-13	AA 5.0		AA 3	AA 7	AA 8	AA 0.003	AA 10	1.06		AA 8	AA 4.0		25
Ave.				**84.000**	**7.500**	**0.010**		**3.210**		**3.325**			**32.938**
Max.				**84**	**24**			**8.7**		**10**			**113**
All metals concentrations are in ug/L except Hg, which is ng/L													

WWTP Pollutants of Concern - Raw Data

Sludge

Month	Sb	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
Jan-09		16.66	3.29		163.61	177.50	0.272	7.63	31.81	5.04		309.016
Feb-09		39.76	1.15		111.80	22.50	0.341	2.82	23.70	13.20		199.4
Mar-09		39.76	1.15		111.80	22.50	0.341	2.82	23.70	13.2		199.4
Apr-09		14.93	4.13		173.08	40.82	AA 0.010	4.34	32.09	23.97		174.391
May-09		13.52	3.16		200.43	34.78	AA 0.01	6.90	39.43	3.60		260.358
Jun-09		14.64	2.45		253.47	28.27	AA 0.010	4.30	37.01	2.87		193.079
Jul-09		2.04	1.20		191.33	24.19	0.03	1.92	31.94	1.81		85.251
Aug-09		6.99	3.74		251.46	46.70	AA 0.0100	6.49	67.39	4.03		218.491
Sep-09		30.7	4.56		181.48	28.39	0.286	3.77	45.53	0.41		212.461
Oct-09		3.05	1.69		110.03	30.19	0.165	1.73	33.38	AA 1.0		80.018
Nov-09		5.24	1.842		88.23	23.505	0.363	3.24	30.547	3.2		83.692
Dec-09		8.37	1.50		143.18	24.05	0.191	22.04	23.93	2.22		86.623
Jan-10		4.26	1.13		108.44	19.26	0.275	19.94	21.32	1.08		117.698
Feb-10		6.39	1.58		92.91	15.52	5.252	12.91	18.52	1.40		92.064
Mar-10		4.62	1.87		120.51	13.09	0.334	2.68	28.30	3.89		143.131
Apr-10		4.32	1.37		196.10	21.98	0.192	3.76	19.31	4.52		162.901
May-10		6	1.23		128.77	30.50	0.152	2.37	30.13	2.40		146.914
Jun-10		13.76	1.10		148.56	38.37	0.186	AA 0.400	36.67	12.22		168.934
Jul-10		3.09	2.41		325.00	14.40	0.213	AA 0.400	18.00	1.74		222
Aug-10		6.15	4.39		144.00	6.99	0.122	7.48	48.50	0.78		138
Sep-10		8.13	0.90		89.30	32.10	0.103	10.00	30.90	8.00		136
Oct-10		5.55	1.24		121.00	25.60	0.108	8.47	36.00	1.57		205
Nov-10		**(None produced)**										
Dec-10		7.67	1.63		136.46	3.81	0.457	1.59	44.60	11.03		251.222
Jan-11		0.66	0.70		203.00	41.30	0.108	2.20	30.00	4.04		259
Feb-11		5.24	0.79		129.00	34.20	0.131	2.79	27.30	1.00		105
Mar-11		AA 0.010	0.57		98.90	31.00	0.142	19.70	24.10	1.09		106
Apr-11		1.52	0.92		200.62	39.93	0.318	1.21	42.64	5.49		208.367
May-11		3.95	1.52		183.00	47.90	0.304	15.10	23.30	2.53		194

WWTP Pollutants of Concern - Raw Data

Jun-11		1.75	1.06		190.00	45.90	0.198	7.41	40.40	1.67		152
Jul-11		1.08	1.08		155.00	52.20	0.538	2.89	53.00	2.63		130
Aug-11		20.1	8.75		136.00	55.60	1.38	11.70	45.10	16.80		228
Sep-11		9	7.86		134.00	51.70	0.546	11.50	39.90	AA 5.89		218
Oct-11		11.2	6.69		118.00	45.60	0.565	10.60	34.00	5.16		186
Nov-11		10.5	7.02		132.00	52.00	0.861	11.00	35.60	AA 0.616		199
Dec-11		11.5	6.57		121.00	46.40	0.385	10.50	31.90	2.61		196
Jan-12		8.7	1.53		103.00	11.80	0.321	13.90	38.30	5.70		274
Feb-12		15.4	5.64		101.00	43.60	0.473	11.70	27.30	2.17		253
Mar-12		10.5	4.25		79.50	39.80	0.256	8.09	21.10	2.98		194
Apr-12		9.1	5.46		74.90	47.30	AA 0.149	16.30	24.00	4.12		284
May-12		9.3	10.20		87.60	85.50	0.241	29.20	56.20	5.86		488
Jun-12		8.6	5.48		80.20	39.90	0.185	10.40	24.00	AA 0.588		235
Jul-12		8.35	5.61		89.40	40.40	0.224	23.50	27.30	3.71		234
Aug-12		8.87	5.39		89.80	31.40	0.173	31.00	25.90	3.33		216
Sep-12		9.63	6.40		104.15	36.35	0.234	31.20	26.90	3.35		273
Oct-12		16.85	5.85		93.80	32.10	0.164	29.90	25.50	4.13		276
Nov-12		10.4	5.68		86.30	31.20	0.297	33.20	28.00	4.17		205
Dec-12		7.2	3.01		101.00	20.50	0.172	44.70	27.90	AA 0.616		200
Jan-13	AA 0.768	12.4	5.28		82.00	33.90	0.19	23.00	25.30	5.20		181
Feb-13		15.1	4.69		86.40	43.30	0.353	18.80	29.70	3.86		161
Mar-13	AA 0.85	11.2	4.24		63.10	31.10	0.15	33.50	28.00	4.88		156
Apr-13	AA 1.9	9.4	3.85		69.50	23.50	0.215	18.20	25.10	2.90		140
Ave.		**10.26**	**3.43**		**133.00**	**36.48**	**0.40**	**12.66**	**32.17**	**4.82**		**192.89**
Max.		**39.76**	**10.2**		**325**	**177.5**	**5.252**	**44.7**	**67.387**	**23.97**		**488**
All metals concentrations are in mg/kg												

Removal Rates Calculated Using Mean Removal Efficiency

Antimony (Sb)						Arsenic (As)					
Month	Influent		Effluent		% Removal	Month	Influent		Effluent		% Removal
Jan-10						Jan-10					
Feb-10						Feb-10					
Mar-10						Mar-10					
Apr-10						Apr-10					
May-10						May-10					
Jun-10						Jun-10					
Jul-10						Jul-10					
Aug-10						Aug-10					
Sep-10						Sep-10					
Oct-10						Oct-10					
Nov-10						Nov-10					
Dec-10						Dec-10					
Jan-11						Jan-11					
Feb-11						Feb-11					
Mar-11						Mar-11					
Apr-11						Apr-11					
May-11						May-11					
Jun-11						Jun-11					
Jul-11						Jul-11					
Aug-11						Aug-11					
Sep-11						Sep-11					
Oct-11						Oct-11					
Nov-11						Nov-11					
Dec-11						Dec-11					
Jan-12						Jan-12					
Feb-12						Feb-12					
Mar-12						Mar-12					
Apr-12						Apr-12					
May-12						May-12					
Jun-12						Jun-12					
Jul-12						Jul-12					
Aug-12						Aug-12					
Sep-12						Sep-12					
Oct-12						Oct-12					
Nov-12						Nov-12					
Dec-12						Dec-12					
Jan-13	AA 5.0	5.0	AA 5.0	2.5	50.00	Jan-13					
Feb-13	AA 5.0	5.0	AA 5.0	2.5	50.00	Feb-13					
Mar-13	AA 5.0	5.0	AA 5.0	2.5	50.00	Mar-13					
Apr-13	AA 5.0	5.0	AA 5.0	2.5	50.00	Apr-13					
Lowest % Removal:				**50.0**		Lowest % Removal:				**No usable data**	

Removal Rates Calculated Using Mean Removal Efficiency

Cadmium (Cd)					
Month	Influent		Effluent		% Removal
Jan-10	AA 0.2	0.20	AA 0.2	0.1	
Feb-10	1.10	1.10	AA 0.2	0.1	
Mar-10	AA 0.2	0.20	AA 0.2	0.1	
Apr-10	1.60	1.60	AA 0.2	0.1	
May-10	0.78	0.78	AA 0.2	0.1	
Jun-10	3.20	3.20	AA 0.2	0.1	
Jul-10	AA 0.2	0.20	AA 0.2	0.1	
Aug-10	1.00	1.00	AA 0.2	0.1	
Sep-10	AA 0.2	0.20	AA 0.2	0.1	
Oct-10	0.21	0.21	AA 0.2	0.1	
Nov-10	0.98	0.98	AA 0.2	0.1	
Dec-10	AA 0.2	0.20	AA 0.2	0.1	
Jan-11	0.81	0.81	AA 0.2	0.1	
Feb-11	AA 0.2	0.20	AA 0.2	0.1	
Mar-11	2.50	2.50	AA 0.2	0.1	
Apr-11	2.30	2.30	AA 0.2	0.1	
May-11	1.20	1.20	AA 0.2	0.1	
Jun-11	AA 0.2	0.20	AA 0.2	0.1	
Jul-11	AA 0.2	0.20	AA 0.2	0.1	
Aug-11	AA 0.2	0.20	AA 0.2	0.1	
Sep-11	AA 3	3.00	AA 3	1.5	
Oct-11	AA 3	3.00	AA 3	1.5	
Nov-11	AA 3	3.00	AA 3	1.5	
Dec-11	AA 3	3.00	AA 3	1.5	
Jan-12	AA 3	3.00	AA 3	1.5	
Feb-12	AA 3	3.00	AA 3	1.5	
Mar-12	AA 3	3.00	AA 3	1.5	
Apr-12	AA 3	3.00	AA 3	1.5	
May-12	AA 3	3.00	AA 3	1.5	
Jun-12	3.00	3.00	AA 3	1.5	
Jul-12	3.00	3.00	AA 3	1.5	
Aug-12	AA 3	3.00	AA 3	1.5	
Sep-12	AA 3	3.00	AA 3	1.5	
Oct-12	AA 3	3.00	AA 3	1.5	
Nov-12	AA 3	3.00	AA 3	1.5	
Dec-12	AA 3	3	AA 3	1.5	
Jan-13	AA 3.0	3	AA 3.0	1.5	
Feb-13	AA 3	3	AA 3	1.5	
Mar-13	AA 3	3	AA 3	1.5	
Apr-13	AA 3	3	AA 3	1.5	
Average	1.67	1.94		0.80	**58.70**

Chromium (Cr)					
Month	Influent		Effluent		% Removal
Jan-10	AA 0.2	0.2	AA 0.2	0.1	
Feb-10	4.0	4.0	AA 0.2	0.1	
Mar-10	AA 0.2	0.2	AA 0.2	0.1	
Apr-10	AA 0.2	0.2	AA 0.2	0.1	
May-10	6.0	6.0	AA 0.2	0.1	
Jun-10	AA 0.2	0.2	AA 0.2	0.1	
Jul-10	2.9	2.9	AA 0.2	0.1	
Aug-10	AA 0.2	0.2	AA 0.2	0.1	
Sep-10	4.6	4.6	AA 0.2	0.1	
Oct-10	AA 0.2	0.2	AA 0.2	0.1	
Nov-10	AA 0.2	0.2	AA 0.2	0.1	
Dec-10	AA 0.2	0.2	AA 0.2	0.1	
Jan-11	AA 0.2	0.2	AA 0.2	0.1	
Feb-11	AA 0.2	0.2	AA 0.2	0.1	
Mar-11	4.0	4.0	AA 0.2	0.1	
Apr-11	AA 0.2	0.2	AA 0.2	0.1	
May-11	12.1	12.1	AA 0.2	0.1	
Jun-11	AA 0.2	0.2	AA 0.2	0.1	
Jul-11	AA 0.2	0.2	AA 0.2	0.1	
Aug-11	AA 0.2	0.2	AA 0.2	0.1	
Sep-11	AA 7	7.0	AA 7	3.5	
Oct-11	AA 7	7.0	AA 7	3.5	
Nov-11	AA 7	7.0	AA 7	3.5	
Dec-11	AA 7	7.0	AA 7	3.5	
Jan-12	AA 7	7.0	AA 7	3.5	
Feb-12	AA 7	7.0	AA 7	3.5	
Mar-12	AA 7	7.0	AA 7	3.5	
Apr-12	AA 7	7.0	AA 7	3.5	
May-12	AA 7	7.0	AA 7	3.5	
Jun-12	10.0	10.0	AA 7	3.5	
Jul-12	8.0	8.0	AA 7	3.5	
Aug-12	AA 7	7.0	AA 7	3.5	
Sep-12	20.0	20.0	AA 7	3.5	
Oct-12	10.0	10.0	AA 7	3.5	
Nov-12	AA 7	7	AA 7	3.5	
Dec-12	AA 7	7	AA 7	3.5	
Jan-13	AA 10	10	AA 10	5	
Feb-13	AA 7	7	AA 7	3.5	
Mar-13	AA 7	7	AA 7	3.5	
Apr-13	11	11	AA 7	3.5	
Average	8.42	5.09		1.84	**63.86**

Removal Rates Calculated Using Mean Removal Efficiency

Copper (Cu)					
Month	Influent		Effluent		% Removal
Jan-10	16.0	16.0	4	4	
Feb-10	39.0	39.0	4	4	
Mar-10	4.0	4.0	AA 2.0	1	
Apr-10	48.0	48.0	AA 2.0	1	
May-10	46.0	46.0	4	4	
Jun-10	36.0	36.0	8	8	
Jul-10	80.0	80.0	AA 2.0	1	
Aug-10	37.0	37.0	AA 2.0	1	
Sep-10	25.0	25.0	6	6	
Oct-10	45.0	45.0	4	4	
Nov-10	62.0	62.0	3	3	
Dec-10	12.0	12.0	AA 2.0	1	
Jan-11	17.0	17.0	AA 2.0	1	
Feb-11	36.0	36.0	9	9	
Mar-11	27.0	27.0	4	4	
Apr-11	14.5	14.5	10	10	
May-11	36.0	36.0	7	7	
Jun-11	20.0	20.0	5	5	
Jul-11	66.0	66.0	19	19	
Aug-11	24.0	24.0	7	7	
Sep-11	71.0	71.0	AA 8	4	
Oct-11	40.0	40.0	AA 8	4	
Nov-11	40.0	40.0	AA 8	4	
Dec-11	10.0	10.0	AA 8	4	
Jan-12	30.0	30.0	AA 8	4	
Feb-12	17.0	17.0	AA 8	4	
Mar-12	21.0	21.0	AA 8	4	
Apr-12	23.0	23.0	AA 8	4	
May-12	24.0	24.0	AA 8	4	
Jun-12	58.0	58.0	AA 8	4	
Jul-12	35.0	35.0	AA 8	4	
Aug-12	14.0	14.0	AA 8	4	
Sep-12	55.0	55.0	AA 8	4	
Oct-12	22.0	22.0	AA 8	4	
Nov-12	16.0	16.0	AA 8	4	
Dec-12	20	20	AA 8	4	
Jan-13	25	25	AA 10	5	
Feb-13	16	16	AA 8	4	
Mar-13	17	17	AA 8	4	
Apr-13	38	38	AA 8	4	
Average	32.06	32.06	6.71	4.53	**85.89**

Lead (Pb)					
Month	Influent		Effluent		% Removal
Jan-10	AA 2.0	2.00	AA 2.0	1	
Feb-10	2.90	2.90	AA 2.0	1	
Mar-10	AA 2.0	2.00	AA 2.0	1	
Apr-10	AA 2.0	2.00	AA 2.0	1	
May-10	13.10	13.10	AA 2.0	1	
Jun-10	11.10	11.10	AA 2.0	1	
Jul-10	AA 2.0	2.00	AA 2.0	1	
Aug-10	AA 2.0	2.00	AA 2.0	1	
Sep-10	AA 2.0	2.00	AA 2.0	1	
Oct-10	25.80	25.80	AA 2.0	1	
Nov-10	3.80	3.80	AA 2.0	1	
Dec-10	AA 2.0	2.00	AA 2.0	1	
Jan-11	AA 2.0	2.00	AA 2.0	1	
Feb-11	AA 2.0	2.00	AA 2.0	1	
Mar-11	AA 2.0	2.00	AA 2.0	1	
Apr-11	AA 2.0	2.00	AA 2.0	1	
May-11	AA 2.0	2.00	AA 2.0	1	
Jun-11	AA 2.0	2.00	AA 2.0	1	
Jul-11	AA 2.0	2.00	AA 2.0	1	
Aug-11	AA 2.0	2.00	AA 2.0	1	
Sep-11	AA 10	10.00	AA 10	5	
Oct-11	AA 10	10.00	AA 10	5	
Nov-11	AA 10	10.00	AA 10	5	
Dec-11	AA 10	10.00	AA 10	5	
Jan-12	AA 10	10.00	AA 10	5	
Feb-12	AA 10	10.00	AA 10	5	
Mar-12	AA 10	10.00	AA 10	5	
Apr-12	AA 10	10.00	AA 10	5	
May-12	AA 10	10.00	AA 10	5	
Jun-12	20.00	20.00	AA 10	5	
Jul-12	AA 10	10.00	AA 10	5	
Aug-12	AA 14	14.00	AA 15	7.5	
Sep-12	27.00	27.00	AA 10	5	
Oct-12	AA 20	20.00	AA 10	5	
Nov-12	AA 10	10.00	AA 10	5	
Dec-12	AA 10	10.00	AA 10	5	
Jan-13	AA 10.0	10.00	AA 10.0	5	
Feb-13	AA 10	10.00	AA 10	5	
Mar-13	AA 10	10.00	AA 10	5	
Apr-13	21	21	AA 10	5	
Average	15.59	8.47	#REF!	3.06	**63.83**

Removal Rates Calculated Using Mean Removal Efficiency

	Mercury (Hg)				
Month	Influent		Effluent		% Removal
Jan-10	17.7	17.7	2.3	2.3	
Feb-10	101.5	101.5	3	3	
Mar-10	8.9	8.9	2.6	2.6	
Apr-10	22.9	22.9	2	2	
May-10	18.4	18.4	4.9	4.9	
Jun-10	23.4	23.4	1.5	1.5	
Jul-10	25.75	25.75	6.2	6.2	
Aug-10	19.5	19.5	4.7	4.7	
Sep-10	21.3	21.3	3.8	3.8	
Oct-10	93.3	93.3	7.15	7.15	
Nov-10	24	24	5.2	5.2	
Dec-10	22.4	22.4	3.7	3.7	
Jan-11	13.1	13.1	4.2	4.2	
Feb-11	17.6	17.6	2.8	2.8	
Mar-11	35.4	35.4	7.55	7.55	
Apr-11	19.1	19.1	6.6	6.6	
May-11	53.1	53.1	8.7	8.7	
Jun-11	29.2	29.2	3.4	3.4	
Jul-11	89.8	89.8	2.8	2.8	
Aug-11	15.4	15.4	5.7	5.7	
Sep-11	29	29	6.09	6.09	
Oct-11	13.4	13.4	0.836	0.836	
Nov-11	23.9	23.9	3.15	3.15	
Dec-11	23.5	23.5	4.03	4.03	
Jan-12	58.6	58.6	1.29	1.29	
Feb-12	11.5	11.5	2.66	2.66	
Mar-12	13	13	0.556	0.556	
Apr-12	12.1	12.1	1.4	1.4	
May-12	53.6	53.6	1.84	1.84	
Jun-12	22.5	22.5	1.5	1.5	
Jul-12	27.7	27.7	AA 0.500	0.25	
Aug-12	31.6	31.6	AA 0.500	0.25	
Sep-12	33.8	33.8	0.906	0.906	
Oct-12	11.6	11.6	0.701	0.701	
Nov-12	16.3	16.3	1.09	1.09	
Dec-12	82.7	82.7	0.848	0.848	
Jan-13	8.06	8.06	1.84	1.84	
Feb-13	12.1	12.1	1.87	1.87	
Mar-13	6.6	6.6	1.04	1.04	
Apr-13	126	126	1.06	1.06	
Average	32.23	32.23	3.20	3.05	**90.54**

	Nickel (Ni)				
Month	Influent		Effluent		% Removal
Jan-10	16.00	16.00	AA 1.0	0.5	
Feb-10	23.00	23.00	AA 1.0	0.5	
Mar-10	AA 1.0	1.00	AA 1.0	0.5	
Apr-10	31.00	31.00	2.6	2.6	
May-10	2.80	2.80	AA 1.0	0.5	
Jun-10	38.00	38.00	AA 1.0	0.5	
Jul-10	9.40	9.40	AA 1.0	0.5	
Aug-10	8.00	8.00	AA 1.0	0.5	
Sep-10	AA 1.0	1.00	AA 1.0	0.5	
Oct-10	8.40	8.40	AA 1.0	0.5	
Nov-10	79.00	79.00	2.1	2.1	
Dec-10	19.00	19.00	AA 1.0	0.5	
Jan-11	19.30	19.30	AA 1.0	0.5	
Feb-11	5.00	5.00	AA 1.0	0.5	
Mar-11	1.80	1.80	AA 1.0	0.5	
Apr-11	29.60	29.60	AA 1.0	0.5	
May-11	27.00	27.00	AA 1.0	0.5	
Jun-11	AA 1.0	1.00	AA 1.0	0.5	
Jul-11	5.00	5.00	AA 1.0	0.5	
Aug-11	5.00	5.00	AA 1.0	0.5	
Sep-11	AA 8	8.00	AA 8	4	
Oct-11	AA 8	8.00	AA 8	4	
Nov-11	AA 8	8.00	AA 8	4	
Dec-11	AA 8	8.00	AA 8	4	
Jan-12	8.00	8.00	AA 8	4	
Feb-12	AA 8	8.00	AA 8	4	
Mar-12	AA 8	8.00	AA 8	4	
Apr-12	AA 8	8.00	AA 8	4	
May-12	AA 8	8.00	AA 8	4	
Jun-12	11.00	11.00	10	10	
Jul-12	8.00	8.00	AA 8	4	
Aug-12	AA 8	8.00	AA 8	4	
Sep-12	19.00	19.00	AA 8	4	
Oct-12	AA 8	8.00	AA 8	4	
Nov-12	AA 8	8.00	AA 8	4	
Dec-12	AA 8	8	AA 8	4	
Jan-13	19	19	AA 8	4	
Feb-13	AA 8	8	AA 8	4	
Mar-13	AA 8	8	AA 8	4	
Apr-13	10	10	AA 8	4	
Average	17.49	12.93	4.90	2.49	**80.73**

Removal Rates Calculated Using Mean Removal Efficiency

Zinc (Zn)						Cyanide (CN)					
Month	Influent		Effluent		% Removal	Month	Influent (Total)		Effluent (Free)		% Removal
Jan-10	112	112	45	45		Jan-10	AA 0.010		AA 0.010		
Feb-10	123	123	33	33		Feb-10	AA 0.010		AA 0.010		
Mar-10	24	24	4	4		Mar-10	AA 0.010		AA 0.010		
Apr-10	177	177	48	48		Apr-10	AA 0.010		AA 0.010		
May-10	223	223	45	45		May-10	AA 0.005		AA 0.005		
Jun-10	84	84	14	14		Jun-10	AA 0.005		AA 0.005		
Jul-10	151	151	31	31		Jul-10	AA 0.005		AA 0.005		
Aug-10	62	62	26	26		Aug-10	AA 0.005		AA 0.005		
Sep-10	144	144	32	32		Sep-10	AA 0.005		AA 0.005		
Oct-10	138	138	30	30		Oct-10	AA 0.005		AA 0.005		
Nov-10	199	199	37	37		Nov-10	AA 0.005		AA 0.005		
Dec-10	84	84	30	30		Dec-10	AA 0.005		AA 0.005		
Jan-11	132	132	31	31		Jan-11	AA 0.005		AA 0.005		
Feb-11	116	116	32	32		Feb-11	AA 0.005		AA 0.005		
Mar-11	97	97	42	42		Mar-11	AA 0.005		AA 0.005		
Apr-11	68	68	28	28		Apr-11	AA 0.005		0.010		
May-11	105	105	50	50		May-11	AA 0.005		AA 0.005		
Jun-11	74	74	21	21		Jun-11	AA 0.005		AA 0.005		
Jul-11	59	59	113	113		Jul-11	AA 0.005		AA 0.005		
Aug-11	99	99	18	18		Aug-11	AA 0.005		AA 0.005		
Sep-11	148	148	AA 10	5		Sep-11	AA 0.01		AA 0.01		
Oct-11	146	146	15	15		Oct-11	AA 0.01		AA 0.01		
Nov-11	120	120	16	16		Nov-11	AA 0.01		AA 0.01		
Dec-11	37	37	14	14		Dec-11	AA 0.01		AA 0.01		
Jan-12	105	105	14	14		Jan-12	AA 0.01		AA 0.01		
Feb-12	40	40	19	19		Feb-12	AA 0.01		AA 0.01		
Mar-12	63	63	17	17		Mar-12	AA 0.01		AA 0.01		
Apr-12	65	65	14	14		Apr-12	AA 0.01		AA 0.01		
May-12	77	77	26	26		May-12	AA 0.010		AA 0.010		
Jun-12	193	193	24	24		Jun-12	AA 0.01		AA 0.01		
Jul-12	120	120	28	28		Jul-12	AA 0.01		AA 0.01		
Aug-12	82	82	AA 10	5		Aug-12	AA 0.01		AA 0.01		
Sep-12	148	148	17	17		Sep-12	AA 0.01		AA 0.01		
Oct-12	265	265	AA 10	5		Oct-12	AA 0.01		AA 0.01		
Nov-12	55	55	24	24		Nov-12	AA 0.01		AA 0.01		
Dec-12	49	49	16	16		Dec-12	AA 0.01		AA 0.01		
Jan-13	52	52	19	19		Jan-13	AA 0.010		AA 0.010		
Feb-13	65	65	AA 10	5		Feb-13	AA 0.010		AA 0.010		
Mar-13	67	67	23	23		Mar-13	AA 0.010		AA 0.010		
Apr-13	120	120	25	25		Apr-13	AA 0.01		AA 0.003		
Average	107.20	107.20	28.36	26.03	**75.72**	Average	#DIV/0!	#DIV/0!	0.01	#DIV/0!	**#DIV/0!**

Removal Rates Calculated Using Mean Removal Efficiency

Hexavalent Chromium (Cr^{6+})					
Month	Influent		Effluent		% Removal
Jan-10	AA 10	10	AA 10	5	
Feb-10	AA 10	10	AA 10	5	
Mar-10	AA 10	10	AA 10	5	
Apr-10	AA 10	10	AA 10	5	
May-10	AA 10	10	AA 10	5	
Jun-10	AA 10	10	AA 10	5	
Jul-10	AA 10	10	AA 10	5	
Aug-10	AA 10	10	AA 10	5	
Sep-10	AE		AE		
Oct-10	AA 10.0	10	AA 10.0	5	
Nov-10	14.8	14.8	AA 10.0	5	
Dec-10	AA 10.0	10	AA 10.0	5	
Jan-11	AA 10.0	10	AA 10.0	5	
Feb-11	AA 10.0	10	AA 10.0	5	
Mar-11	AA 10.0	10	AA 10.0	5	
Apr-11	AA 10.0	10	AA 10.0	5	
May-11	AA 10.0	10	AA 10.0	5	
Jun-11	AA 10.0	10	AA 10.0	5	
Jul-11	AA 10.0	10	AA 10.0	5	
Aug-11	AA 10.0	10	AA 10.0	5	
Sep-11	AA 10.0	10	AA 10.0	5	
Oct-11	AA 10.0	10	AA 10.0	5	
Nov-11	AA 10	10	AA 10	5	
Dec-11	AA 10	10	AA 10	5	
Jan-12	AA 10	10	AA 10	5	
Feb-12	AA 10	10	AA 10	5	
Mar-12	AA 10	10	AA 10	5	
Apr-12	4.6	4.6	5.3	5.3	
May-12	AA 10	10	AA 10	5	
Jun-12	AA 0.01	10	AA 0.01	5	
Jul-12	14	14	AA 10	5	
Aug-12	AA 10	10	AA 10	5	
Sep-12	AA 10	10	AA 10	5	
Oct-12	AA 10	10	AA 10	5	
Nov-12	AA 10	10	AA 10	5	
Dec-12	33.3	33.3	15.4	15.4	
Jan-13	AA 10	10	AA 10	5	
Feb-13	AA 10	10	AA 10	5	
Mar-13	AA 10	10	AA 10	5	
Apr-13	AA 10	10	AA 10	5	
Average	16.68	10.68	10.35	5.27	**50.64**

Appendix B

Local Limits Calculation Tables

TABLE 1

Local Limits Determination Based on NPDES Effluent Limits

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rpotw)	NPDES Daily Limit (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.57	12.67	45	0.112	0.0085	12.105	21.51780655	0.86	16.36	3.47	20
Cadmium	0.57	12.67	58.7	0.0055	0.0025	12.105	1.41	0.25	0.87	0.1853	20
Chromium	0.57	12.67	63.9	0.109	0.0151	12.105	31.91	1.52	24.00	5.0932	20
Hex. Chrom.	0.57	12.67	85.5	0.011	0.0125	12.105	8.02	1.26	5.15	1.0931	20
Copper	0.57	12.67	85.9	0.028	0.0479	12.105	20.98	4.84	11.95	2.5363	20
Cyanide	0.57	12.67	50	0.0053		12.105	1.12	#VALUE!	#VALUE!	#VALUE!	20
Iron	0.57	12.67				12.105	-	#VALUE!	-	-	20
Lead	0.57	12.67	63.8	0.025	0.0079	12.105	7.30	0.80	5.04	1.0697	20
Mercury	0.57	12.67	90.5	0.0000013	0.0138	12.105	0.001	1.39	-1.392	-0.2954	20
Molybdenum	0.57	12.67	50	11.19	0.0007	12.105	2364.85	0.07	1891.81	401.4782	20
Nickel	0.57	12.67	80.7	0.132	0.0136	12.105	72.27	1.37	56.44	11.9783	20
Selenium	0.57	12.67	50	0.003	0.0093	12.105	0.63	0.94	-0.43	-0.0916	20
Silver	0.57	12.67		0.0013	0.0062	12.105	0.14	0.63	-0.52	-0.1095	20
Zinc	0.57	12.67	75.7	0.306	0.1290	12.105	133.06	13.02	93.43	19.8271	20

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) NPDES daily maximum permit limit for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rpotw}$$

TABLE 2

Local Limits Determination Based on Activated Sludge Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rprim)	Activated Sludge Inhibition Level (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.57	12.67		0.1	0.0085	12.105	10.57	0.858	7.60	1.61	20
Cadmium	0.57	12.67	15	1	0.0025	12.105	124.32	0.252	99.20	21.05	20
Chromium	0.57	12.67	27	1	0.0151	12.105	144.75	1.524	114.28	24.25	20
Hex. Chrom.	0.57	12.67		1	0.0125	12.105	105.67	1.262	83.27	17.67	20
Copper	0.57	12.67	22	1	0.0479	12.105	135.47	4.836	103.54	21.97	20
Cyanide	0.57	12.67	27	0.1		12.105	14.48	#VALUE!	#VALUE!	#VALUE!	20
Iron	0.57	12.67				12.105	-	#VALUE!	-	-	20
Lead	0.57	12.67	57	0.1	0.0079	12.105	24.57	0.798	18.86	4.00	20
Mercury	0.57	12.67	10	0.1	0.0138	12.105	11.74	1.393	8.00	1.70	20
Molybdenum	0.57	12.67			0.0007	12.105	-	0.071	-	-	20
Nickel	0.57	12.67	14	1	0.0136	12.105	122.87	1.373	96.92	20.57	20
Selenium	0.57	12.67			0.0093	12.105	-	0.939	-	-	20
Silver	0.57	12.67		0.25	0.0062	12.105	26.42	0.626	20.51	4.35	20
Zinc	0.57	12.67	27	5	0.129	12.105	723.75	13.023	565.98	120.11	20

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rprim) Removal efficiency across across primary treatment as percent.

(Ccrit) Activated sludge threshold inhibition level, mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rprim}$$

TABLE 3

Local Limits Determination Based on Nitrification Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rsec)	Nitrification Inhibition Level (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.57	12.67	45		0.0085	12.105	-	0.86	-	-	20
Cadmium	0.57	12.67	67	5.2	0.0025	12.105	1665.07	0.25	1331.80	282.63	20
Chromium	0.57	12.67	82	0.25	0.0151	12.105	146.76	1.52	115.88	24.59	20
Hex. Chrom.	0.57	12.67		1	0.0125	12.105	105.67	1.26	83.27	17.67	20
Copper	0.57	12.67	86	0.05	0.0479	12.105	37.74	4.84	25.36	5.38	20
Cyanide	0.57	12.67	69	0.34		12.105	115.89	#VALUE!	#VALUE!	#VALUE!	20
Iron	0.57	12.67				12.105	-	#VALUE!	-	-	20
Lead	0.57	12.67	61	0.5	0.0079	12.105	135.47	0.80	107.58	22.83	20
Mercury	0.57	12.67	60		0.0138	12.105	-	1.39	-	-	20
Molybdenum	0.57	12.67			0.0007	12.105	-	0.07	-	-	20
Nickel	0.57	12.67	42	0.25	0.0136	12.105	45.55	1.37	35.06	7.44	20
Selenium	0.57	12.67	50		0.0093	12.105	-	0.94	-	-	20
Silver	0.57	12.67	75		0.0062	12.105	-	0.63	-	-	20
Zinc	0.57	12.67	79	0.08	0.129	12.105	40.25	13.02	19.18		20

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rsec) Removal efficiency across primary treatment and secodary treatment as percent.

(Ccrit) Nitrification threshold inhibition level, mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rsec}$$

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TABLE 4

Local Limits Determination Based on USEPA 503 Sludge Regulations

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Sludge Flow (MGD) (Qsldg)	Percent Solids (%) (PS)	Removal Efficiency (%) (Rpotw)	503 Sludge Criteria (mg/kg) (Cslcrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.60	12.67	0.060	5.00	45	41	0.0085	12.07	2.280	0.856	0.968	0.193	20
Cadmium	0.60	12.67	0.060	5.00	58.7	39	0.0025	12.07	1.662	0.252	1.078	0.215	20
Chromium	0.57	12.67	0.060	5.00	63.9		0.0151	12.105	-	1.524	-	-	20
Hex. Chrom.	0.57	12.67	0.060	5.00		1200	0.0125	12.105	#DIV/0!	1.262	#DIV/0!	#DIV/0!	20
Copper	0.57	12.67	0.060	5.00	85.9	1500	0.0479	12.105	43.690	4.836	30.116	6.391	20
Cyanide	0.57	12.67	0.060	5.00	50			12.105	-	#VALUE!	-	-	20
Iron	0.57	12.67	0.060	5.00	0			12.105	-	#VALUE!	-	-	20
Lead	0.57	12.67	0.060	5.00	63.8	300	0.0079	12.105	11.765	0.798	8.614	1.828	20
Mercury	0.57	12.67	0.060	5.00	90.5	17	0.0138	12.105	0.470	1.393	-1.017	-0.216	20
Molybdenum	0.57	12.67	0.060	5.00	50	75	0.0007	12.105	3.75	0.071	2.93	0.622	20
Nickel	0.57	12.67	0.060	5.00	80.7	420	0.0136	12.105	13.022	1.373	9.044	1.919	20
Selenium	0.57	12.67	0.060	5.00	50	36	0.0093	12.105	1.801	0.939	0.502	0.107	20
Silver	0.57	12.67	0.060	5.00	0		0.0062	12.105	-	0.626	-	-	20
Zinc	0.57	12.67	0.060	5.00	75.7	2800	0.129	12.105	92.544	13.023	61.012	12.948	20

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qsldg) Sludge flow to disposal in MGD.

(PS) Percent solids of sludge to disposal.

(Rpotw) Removal efficiency across POTW as a percent.

(Cslcrit) 503 sludge criteria in mg/kg dry sludge.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Cslcrit * (PS/100) * Qsldg}{Rpotw}$$

TABLE 5

Local Limits Determination Based on Anaerobic Digester Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE							MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Sludge Flow to Digester (MGD) (Qdig)	Removal Efficiency (%) (Rpotw)	Anaerobic Digester Inhibition Level (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.57	12.67	0.12	45	1.6	0.0085	12.105	-	0.86	-	-	20
Cadmium	0.57	12.67	0.12	58.7	20	0.0025	12.105	34.10	0.25	27.03	5.74	20
Chromium	0.57	12.67	0.12	63.9	240	0.0151	12.105	375.89	1.52	299.19	63.49	20
Hex. Chrom.	0.57	12.67	0.12	85.5	110	0.0125	12.105	128.76	1.26	101.74	21.59	20
Copper	0.57	12.67	0.12	85.9	40	0.0479	12.105	46.60	4.84	32.45	6.89	20
Cyanide	0.57	12.67	0.12	50	4		12.105	8.01	#VALUE!	#VALUE!	#VALUE!	20
Iron	0.57	12.67	0.12				12.105	-	#VALUE!	-	-	20
Lead	0.57	12.67	0.12	63.8	340	0.0079	12.105	533.34	0.80	425.88	90.38	20
Mercury	0.57	12.67	0.12	90.5		0.0138	12.105	-	1.39	-	-	20
Molybdenum	0.57	12.67	0.12	50		0.0007	12.105	-	0.07	-	-	20
Nickel	0.57	12.67	0.12	80.7	10	0.0136	12.105	12.40	1.37	8.55	1.81	20
Selenium	0.57	12.67	0.12	50		0.0093	12.105	-	0.94	-	-	20
Silver	0.57	12.67	0.12	0	13	0.0062	12.105	-	0.63	-	-	20
Zinc	0.57	12.67	0.12	75.7	400	0.129	12.105	528.82	13.02	410.04	87.02	20

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.
(Qpotw) POTW's average influent flow in MGD.
(Qdig) Sludge flow to digester in MGD.
(Rpotw) Removal efficiency across POTW as percent.
(Ccrit) Anaerobic digester threshold inhibition level in mg/l.
(Qdom) Domestic/commercial background flow in MGD.
(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.
(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).
(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).
(Lind) Maximum allowable industrial loading to the POTW in pounds per day.
(Cind) Industrial allowable local limit for a given pollutant in mg/l.
(SF) Safety factor as a percent.
8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qdig}{Rpotw}$$

Local Limits Comparison for Pollutants of Concern

	Maximum Allowable Industrial Loadings (MAIL)					
	Approved Study	2013 Local Limits Calculations				
	2002 (lbs/day)	(lbs/day)				
POC		Table 1	Table 2	Table 3	Table 4	Table 5
Arsenic		16.4	7.6	-	**0.968**	-
Cadmium		0.87	99	1332	1.078	27.0
Chromium - Total	**67.87**	**24.0**	114.3	115.9	-	299.2
Copper	**12.05**	**12.0**	104	25.4	30.12	32.4
Lead	**3.08**	**5.04**	18.9	108	8.61	426
Mercury		-	8	-	-1.017	-
Molybdenum		1892	-	-	**2.93**	-
Nickel	**9.65**	56.4	97	35.1	9.04	**8.55**
Selenium		-0.432	-	-	0.502	-
Silver		-0.516	20.5	-	-	-
Zinc	**20.08**	93.4	566	**19.2**	61.0	410

Notes:

Numbers highlighted are the proposed new daily maximum limits.

Appendix C

Local Industrial Sampling

Metals Sampling for Ford (2009 - 2013)

Date / Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
01/21/09 1134	AA	AA	0.002	0.006	0.003	AA	0.009	0.003	AA	AA	0.027
04/16/09 1025	AA	AA	0.003	0.016	0.002	AA	0.005	0.006	0.002	AA	0.023
08/26/09 1022	0.0011	AA 0.00004	0.00063	0.00334	0.00028	AA 0.000089	0.00626	0.00264	0.00113	AA 0.00001	0.0103
10/16/09 1036	AA	AA	0.003	0.006	0.002	AA	0.006	0.004	AA	AA	0.019
01/20/10 0920	AA	AA	0.003	0.032	0.007	AA	0.014	0.008	AA	AA	0.111
04/21/10 0915	0.00134	0.00013	0.0033	0.0192	0.00373	AA	0.00968	0.00479	0.00183	AA	0.0443
07/28/10 1627	0.00102	AA	0.00559	0.00395	0.00014	AA	0.00514	0.00204	0.00091	AA	0.0111
10/20/10 9:24	0.00111	AA	0.00123	0.00379	0.0003	AA	0.00644	0.00317	AA	AA	0.0127
2/2/11 11:15	AA	AA	0.00413	0.0197	0.00332	5.7E-05	0.0175	0.00364	AA	AA	0.025
4/28/11 11:42	AA	0.00013	0.00172	0.0138	0.00491	AA	0.00666	0.00325	AA	AA	0.0568
7/27/11 1431	0.00085	6.8E-05	0.00399	0.00678	0.00133	AA	0.00874	0.0044	AA	AA	0.0156
10/26/11 0952	0.00119	AA	0.00185	0.0164	0.00387	AA	0.00782	0.00954	AA	AA	0.045
02/15/12 0928	0.0006	AA	0.00256	0.0347	0.00534	AA	0.0168	0.00614	AA	AA	0.0333
04/25/12 0943	0.0006	AA	0.00201	0.014	0.00351	AA	0.00997	0.0034	AA	AA	0.0174
08/01/12 1619	0.00087	AA	0.00885	0.00426	0.00043	AA	0.00403	0.0018	AA	AA	0.00946
11/07/12 1022	0.00107	AA 0.0003	0.00148	0.00615	0.0022	AA 0.0002	0.0151	0.00499	AA 0.005	AA 0.0001	0.0215
02/06/13 1121	0.00058	AA 0.001	0.0119	0.00391	0.00235	AA 0.0002	0.0177	0.00458	0.00053	AA 0.002	0.00996
05/01/13 1034	0.00056	AA 0.001	0.00071	0.00283	0.00262	AA 0.0002	0.0144	0.0036	AA 0.002	AA 0.002	AA 0.025
Average	0.0009	0.0001	0.0034	0.0118	0.0027	0.0001	0.0100	0.0044	0.0013	-	0.029
20% SF	0.001	0.000	0.004	0.014	0.003	0.000	0.012	0.005	0.002	-	0.035
Max	0.00134	0.00013	0.0119	0.0347	0.007	5.7E-05	0.0177	0.00954	0.002	-	0.111
20% SF from Max	0.002	0.000	0.014	0.042	0.008	0.000	0.021	0.011	0.002	-	0.133

Metals Sampling for Lima Army Tank Center (2009 - 2013)

Date / Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/19/09 1116	AA	0.01	0.02	0.035	0.014	0.041	AA	0.03	AA	AA	0.207
05/28/09 0944	AA	0.008	0.01	0.046	0.015	0.077	AA	0.02	AA	AA	0.291
08/19/09 1603	AA	0.014	0.11	0.064	0.027	0.112	AA	0.15	AA	AA	0.209
11/18/09 0936	AA	0.015	0.06	0.117	0.024	0.061	AA	0.08	AA	AA	0.219
03/03/10 1241	AA	0.012	0.02	0.044	0.015	0.026	AA	0.02	AA	AA	0.26
5/21/10 10:40	AA	0.01	0.02	0.051	0.012	0.084	AA	0.02	AA	0.014	0.225
8/17/10 16:12	AA	0.005	0.02	0.061	AA	AA	AA	0.02	AA	AA	0.118
12/2/10 8:11	AA	0.008	0.05	0.045	0.013	0.029	AA	0.03	AA	AA	0.123
2/25/11 10:58	0.006	0.045	0.23	0.192	0.018	0.037	AA	0.14	AA	AA	0.299
5/26/11 10:29	AA	0.006	0.01	0.032	0.012	0.023	AA	0.01	AA	AA	0.209
08/24/11 0851	AA	0.038	0.068	0.152	0.036	0.158	AA	0.05	AA	0.005	0.643
10/13/11 0945		AA									0.143
11/17/11 1114	AA	0.008	0.01	0.059	0.011	0.045	AA	AA	AA	AA	0.17
05/25/12 1040	AA	0.018	0.07	0.088	0.03	0.18	AA	0.12	AA	AA	0.324
09/07/12 1015	AA	0.023	0.06	0.119	0.022	0.191	AA	0.07	AA	AA	0.445
12/05/12 1131	AA	0.016	0.16	0.143	0.032	0.128	AA	0.19	AA	AA	0.163
03/13/13 0922	AA	0.004	0.03	0.033	AA	0.036	AA	0.058	AA	AA	0.177
Average	0.006	0.0150	0.0593	0.0801	0.0201	0.0819	-	0.0672	-	0.0095	0.249
20% SF	0.007	0.018	0.071	0.096	0.024	0.098	-	0.081	-	0.011	0.298
Max	0.0060	0.0450	0.2300	0.1920	0.0360	0.1910	-	0.1900	-	0.0140	0.6430
20% SF from Max	0.007	0.054	0.276	0.230	0.043	0.229	-	0.228	-	0.017	0.772

Metals Sampling for Lima Tank Wash (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
04/08/09 0949	0.029	0.001	AA	0.036	AA	AA	AA	0.008	AA	AA	0.245
07/01/09 1031	AA	AA	AA	0.021	AA	AA	0.079	0.008	AA	AA	1.08
09/30/09 1108	0.019	0.008	AA	0.034	0.024	AA	0.015	0.046	0.037	AA	0.279
12/17/09 1209	0.002	0.004	0.009	0.063	0.051	AA	0.003	0.07	AA	0.004	2.06
03/17/10 1018	0.004	AA	0.06	0.282	AA	AA	AA	0.584	AA	AA	1.93
6/18/10 10:40	0.323	AA	0.007	0.135	0.087	AA	0.0027	0.079	0.055	0.0018	1.171
9/22/10 10:05	AA	AA	5.08	0.015	AA	AA	AA		AA	0.0024	0.186
10/27/10 10:36			AA								
12/17/10 11:34	0.0013	0.00087	AA	0.029	AA	AA	0.0042	0.041	0.0038	AA	0.564
3/23/11 10:51	0.0083	0.003	0.024	0.121	AA	AA	AA	0.097	0.0022	0.00073	1.468
7/1/11 10:24	0.0821	0.00085	0.161	0.084	AA	AA	AA	0.029	0.1048	0.0062	0.36
09/30/11 0949	AA	AA	0.021	0.017	0.016	AA	AA	0.033	AA	AA	7.48
12/16/11 1035	AA	AA	0.063	0.038	0.038	AA	AA	0.02	AA	AA	12.1
03/28/12 1023	AA	0.016	1.99	0.362	0.298	0.0004	0.063	0.358	AA	AA	141
07/12/12 0949	AA	AA	0.094	0.015	AA	AA	AA	0.019	AA	AA	0.281
10/04/12 1057	AA	AA	0.015	0.018	0.02	AA	AA	0.02	AA	AA	0.163
01/04/13 0938	AA	AA	0.047	0.019	AA	AA	0.137	0.019	AA	AA	1.11
03/27/13 1007	AA	AA	4.01	0.09	0.025	AA	AA	0.014	AA	AA	1.66
Average	0.0306	0.0052	1.1505	0.0735	0.0794	0.0004	0.0681	0.0650	0.0369	0.0031	15.125
20% SF	0.037	0.006	1.381	0.088	0.095	0.000	0.082	0.078	-	-	18.150
Max	0.0821	0.016	5.08	0.362	0.298	0.0004	0.137	0.358	0.1048	0.0062	141
20% SF from Max	0.099	0.019	6.096	0.434	0.358	0.000	0.164	0.430	0.126	0.007	169.200

Metals Sampling for Lima Memorial Hospital (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/26/09 1015	AA	AA	AA	0.074	AA	AA	AA	0.01	AA	0.031	0.41
06/05/09 0918	AA	0.006	0.04	0.464	0.095	0.047	0.0003	0.04	0.005	0.208	1.53
08/19/09 1652	AA	AA	AA	0.03	AA	AA	AA	AA	AA	AA	0.146
11/18/09 1021	AA	AA	AA	0.031	AA	0.077	AA	AA	AA	AA	0.099
02/24/10 0856	0.008	AA	AA	0.025	0.006	0.004	AA	0.012	0.002	0.002	0.242
5/20/10 10:03	AA	AA	0.01	0.04	AA	0.026	AA	AA	AA	AA	0.207
11/17/10 11:03	AA	AA	0.01	0.037	AA	0.592	AA	AA	AA	0.003	0.135
3/2/11 9:53	AA	AA	AA	0.042	AA	0.31	AA	AA	AA	AA	0.12
5/20/11 9:08	AA	AA	AA	0.035	AA	0.954	AA	AA	AA	AA	0.082
08/24/11 1034	AA	AA	AA	0.029	AA	AA	AA	AA	AA	AA	0.144
11/17/11 0847	AA	AA	AA	0.032	AA	AA	AA	AA	AA	AA	0.061
03/08/12 0959	AA	AA	AA	0.039	AA	AA	AA	AA	AA	AA	0.122
05/24/12 1149	AA	AA	0.02	0.03	AA	AA	AA	AA	AA	AA	0.124
09/05/12 1013	AA	AA	AA	0.021	AA	AA	AA	AA	AA	AA	0.064
12/05/12 0920	AA	AA	AA	0.018	AA	AA	AA	AA	AA	AA	0.039
03/06/13 1031	AA	AA	AA	0.037	AA	AA	AA	AA	AA	AA	0.167
Average	0.008	0.0060	0.0200	0.0615	0.0505	0.2871	0.0003	0.0207	0.0035	0.0610	0.231
20% SF	-	0.007	0.024	0.074	0.061	-	0.000	0.025	-	0.073	0.277
Max	-	0.006	0.04	0.464	0.095	0.954	0.0003	0.04	0.005	0.208	1.53
20% SF from Max	-	0.007	0.048	0.557	0.114	1.145	0.000	0.048	0.006	0.250	1.836

Metals Sampling for Metokote (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
01/22/09 1158	0.002	0.002	AA	0.023	AA	0.024	AA	0.21	AA	AA	0.141
04/22/09 1007	0.007	AA	AA	0.015	AA	AA	AA	0.054	AA	0.022	0.108
08/12/09 1444	AA	0.002	0.006	0.026	0.016	0.034	AA	0.616	AA	AA	1.3
10/16/09 1125	0.017	AA	0.008	0.017	0.002	0.026	AA	0.337	AA	AA	1.47
01/21/10 1043	0.04	AA		0.013	AA	0.013	AA	0.158	0.051		0.497
04/29/10 0947	0.0033	AA	AA	0.006	AA	AA	AA	AA	0.0172	0.0039	0.719
7/28/10 15:54	0.0086	AA 0.0002	0.0011	0.041	AA 0.002	AA 0.0002	AA 0.002	0.022	0.0088	0.0017	0.23
10/21/10 10:00	AA	AA	AA	0.0268	0.044	0.0084	AA	0.116	0.0044	AA	1.168
2/4/11 10:45	0.0031	0.0021	0.018	0.015	AA	0.012	AA	0.127	0.0388	0.0102	0.702
4/20/11 10:52	AA	AA	AA	0.011	AA	0.035	AA	0.301	AA	0.00092	0.785
7/29/11 1229	0.0048	AA	0.0066	0.011	AA	0.0027	AA	0.023	0.0029	AA	0.146
10/19/11 0931	AA	AA	0.009	0.012	AA	AA	AA	0.08	AA	AA	0.221
02/15/12 0904	AA	AA	AA	0.008	AA	AA	AA	0.043	AA	AA	0.176
04/26/12 1310	AA	AA	AA	0.01	AA	AA	AA	0.046	AA	AA	0.092
08/02/12 1508	AA	AA	0.01	0.018	AA	AA	AA	0.113	AA	AA	0.405
10/31/12 1041	AA	AA	0.011	0.011	AA	AA	AA	0.05	AA	AA	0.112
01/30/13 1039	AA	AA	AA	0.017	AA	AA	AA	0.088	AA	AA	0.163
05/01/13 0941	AA	AA	AA	0.015	AA	AA	AA	0.049	AA	AA	0.168
Average	0.0107	0.0020	0.0087	0.0164	0.0207	0.0194	#DIV/0!	0.1431	0.0205	0.0077	0.478
20% SF	0.013	-	0.010	0.020	0.025	-	#DIV/0!	0.172	-	0.009	0.574
Max	0.04	-	0.018	0.041	0.044	0.035	0	0.616	0.051	0.022	1.47
20% SF from Max	0.048	-	0.022	0.049	0.053	-	0.000	0.739	-	0.026	1.764

Metals Sampling for P&G (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/25/09 0951			AA	0.028	AA		AA	0.012			0.373
05/22/09 1011			AA	0.025	AA		0.0003	0.008			0.077
11/19/09 1018			0.008	0.034	AA		AA	0.018			0.222
02/25/10 1010			0.011	0.047	0.01		AA	0.022			0.417
12/2/10 9:08			AA	0.046	AA		AA	0.013			0.173
2/24/11 12:05			AA	0.037	AA		AA	0.018			0.143
5/26/11 9:05			0.027	0.081	0.012		AA	0.199			0.851
11/02/11 0922											
11/16/11 0942			AA	0.022	AA		0.0003	0.008			0.304
11/30/11 1033			AA	0.024	AA		AA	AA			0.32
01/06/12 0917											
06/06/12 0956			AA	0.031	AA		AA	AA			0.196
09/12/12 1018			AA	0.032	0.011		AA	0.011			0.466
10/05/12 0958			AA	0.031	AA		AA	AA			0.078
12/05/12 1028			0.008	0.032	AA 0.010		AA 0.002	0.018			0.480
02/01/13 1046			AA 0.007	0.016	AA 0.010		AA 0.0002	0.01			0.044
04/24/13 1049			AA	0.014	AA		AA	AA			0.048
Average	#DIV/0!	AA	0.0080	0.0253	0.0110	#DIV/0!	0.0003	0.0118	#DIV/0!	AA	0.2420
20% SF	-	-	0.0096	0.0303	0.0132	#DIV/0!	0.0004	0.0141	-	-	-
Max	0	-	0.008	0.032	0.011	0	0.0003	0.018	0	-	0.48
20% SF from Max	0.000	-	0.010	0.038	0.013	0.000	0.000	0.022	0.000	-	0.576

Metals Sampling for Nelson (2009 - 2013)

Res Rd	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
01/16/09 1024	0.003	0.0003	0.002	0.041	AA	AA	AA	0.023	0.001	AA	0.16
04/22/09 0935	AA	AA	AA	0.022	AA	AA	AA	0.005	AA	AA	0.056
08/07/09 1652	0.001	AA	AA	0.007	AA	0.034	AA	0.005	AA	AA	0.211
10/23/09 1105	AA	AA	AA	0.014	0.002	AA	AA	0.012	AA	AA	0.101
01/22/10 1121	0.035	AA		0.022	AA	0.004	AA	0.024	0.012		0.145
04/28/10 0947	0.004	0.001	AA	0.014	AA	AA	AA	0.004	0.008	AA	0.045
8/5/10 17:10	0.0054	AA 0.0002	AA 0.0002	0.009	AA 0.002	AA 0.0002	AA 0.002	AA 0.001	0.0018	0.0017	0.58
10/22/10 10:49	0.0017	AA	AA	0.011	AA	AA	AA	0.004	0.0033	AA	0.067
2/4/11 11:37	AA	0.0029	AA	0.022	AA	0.0188	AA	0.0186	0.0281	AA	0.069
4/29/11 11:13	AA	AA	AA	0.002	AA	AA	AA	AA	0.0021	AA	0.04
7/29/11 1354	0.0017	AA	AA	0.018	AA	AA	AA	AA	0.003	AA	0.133
10/21/11 0936	AA	AA	AA	0.009	AA	AA	AA	AA	AA	AA	0.043
02/10/12 0842	AA	0.003	0.012	0.02	AA	0.022	AA	AA	AA	AA	0.053
04/26/12 1240	AA	AA	AA	0.013	AA	AA	AA	AA	AA	AA	0.039
08/02/12 1545	AA	0.004	AA	0.009	AA	AA	AA	AA	AA	AA	0.052
11/09/12 0931	AA	AA	0.007	0.014	AA	AA	AA	AA	AA	AA	0.036
02/07/13 1014	AA	AA	AA	0.017	AA	AA	AA	AA	AA	AA	0.03
04/26/13 1018	AA	AA	AA	0.008	AA	AA	AA	AA	AA	AA	0.025
Nelson 2											
02/26/09 0946	0.01	0.002	AA	0.013	AA	AA	0.0002	AA	AA	AA	0.168
08/28/09 0906	0.005	AA	AA	0.012	AA	AA	AA	0.002	0.115	AA	0.216
11/20/09 1130	0.007	AA	AA	0.025	AA	AA	AA	AA	AA	AA	0.248
02/24/10 1004	0.02	AA	AA	AA	AA	AA	AA	AA	0.002	AA	0.054
5/20/10 9:31	AA	AA	AA	0.011	0.0052	AA	AA	AA	0.0034	AA	0.054
08/27/10 0903	AA	AA	AA	0.091	0.0021	AA	AA	0.003	AA	0.0051	0.399
11/24/10 8:59	0.0046	AA	AA	0.005	AA	0.0501	AA	AA	0.0045	0.0054	0.091
2/17/11 9:01	AA	0.0021	AA	0.011	AA	0.006	AA	0.018	AA	0.0082	0.091
6/1/11 9:10	0.002	AA	AA	0.005	AA	0.011	AA	0.004	0.0037	AA	0.018
09/01/11 0854	AA	AA	0.011	0.013	AA	AA	AA	AA	AA	AA	0.065
11/18/11 0915	AA	AA	0.013	0.015	AA	AA	AA	0.008	AA	AA	0.071
03/08/12 0926	AA	AA	AA	0.009	AA	AA	AA	AA	AA	AA	0.033
06/06/12 0906	AA	AA	AA	0.022	1.31	AA	AA	AA	AA	AA	0.116
Average	0.0077	0.0022	0.0090	0.0168	0.3298	0.0208	0.0002	0.0100	0.0145	0.0051	0.1132
20% SF	0.009	0.003	0.011	0.020	0.396	-	0.000	0.012	-	0.006	0.136
Max	0.035	0.004	0.013	0.091	1.31	0.0501	0.0002	0.024	0.115	0.0082	0.58
20% SF from Max	0.042	0.005	0.016	0.109	1.572	0.060	0.000	0.029	0.138	0.010	0.696

Metals Sampling for AmTrim LLC (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
07/30/09 1006	AA	AA	0.303	0.013	AA	AA	AA	0.263	AA	AA	0.01
09/25/09 0910	AA	AA	1.22	0.023	AA	AA	AA	0.925	AA	AA	AA
5/27/11 10:10	AA	AA	0.082	0.011	AA	AA	AA	0.104	AA	AA	0.024
05/30/12 1016	AA	AA	0.153	0.044	AA	0.057	AA	0.416	AA	AA	0.023
Average	#DIV/0!	#DIV/0!	0.4395	0.0228	#DIV/0!	0.0570	#DIV/0!	0.4270	#DIV/0!	AA	0.0190
20% SF	#DIV/0!	#DIV/0!	0.5274	0.0273	#DIV/0!	0.0684	#DIV/0!	0.5124	#DIV/0!	#VALUE!	0.023
Max	0.0000	0.0000	1.2200	0.0440	0.0000	0.0570	0.0000	0.9250	0.0000	0.0000	0.0240
20% SF from Max	0.000	0.000	1.464	0.053	0.000	0.068	0.000	1.110	0.000	0.000	0.029

Metals Sampling for Randall Bearing (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
06/17/09 1118	0.011	AA	AA	0.119	0.114	0.061	AA	AA	0.005	AA	0.042
6/23/10 9:51	AA	AA	AA	0.34	AA	0.0024	AA	0.04	AA	AA	0.059
6/23/11 8:40	AA	AA	AA	0.059	0.011	AA	AA	AA	0.005	AA	0.041
07/13/12 0916	AA	AA	AA	0.095	0.139	AA	AA	AA	AA	AA	0.035
Average	0.011	#DIV/0!	#DIV/0!	0.15325	0.088	0.0317	#DIV/0!	0.04	0.005	AA	0.04425
20% SF		#DIV/0!	#DIV/0!	0.184	0.106	0.038	#DIV/0!	0.048	0.006	#VALUE!	0.053
Max	0.011	0	0	0.34	0.139	0.061	0	0.04	0.005	0	0.059
20% SF from Max	0.013	0.000	0.000	0.408	0.167	0.073	0.000	0.048	0.006	0.000	0.071

Metals Sampling for St. Rita's Med Center (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
04/01/09 0913	0.005	AA	AA	0.041	AA	0.151	AA	0.021	0.007	AA	0.088
06/18/09 1126	AA	AA	AA	0.024	AA	0.22	AA	AA	AA	AA	0.115
09/25/09 1005	AA	AA	AA	0.039	0.015	0.022	AA	AA	0.027	0.012	0.369
12/16/09 0941	0.126	AA	AA	0.07	AA	0.303	AA	AA	0.018	AA	0.179
03/19/10 1053	0.002	AA	AA	0.097	AA	0.033	AA	0.003	AA	AA	0.151
6/18/10 10:10	0.0072	AA	0.0117	0.053	AA	AA	AA	AA	0.0011	0.0013	0.203
9/29/10 9:40	0.0042	AA	AA	0.006	AA	0.201	AA	0.0013	0.0002	AA	0.097
12/16/10 12:27	AA	0.00078	AA	0.018	AA	0.426	AA	0.024	0.0026	AA	0.108
3/17/11 9:49	AA	0.00024	AA	0.024	AA	0.04	AA	AA	AA	AA	0.183
6/24/11 13:27	AA	AA	AA	0.039	AA	0.0076	AA	AA	0.0246	0.0076	0.087
09/28/11 0906	AA	AA	0.01	0.029	AA	0.907	AA	AA	AA	0.012	0.093
12/29/11 0924	AA	AA	AA	0.04	AA	0.105	AA	AA	AA	0.038	0.088
03/30/12 1026	AA	0.004	AA	0.052	AA	0.349	AA	AA	AA	0.017	0.079
07/11/12 1028	AA	0.006	0.011	0.036	AA	0.083	AA	AA	AA	0.006	0.13
10/12/12 1122	AA	AA	AA	0.042	AA	0.029	AA	AA	AA	0.005	0.09
01/03/13 1123	AA	AA	AA	0.044	AA	AA	AA	AA	AA	AA	0.074
03/27/13 0930	AA	AA	AA	0.04	AA	0.277	AA	AA	AA	0.011	0.149
Average	0.0289	0.0028	0.0109	0.0408	0.0150	0.2102	#DIV/0!	0.0123	0.0115	0.0122	0.134
20% SF	-	0.003	0.013	0.049	0.018	-	#DIV/0!	0.015	-	0.015	0.161
Max	0.126	0.006	0.0117	0.097	0.015	0.907	0	0.024	0.027	0.038	0.369
20% SF from Max	-	0.007	0.014	0.116	0.018	-	0.000	0.029	-	0.046	0.443

Metals Sampling for Superior Forge (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/18/09 1009	0.002	AA	AA	0.023	AA	0.022	AA	0.002	0.006	AA	0.167
08/27/09 1149	0.003	AA	AA	0.028	0.006	AA	AA	0.01	AA	AA	0.143
02/19/10 1126	0.005	AA	AA	0.038	0.009	AA	AA	0.005	0.002	AA	0.074
8/25/10 8:55	0.0083	AA	AA	0.0072	0.0117	AA	AA	0.0023	0.0034	0.0035	0.171
2/16/11 11:35	AA	AA	AA	0.073	0.013	0.01	AA	0.019	AA	AA	0.091
08/26/11 1030	AA	AA	0.007	0.023	AA	0.027	AA	AA	AA	AA	0.059
03/09/12 1032	AA	AA	0.018	0.031	AA	0.034	AA	AA	AA	AA	0.056
09/21/12 1013	AA	0.004	0.081	0.236	0.012	0.052	AA	0.016	AA	AA	0.302
02/208/13 1015	AA	AA	0.029	0.034	AA	0.086	AA	0.009	AA	AA	0.054
Average	#DIV/0!	0.004	0.0338	0.0794	0.0125	0.0418	#DIV/0!	0.0147	AA	AA	0.1124
20% SF	#DIV/0!	-	0.041	0.095	0.015	-	#DIV/0!	0.018	-	-	0.135
Max	0	-	0.081	0.236	0.013	0.086	0	0.019	0	0	0.302
20% SF from Max	-	-	0.097	0.283	0.016	-	0.000	0.023	-	-	0.362

Metals Sampling for Whemco A (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/20/09 1032	0.005	AA	AA	0.003	AA	0.032	AA	0.002	0.004	AA	0.047
08/20/09 1915	0.007	AA	AA	0.016	0.018	AA	AA	0.021	0.015	AA	0.134
02/18/10 0957	0.018	0.002	AA	0.005	AA	0.039	AA	0.037	0.002	0.001	0.172
8/26/10 9:39	0.0031	AA	AA	0.031	AA	0.047	AA	AA	0.023	0.0101	0.029
2/18/11 12:21	AA	0.0022	AA	0.013	AA	0.025	AA	0.056	0.0019	AA	0.055
09/02/11 0909	AA	AA	AA	AA	AA	0.064	AA	0.013	AA	AA	0.019
03/07/12 0745	AA	AA	AA	AA	AA	0.107	AA	0.009	AA	AA	0.015
09/06/12 1042	AA	AA	AA	AA	AA	0.061	AA	0.02	AA	AA	0.023
02/27/13 0950	AA	AA	0.06	0.022	AA	0.064	AA	0.203	AA	AA	0.201
Average	0.0083	0.0021	0.0600	0.0150	0.0180	0.0549	#DIV/0!	0.0451	0.0092	0.0056	0.077
20% SF	0.010	-	0.072	0.018	0.022	-	#DIV/0!	0.054	-	0.007	0.093
Max	0.018	-	0.06	0.031	0.018	-	0	0.203	0.023	0.0101	0.201
20% SF from Max	0.022	-	0.072	0.037	0.022	-	0.000	0.244	0.028	0.012	0.241

Metals Sampling for Whemco B (2009 - 2013)

Date/Time	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
02/20/09 1058	AA	AA	AA	0.002	AA	AA	0.0002	AA	0.006	AA	0.196
08/27/09 1117	AA	AA	AA	0.018	AA	AA	AA	0.0048	0.012	AA	0.131
02/18/10 1054	0.002	0.001	AA	AA	AA	AA	AA	0.009	0.02	AA	0.066
8/26/10 10:04	0.0032	AA	AA	0.031	AA	0.0037	AA	0.007	0.0039	AA	0.016
2/16/11 11:00	AA	AA	AA	0.009	AA	0.022	AA	0.039	AA	AA	0.041
09/02/11 0933	AA	AA	AA	0.019	AA	AA	AA	AA	AA	AA	0.01
03/09/12 1102	AA	AA	0.007	0.01	AA	0.039	AA	AA	AA	AA	0.024
09/06/12 1127	AA	AA	AA	AA	AA	0.053	AA	0.008	AA	AA	0.011
02/27/13 1027	AA	AA	AA	0.009	AA	0.065	AA	AA	AA	AA	0.01
Average	0.0026	0.001	0.0070	0.0140	AA	0.03654	0.0002	0.0136	0.0105	AA	0.056
20% SF	0.003	-	0.008	0.017	-	-	0.00024	0.016	0.013	-	0.067
Max	0.0032	-	0.007	0.031	-	-	0.0002	0.039	0.02	-	0.196
20% SF from Max	0.004	-	0.008	0.037	-	-	0.000	0.047	0.024	-	0.235

Metals Sampling Averages (2009 - 2013)

Sample Site	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn
Ford	0.0009	0.0001	0.0034	0.0118	0.0027	0.0001	0.0100	0.0044	0.0013	-	0.0290
LATC	0.006	0.0150	0.0593	0.0801	0.0201	0.0819	-	0.0672	-	0.0095	0.2485
LTW	0.0306	0.0052	1.1505	0.0735	0.0794	0.0004	0.0681	0.0650	0.0369	0.0031	15.1247
LMH	0.008	0.0060	0.0200	0.0615	0.0505	0.2871	0.0003	0.0207	0.0035	0.0610	0.2308
Metokote	0.0107	0.002033	0.0087	0.0164	0.0207	0.019388	#DIV/0!	0.1431	0.020517	0.0077	0.4779
Nelson Pkg	0.0078	0.001922	0.0159	0.0191	0.2667	0.016207	0.0002	0.0165	0.014454	0.0029	0.1290
P & G	#DIV/0!	AA	0.0080	0.0253	0.0110	#DIV/0!	0.0003	0.0118	#DIV/0!	AA	0.2420
Randall Bearing	0.011	#DIV/0!	#DIV/0!	0.1533	0.0880	0.0317	#DIV/0!	0.0400	0.005	AA	0.0443
SRMC	0.0289	0.0028	0.0109	0.0408	0.0150	0.2102	#DIV/0!	0.0123	0.0115	0.0122	0.1343
Superior Forge	#DIV/0!	0.004	0.0338	0.0794	0.0125	0.0418	#DIV/0!	0.0147	AA	AA	0.1124
SMP	#DIV/0!	#DIV/0!	0.4395	0.0228	#DIV/0!	0.057	#DIV/0!	0.4270	#DIV/0!	AA	0.0190
Whemco A	0.0083	0.0021	0.0600	0.0150	0.0180	0.054875	#DIV/0!	0.0451	0.0092	0.0056	0.0772
Whemco B	0.0026	0.001	0.0070	0.0140	AA	0.03654	0.0002	0.0136	0.0105	AA	0.0561
Koop Rd LS	0.0066	0.0029	0.0153	0.0383	0.0090	0.0157	0.0002	0.0099	0.0090	0.0030	0.0888
Res Rd LS	0.0104	0.00211	0.0150	0.0575	0.0067	0.0118	0.0012	0.0173	0.00951	0.0117	0.170
Domestic / Commercial Average	0.0085	0.0025	0.0151	0.0479	0.0079	0.0138	0.0007	0.0136	0.0093	0.0074	0.1294

Note: All values in milligrams/liter (mg/l)
AA = Below Detection Limit