Technical Expert Working Group Conference Call

Friday June 3, 2011
10:00 – 11:00 a.m.

CALL SUMMARY[1]

Attendees:

EPA Region 3 and contractors: Bill Arguto, Wendy Gray, George Rizzo, Michelle Hoover, Enid Chiu, Kathy Martel (Cadmus), Karen Sklenar (Cadmus), Steve Reiber (HDR)

The Washington Aqueduct and contractors: Lloyd Stowe

DCWASA and contractors: Rich Giani, John Civardi (Hatch Mott MacDonald)

Parents for Nontoxic Alternatives: Ralph Scott

Concerned Citizen: Susan Kanen

Naval Facilities Command: Nicole Johnson, Tawana Spencer

Agenda and Housekeeping Issues

There were no changes or additions to the agenda. The meeting agenda is included as Attachment A to this call summary. Bill Arguto led the call.

Bill Arguto asked if there were any comments on the minutes from the last call. Mr. Arguto acknowledged receiving Susan Kanen's correction to the minutes. Ralph Scott replied that he feels the minutes do not adequately address his concerns about Lead and Copper Rule (LCR) monitoring. He is concerned that more LCR monitoring samples are collected in cooler months as compared to warmer months when elevated lead levels are likely to occur. Mr. Scott said that his concern was based upon data through 2008. Bill Arguto asked Mr. Scott to draft text that could be added to the minutes. Wendy Gray will be issuing revised minutes.

Summary of Discussions by Topic Area

1. Pipe Loop Chart Improvements

Susan Kanen discussed the Washington Aqueduct's pipe loop charts and her observations and concerns related to the data and its manner of presentation. She plans to use these charts to correlate sampling date with water temperature and lead concentration. Ms. Kanen noted that the Washington Aqueduct chart (tracking the long term trend) only

[1] This document represents a summary of meeting discussions and is not intended as a verbatim transcript of the meeting.

showed the highest data point of the three loops rather than the data points from all three loops in their entirety. Therefore, Ms. Kanen charted the Washington Aqueduct's data for all three loops and converted the Delecarlia Total Lead bar charts to line graphs. She reported that when using this charting method the lead levels no longer show a downward trend. She also noted that peak lead concentrations do not necessarily match the summer peak temperature although lead concentrations and temperature are closely related. In addition, Ms. Kanen explained that she was concerned that the Dalecarlia sample collected on March 10, 2011, having a lead concentration of 28 ppb during the spring would correlate to a lead concentration of 200 ppb during the mid-summer.

Ms. Kanen pointed out missing data is not shown on the Washington Aqueduct's long term trend charts and over 20% of the scheduled weekly samples are missing from the last three years. She asked whether the data are not being reported or the samples were not collected. Ms. Kanen is concerned with the absence of samples over periods of time. For example, from 2009 on, there are no samples for Pipe Loop C for over 134 days during warmer months. She stated there needs to be consistent sampling over all water temperature conditions. Ms. Kanen noted that the Washington Aqueduct had incorporated some of her chart suggestions into their pipe loop charts as distributed for this meeting, including display of data collected for each of the three pipe loops.

Ms. Kanen does not consider the pipe loop data valid since April 2008. She is concerned that Loop A shows higher trends than Loops B and C, even though the pipe loops continue to be operated in parallel. Ms. Kanen said that she would like to know the reason why the pattern among the three loops broke since April 2008 and suggested that the reason may be due to leakages, or different amounts of plastic tubing and lead pipe that exist in the three loops. She questioned whether the three loops were accurate replicates of each other given the differences in experimental pipe loop construction.

Ms. Kanen expressed additional concern over whether the pipe loops are providing too much flow-through and not enough representative stagnation time. She predicts that the McMillan loop samples will continue to have low lead concentrations around 1 ppb as long as they are operated in a flow-through manner.

Susan Kanen and Lloyd Stowe agreed that Ms. Kanen will visit the Washington Aqueduct pipe loops this summer.

2. Washington Aqueduct Pipe Loop Update

Prior to the call, Mike Chicoine distributed graphs showing total and dissolved lead results for the control pipe loops at Dalecarlia and McMillan Water Treatment Plants (WTP). After Susan Kanen spoke, Lloyd Stowe clarified that the Washington Aqueduct pipe loops are not currently used as on-going experiments but are used in a flow-through mode for process control and to observe general water quality trends. He said the pipe loops are designed and operated using 8-hour stagnation.

Mr. Stowe said no data were available for the McMillan WTP loops for approximately one month because the clearwell that fed water to the loops was out of service. In the Dalecarlia WTP loops, higher levels of particulate lead have been found. The Washington Aqueduct staff will work with their contractor, CDM, to measure particulate in the water (especially iron and calcium) and check the possibility of lead being absorbed by those particles. Samples will be analyzed by staff at the University of Cincinnati.

Ms. Kanen asked Mr. Stowe if he could explain the variability of Loops A, B and C and asked if the pipe loops are currently leaking. Lloyd Stowe said he is not sure why the three loops vary in lead concentrations and that he inspected the pipe loops today and didn't see any leaks.

3. DC Water's Pipe Loop Update

Rich Giani distributed DC Water's latest pipe loop data prior to the call. He said that DC Water observed a quick lead spike of less than 10 ppb after switching back to chloramine disinfection after the free chlorine disinfection period. Since that time, the lead concentrations have leveled off around 3 ppb.

Susan Kanen plans on observing the DC Water pipe loops sampling protocol when she visits the Washington Aqueduct this summer. Rich Giani asked Ms. Kanen to contact DC Water in advance of her intended visit so that security can be notified.

4. DC Water LCR Monitoring Update

Rich Giani said the preliminary LCR lead monitoring 90th percentile results for the Jan. – June 2011 monitoring period are currently about 5 ppb for the first draw samples, and 8 ppb for the second draw samples. DC Water still needs to QA/QC the data.

Susan Kanen questioned the sampling guidelines used for collecting second draw samples and whether these samples truly represent the lead service line. Rich Giani acknowledged that there is some variability in sampling technique since the utility relies on customers to collect the samples; however, results for second draw samples have similar trends as lead profile results so Rich believes that the second draw samples are representative of the service line. Mr. Giani also clarified that LCR sampling instructions no longer include a requirement to pre-flush the taps.

Ms. Kanen asked if lead profiles were available for the LCR sampling locations. Rich Giani said she would have to make a Freedom of Information Act request since lead profile information is private information that was prepared for the homeowners at LCR sampling sites.

Ralph Scott asked Mr. Giani if DC Water intends to ask EPA for a reduced LCR monitoring schedule since recent results have been relatively low. Mr. Giani replied that they would not consider asking for reduced monitoring until the chemical treatment changes are finalized.

Ralph Scott also asked about the distribution of sampling over the year and, more specifically, over the summer. He expressed concern that more samples are not being collected during the summer. Rich Giani replied that, while samples are not collected in June, they are collected in July, August and September. Mr. Giani also said that DC Water is currently setting up a new web page with detailed information on LCR sampling data by date and expects this information will be ready before the next TEWG call.

Mr. Giani clarified that all LCR samples are currently collected from homes with full or partial lead service lines. He added that the LCR sampling sites where DC Water currently sees elevated lead levels are homes with galvanized plumbing. Susan Kanen asked if LCR samples from 2005 and 2006 were collected from full or partial lead service lines. Rich Giani said that some LCR sampling sites used in 2005 and 2006 had test pits dug for confirmation that they did not have lead service lines and were eliminated from the list of eligible sample sites.

Susan Kanen asked if DC Water samples warm water taps, even though it is not a regulatory requirement. Rich Giani answered that DC Water does not sample warm water taps, but distributes public education and outreach materials to consumers that describe that warm water should not be used for drinking or cooking.

Rich Giani stated that DC Water uses the pipe loops to look for water quality trends, but relies on the LCR samples collected from homes to determine the actual water quality delivered to consumers.

Ms. Kanen asked Mr. Giani to comment on the source of blood lead levels in children. Mr. Giani said that as a water supplier his job is to provide water that has lead concentrations below the Lead and Copper Rule Action Level, and that her question would be better answered by health professionals.

Ms. Kanen asked whether DC Water is working with Virginia Tech on lead research, and Mr. Giani said that DC Water was not working directly with Virginia Tech but was providing the list of eligible sample sites for their use and that if data was to be made public by Virginia Tech she should request it from them. Mr. Giani said that DC Water was working with Parents for Nontoxic Alternatives to fund a survey of customers to understand usage and lead education.

5. Update on Washington Aqueduct Treatment Changes (Addition of Caustic Soda and Disinfectant Change from Chlorine Gas to Sodium Hypochlorite)

Lloyd Stowe provided an update on the Washington Aqueduct treatment process changes. The hypochlorite chemical feed system has been in service at McMillan WTP for approximately one year. Starting two weeks ago, McMillan WTP staff is feeding a

combination of caustic and lime for pH adjustment, and will feed only caustic when the current supply of lime is depleted.

At the Dalecarlia WTP, one chlorine feed point has been using hypochlorite for about one week and the other two feed points will be using hypochlorite by the end of June. The system may feed liquid chlorine for an additional short time in order to deplete the remaining liquid chlorine supply. Starting in May 2011, pH adjustment is now accomplished by feeding a combination of caustic and lime. Unlike at McMillan WTP, Dalecarlia WTP operators will continue to feed both caustic and lime as treatment proceeds.

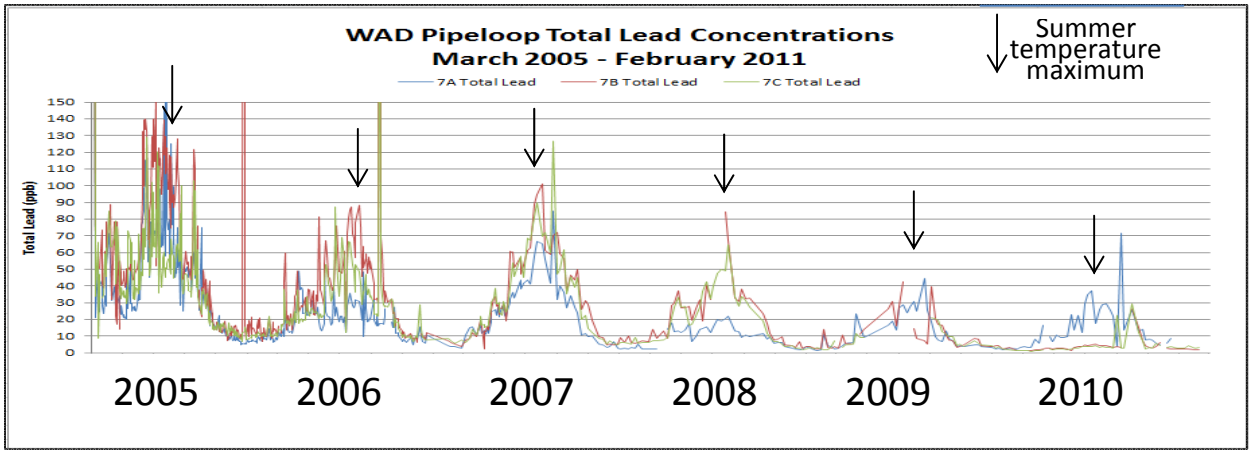
Susan Kanen asked why Washington Aqueduct was changing to caustic and if it would affect lead levels. Lloyd Stowe responded that caustic addition improves pH stability of the finished water which will help reduce lead leaching rates. Susan Kanen what was the pH the target level, because lead concentration increases at pH of 6. Lloyd Stowe said that pH goal is not changing from the goal of 7.7.

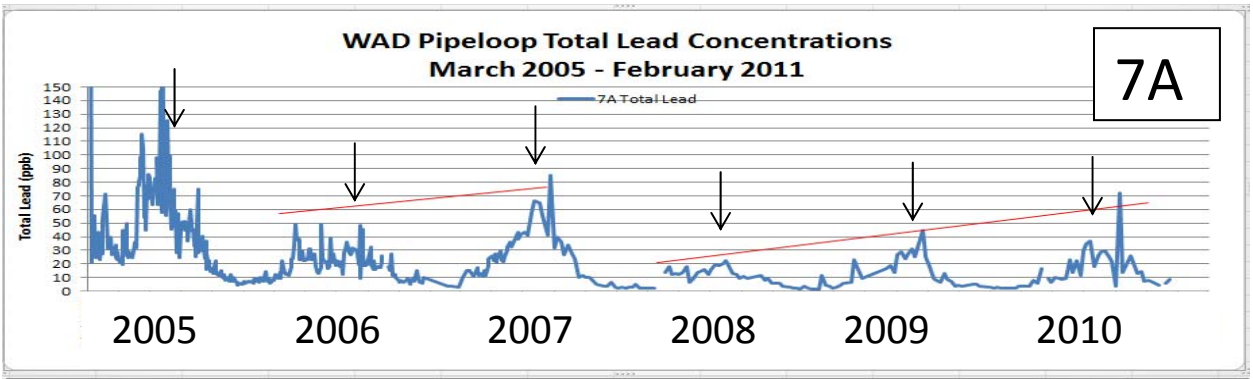
6. Other Items

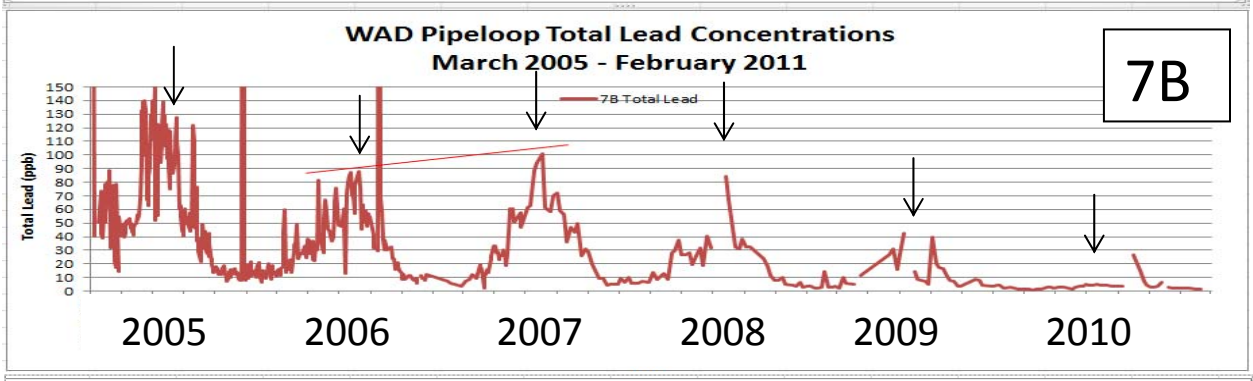
The next call is scheduled for August 26th at 10:00 a.m. EST. Bill Arguto requested that topics for the agenda be sent to him.

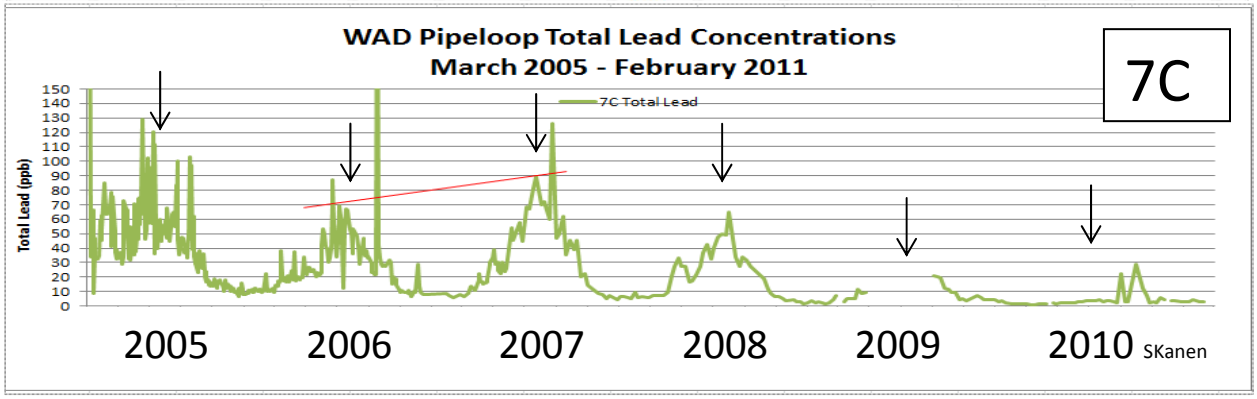
Attachment A: Call Agenda

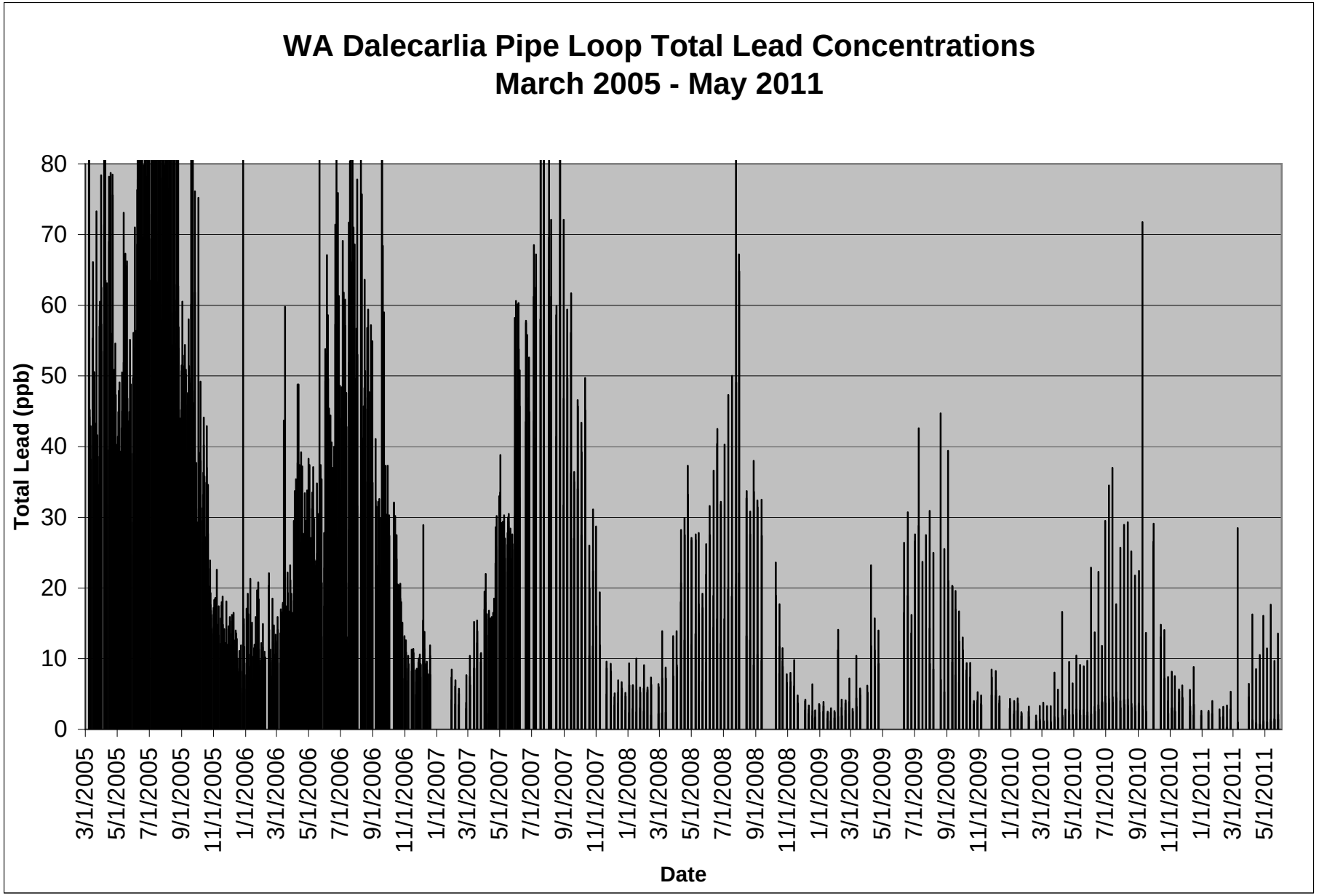
1. Pipe loop chart improvements (Susan Kanen)
2. Washington Aqueduct pipe loop update (Washington Aqueduct - Lloyd Stowe)
3. DC Water pipe loop update (DC Water - Rich Giani)
4. DC Water preliminary LCR results update (DC Water - Rich Giani)
5. Washington Aqueduct update on caustic/hypochlorination project (Washington Aqueduct - Lloyd Stowe)

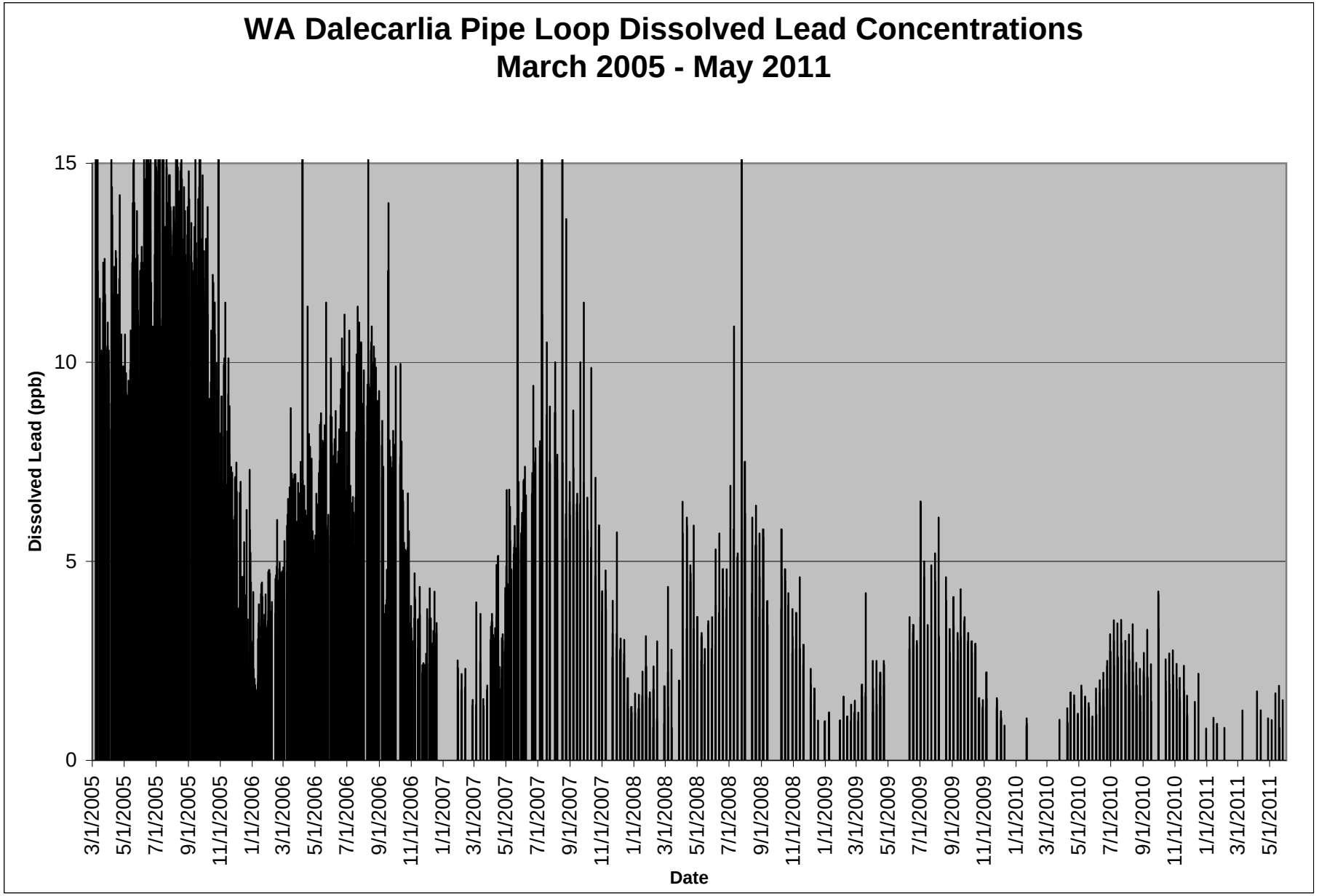


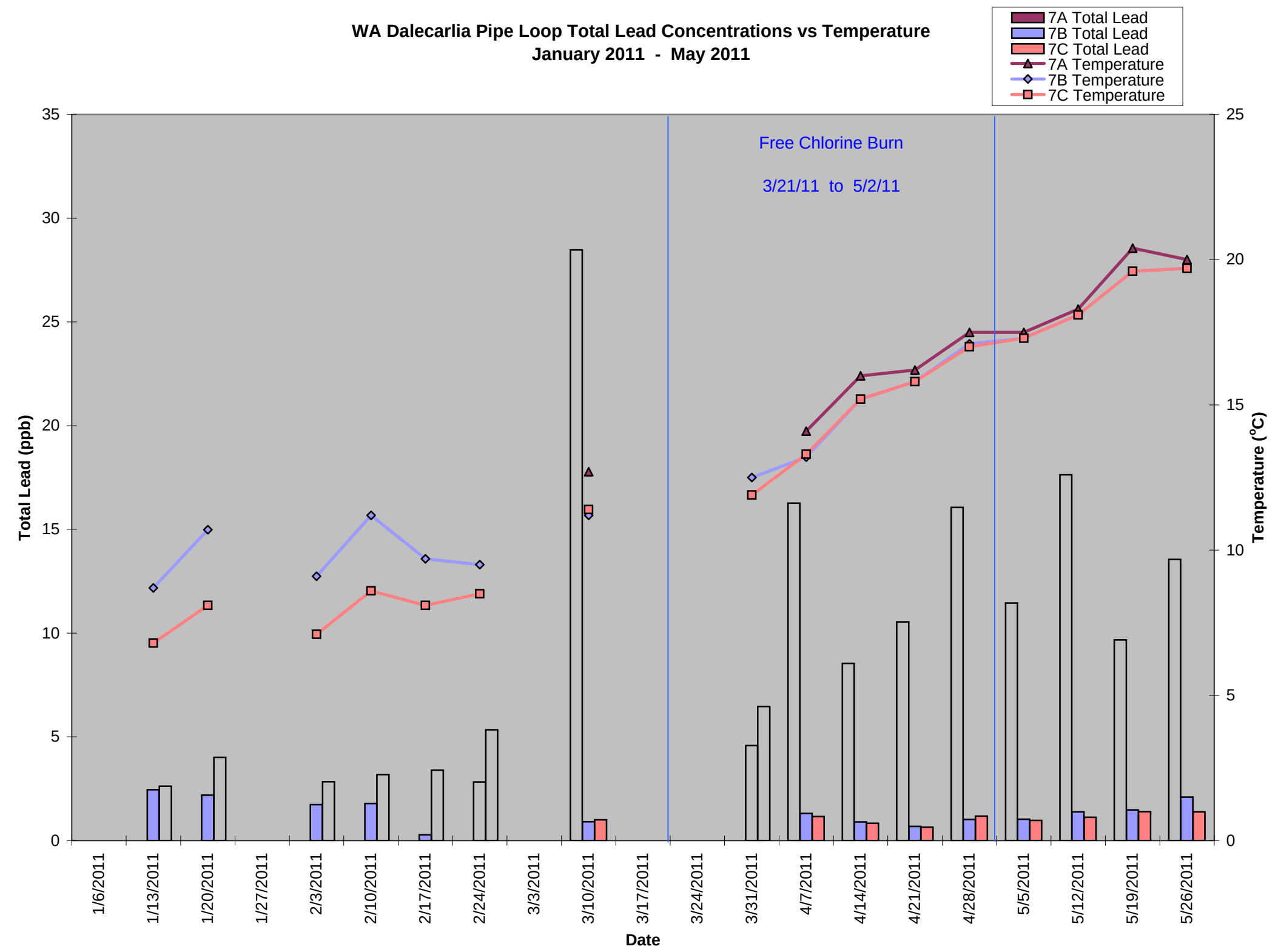











WA Dalecarlia Pipe Loop Total Lead Concentrations vs Temperature
January 2011 - May 2011
7A Total Lead
7B Total Lead
7C Total Lead
7A Temperature
7B Temperature
7C Temperature
Free Chlorine Burn
3/21/11 to 5/2/11
Total Lead (ppb)
Temperature (°C)
Date
0
5
10
15
20
25
30
35
1/6/2011
1/13/2011
1/20/2011
1/27/2011
2/3/2011
2/10/2011
2/17/2011
2/24/2011
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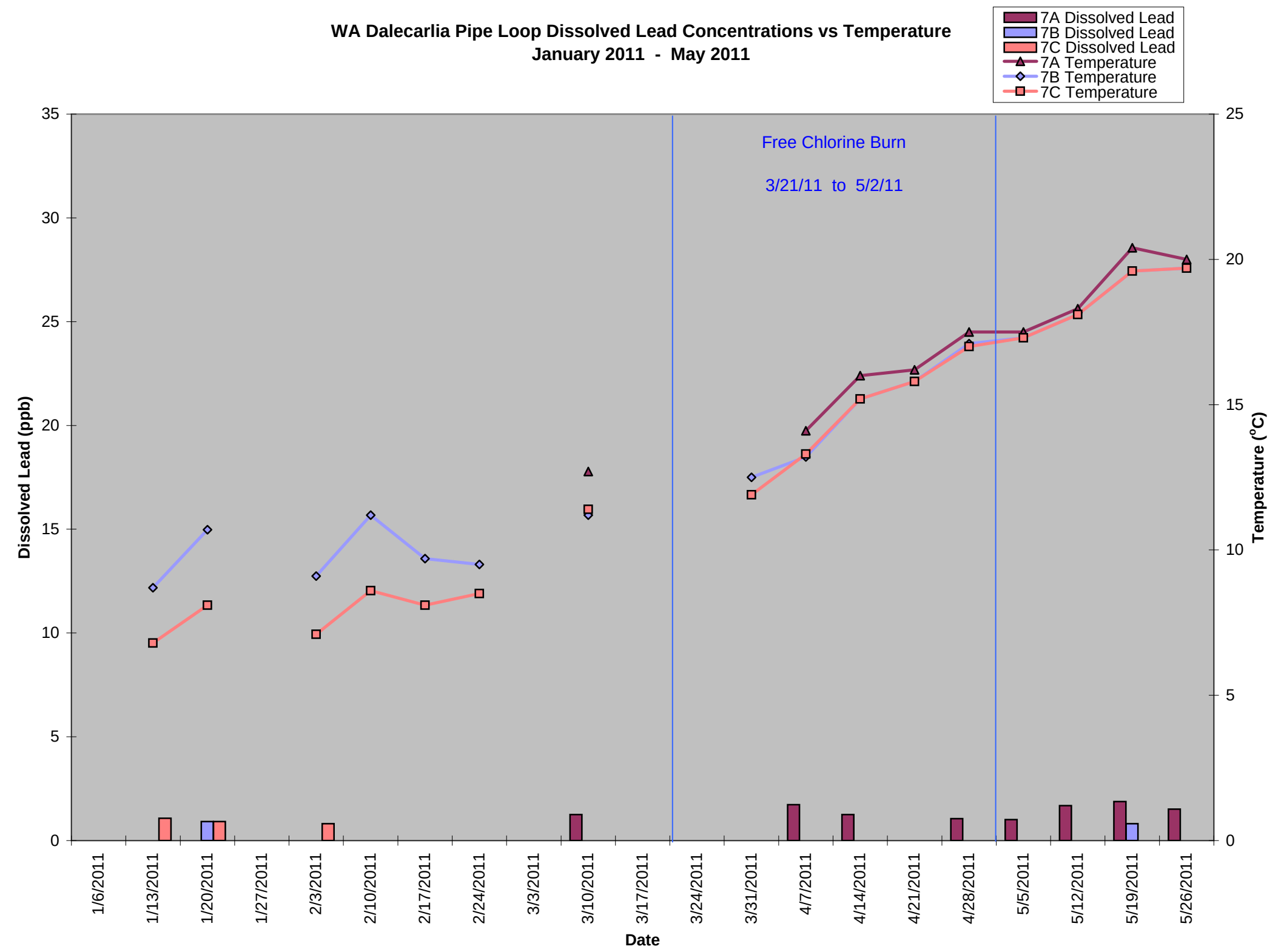
WA Dalecarlia Pipe Loop Dissolved Lead Concentrations vs Temperature
January 2011 - May 2011
7A Dissolved Lead
7B Dissolved Lead
7C Dissolved Lead
7A Temperature
7B Temperature
7C Temperature
Free Chlorine Burn
3/21/11 to 5/2/11
Dissolved Lead (ppb)
Temperature (°C)
Date
0
5
10
15
20
25
30
35
1/6/2011
1/13/2011
1/20/2011
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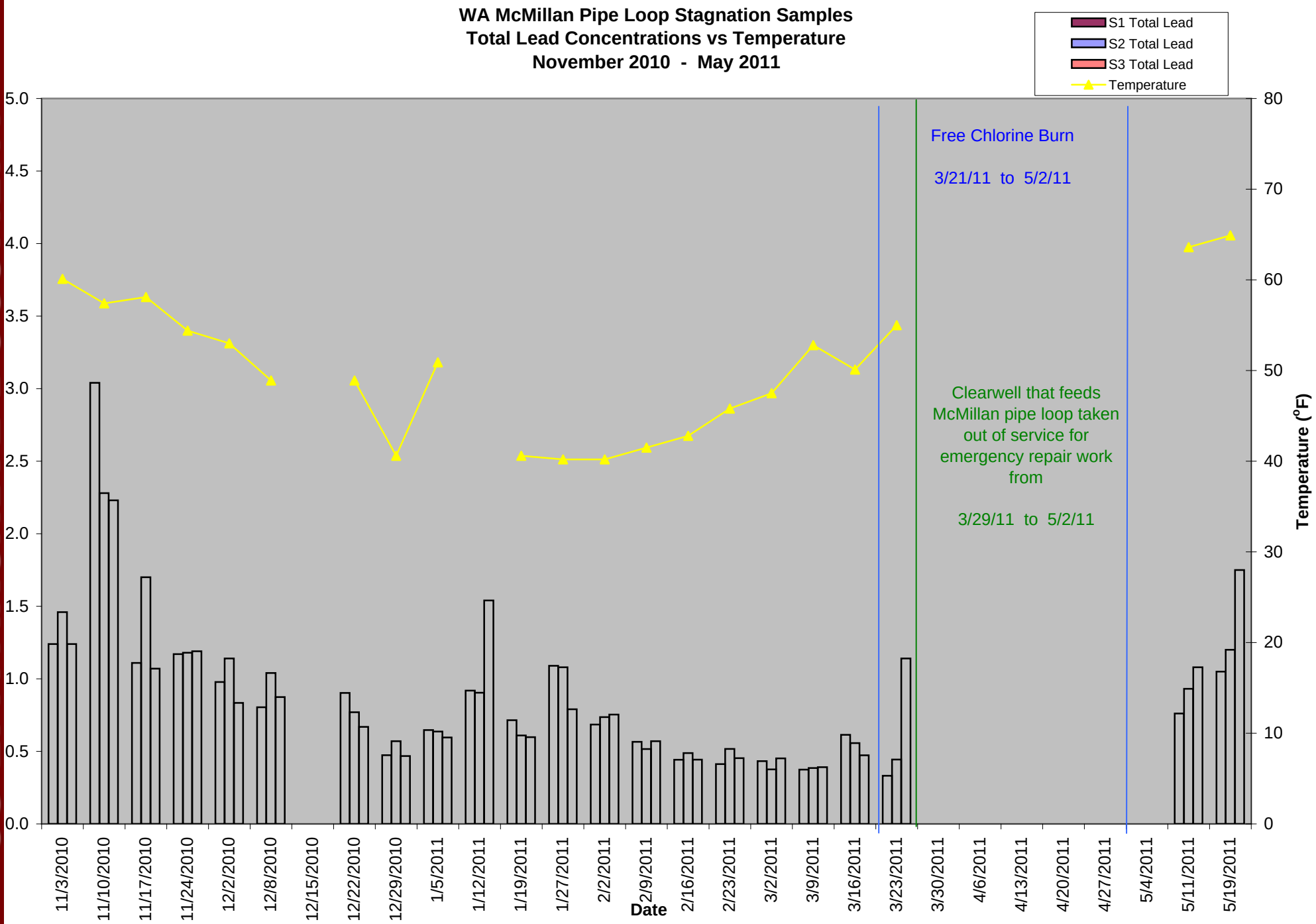

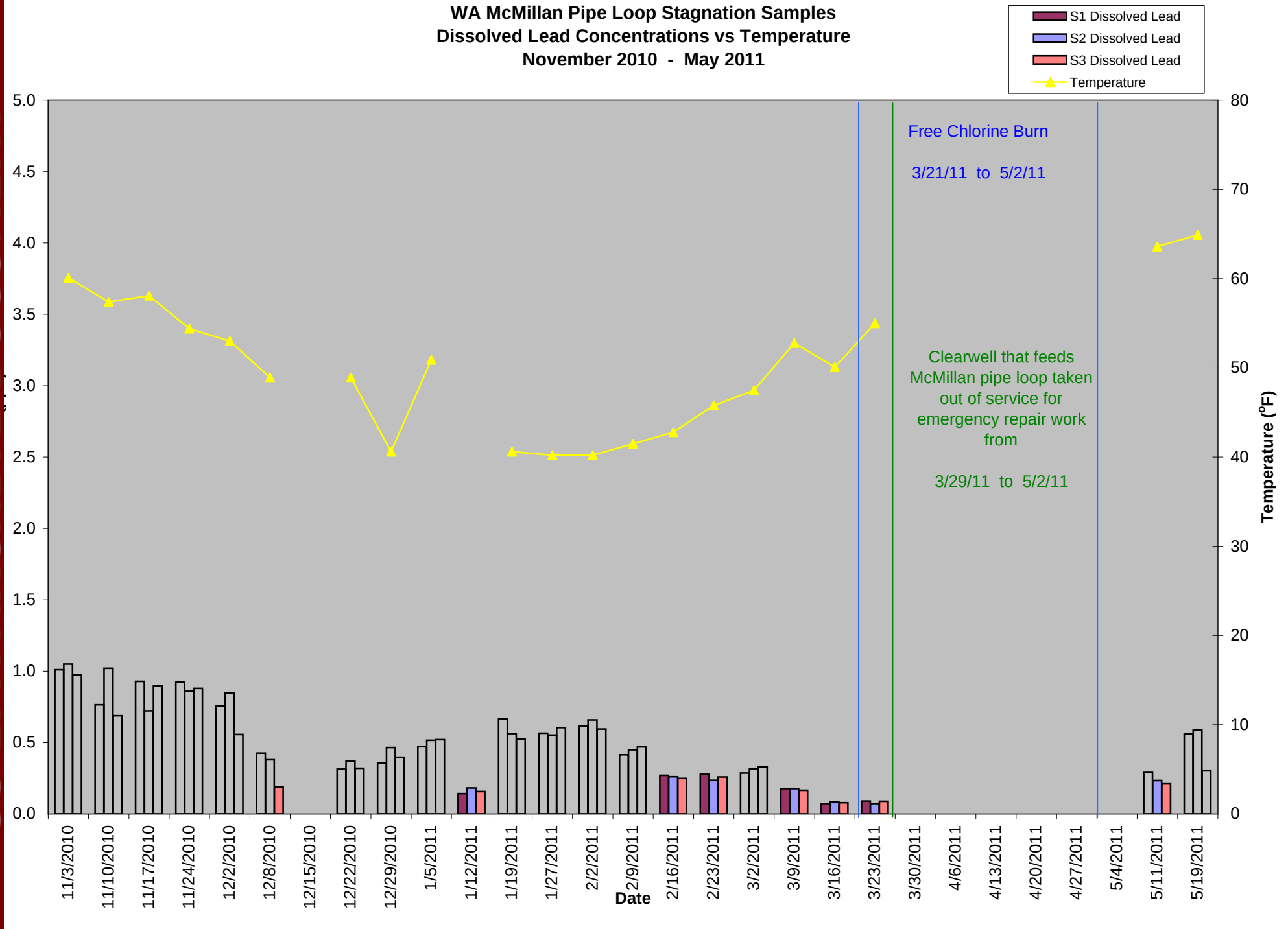

DC Water pipe loop update