Testimony on Air Toxics in Oregon
February 23, 2016

House Committee on Energy and Environment

Written Testimony Submitted by Mary Peveto, President, Neighbors for Clean Air

Chair Vega Pederson, Members of the Committee, for the record, my name is Mary Peveto and I am the president and one of the founding members of the grassroots organization Neighbors for Clean Air.

Thank you for the opportunity to testify today regarding Oregon's air toxics crisis.

There is a saying that "in crisis lies opportunity." The current flurry of news coverage has helped to elevate the issue of Portland's dirty air, and I am grateful that this issue is at long last receiving the scrutiny it deserves from our state and federal leaders. But I want to be very clear that Portland's toxic air is not at all a new problem; just a newly popular one.

Recent news coverage has focused on the time lag between when our state's Department of Environmental Quality (DEQ) first learned about the US Forest Service's moss findings in May 2015, and February 2016, when the public did. But the real delay by the agency should be measured not in months, but in years, even decades.

In 2003 Oregon's air quality rules were amended to purportedly address the dangerous air toxics that the federal Clean Air Act doesn't. Oregon rules specifically directed the state to address geographic areas of highest concern, and state regulators immediately identified the Portland Metro airshed as its top priority.

Six years later, in 2009, I stumbled on a national study showing that Chapman Elementary (the Portland Public school that all three of my children attended) ranks among the worst **two percent** in the country for schools with exposure to toxic industrial air pollution. Motivated to action, a group of neighbors and fellow parents founded the grassroots organization Neighbors for Clean Air. Since then, we have taken on the pollution battles that our state regulators would not, in what has become an ongoing David v. Goliath fight. As an example, our first stop was ESCO, our very close neighbor.

I specifically learned about Portland's elevated levels of cadmium and arsenic—along with diesel particulates and a dozen other toxics that exceeded the established health thresholds—over five years ago as a member of the DEQ's Portland Air Toxics Solutions Advisory Committee.

I am submitting into the public record two documents that DEQ staff shared with that committee several years ago.

These documents (one summary memo from 2011 and one monitoring report from 2005) show that DEQ has been well aware of toxic pollution in Portland neighborhoods—including cadmium, arsenic, diesel particulates and a dozen other toxics—**for more than a decade**.

While we knew where the heavy the metals in NW Portland and the diesel emissions across the region came from, DEQ staff told committee members at that time that they had no explanation for the high levels of cadmium, arsenic and lead monitored at its North Portland air toxics monitoring site in 2005. And until the U.S. Forest Service and an investigative reporter at the *Portland Mercury* finally pointed them to art glass manufacturers, they still had no idea, 11 years later.

The problem is not that the agency charged with oversight of our state's air quality didn't know about the pollution in our air. As these documents clearly show, **the agency knew but failed to act to protect our health, which is one of its key missions.**

Without state-level accountability, we have been left with "DIY" air emissions regulations, relying on hard-won Good Neighbor Agreements and odor regulations to make headway. Neighbors for Clean Air has been successful in winning small battles against big polluters like Esco, Vigor and Intel. We are proud of these victories because they don't come easy. Yet, they are far from enough.

When more than 100 Oregon schools still fall in the worst 10 percent nationally for exposure to industrial pollution, and when 460 Oregonians deaths each year are attributed to diesel exhaust, it's clear that this isn't a problem that can be fixed voluntarily polluter by polluter – it needs to be fixed at the system level.

And despite what you have and will continue to hear from industry lobbyists, or even from agency staff, DEQ has the tools to address this problem. Now.

We don't need more study. We don't need a workgroup. And while more money and new laws will certainly help, there are two concrete, proactive steps that DEQ can and should take **now**:

1. **DEQ should immediately require facility-by-facility risk assessment.** It's astounding that a facility is required to report many of the toxic substances in their emissions, but there's no follow-on requirement to assess the risk to public health. In other states, reporting is only the first step and is (rightly) followed by a very specific process that analyzes facilities' risk to public health and requires action to ensure that the risk is reduced to acceptable levels.

2. **DEQ should set a diesel standard.** Today, Oregon relies on voluntary diesel emissions control. And yet—according to a 2013 study by the Multnomah County Health Department—diesel emissions are the leading risk to human health of the 15 industrial pollutants in the Portland airshed. Long-term exposure to diesel emissions is linked to both lung and bladder cancer. Children are particularly

vulnerable. Multnomah County and the state know **people of color are disproportionately impacted because they are more likely to live near diesel emission sources.** Limiting diesel emissions will lower the risk of the three leading causes of death in Multnomah County, as well as the incidences of asthma – and the agency doesn't need a new law to make it happen.

With Washington and California far ahead of us (and I'm more than happy to share their best practices with members of this committee), it's time to ask whether our state and its DEQ are capable of operating differently enough to protect public health from harmful air pollution. And if they're not, it's time to ask whether DEQ is the right entity to hold polluters accountable and protect our communities' public health.

I am delivering to you today over 4000 signatures, from people like me, like Sarah and Mary, who know that its long past time that air emissions regulations be designed and carried out to protect Oregonians' health, period. And right now, that's simply not the case.

Thank you for your consideration of this critical issue.

Memo

To: Portland Air Toxics Solutions Advisory Committee

From: Gregg Lande

CC: Sarah Armitage, Aida Biberic, Monica Russell, Patricia Huback

Date: 22 November, 2010

Re: North Portland Cadmium Source Investigation

State of Oregon
Department of Environmental Quality

As a follow-up to the modeling and monitoring comparison discussion of last meeting, this memo summarizes the history of DEQ's investigation into ambient air cadmium measurements in North Portland.

Oregon's Air Toxics Program

The Environmental Quality Commission adopted initial rules for Oregon's risk-based community approach to air toxics in 2003. In mid 2006, the Commission adopted ambient benchmark concentrations, including a level for cadmium. The benchmarks allowed DEQ to evaluate monitoring data by comparing it to levels representing very low risk or clean air goals.

Ambient Air Monitoring

City-wide air toxics monitoring began with the 1999 - 2000 five site network. Cadmium was not one of the metals measured at that time.

The 2005 six site network was the first time we could see and compare ambient concentrations of cadmium in various parts of the Portland – Vancouver airshed. Data for 2005 was finalized and ready for use in late 2006. Cadmium average and maximum concentrations were higher at the North Roselawn site than elsewhere in the city, but other pollutants showed variations across the city as well. It was notable that the annual average concentration of cadmium at this site was well above the Oregon Ambient Benchmark Concentration, while at other sites the concentration was very close to the Benchmark value.

EPA's School Air Toxics monitoring was done in September and October of 2009 and results were posted within a few weeks. These additional cadmium concentration measurements at Tubman school in North Portland were similar in magnitude to those we had seen previously at North Roselawn, confirming the higher concentrations in this part of the city. (We weren't able to compare the Tubman values to Roselawn until the DEQ lab finished the Roselawn analysis sometime later.)

EPA's monitoring project included Daily Screening Levels that allowed comparison of pollutant concentrations in each 24 hour sample to a health benchmark concentration. Three of the ten daily Tubman cadmium concentrations approached the screening level, although none were above it. Importantly, the wide variation in concentrations seemed more indicative of a nearby small source, as opposed to a more distant large source or an area-wide emissions source. This remains speculative but we know that an area-wide source, such as home heating, would likely result in similar concentrations on successive days regardless of wind direction. A distant single source would likely show smaller variation in concentrations because of plume spread.

Air Dispersion Modeling Estimates

Preparation for the Portland Air Toxics Solutions project began in the summer of 2009 and included modeling of cadmium concentrations across the airshed for the 2005 base year. The results predicted locally high concentrations in an area of NW Portland and in North Portland near the Columbia River but nothing of note near the North Roselawn or Tubman school sites. The previous Portland air toxics monitoring study, the Portland Air Toxics Assessment, completed in summer 2006 did not include cadmium because EPA's National-scale Air Toxics Assessments for 1999 and 2002 did not identify cadmium as a pollutant of concern.

DEQ Investigative actions to-date

At this point the combination of the monitoring information, which suggested at least one local point source, with the model results, which showed no local point source, raised questions about the emissions inventory that was the basis for the model predictions. DEQ staff reviewed the permitted source emissions inventory, and EPA's Toxic Release Inventory, but still found nothing that looked significant in close proximity to the Tubman or Roselawn sites.

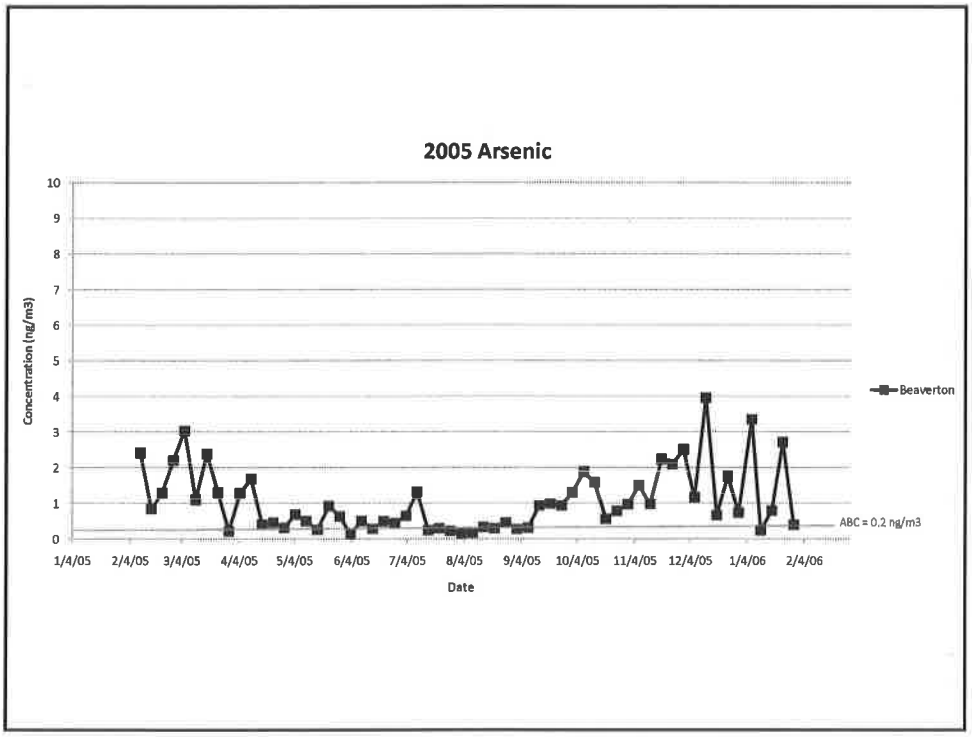
In December 2009, four staff members spent a day canvassing the neighborhood near Tubman in an attempt to find the source. DEQ staff visited a small art glass manufacturer and requested production information that allowed staff to compare days when they were melting glasses containing cadmium with the higher measured concentration days. There was no clear correlation. No other likely sources were found that day.

Since then the investigation has taken several paths:

- Air permit writers/inspectors requested additional information and verification of emissions at several permitted sources in North Portland. None of the permitted sources appear to release cadmium in large enough amounts to be responsible.
- DEQ's Water Quality program and the City of Portland searched their files to identify facilities that discharge cadmium to water, either directly or through the sewer system. None were found.
- DEQ's Hazardous Waste and Clean-up programs provided information about cadmium in waste and at clean-up sites. Soil samples and stormwater outfalls associated with the Portland Harbor clean-up have shown cadmium indicating its release from past practices. There are no active clean-ups that are releasing cadmium to the air.
- Air Staff used back trajectory analysis, using meteorological data in conjunction with the concentrations measured at the two North Portland sites. Data for these analyses are limited and wind directions on the sampling days are variable. The results indicate that the source could be to the NW of both sites, although in some cases it appears to be to the South. Much better time resolution, correlating concentration with wind direction, would be helpful.
- Air Staff correlated the metals measurements at both the North Portland sites to look for a source "fingerprint". Cadmium has some correlation to Arsenic, Lead, and Nickel, with little correlation to other metals, although this is very limited data.
- Air Staff re-reviewed EPA's *Locating and Estimating Sources of Cadmium* document which suggests that small commercial operations making plastic products or printing may release cadmium. Purchasing a Business Directory, or searching other business databases, has been suggested to identify possible sources that use these process, but no decision has been made.

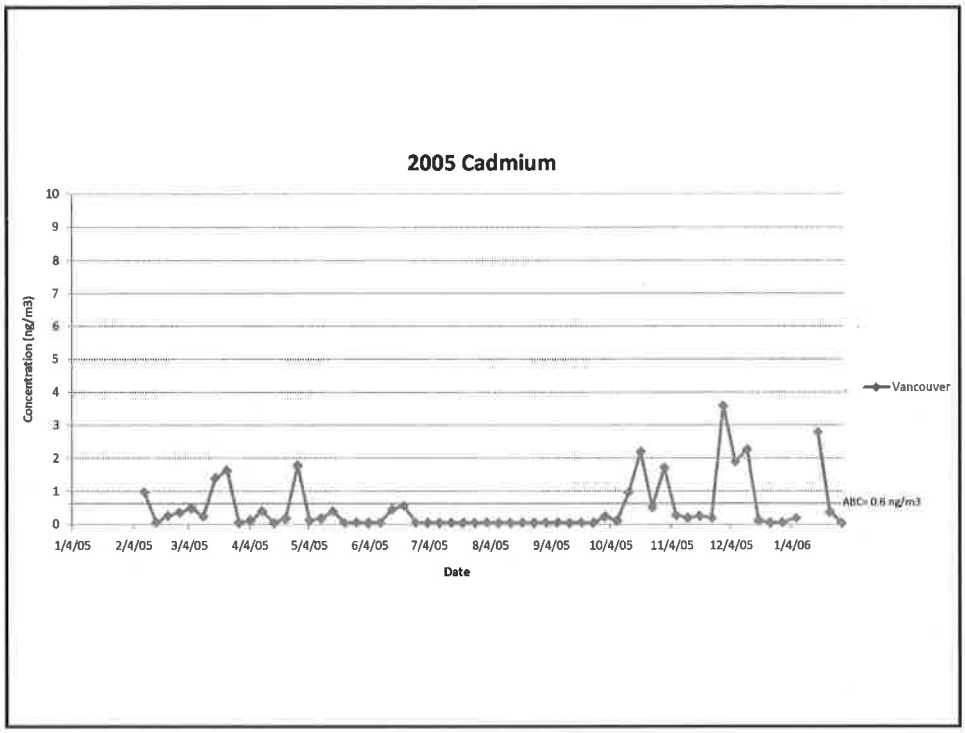
Future Actions

DEQ is planning further canvassing of the nearby commercial areas. In addition, EPA has recently decided to conduct follow-up monitoring at the Tubman site using a newly developed real-time multi-metal ambient monitoring system which is coupled with meteorological monitoring. This system is capable of providing hourly concentration readings for over 10 metals and associated wind speed and direction measurements. DEQ will coordinate with EPA on the set-up and operation of the system and with the subsequent data analysis. DEQ expects this to yield much better information about the location of the sources responsible for the elevated cadmium concentrations in North Portland. EPA plans to conduct this monitoring for about a month in the spring of 2011.



2005 Monitoring

Cadmium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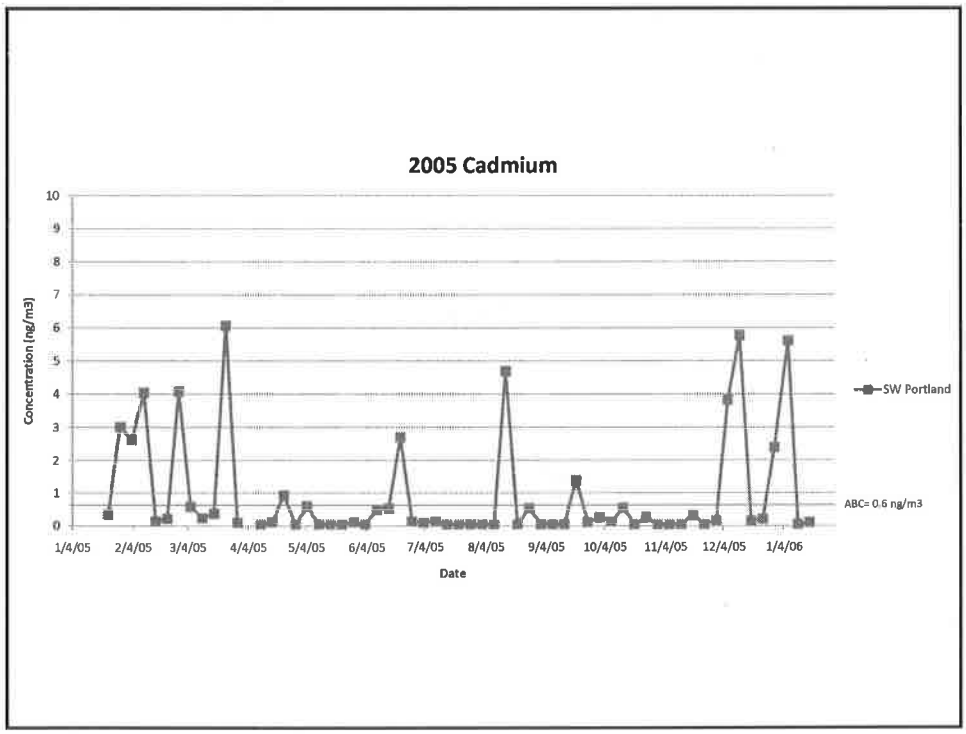
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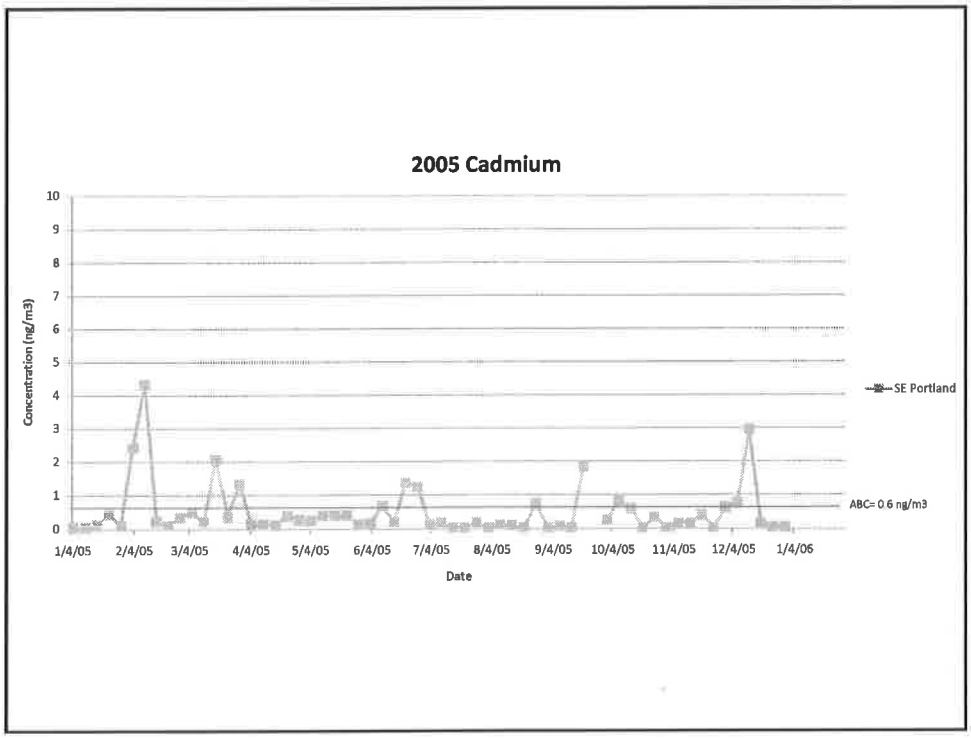
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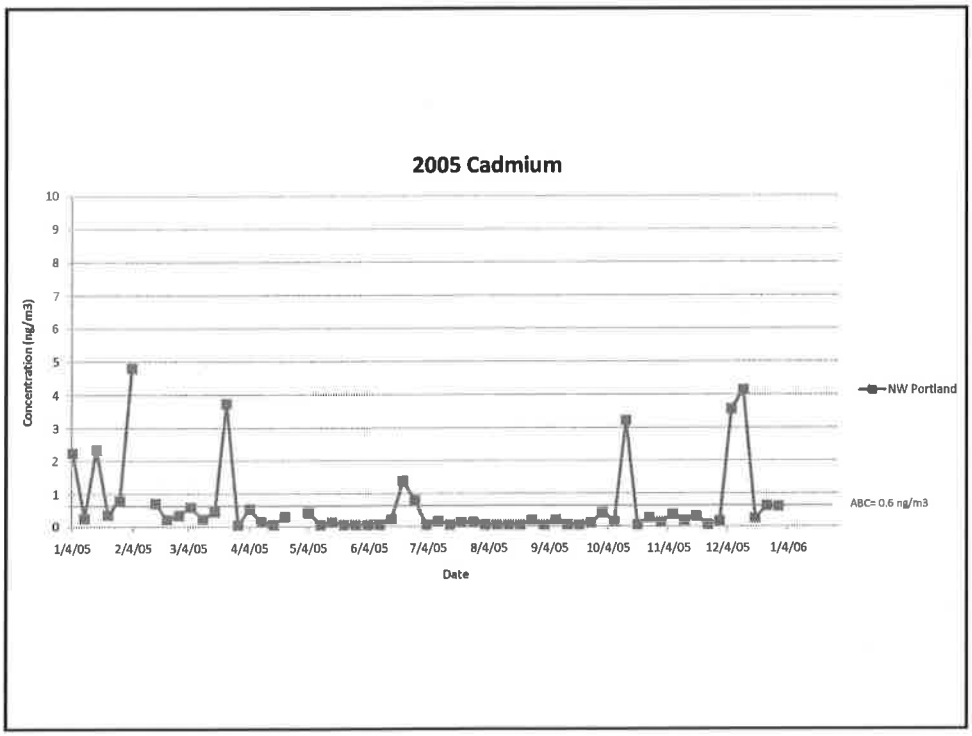
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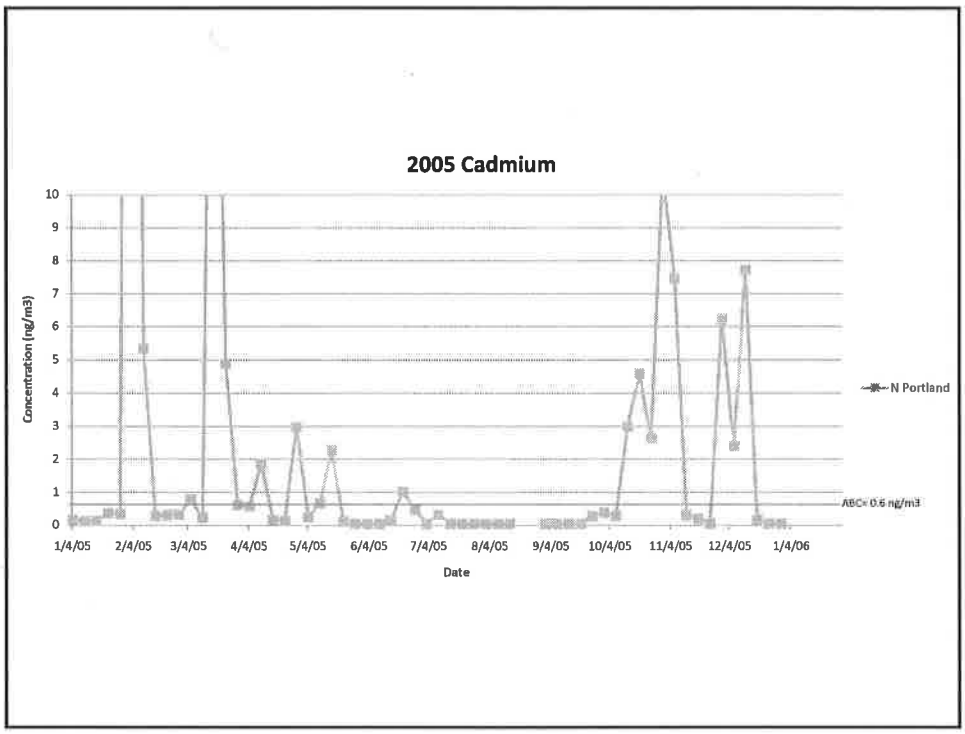
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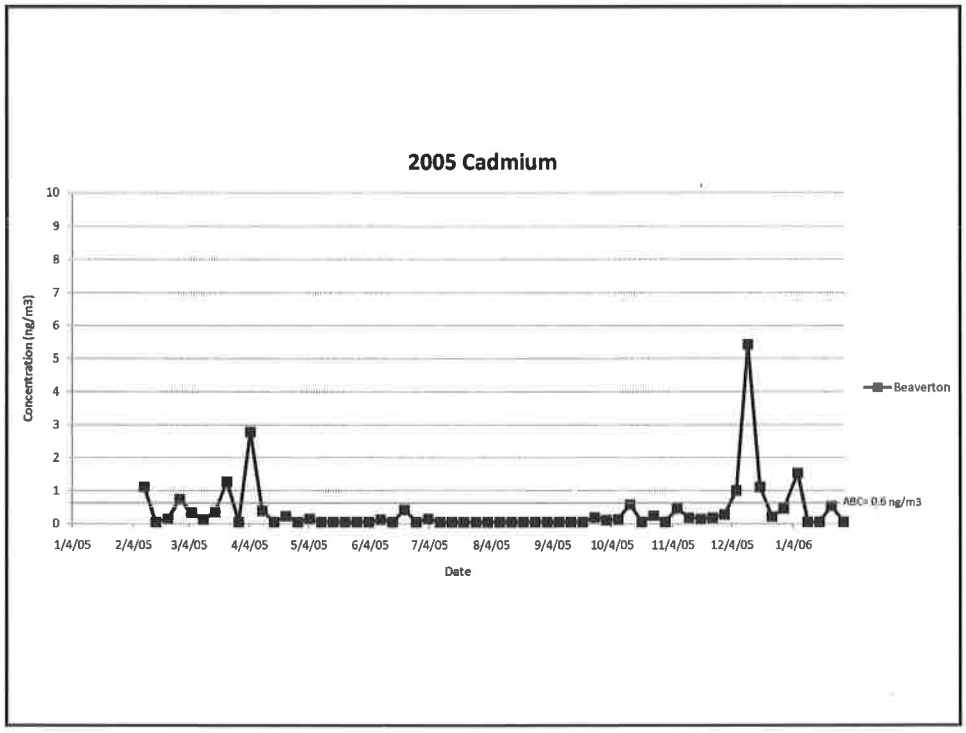
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