

Trail Area Health & Environment Committee



MINUTES

Meeting: Tuesday, November 22, 2016
City of Trail – Committee Room #2
7:00 pm

Committee Members in Attendance:

Mike Martin, Chair, City of Trail
Marylynn Rakuson, Community Member
Mike Adams, Interior Health
Jeannine Stefani, Interior Health

Linda Worley, Director, RDKB Area B
Tiffany Armstrong, Community Member
Mark Tinholt, Teck Trail Operations
Dawn Tomlin, Interior Health

Others in Attendance:

Bruce Enns, SNC-Lavalin Inc.
Cindy Hall, SNC-Lavalin Inc.
Andrea McCormick, SNC-Lavalin Inc.
Liz Anderson, SNC-Lavalin Inc.

Dan Bouillon, Teck Trail Operations
Frances Maika, VOX Communications
Ruth Beck, THEP Program Manager
Thompson Hickey, Teck Trail Operations

MEETING MINUTES: Dated Tuesday, September 20, 2016

Motion to approve the minutes from Tuesday, September 20, 2016. No errors or omissions; accepted as circulated.

PRESENTATIONS, REPORTS, DISCUSSIONS & RECOMMENDATIONS:

Presentation:

2016 Children's Lead Testing Results – Jeannine Stefani, Interior Health; attached

Jeannine presented the results of the Fall 2016 Children's Blood Lead Testing Clinic with a PowerPoint presentation.

Discussion took place about comparing data from other areas that report children's blood lead; Mark would need full data sets to be able to compare 'apples to apples' as the age range of children tested varies from place to place. Marylynn commented that we have done remarkably well at reducing blood lead levels in children. Mark added that blood lead levels at all the smelters have come down and we have been learning a lot from each other (people from Port Pirie, Australia have come here, we have gone to Torreón, Mexico).

Mark highlighted Slide 15: the relationship between the geometric mean for children's blood lead levels and the level of lead in the community air in the month of August in any given year. We're observing a different relationship in the years 2010 – 2016 compared with previous years. In the more recent period, changes in children's lead levels have a different correlation with air lead levels. This could be a reflection of the fact that our programs for families have expanded considerably since 2010 (soil testing and remediation/yard improvement, Healthy Families Healthy Homes, Lead Safe Renovation) and that children's lead levels now reflect a combination of all of our programs working together. Mark also noted that prior to 2003, the air monitoring station was in a different location: it was moved to Butler Park to be more conservative/protective: readings at the Butler Park station are typically 1.7x greater than the readings at the previous location. Mark will look into adjusting the graph to compensate for this difference – that is, readings prior to 2003 would be adjusted upwards by a factor of 1.7.

Mark clarified that the main pathway for lead exposure is dust from aerial emissions settling on surfaces, then children getting the dust on their hands (or toys etc.) and then ingesting it. Previous data has

indicated that dustfall outweighs the soil as the most consequential pathway and therefore, the greatest opportunity for reducing children's blood lead levels is reducing fugitive dust. The results of the ongoing Dust Study will further clarify conditions today. Mark further explained that the proposed blood lead goal for 2020 (3.5 µg/dL) was identified from an assessment of information and data on the projected outcomes of the fugitive dust reduction project and modeling the geometric mean blood lead level that would correlate if the 2018 air quality goal were achieved. The 2018 air quality goal is based on the Ontario standard, the most conservative standard/guidance in Canada. *(Note subsequent to the meeting: the standard was also chosen because it was the most recent and most closely aligned with current science.)*

Linda shared that Rivervale is grateful for the street washing that is provided to them twice a year; it shows the residents that the THEC cares about them.

Blood Lead results media release: Ruth led the group through the release and highlighted the three quotes from Dr Golmohammadi (the MHO), Mayor Martin, and Dan Bouillon. After some discussion, several small adjustments were made. The THEC approved the content of the media release; once small grammatical corrections are made in the morning by Ruth and Mark, it will be sent out by the City of Trail.

Reports & Issues Arising:

Consultation Process Update – Frances Maika, VOX Communications

Frances Maika provided an update on the consultation process to date. The surveys have all been entered for analysis. Overall, support for the goals is approximately 80%; very similar to the outcome of the 2010 consultation. Frances will present the draft report at the February THEC meeting.

Marylynn commented that one woman, a food bank recipient, who attended the focus group told her that she felt really good about what she learned about Trail and the work being done here to address lead. This woman is now spreading the word about the THEP at the food banks.

Community Check-In

Marylynn asked Mark to provide an update on what is happening at the creek in Warfield; specifically, are we testing for contaminants in the creek? Mark clarified that this was in reference to the groundwater project in Haley Gulley, about which a presentation was made at the previous THEC meeting. There are two old landfills and yes, Teck is monitoring the creek. There are elevated metals in sediment, so Teck just completed a project to install a settlement pond to trap sediment and stop it from moving down the creek. This work is being done with review and approval by the BC Ministry of Environment and Environment Canada. Mark offered to provide a more in-depth review at a future meeting. Marylynn added that she understands we've inherited the problems from the past, and that we're working on mitigating them. Thompson commented on legacy issues and current operations' environmental performance: "we're trying to balance both". Mark will confirm what notifications went out to the public in advance of the work.

Program Reports and Issues Arising:

Air Quality – Mark Tinholt, Teck Trail Operations; report attached

Mark presented the Teck Air Quality Report. He highlighted the low air lead in October this year and added that the October dustfall jar data shows low lead as well: Mark noted that this could be due to the record rainfall in October. The arsenic average for the year-to-date meets the 2018 goal (with 10 of 12 months data reported) and is on track to be Teck's best result ever.

Air Quality Technical Working Group (AQTWG); minutes attached

Mark presented the minutes of the AQTWG meeting. The meeting was to discuss the sulphur dioxide (SO₂) Canadian Ambient Air Quality Standards (CAAQS) that have now been released. The new CAAQS are being adopted as the air quality objective in BC. The AQTWG recommended to the THEC that SO₂ be added as an issue that the THEC monitors and participates in, and requested the mandate to follow up and report back to the THEC regarding SO₂ issues and the new guidance. The working group would prepare draft communications/educational materials to present to the THEC at a future meeting.

MOTION: Mark moved: That the THEC give the Air Quality Technical Working Group a mandate to follow up and report back to the THEC regarding SO₂ issues and the new CAAQS guidance. This includes

drafting internal and external THEC communication (e.g. Issues Brief, THEC PPT, Fact Sheet for the website etc.); following up contacts with identified resource groups; and identifying other helpful actions. Marylynn seconded. None against; carried.

Note: Frances pointed out that Ruth Hull was left off the attendees list in the AQTWG minutes.

Family Health – Jeannine Stefani, Interior Health; report attached

Jeannine shared the Family Health report and noted that there are 14 children identified as case management this year based on the results of the 2016 Fall Clinic: 7 new, 7 repeat. Jeannine described the kinds of actions that take place to support case management children/families: we provide education, soil testing, yard improvement and/or remediation, and Home & Garden supports. We offer a lot of supports so it's not easy to identify which support or combination of supports makes the difference in a particular case. The case management children will get tested again in February; the one child who tested over 15ug/dL will be tested by their doctor much sooner than that.

Home & Garden – Cindy Hall, Andrea McCormick, and Bruce Enns, SNC-Lavalin Inc; report attached

Cindy provided the Healthy Homes update. Andrea gave an update on the soils program. Bruce spoke about the dust study and added that we can expect data by the end of the year. Andrea spoke about Lead Safe Renovation (LSR). Cindy added that a more detailed update on the Home & Garden program will be given at the February meeting. Ruth informed Andrea that the analytics for LSR traffic on the website will be provided soon. Discussion took place about soil assessment requests and waitlists.

Program Manager – Ruth Beck, Circle B Services Consulting

No specific report; Ruth has been integral in supporting the activities mentioned above.

Executive Committee – verbal report

Ruth spoke about prioritizing the timing of working group meetings due to capacity constraints. The priority order is for the WAS Impacts Terms of Reference (ToR) group to meet later in November; the Consultation Working Group will meet in January to review draft report; the AQTWG will work as needed over winter and spring with regard to SO₂; the Blood Lead Reduction Working Group (BLRWG) and the Community and Families Working Group (CFWG) will be meeting in spring 2017. Ruth will include the CFWG in the meeting to review the consultation results.

NEXT MEETING: Tuesday, February 7, 2017

Fall 2016 Blood Lead Results

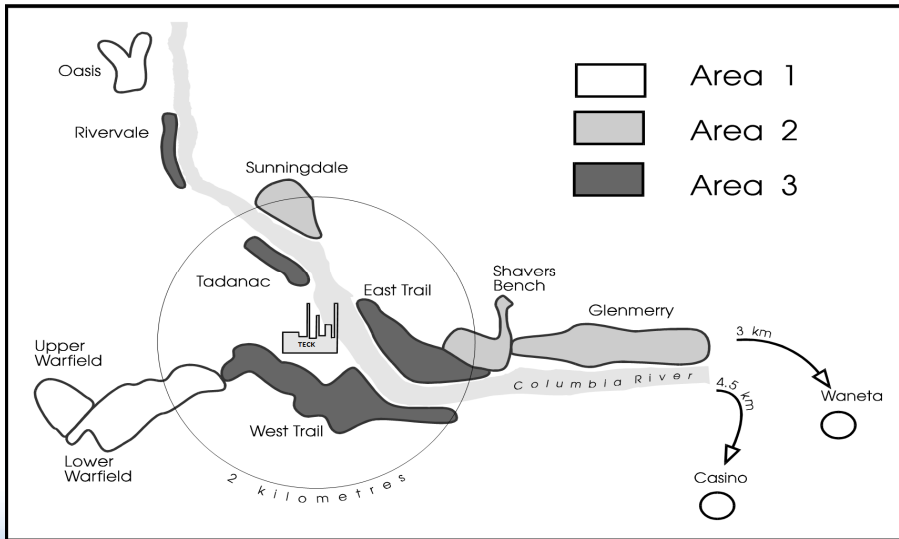


Who Was Tested in 2016?

- **Target group:**
 - Children aged 6-36 months, living in City of Trail or Rivervale (Area 2/3)
 - This is the group our results reflect
- **Also:**
 - New to area, up to age 5 years old
 - Previous case management for follow-up
 - Parents who requested testing for their child from any area



“Areas” & Neighbourhoods

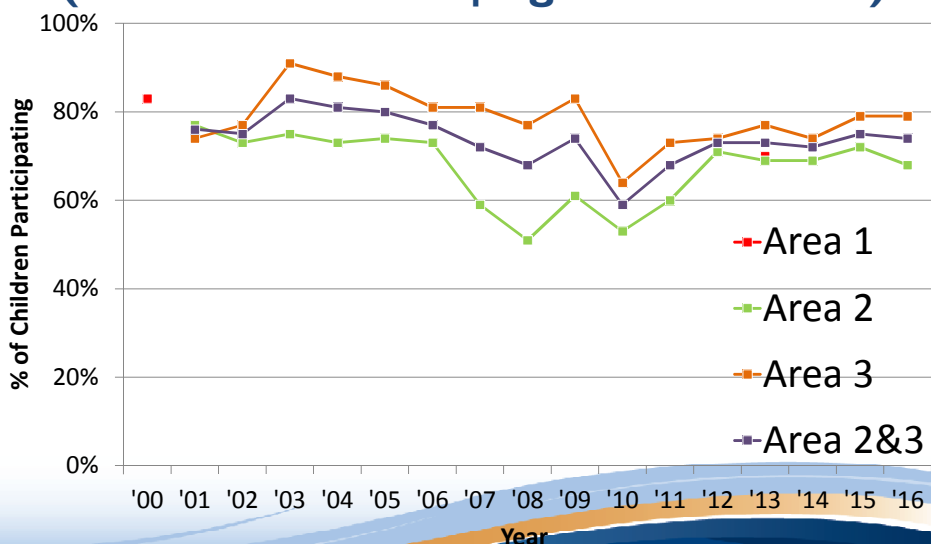


Fall 2016 Total Participation By Target Areas 6-36 Months

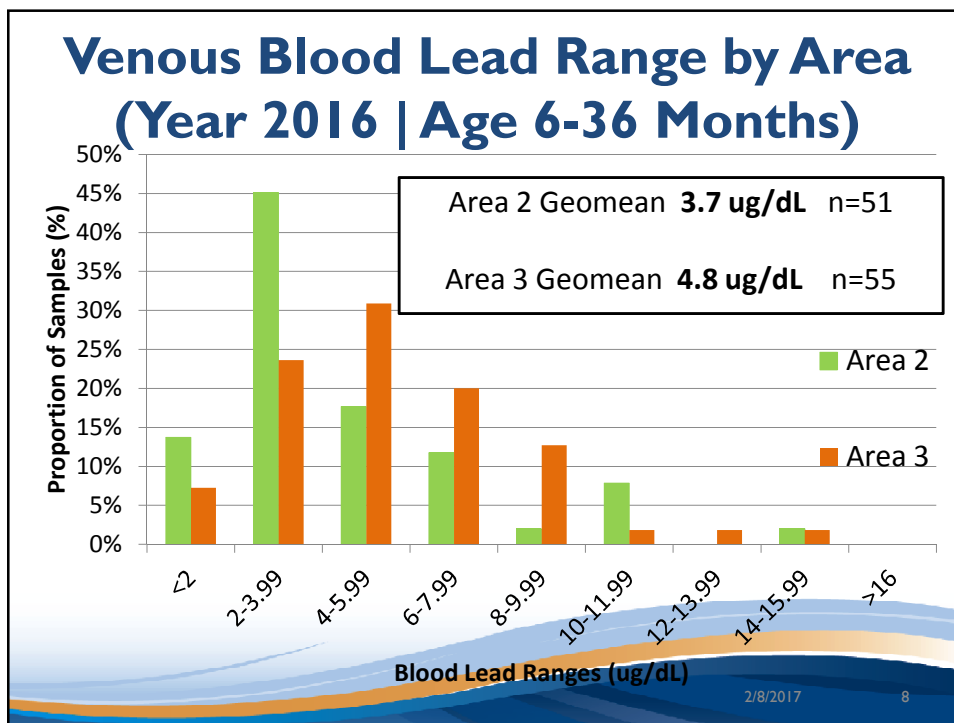
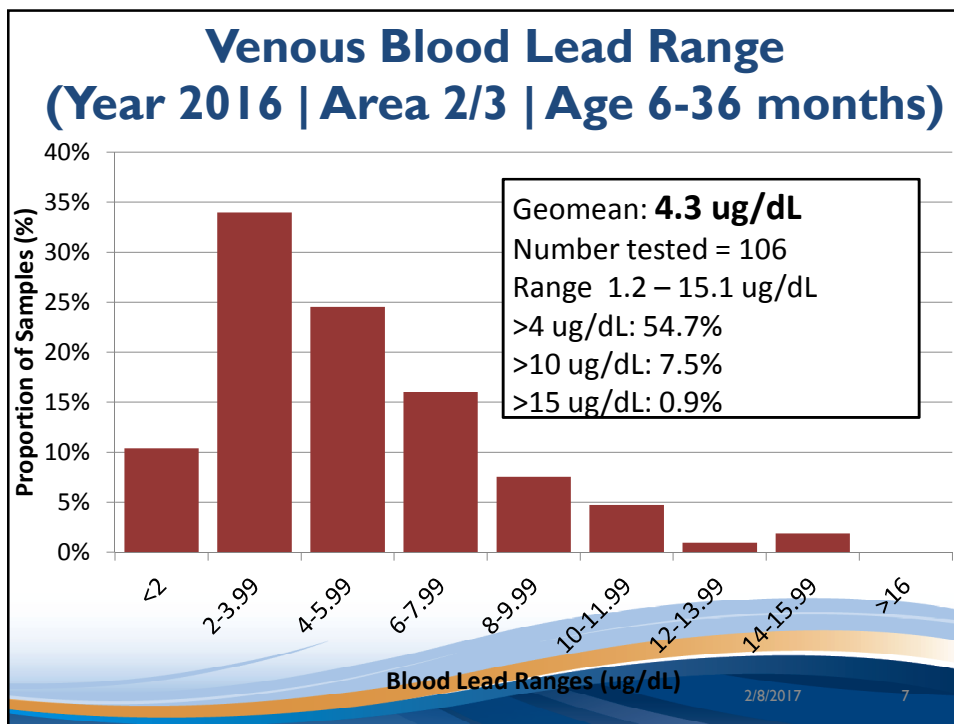
Participation Breakdown By Areas				
	2016			2015
Area	# Children Contacted	# Children Participating	% Children Participating	# (%) Children Participating
Area 2	79	54	68%	56 (73%)
Area 3	72	57	79%	63 (80%)
Area 2 & 3	151	111	74%	119 (76%)

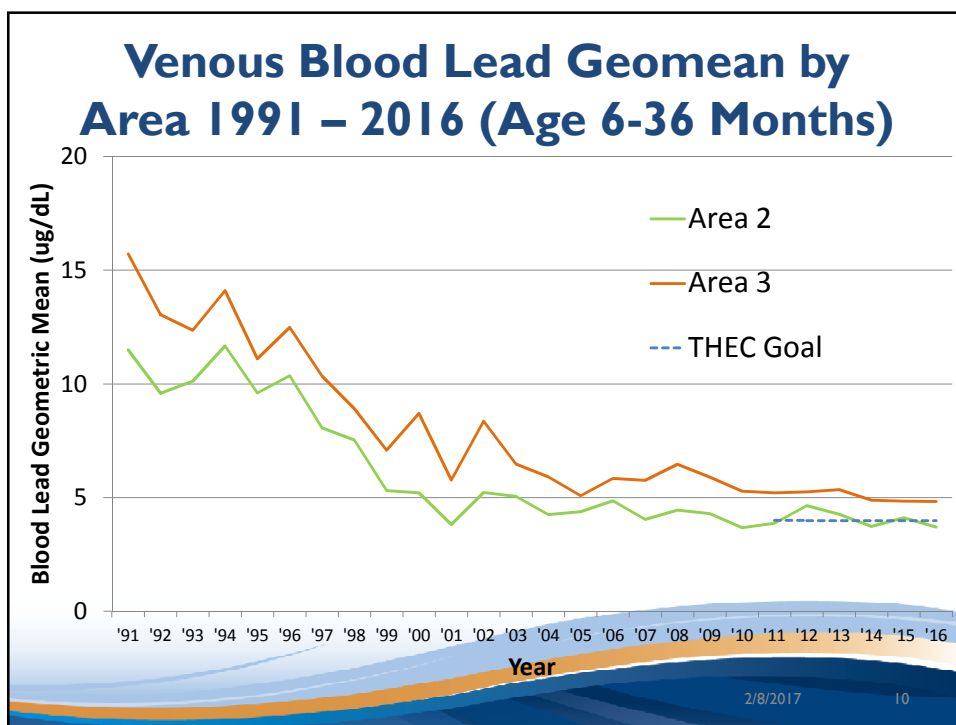
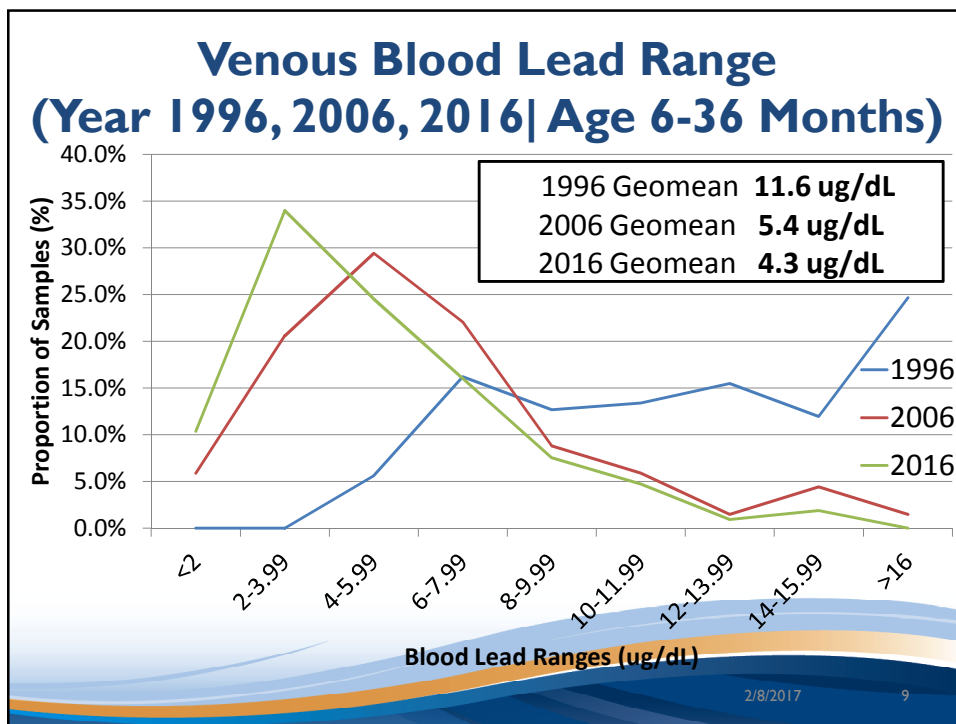
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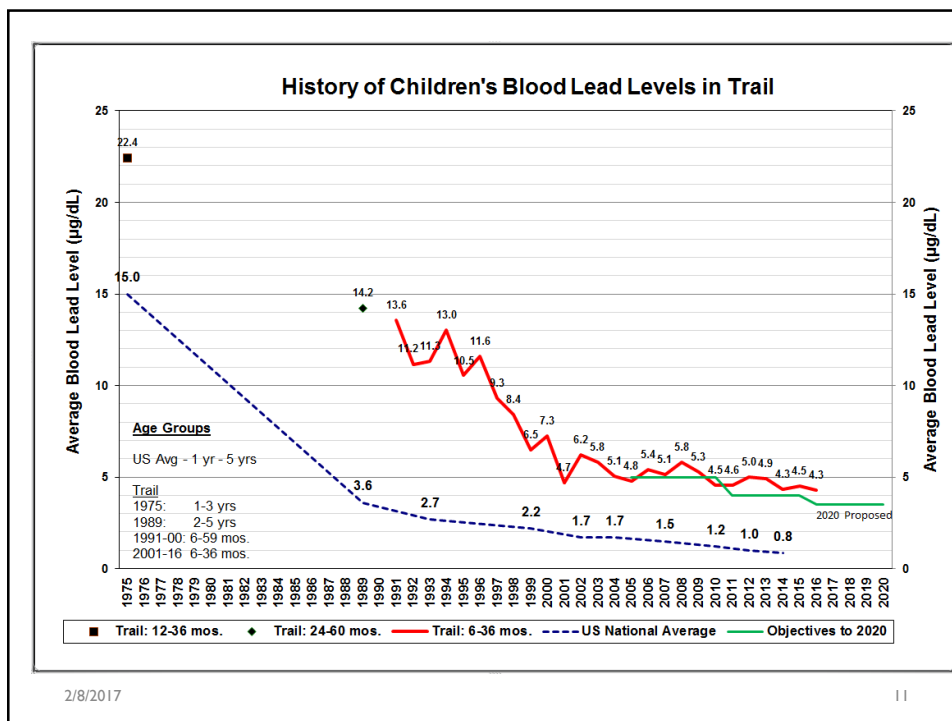
Percent Participation by Area (Year 2000 – 2016 | Age 6-36 Months)



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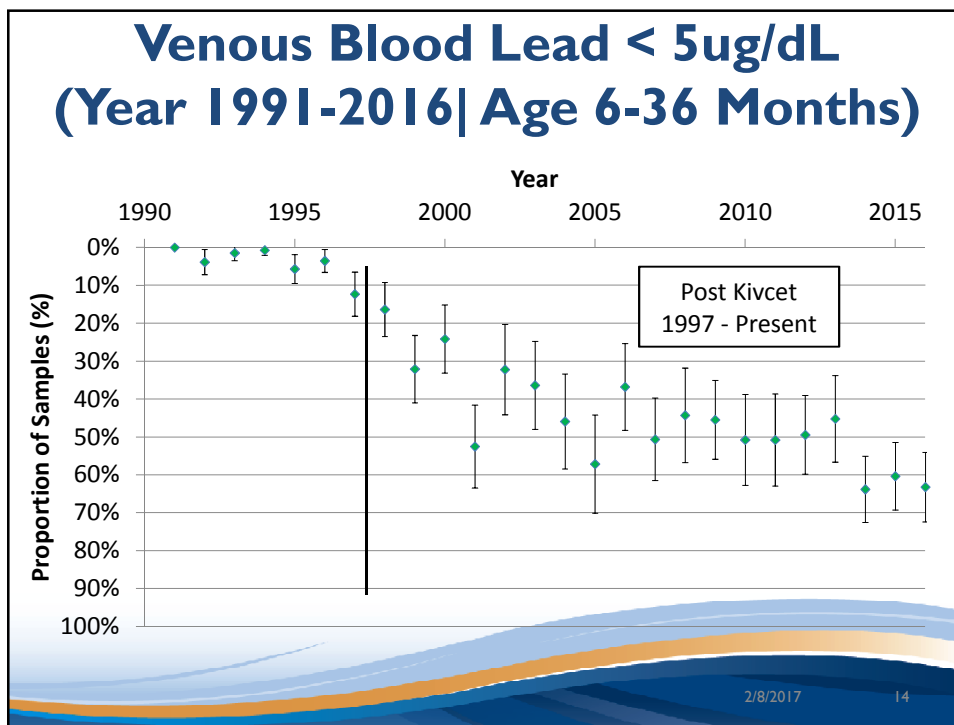
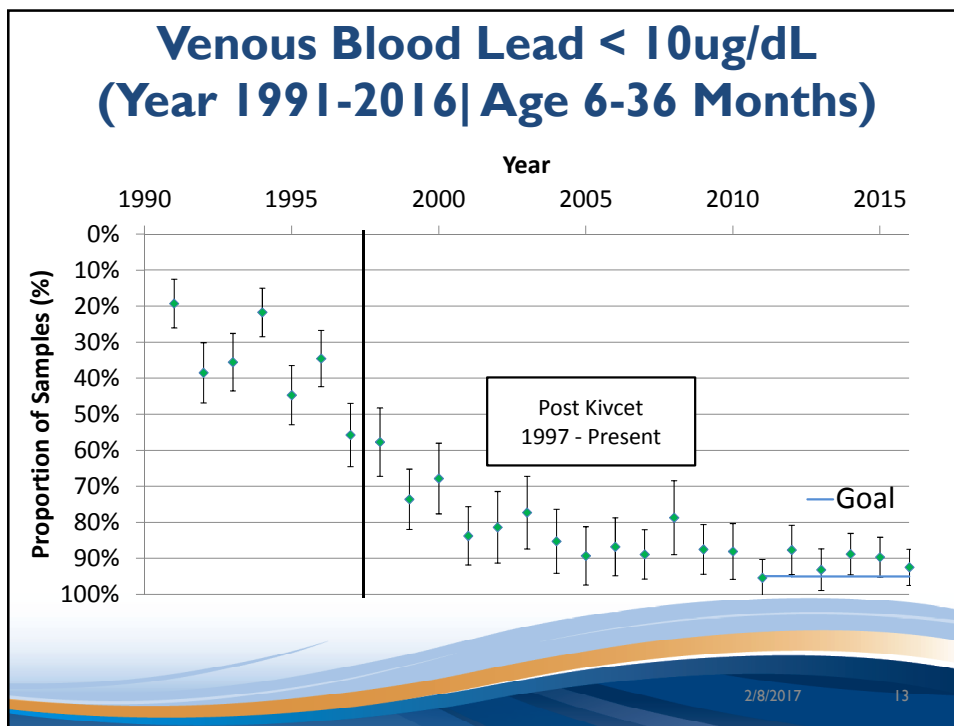


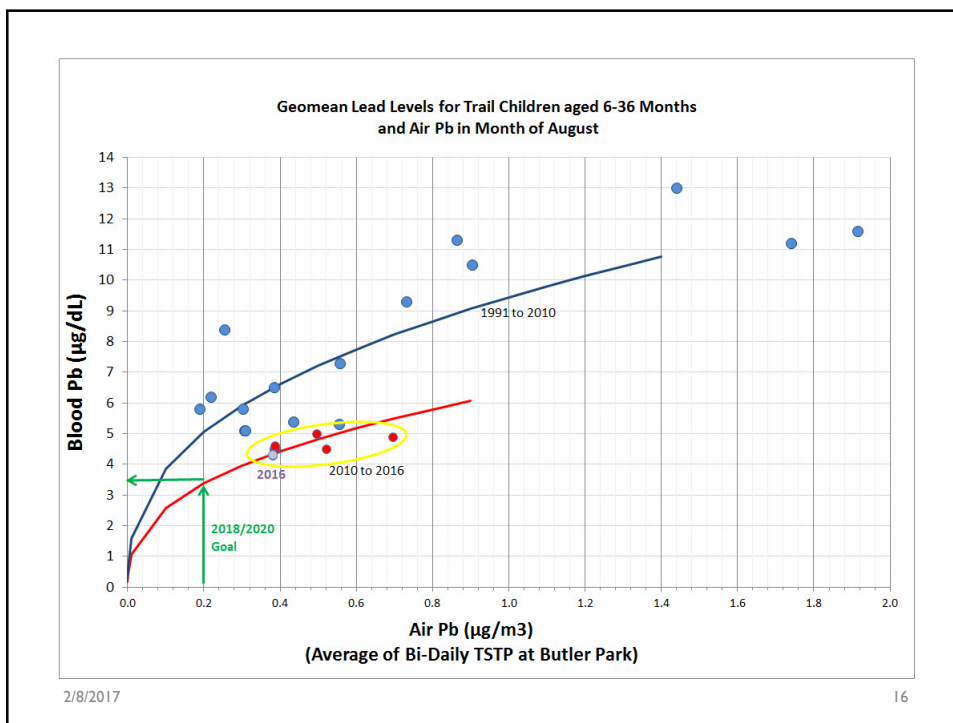
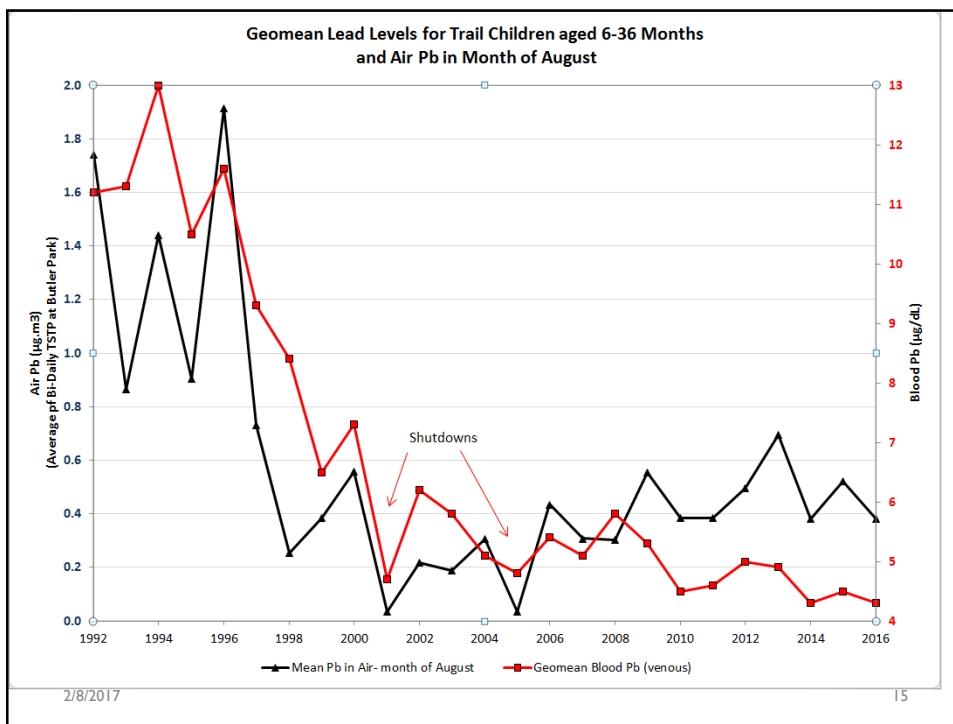


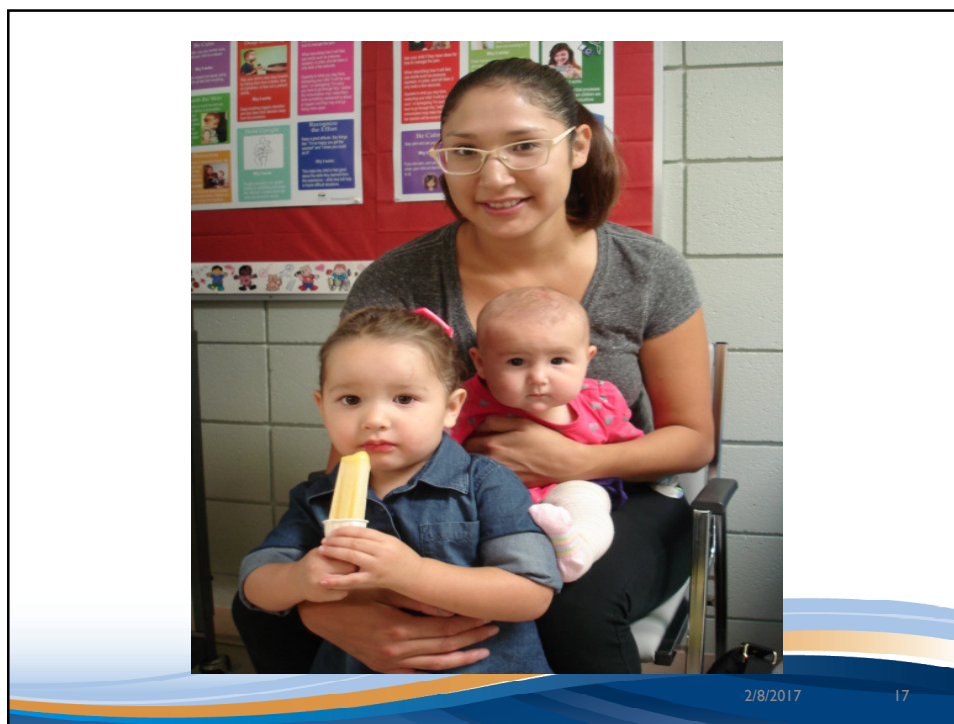
Comparison with other Smelter and Non-Smelter Communities

City/Region	Country	Nature of site	Age of kids tested	Year	Geomean Blood Lead Level (µg/dL)
La Oroya	Peru	Pb smelter closed 2009	< 6 yrs	2011	~10
Hercalaneum	U.S.A.	Primary Pb smelter -closed	< 6 yrs	2003	8.0
Hoboken (Moretusburg)	Belgium	Secondary Pb smelter	2.5-6 yrs	2016	5.2
Torreon	Mexico	Primary Pb smelter	<16 yrs	2014	5.2 avg
Rouyn-Noranda QC	Canada	Primary Cu smelter	6 mos to 5 yrs	1999	5.2
Broken Hill	Australia	Pb mining	1-4 yrs	2014	5.2
Port Pirie	Australia	Primary Pb smelter	<5 yrs	2016	4.4
Trail BC	Canada	Primary Pb smelter	0.5 to 3 yrs	2016	4.3
Belledune, NB	Canada	Pb smelter, industry	3-6 yrs	2005	3.5
Hamilton, ON	Canada	Urban/city centre	< 6 yrs	2008	3.0
Mount Isa	Australia	Primary Pb smelter/mine	1-5 yrs	2014	2.6
Flin Flon, MB	Canada	Closed Cu smelter	0.5 - 6 yrs	2011	1.4
St Johns, Nfld	Canada	Urban	1-5 yrs	2011	1.2
Nation-wide	U.S.A.	Urban/rural (NHANES)	1 to 5 yrs	2014	0.8
Nation-wide	Canada	Urban/rural (CHMS)	3-5 yrs	2013	0.8
Vancouver	Canada	Urban/city centre	2-3 years	1994	5.4
Fraser Health	Canada	Urban/city centre	0-5 years	2014	<2

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Concluding Messages

- Children's blood lead results for 2016, with a geomean of 4.3 micrograms per decilitre, are similar to the last two years and equal to the lowest levels recorded to date.
- There is more work to be done to achieve the THEC's proposed goal of 3.5 micrograms per decilitre by 2020.
- There continues to be a high level of participation in the voluntary blood lead testing program.

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Concluding Messages

- The level of lead in community air continues to have a significant influence on blood lead levels.
- The level of lead in air in August 2016 was lower than in 2015 and equal to August 2014 when the same 4.3 $\mu\text{g}/\text{dL}$ geomean was attained.
- Teck's Fugitive Dust Reduction Program offers the greatest opportunity to further reduce emissions to achieve the THEC's goals for children's blood lead levels and air quality.

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Concluding Messages

- The greatest benefits of Teck's Fugitive Dust Reduction Program have yet to be realized.
- The smelter recycle building, recently completed, is anticipated to significantly reduce fugitive dust for 2017.
- In combination with other THEP programs (e.g. soils program, Healthy Families Healthy Homes, lead safe renovation support), we are on course to achieve lower blood lead goals in future.

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Concluding Messages

- There has been significant improvement in children's blood lead levels over the past 20 years.
- Trail is among the world's leading smelter communities in terms of low lead emissions and blood lead levels.
- There is no known level of lead exposure that is considered safe. The lower the better.
- For more information on lead, its effects, and the supports available in the Trail area, please visit www.thep.ca

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**TRAIL
A R E A
HEALTH &
ENVIRONMENT
COMMITTEE**



NEWS RELEASE

2016 Children's Lead Testing Results & Projects to Reduce Lead Exposure

November 23, 2016

Results from the Trail Area Health & Environment Committee (THEC) 2016 children's blood lead testing clinic show that the average blood lead level for children aged six to 36 months in Trail and Rivervale is 4.3 micrograms per deciliter with 92.5 per cent of children testing below 10 micrograms per decilitre. This matches the 2014 result as the lowest average recorded to date. There continues to be a very high participation rate for this voluntary program.

"The fall 2016 results are similar to the past two years. Overall, we have observed a significant decline in children's blood lead levels over the past few decades to about four micrograms per decilitre in the years 2014 to 2016", says Dr. Kamran Golmohammadi, Medical Health Officer with Interior Health.

The THEC is focused on further reducing overall blood lead levels and its new proposed goals for the year 2020 are to see an average blood lead level in children aged six to 36 months in Trail and Rivervale of 3.5 micrograms per decilitre and to have 95 per cent of children test below 10 micrograms per decilitre.

Mayor Mike Martin, Chair of the Trail Area Health & Environment Committee, says: "With the support of the community and through a comprehensive program, the THEC has done a good job of reducing children's exposure to lead in our community. This year's result continues to head us in the right direction. There is still work to be done to meet our proposed 2020 goal for children's lead levels, but we know that the greatest benefits of Teck's Fugitive Dust Reduction Program have yet to be realized. It is expected that the new Smelter Recycle Building, which was completed this fall, should start having a considerable impact in 2017. Teck Trail Operations' continued investments in reducing fugitive dust emissions are seen as the greatest opportunity to further reduce children's lead levels. This, in

combination with our other programs such as soil testing, Healthy Families Healthy Homes, and lead safe renovation support, has us on course to achieve lower blood lead goals in future.”

Dan Bouillon, Manager, Environment at Teck Trail Operations says: “Teck is committed to continuing to reduce lead emissions and meeting the THEC’s air quality goals. We have made significant reductions in air emissions in past years and are further reducing emissions through the Fugitive Dust Reduction Program, a multi-year effort to continue to improve community air quality, which includes the new Smelter Recycle Building. We have also initiated further dust suppression actions within our operations, and will continue to implement new air quality improvements in the future.”

The THEC is currently reviewing public input from a recent community consultation about its proposed new goals for children’s lead levels and actions to improve air quality and reduce lead exposure for 2020.

About the Trail Area Health & Environment Program

The Trail Area Health & Environment Program is a community-led program with five main areas of activity: Family Health, Home & Garden, Air Quality, Parks and Wildlands, and Property Development. THEC promotes a healthy environment through a comprehensive integrated program that successfully improves air quality and children’s blood lead levels, and promotes the health of the community. The Air Quality Program reduces smelter emissions and makes the largest contribution to achieving health and environment goals. All our activities work together to get the best results – lower exposure, lower health risks, and a healthier environment.

The Trail Area Health & Environment Committee (THEC) oversees the program. THEC is a partnership between the local community, Teck, the Ministry of Environment, and Interior Health. Over the past two decades of successful collaboration, children’s blood lead levels in Trail have reduced significantly and air quality has greatly improved. THEC’s community-led partnership has been recognized internationally as an effective collaborative model for safeguarding health and the environment. In 2011 the program received a Premier’s Innovation and Excellence Award for Partnership. For more information please visit www.thep.ca

For more information, contact:

Karl Hardt, Interior Health Communications (250) 354-3030

Mayor Mike Martin, Trail, Chair of the THEC (250) 364-0809

Catherine Adair, Community Relations Leader, Teck Trail Operations (250) 364-4878



Nov 22, 2016

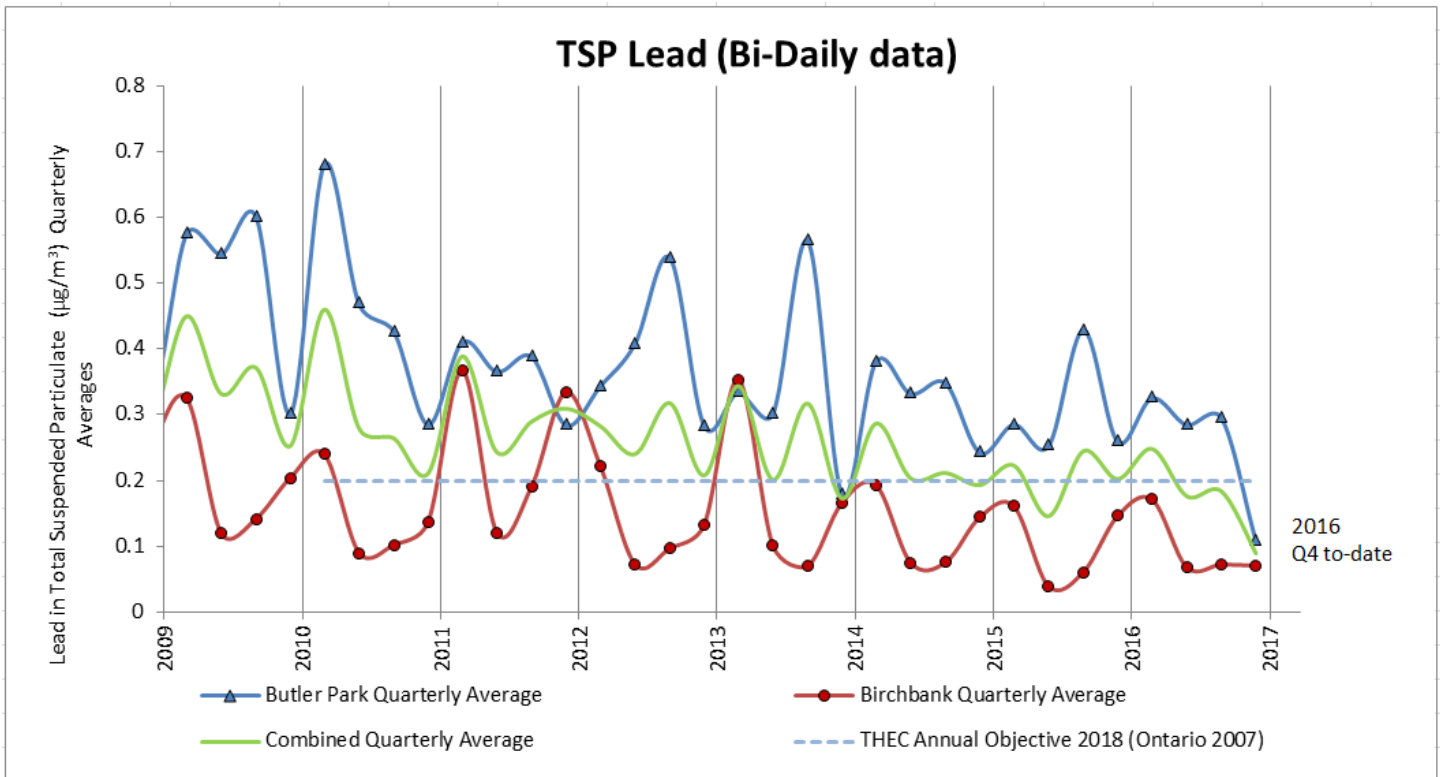
RECENT HIGHLIGHTS

1. Lead in Air:

- The average for the third quarter of 2016 is the lowest for the third quarter since the 2005 shutdown year. For 2016, we are on track to meet the lowest ever annual average for lead in community air while in operation using our current monitoring system.

Details:

The chart shows quarterly averages for Lead in air (measured in Total Suspended Particulate) for Butler Park (dark blue), Birchbank (red), in comparison to the 2018 THEC Air Quality Objective (dashed line). The green line is the average of the two. Quarterly averages for Lead in ambient air are expected to have some variability due to season, weather, predominant wind direction and operational variance. The average for the third quarter of 2016 at Butler Park ($0.29 \mu\text{g}/\text{m}^3$) is the lowest since the 2005 shutdown year. The average to date for Q4 is very low ($0.1 \mu\text{g}/\text{m}^3$), however it is unclear why at this point. It could be due to the record rainfall in October, the commissioning of the Smelter Recycle Building, a maintenance shutdown, or other factors. Overall, we are on track to meet the lowest ever annual average for lead in community air while in operation using our current monitoring system.

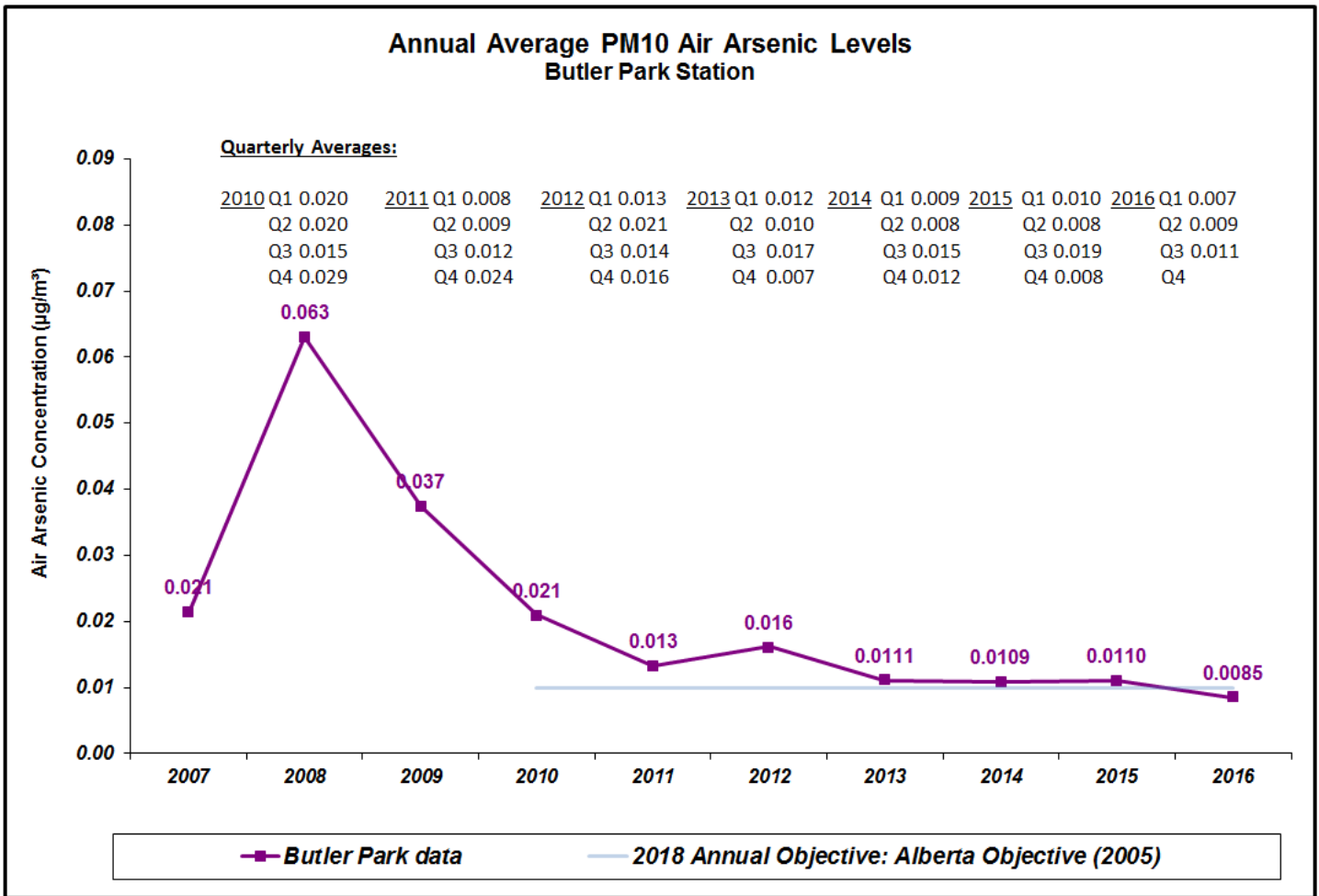


2. Arsenic in Air:

- The annual average for arsenic in air continues to be improving; the average for the year to date is less than the 2018 objective.

Details:

The chart shows the annual average for Arsenic in air (measured as inhalable PM₁₀ fraction) for Butler Park (purple) in comparison to the 2018 THEC Air Quality Objective (blue line). Improvements between 2008 and 2011 appear to be the result of maintenance of the Continuous Drossing Furnace and Refinery Scrubber Stack. The 2015 annual average was 0.011 µg/m³, and for the 2016 to date, 0.0085 µg/m³.



Trail Health & Environment Committee Air Quality Technical Working Group

MINUTES

Meeting: Wednesday, October 19 2016



In Attendance:

Ron Joseph, Community Rep, Chair
Mark Tinholt, Teck, Secretary
Mike Adams, Interior Health
Lisa Pasin, City of Trail
Gord DeRosa, Community Rep
Ruth Beck, THEP manager
Frances Maika, THEC consultant
Dan Bouillon, Teck
Bill Jankola, Teck
Suzanne Belanger, Teck
Bruce Enns, THEP Program Office

Regrets: Brad McCandlish, MOE

MEETING MINUTES:

A ppt presentation was used to facilitate a discussion on

1. Review of background/status of sulphur dioxide (SO₂) Canadian Ambient Air Quality Standards (CAAQs)
2. Review outcomes of action items identified from June 14 AQTWG meeting, as follows
 - Alternate data presentation options
 - Use of Air Quality Health Index (AQHI)
 - Requesting Interior Health Support on health messaging
3. Next Steps/Recommendations

Actions and Recommendations include:

1. For Nov 22 THEC Meeting
 - Recommendation: Given new federal guidance on sulphur dioxide, recommend that SO₂ be added as an issue that the THEC monitors and participates in.
 - Request Motion: to give the AQTWG the mandate to follow up and report back to the THEC regarding SO₂ issues and the new guidance. This includes drafting internal and external THEC communications (Issues Brief, THEC PPT, Fact Sheet for website); following up contacts with identified resource groups; identifying other helpful actions.
2. Develop Draft Communications:
 - Draft PPT presentation (part of this a Teck Presentation) to the THEC
 - Draft THEC Issues brief and key messages, passive/response basis (a media release would be developed only if it is determined that a proactive approach is required)
 - Draft Fact Sheet for Website – including govt. health links

3. Follow Up Actions:

- Teck to verify MOE's "next steps" re. public rollout of the SO₂ announcement
- Mike Adams will follow up with Island Health MHO re the James Bay SO₂ Monitoring health messaging example
- Interior Health (Mike Adams) to follow-up re work being done in Kitimat (e.g. health messaging "Advisory Protocol" etc.)
- Consider the need for additional actions, when appropriate

Next AQTWG meeting to be scheduled after outcome of Nov 22 THEC meeting.

FAMILY HEALTH REPORT



November 22, 2016

RECENT HIGHLIGHTS

1. Fall 2016 Blood Lead Clinic results
 2. Dates for Winter 2016 clinic
 3. Healthy Family Visits
 4. Community Outreach
 5. New Trail Blood Lead Program Database
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ADDITIONAL DETAILS

1. Fall 2016 Blood Lead Clinic results:
 - See power point presentation
2. Winter 2016 clinic dates February 20th and 21st
3. Healthy Family Visits
 - 53 done in 2016
 - 3 done since last Trail Area Health and Environment Committee meeting September 20th
 - 8 more scheduled
4. Community Outreach
 - Attended local pregnancy outreach program on October 11th and November 8th. Continue to attend monthly.
 - Family Action Network's Ages and Stages Day at Kiro Wellness Centre was on October 25th.
5. New Trail Blood Lead Program Database
 - Continue to work collaboratively with Interior Health's Information Management Information Technology department and Teck to develop a new Trail Blood Lead Program Database



November 21, 2016

RECENT HIGHLIGHTS

1. Healthy Homes Program Update
2. Soils Program
3. Dust Study
4. Lead Safe Renovation

Additional Details

1. Healthy Homes Update
 - 68 home visit to date with 8 visits scheduled before the end of the year
 - Focus during the last few months has been providing case management support to IH and the Healthy Family Program.
2. Soil Program Update
 - We have been sampling soil for most of November to get through our request list
 - Healthy Homes 50 assessments with one outstanding request
 1. 26 Yard and Gardens
 2. 2 Vegetable Gardens
 3. 22 Yards (1 outstanding request)
 - Community Participants 68 assessments with 25 outstanding requests
 1. 39 Yard and Gardens (4 outstanding)
 2. 7 Vegetable Gardens (1 outstanding)
 3. 22 Yards (20 outstanding)
 - 73 Remediation, Improvement and Conditioning properties:
 - 16 Yard conditioning (plus 7 combined with yard improvement)
 - 8 Vegetable gardens remediated
 - 39 Yard improvements for HH families
 - 10 Yards remediated (all or part of the yard)
3. Dust Study
 - Lab analysis of dust fall jars has been completed. Dust mat results are pending.
 - Dust mats were shipped in October to special lab in Idaho, USA and vacuumed to collect the dust they contained. Mats and dust samples are currently being shipped back and sent on to a lab for further analysis.
 - We expect to have all of the results by the end of the year and will then begin data analysis.
4. Lead Safe Renovation
 - Over the winter we will be reflecting on what worked and what we can improve for 2017.
 - Looking at ways to engage partners (i.e. RDKB, Building stores)