

Trail Health & Environment Committee



MINUTES

Meeting: Tuesday, May 1, 2012, 7:00 p.m.
City of Trail Committee Room, Spokane St. Entrance

Committee Members in Attendance:

Dieter Bogs, Chair, City of Trail
Jeannine Stefani, Interior Health
Brad McCandlish, BC Ministry of Environment
Graham Kenyon, Community Rep.

John Crozier, Councillor, Village
Ron Joseph, Community Rep.
Jacquie Johnson, Interior Health

Other in Attendance:

Ruth Beck, THEP Program Manager
Bruce Enns, SNC-Lavalin Environment
Cindy Hall, SNC-Lavalin Environment
Dale Webb, Teck Metals Ltd.
Maura Malone, Teck Metals Ltd.
Dave Derosa, Teck Metals Ltd.

Dr. Andrew Larder, Interior Health
Steve Hilts, Teck Metals Ltd.
Dr. Nelson Ames, retired MHO
Greg Belland, Teck Trail Operations
Richard Deane, Teck Trail Operations
Bill Jankola, Teck Metals Ltd.

MEETING MINUTES: Dated February 28, 2012 (approved) Jeannine Stefani/Brad McCandlish

REPORTS & RECOMMENDATIONS

Family Health:

IHA Report – Jeannine Stefani – report attached

- POCT: Jeannine S and Dr. Larder (attended via conference call) summarized the findings of the POCT trial (details attached in the report. Overall, even though parents who had their children tested using the LeadCare II device preferred the method, from a scientific perspective it does not produce accurate enough results to determine actual blood lead levels below the level of concern (10 µg/dL). Also, data is not accurate enough to track and/or trend blood lead levels in the pediatric population. The device produces far too much variability.
 - Comment: Steve Hilts - LeadCare I has always been an option but we haven't used it because of issues around potential contamination from the skin surface. The USA uses the device heavily in all of its CDC programs. I recommend that THEC keep an eye on the technology until something less invasive and cost effective comes along.
 - Discussion – develop a key message and ways to communicate these results to parents and the general public: “Although parents and our health professionals preferred the Point of Care Testing (POCT) method, the POCT trial led to a recommendation *against* using this method because the blood lead test results are not precise enough at the low levels we are currently seeing.”
 - Question - Does the Lead Care II device perform to its specifications? Dr. Larder - Yes, part of the examination by IH was to confirm the manufacturers' claims and the result showed that it performed as specified.
 - Question - Just wondering if IH knew about the local mental health program, run by Sheila Adcock, and its woodworking program? Is it possible that IH could partner with this group to make the sandboxes locally through this program? Jeannine - No, was not aware of the program.

Action - Jeannine Stefani will explore this further.

- Community Education: Radio Ads will be starting in mid May and running until mid September. Messages: Home Renovation, BLL Testing, Home & Garden, Sandboxes, and Nutrition.
- Continuing Education: Jeannine Stefani travelled to Chicago March 28th- 30th to the US CDC National Healthy Homes and Lead Poisoning Prevention Training Centre to attend a Case Management track that helped broaden her understanding. Jeannine thanked to IH for providing her with a scholarship and covering travel cost.
- Jeannine will also be traveling to the Lead Collaborative Consortium (LCC) conference in Hamilton at McMaster University June 7-8th, 2012 and will co-present with Steve Hilts about Trail's experience.

cc: Trail Times, EZ Rock, Mountain FM, Shaw Cablesystems

- Steve Hilts – This is the 3rd year of the LLC and as a result of some suggestions made by himself the LCC has included the US CDC and Health Canada on the agenda and has expanded emphasis on community experience and policy. As a result he has been asked to present about Trail, and will be joined by Jeannine in making that presentation.
- Question: could the presentation be shared with the THEC? Steve: yes, of course!

Family Action Network (FAN) Update: presented by Ruth Beck (as reported to her by Fiona Mooney, FAN Consultant/Facilitator)

- (agenda item moved forward from the Program's Managers report) FAN is a network aimed at making the Greater Trail Area the best place to raise a family. While still in the development phase, the primary objective of FAN is to help children entering school be best prepared developmentally in order to maximize their success. FAN is currently focused on informing public about services; looking into options for a possible storefront; creating a blueprint for action; and strengthening the Advisory Group. At the last meeting, 5 mayors from the Greater Trail Area were in attendance and each committed to the initiative. They intend to focus their energy on advocacy, integrating early childhood wellbeing into future planning (e.g. OCP's), and infrastructure.
- Discussion: FAN will be hosting representatives from Revelstoke on May 30th, 2012.

Action: Cindy Hall, Community Program Representative, will participate and represent THEP as part of the FAN Advisory Group.

Action: Ruth Beck to look into having a FAN representative to present to THEC next meeting.

Air Quality:

Teck Report

- **Air Quality: presented by Richard Deane, Teck Metals Ltd, Trail Operations - report attached**
 - Comments regarding lead in Total Suspended Particulate: Richard Deane – In Chart #2 of Total Suspended Particulate ($\mu\text{g}/\text{m}^3$) it is easier to identify trends (e.g. lowest being 2005 due to labor dispute shutdown; increase in 2009). While 2009 was high and above target, the lines are now trending downward. There is a discrepancy between stack emissions and measured lead in TSP i.e. measured stack emissions have continued to decline, even through the 2009/10 period, while lead in TSP increased. We believe the cause is “fugitive emission” – dust that “escapes” from the site rather than going through the emission control systems and stacks. Fugitive dust sources include outdoor materials storage and handling, road dust and dust escaping from plant buildings. .
 - Question: Is there a correlation between KIVCET throughput and production? Does it correspond with these numbers? Richard Deane – No, likely that this is a result of fugitive dust.
 - Comment: It seems as though the prevailing winds have changed, more from the north. Richard Deane – Yes, the air monitoring stations have shown that winds from the north have been more frequent in recent years.
 - Comments regarding lead in dustfall: Richard Deane – Solid red line on graph shows the moving average. It is easier to see spikes (e.g. winter 2011) by looking at Tadanac and the thought is that with the change in wind patterns the spikes in lead dustfall may be wind related.
 - Question: Why was Birchbank chosen as a location for a weather station? Steve Hilts and Greg Belland– There used to be station in Genelle but the weather station was re-located as recommended by MOE meteorologist.
 - Comment re. Arsenic –PM10: Improvements to the Continuous Drossing Furnace and Refinery Scrubber Stack have led to decreasing arsenic levels, 2012 average reported as 0.013 ($\mu\text{g}/\text{m}^3$) which is approaching 2018 goal of 0.010 ($\mu\text{g}/\text{m}^3$). Silver production has the majority of arsenic.
- **Fugitive Dust: presented by Bill Jankola, Teck Trail Operations, presentation attached**
 - Question: Will the Baghouse be sealed or not? Bill Jankola – Yes, entrance will be air-locked and building will be under negative pressure.
 - Question: This report is good news. What type of monitoring system will be in place, something similar to EPA 42 methodology? The Lead Dustfall monitoring network in the early days of the lead project had over 30 stations but has since been thinned down. Should we not consider intensely monitoring this both before and after the project? Although crude it does provide an

- interesting snapshot. Bill Jankola and Steve Hilts – There are more dustfall stations than shown in Richard’s air quality report tonight, including a more dense network around the work area.
- Comment: The far end of the water treatment plant is a priority amongst concerned citizens.

Program Planning & Operations: THEP Program Manager, Ruth Beck – report attached

- **5 Year Plan Committee**
 - Ruth provided a summary of activities leading to the decision to hold a 1 day workshop, scheduled for June 18. The purpose of the workshop is to discuss key questions related to the impending CDC guidance and come to agreements that can be brought back to THEC for approval. The main focus will be on Family Health as well as communications. It is **not** intended to be a program review. The workshop will be facilitated.
 - Question: Is Dr. Ames invited/attending? Dr. Ames – Yes!
 - Comment: Graham Kenyon – I was originally concerned that this process would undo 20 years of work but I am encouraged by Ruth Beck’s workshop proposal. Steve Hilts – What is proposed here fits. We are building something that is going to be submitted to the Province, and with blood lead guidelines expected to change, we need to review our goals and plans.

Home & Garden: Bruce Enns, SNC-Lavalin Environment – report attached

- **Community Program Office (CPO)**
 - Lots of changes - Bruce took over for Andrea McCormick last summer when she began maternity leave. Also, with other staff leaving, including Mark and Gale Stromberg, there has been a complete staff change at the CPO. Cindy Hall has been hired as the new Community Program Rep. and two new field staff are Joseph Hopkins and Catherine Juelfs.

Parks & Wildlands:

- **Status of Parks/Community: Bruce Enns, SNC- Lavalin Environment – verbal report**
 - 15 parks and playgrounds in Trail have been sampled and three were reported having > 1000 PPM Lead. Two have been scheduled for remediation along Esplanade Ave. Also, Tadanac Park had one area with higher lead levels, but requires more sampling. Bruce and Mark Tinholt have met with the City to report findings and talk about next steps, and also met with the remediation contractor Rob Worosz of Alpine Contracting.
- **LCEMP Steering Committee: Dave Derosa, Teck Metals Ltd. – verbal report**
 - Currently working on organizing Lower Columbia Ecosystem Management Plan (LCEMP) workshop for the week of June 18th, 2012. The responses from the Steering Committee are positive with lots of people wanting to participate. The Regional District of Central Kootenay has also expressed interest.

Other Business:

- **Community Engagement:**
 - Questions: Graham Kenyon was wondering if anything is being done to encourage more participation from parents on THEC? Ruth Beck – Rachele Vogel would like to be involved but is currently away on an extended holiday. Also, Martin Davis would like to be involved whenever it fits his busy schedule but is definitely interested.
 - Discussion: Jeannine Stefani – At an earlier meeting with Program Team an idea was presented to create a bookmark that would invite parents to participate and get involved on THEC. This would be developed and handed out to parents at the Fall 2012 Blood Lead Level Clinic. It was felt that this may entice parents by inviting them to “discuss results”. IHA has been collecting emails addresses and plans to send out email prior to presentation of Fall Clinic results.

Action: Ruth Beck and Jeannine Stefani to work on a “Call for Volunteers” to be timed for when BLL results are communicated to parents.

NEXT MEETING Tuesday July 10th, 2012

Point of Care Testing (POCT) trial results for LeadCare II - completed October 2011

Rational for doing trial:

Parent feedback from community consultation done in 2010

Parents want capillary testing option with smaller amount of blood drawn plus less wait time for their child's blood lead level result

THEC wants to increase participation in Blood Lead Testing clinics

Potential cost savings of cost of blood lead testing clinics

Parent feedback:

113 parents surveyed after their child participated in the Fall 2011 clinic were asked:

1. Would you be more likely to come to clinic if we used the POCT device?

87% responded "yes"

2. Are you okay with "low" rather than an actual number of below 3.3 if we used the POCT device?

77% responded "yes"

Trial results:

Interpretation done by IH pathologist on February 15, 2012

1. "For use as a **screening device** when the level of concern using ICP-MS = 10ug/dL:

This device **provides results sufficiently accurate** for use as a screening device if the level of concern using the LeadCare II is set to 8 ug/L (sic – should be ug/dL) **when the level of concern using ICP-MS is 10 ug/L**" (sic – should be ug/dL)

2. "For use as a testing method which can **provide data for tracking and/or trending** accurate Whole blood Lead Levels in the paediatric population:

This device is **not adequate for providing data** for this use if the average of Whole Blood Lead levels in the pediatric population is <10ug/dL.

The vendor claim for precision at this level is 17.5%, the observed precision with this study was 10.5, **therefore a Whole Blood Lead level measuring 5 ug/dL with this device may have an actual value anywhere from 3 to 7 ug/dL.**"

Dr. Larder's recommendation:

"It is my recommendation that the LeadCare II device should not be used to conduct point of care testing for blood lead levels.

There are two reasons for this recommendation:

1. It is likely that in the near future the level of concern for blood lead will be significantly reduced to levels that will render this device unsuitable for screening purposes.
2. The results obtained with this device cannot provide data for tracking blood lead levels in the pediatric population."

Key Messages for the Public

- Although parents preferred the Point of Care Testing (POCT) method, the POCT trial showed that this method is unsuitable for screening children's blood lead levels in Trail.
- Blood lead test results need to be precise at low levels given the new blood lead guidance coming from the US CDC.
- With current technology, a POCT blood lead reading of 5µg/dL may *actually* be anywhere from 3 to 7 µg/dL.
- POCT results are not accurate enough for us to monitor the Trail average of children's blood lead levels since our average is around 5µg/dL.

Where do we go from here?

Due to the positive feedback for use of the POCT from the parents that participated in the trial, the THEC will continue to watch as technology improves with POCT devices.

The next generation of POCT will need to be more precise to be able to screen for elevated blood lead levels using the proposed new lower blood lead reference values.

Submitted by:

Jeannine Stefani

Trail Lead Health Services Coordinator

May 1, 2012

Trail Health and Environment Committee

Interior Health Report

May 1, 2012

1. Point of Care Testing (POCT)

- Recommendations attached

2. Case Management

- Able to contact 3 of 4 new case management families from Feb. 2012 clinic

3. Sandboxes

- 8 picked up, 5 more spoken for but not picked-up

4. Community Education

- Participating on the Family Action Network working group. New name for the group following-up from the Family Action Days in May 2011
- Family Fun Day April 28 – Unable to attend but gave Home and Garden program Family Health information
- Beaver Valley Adventure Picnic June 11th
- Teddy Bear Picnic June 27th
- Radio ads to start mid May to mid September

5. Continuing Education

- Jeannine Attended US CDC National Healthy Homes and Lead Poisoning Prevention Training Center in Chicago March 28-30th. Attended the Case Management track.
IH provided me with Education Leave and US CDC provided me with a scholarship for the conference and travel costs.
- Jeannine planning to attend the Lead Collaborative Consortium conference in Hamilton at McMaster University June 7th and 8th, 2012. IH has funded Jeannine to attend. To assist Steve Hilts in a presentation for the conference about the Trail experience.

6. Fall Blood Lead Clinic prep

- To start utilizing 3 databases to find eligible children to invite to clinic

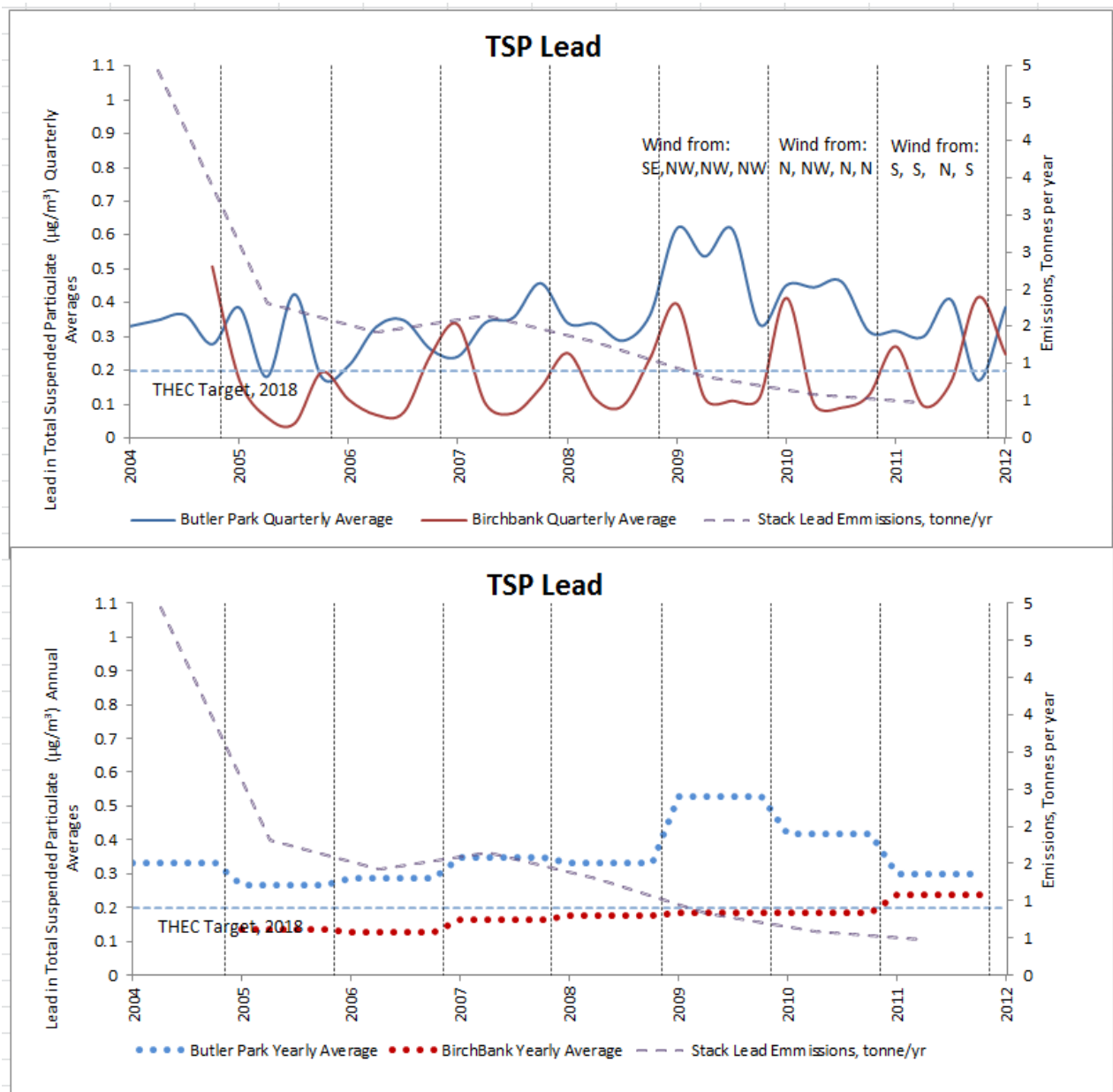
Trail Health & Environment Committee – Teck Report

May 1, 2012

Air Quality Program

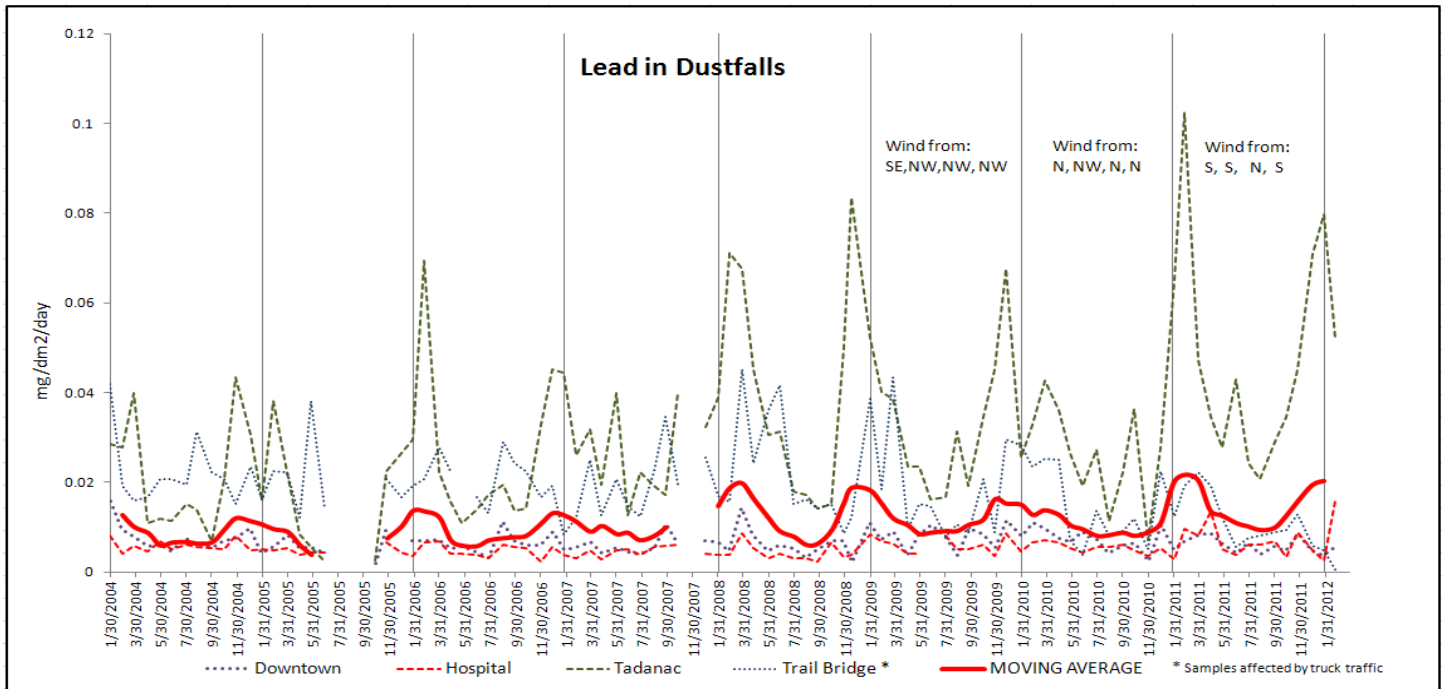
Lead – Total Suspended Particulate:

- Graphs have been improved to also show stack emissions and predominant wind direction (quarterly, as measured at Maintenance Services Building). Stack emissions have continue to drop, but there has been variation in predominant wind direction.
- Most recent Quarterly averages for Lead in ambient (community) air have decreased since 2009; however this is a reflection of seasonal variation: prevailing winds were more predominantly directed towards Birchbank (from south to north) in 2011, which decreased levels at Butler Park but increased levels at Birchbank. Overall average is increased since 2005, and is above the current 2018 THEC target.
- The discrepancy in trends between stack emissions and measured TSP in air is believed to be sourced from fugitive dust.
- Trail smelter’s releases of lead to air are still amongst lowest in industry.



Lead in Dustfalls (monthly):

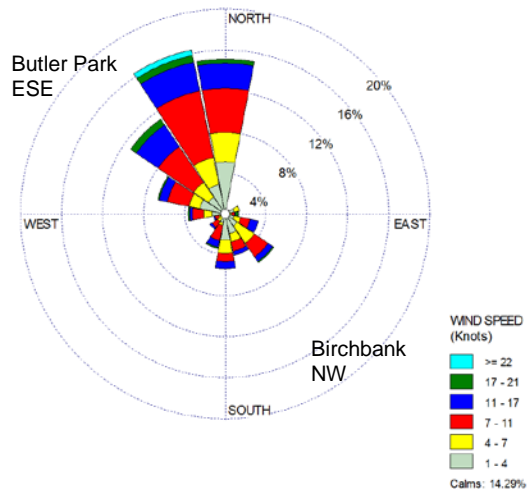
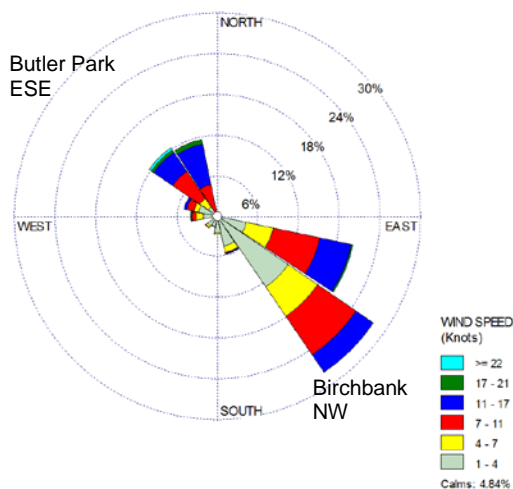
- Chart has been improved so trends are easier to see, including quarterly predominant wind as measured at Maintenance Services.
- No regulatory basis for comparison- used by Teck to monitor trends over a wider area (more stations).
- In general, average data appears to follow a seasonal cycle that has not changed significantly during the reporting period. The seasonal cycle peaks during the winter months, with some variation that appear to be due to weather conditions.
- The January 2011 winter peak in Tadanac came back down to a more typical range in December 2012 – Tecks data interpretation is that the peak in Tadanac January 2011 is the result of unusual winds during that season.



Example Wind Roses (wind directed from...)

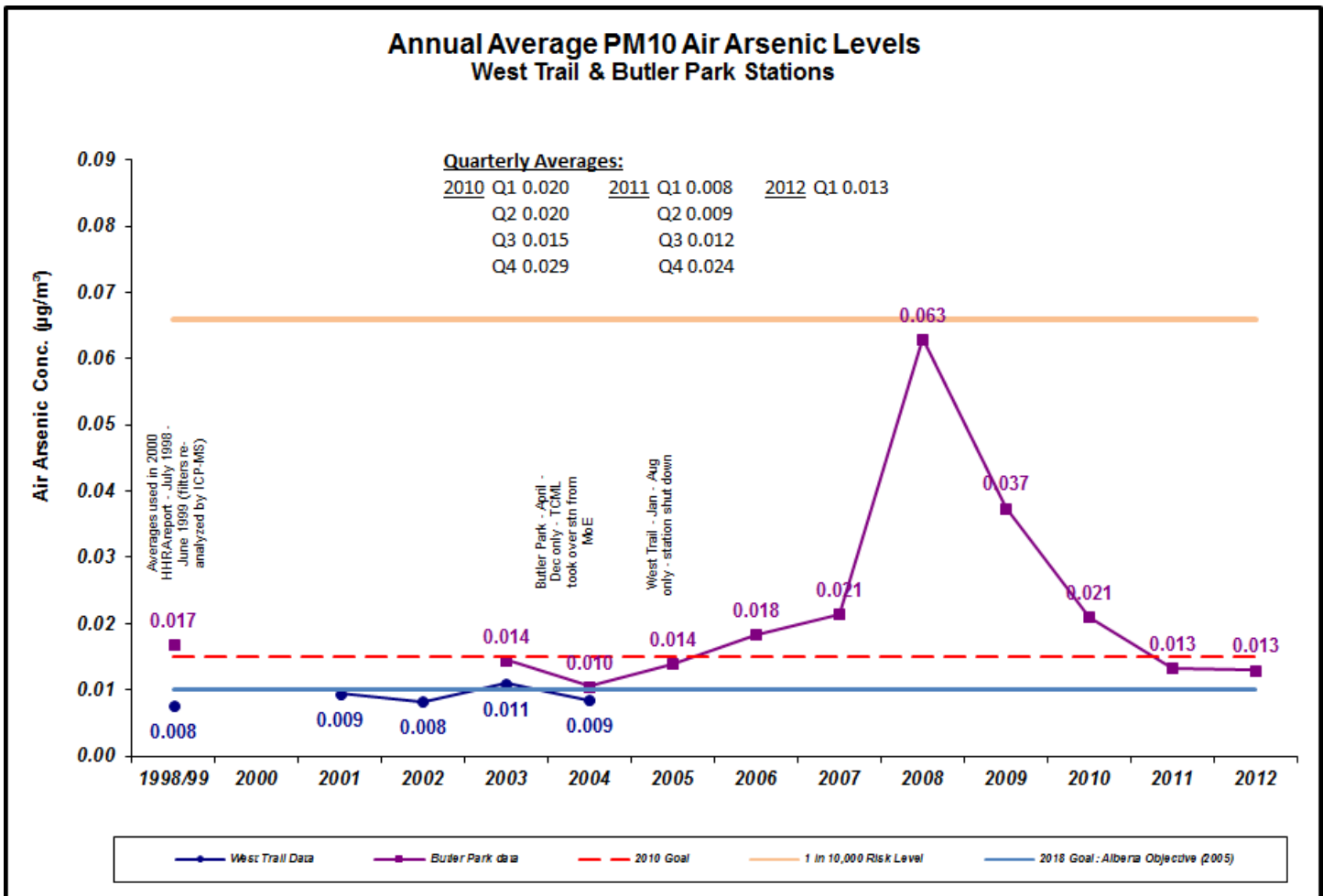
January 2009 Windrose (typical winter)

August 2010 Windrose (typical summer)



Arsenic- PM10:

- Arsenic in ambient (community) air has returned to pre-2004 levels, with 2012 average to date of 0.013 $\mu\text{g}/\text{m}^3$ approaching 2018 goal of 0.010.
- Trail smelter's releases of arsenic to air are amongst lowest in industry.
- Improvements appear to be the results of actions taken at the Continuous Dressing Furnace and Refinery Scrubber Stack.



Teck



Trail Health & Environment Committee: Fugitive Dust Update May 1, 2012

Fugitive Dust Project:

Project Goals



- Reduce fugitive dust emissions
 - Improve materials storage for raw materials, intermediate process materials and recycles at Trail Operations
 - Develop sustainable materials transportation, handling and recycling practices
 - Reduce fugitive emissions from existing processes and infrastructure
- Develop 5-year Plan with milestones and targets to achieve THEC 2018 ambient metal targets
 - Improve risk and source identification
 - Focus on continuous improvement
 - Develop improved control measures to prevent excursions from resulting in elevated fugitive emissions

Fugitive Dust Project:

Project Status



- Project team established
 - 2 full time Teck engineers on project
 - Bill Jankola – Project lead, former Chief Metallurgist at Trail Operations
 - Maura Malone – Senior Production Engineer
 - Extensive internal support, including:
 - Operations and Services representatives
 - Teck Environmental group
 - Technicians
 - Consultants
 - G.F. Kenyon
 - Outside engineering
 - AMEC
 - Hatch

Fugitive Dust Project:

Project Status



- Benchmarking with other operations
 - Met-Mex Peñoles; lead-zinc smelter in Torreón, Mexico
 - Vancouver Wharves concentrate unloading
 - Waneta concentrate unloading
 - Teck Red Dog concentrate storage in Alaska



Fugitive Dust Project:

Project Status



- Material storage (investigating feasibility of enclosures)
 - Feasibility estimates in-progress for enclosures (target summer 2012)
 - Smelter Recycle area
 - Roaster Feed Pad
 - Feasibility estimates for covering 2 other areas in development (target end of 2012)



Fugitive Dust Project:

Project Status



- Risk assessment and gap analysis
 - Identifying and mapping all potential sources on site
 - Roads, buildings, material handling, processes
 - Developing measurement procedures
 - Based on EPA methodology
 - Consolidated existing plant initiatives focused on reducing fugitive dust:
 - Baghouse improvements
 - Wheel washing, sweeping and road washing
 - Plant procedural improvements
 - Engineering and maintenance improvements at KIVCET
 - Working on gap analysis of existing work and identified sources to determine prioritization

Fugitive Dust Project:

Path forward



- Complete feasibility estimates for enclosures and covers
 - Internally gate projects for approval
- Benchmark sources and prioritize areas for improvement
 - Improved source identification
 - Develop 5-year rolling plan
 - Focus on continuous improvement

THEC Meeting May 1, 2012 – Program Manager’s Report

5 Year Plan Committee Support

The 5 Year Plan Committee met April 20. The discussion included:

- updates on CDC and Health Canada guidance on blood lead levels as well as the legislative amendment process;
- reviewing the plan outline and discussion of who is responsible for contributing information to and/or writing different sections. Note that we will be developing Terms of Reference for a consultant to conduct an updated literature review.
- starting to develop a program “inventory”, basically a description of current programs and protocols including budgets for each part of THE Program. This is one of the starting points for the plan.
- identifying key questions arising from the new/impending government guidance. Preliminary list of key questions are:
 - Should we expand **blood lead testing** to include Area 1? Or should we not expand testing, given the emphasis on primary prevention?
 - Should do more population based **primary prevention with families** of young children? If so, what might this look like?
 - Should we expand **case management** to families where children have BLLs below 10µg/dL?
 - Should we be doing something different related to **soil assessment and remediation**?
 - What are the potential **resourcing** issues related to any refinements we’d like to make?
 - What should we do to improve our **communication and engagement with families** of young children?
- determining next steps to resolve the key questions, identify parts of the program we might want to refine, and start the discussion about those refinements.

RECOMMENDATION - The 5 Year Plan Committee proposes the following:

- A one day workshop during the week of June 18. The purposes of the workshop are:
 - to resolve issues around interpretation of the new/impending guidance (e.g. Feb. 28 Report)
 - to identify and discuss program areas and activities for potential refinement (building on the list of questions shown above)
 - to begin discussion of program refinements and/or identify process for decisions about refinements
 - to refine public messages about the implications of the new guidance, if possible
- The workshop will be run as a strategic planning session set in the context of the 5 year planning process and the new/impending guidance
- THEC members are invited to participate. The date will be finalized by a “doodle poll” of interested participants; the poll is underway with the 5 Yr Plan Committee.

New/impending guidance on blood lead levels

The CDC has not yet released its guidance. It is still reviewing recommendations from its advisory committee. A verbal update will be provided to THEC on May 1.

Ruth’s support for THEP activities

The past two months has focused on:

- Supporting Bruce Enns to hire our new community programs representative, Cindy Hall. Welcome Cindy! Cindy will be working full time out of the Community Program Office with responsibilities for supporting the Home & Garden Program as well as THEP Management and Administration. Transition from Chris Pistner to Cindy is happening quickly as Chris is wrapping up work and moving to Chile. Thank you, Chris! Thank you, THEC, for your patience during this transition.
- Developing the Spring Newsletter. The newsletter will be mailed to residential addresses in Trail and Rivervale on May 3 or 4. This is just in time for our first Home & Garden Day, Saturday May 5.
- Organizing the reprinting of program materials. We're doing a reprint of our family health and home & garden materials to support public outreach over the coming months.
- The website revamp. I've been working on a more thorough draft of the text and instructions to the web designer. The draft will be ready by May 8. Michael Hepher will design an "alpha" version of the site by June 7. He and I will do a preliminary review and Mike will make edits. Then we will convene a meeting of the Website Revamp Committee to conduct a final review. Mike will make final edits and then the site will be ready to "go live". Given the timing of these steps, I've proposed to Mike that we look at launching the "new look" website at the end of the summer, to be timed with the Fall Newsletter and our promotion of the blood lead clinics.
- Support for the 5 Year Plan process, as described above.

Fiona's support for THEP activities

I have been working with Mike Hepher and THEP partners on the Nutrition brochure. First rounds of editing are complete and it is currently with Mike in the design stage.

Family Action Network Update

Since mid-February a committed Working Group, with me as their Coach/Consultant, has been meeting regularly to move forward on ways to make Greater Trail the best place to raise a family. This builds on the work of the Success by Six coalition and Family Action Days. We are in the development phase of figuring out a model and methods of supporting families in more integrated ways, including advocacy at community and political levels, information provision, service provision, programs, and skill-building. Even as we focus on research and development, we are taking action toward our broad goals, such as raising awareness of the importance of investing in families at the recent AKBLG conference in Trail. A meeting of the advisory committee was held April 30 and will be reported on verbally.

Next steps include:

- broadening our participation base to include all sectors and other communities (Rossland, Warfield, Beaver Valley),
- increasing our feedback from families on how we can best support them,
- hosting representatives from Revelstoke where an innovative and collaborative system of knowing every child has been developed,
- and fine-tuning our own model and methods to the implementation stage.

Home and Garden Report for May 1, 2012

Personnel and Office Changes

Hired Cindy Hall as the new Community Program Rep / Office administrator

Hired Joseph Hopkins as Agathe Bernard's replacement

Hired (through internal SNC transfer) Catherine Juelfs as second field person

Getting a second van to accommodate additional work and staff

Now have our brand new XRF soil and lead paint screening device

All staff to be trained on May 3rd and subsequently certified to use XRF

Gale and Mark Stromberg will be leaving us near the end of May so we are taking advantage of their experience in training the new personnel as much as possible before then

Bruce becomes Project Manager and SNC's Trail office Operations Manager

Program Notes

Have had sporadic activity on vacuums, HRSP and Radon kits

Phone calls and drop-ins for soil assessments are starting to pick up speed

Have had one homeowner bring in some paint samples for lead analysis

Spring garden remediations are getting underway week of April 30th

Community events presence:

Family Fun Day – April 28th – Joseph with info and hand-washing station

Home Hardware –

Columbia Valley Greenhouses –

Maglio's

~16 Case management and 20 yard support soil assessments getting underway week of April 30th

Additional property assessments planned in 'outer' areas to get a better idea of community wide lead patterns

Plan for an expanded Long Term Study to try to explain more of the variability in the results collected to date

Plan to conduct a relatively simple 'grass clippings' experiment to determine if there is significant lead in clippings, and to make recommendations for use or not in veg gardens