

**Spokane River Regional Toxics Task Force
DRAFT MEETING SUMMARY**

September 24th, 2014 | 9:00am – 12:30pm

Spokane County Water Resource Center | 1004 N. Freya Street | Spokane, WA 99202

Attendees

*Voting Members and Alternatives (*Denotes Voting Member)*

Tom Agnew*, Bijay Adams – Liberty Lake Sewer and Water District

Dale Arnold*, Lynn Schmidt, Elizabeth Schoedel – City of Spokane

Galen Buterbaugh* – Lake Spokane Association

Doug Krapas* – Inland Empire Paper Company

Mike LaScoula*, Sandy Phillips – Spokane Regional Health District

Bud Leber* – Kaiser Aluminum

Dave Moss*, Rob Lindsey, Mike Milne – Spokane County

Mike Petersen* – The Lands Council

Advisors

Adriane Borgias, Holly Davies – Department of Ecology

Jule Schultz (on phone) – Riverkeeper

Public

John Beacham – City of Post Falls

Lisa Dally Wilson – Dally Environmental

Dave Dilks – Limnotech

Kevin Harris – Ruckleshaus Center

Don Keil – City of Coeur d’Alene

Jim Kimball – JUB Engineering

Ken Windram – Hayden Area Regional Sewer Board

Lisa Rodenburg (on phone) – Rutgers University

Jule Schultz – Riverkeeper

Introductions and Agenda Review

Facilitator Chris Page (Ruckleshaus Center) welcomed everyone to the meeting and reviewed the agenda after a round of introductions. No changes were made to the agenda.

TTWG Report and Technical Topics

Bud Leber discussed the PCB workshop proposal. Sessions suggested by the Technical Track Work Group (TTWG) include an analytical session, a sampling session, a mass balance session, and a “Where to Now?” session. The Task Force discussed potential venues, time frame, guest speakers and session idea. The workshop will be held in a place that can accommodate multiple public guests and hold up to 80 people. Potential locations include but are not limited to WSU Spokane, Gonzaga, and Washington DOT.

The following is a compiled list, in no particular order, of suggestions from the Task Force:

- The workshop could include guests from other watersheds (Delaware River, San Francisco, Puget Sound, Jeff Louch from the National Council on Air & Stream Improvement).
- The workshop needs a clear intention to guide the sessions and facilitate a clear outcome (i.e. evaluate the intensive sampling and monitoring and delineate a path forward).

- Session on PCB sources and PCBs in buildings and schools
- Product testing
- Activities the SRRTTF needs to do to show measurable progress and messaging to the public
- Lessons from others doing similar work (Delaware River, San Francisco, Puget Sound, experts)
- Will there be a final report from the workshop addressing the results, conclusions, and a clear path forward?
- How does this process work for addressing other substances?
- Ecology personnel to be included in their areas of expertise (procedures for evaluation of laboratory data, blank corrections, sampling, Environmental Information Management)
- Statistical discussion and relevance of data at low concentrations
- Refocus on SRRTTF vision and adaptive management – is what we are doing helping? Do a SWOT. (Strengths, Weaknesses, Opportunities, Threats) analysis and identify a path forward.

ACTION ITEM: Kara Whitman (Ruckelshaus Center) will post a revised copy of the workshop session overview to the Task Force website and email Task Force members requesting feedback on the workshop and topic ideas to be addressed at the October 1st, 2014 TTWG meeting. (COMPLETED)

DECISION: The TTWG will proceed with the next phase of planning for the January workshop at its next meeting on October 1st, 2014.

Spokane County's 2014 Annual Report + Positive Matrix Factorization Analysis

Presentation by Mike Milne, Spokane County, and Dr. Lisa Rodenburg, Rutgers University – Mike Milne gave an overview of the County PCB, PBDE and dioxin sampling results as part of the Spokane County Toxics Management April 2014 Annual Report. The County permit requires the trackdown of Polychlorinated biphenyls (PCBs), Polybrominated Diphenyl Ethers (PBDEs), and Dioxin (2, 3, 7, 8 Tetrachlorodibenzodioxin or TCDD).

Some highlights from the presentation:

- Spokane County Regional Water Reclamation Facility (SCRWRF) completed in 2011 (NPDES permit Nov. 2011-Nov. 2016). Permit includes influent and effluent monitoring, toxics reductions plan.
- The County is currently sampling and analyzing PCBs (209 congeners), PBDEs (46 congeners) and Dioxin (2, 3, 7, 8 TCDD) in influent on a bimonthly basis, and effluent on a quarterly basis, using the EPA 1668 method.
- Source identification trackdown sampling: 4 sampling events at 3 locations in the collection system upstream of influent pump stations (100,000 people connected)
- Techniques: 24 hour composite samplers, Teflon tubing, pre cleaned by lab. Collect rinsate blanks, travel blanks and method (lab) blanks.
- Data quality review: Quality Assurance Project Plan (QAPP); examining: chain of custody (COC), surrogate recovery, reporting limits, duplicate relative percent difference, outlier identification, blank factors, travel and rinsate blanks, homolog patterns and totals comparisons.
- From October 2012 and December 2013, the SCRWRF removed about 97% of total PCBs and 99% of PBDEs from the influent. Dioxin was only detected in one sample.
- Concentrations are reported without blank corrections or censoring.

Question: Is the county removing phosphorus year-round? Answer: Yes, phosphorus is treated year-round through the addition of Ferric Chloride and a membrane removal technology. Questions for future consideration: Is there a difference when less Ferric Chloride is used? Does this help in removing other toxics?

Presentation by Dr. Lisa Rodenburg, Rutgers University -- Dr. Rodenburg presented her Positive Matrix Factorization (PMF) Analysis of the Spokane County data. Some highlights from the presentation:

- PMF is a robust multivariate statistical method for determining relationships and variability among inhomogeneous large complex environmental datasets. PMF helps us look at the “Big Data Set” of PCB congeners in a system to figure out the number of sources and the congener fingerprints.
- The more data the better the analysis.
- The data in the Spokane County system is similar to what is seen in other urban systems in the Eastern US (Delaware River, New York City area, etc.).
- Blank corrections not as important in influent samples since concentrations are higher (10,000s pg/L, vs. effluent samples at 100s pg/L). Regardless, blank corrections don’t seem to make a difference in the PMF method.
- Correlation Matrix: molecular weight increases with PCB Aroclor number. The higher the number the more chlorine. Correlations among various congeners reveal several trends.
- PCB 11 (3,3'-dichlorobiphenyl) is associated with pigments but also found with PCB congeners 77, 123, 155, 184, and 209. None of these are in the top percentages in influent. PCB 11 is the most abundant congener in effluent, but not influent. The significance of this is that the heavier PCBs are being removed in the solids whereas PCB 11 is more soluble in water and is not as well removed. Spokane County has more PCB 11 than other urban systems that Dr. Rodenburg has investigated. PCB 11 is strongly correlated to PCBs 35 and 77.
- PCB 77 is dioxin-like and accounts for 1-25% of total TEQ in these samples.
- Reducing legacy PCB sources will not fix PCB 11. The only way to get rid of PCB 11 is to eliminate the source, which is most likely pigments (ink or dyes).
- The County is doing a good job at removing high atomic weight congeners in the biosolids. PCB 11 is more difficult to remove because it has only two chlorines so it does not stick to the solids as well.
- Aroclors (legacy sources) have widely used before being banned in 1977, however they are persistent in the environment. Equipment containing Aroclors are still in use (1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, and 1268). Aroclors are combinations of PCB congeners manufactured for industrial use. Except for Aroclor 1016, the last two numbers in the name refer to the percentage of chlorine in the mixture.

Factor analysis: PCB 11 was found in all samples and is not generally associated with Aroclors. After removing PCB 11, a data matrix of the top 38 congeners was analyzed. This represents about 60% of the mass of PCBs in the effluent. Six factors were identified:

- Factor 1: “weathered” sample of lower congeners possibly atmospheric contribution; in the effluent because it is in the dissolve phased (8.2%)
- Factor 2: Aroclor 1254 ??%
- Factor 3: weathered (25%)
- Factor 4: weathered (13%)
- Factor 5: weathered (10%)
- Factor 6: 1254 + 1260 (41%)
- As more data is available more congeners can be included in the analysis.
- Results seem typical of urban wastewater (Aroclors comprise about 75% of PCBs in this system); there is no evidence of microbial degradation, which is usually seen as dechlorination)

Question: What was the historical use of Aroclor 1254? Answer: Aroclor 1254 had a broad range of applications. Aroclor 1268 had a bit narrower range of uses.

Question: What do you mean by weathered? Answer: This is a generalized term to describe compounds sampled that appear to be derived from Aroclors but could have changed due to exposure to air or biodegradation. This process can also inadvertently generate PCBs that have not been identified. (Definition from the Draft PCB Chemical Action Plan, Washington Department of Ecology 2014).

Question: Does weathered correlate to less toxic? Answer: This was not calculated but can be in the future. Factor 4 may not be very toxic.

Question: What is your opinion (Dr. Rodenburg) on the likelihood of future data changing the results? Answer: We would like to have enough data to separate the influent from the effluent. This will not be possible at this point because the effluent is only sampled quarterly. Factor 2 (A. 1254) will not change with more data, probably had a transformer leak or some big dump of 1254 at a one-time event.

Question: Was there any specific event that could account for the spike at the North Valley sampling location? Answer: Not that we can find and there is no stormwater influence. It is possible that it came from a roof drain or other illegal connection.

- Location trends: There were no obvious differences between sample locations. Need to worry more about Factor 1 (27%), 2 (Aroclor 1254) (46% of effluent) and 5(21%), all of which are experiencing high amount of removal (about 99%), Factor 1 has lowest molecular weight, which is harder to remove. This information can be broken out sample-by-sample if needed.

PBDEs: measured 46 congeners, included 24 in data matrix. Identified 4 factors.

- Factor 1 (.5% of total, Effluent. Dominant in effluent and shows evidence of debromination) in the collection system),
 - Factor 2 (43% of total, Penta –bde)
 - Factor 3 (46% of total, background)
 - Factor 4: (10% of total, Deca –bde)
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- 47, is a typical congener that is found in the Penta formulation and could also represent debromination. 47 and 99 always found.

Question: Can there be some microbial degradation in treatment? Answer: Residence time may not be long enough, both require anaerobic digestion; it is possible that some debromination happens in the digester. Somewhere upstream there is some microbial degradation occurring.

Question: What congeners were found in titanium dioxide? Answer: Congeners 206, 208 and 209 (if made through a chlorination process); the other manufacturing process does not produce PCBs.

ACTION ITEM: Mike Milne or Rob Lindsey, Spokane County will send copy of the presentation on Spokane County's 2014 Annual Report and Positive Matrix Factorization Analysis to Ruckelshaus Center. (COMPLETED)

ACTION ITEM: Kara Whitman, Ruckelshaus Center, will post the presentation to the SRRTTF website. (COMPLETED)

Draft PCB Chemical Action Plan

Holly Davies gave an update on the Draft Chemical Action Plan and invited Task Force members to attend the public meeting held in the evening on September 24th, 2014.

Questions:

Comment and Question: 2 cycle motors may be a source of PCBs. Yard equipment is a major source of CO₂ in Los Angeles. Is there anyone looking at these as a source for PCBs? Answer: CO₂ is included in air quality monitoring, but not PCBs.

Comment: Need sources of contact for dealing with waste oil with PCBs. People panic and dump waste in Sewer or other rather than pay a lot of money to dispose of it.

Comment: Mike LaScuola added that the Spokane Regional Health District is looking closely at schools and legacy PCBs. Some of the most heavily laden are grocery stores, small markets, and gas stations where there are PCBs in light ballasts and display cases.

Question: Do you (Holly) think a recommendation will come out of this similar to lead? How about landfills?
Holly: They are not looking at residential sources as much as public locations such as schools.

Comment: The Spokane River Forum webpage has a link where you can input a product to get rid of and it will tell you how to get rid of the waste. The public can go to www.spokaneriver.net/wastedirectory for information about proper toxics waste disposal.

Question: Is there a state program to deal with school PCBs? Answer: The budget package is in and they are going to hire someone to work with the school districts and develop a strategy for working with the school districts.

Update on quantifying PCBs Removed to date (SRSP)

Lisa Dally Wilson discussed the summary of collective Spokane River Stewardship Partners (SRSP) PCB activities including meetings, TSCA reform, monitoring, funding, and workshops. This document is a start in communicating Task Force activities and accomplishments to the public. It is one piece of the larger picture that relates to Measurable Progress. The Task Force is getting wide spread support for its efforts, including from the EPA and the Governor's office. Many are looking at the SRRTTF as a model for other efforts.

Task Force members discussed the need to continue to show their progress through summarizing qualitative and quantitative success and documenting activities on the Task Force website. The Task Force also discussed using this as a baseline for drafting an SRRTTF annual report. NOTE: the numbers of PCBs removed does represent an "apples to oranges" presentation since not all of the permits have the same requirements.

The Task Force discussed how this would relate to the permit renewal process and determining measurable progress. Adriane Borgias explained that including a "measurable progress" determination in permit renewal is a new activity for Ecology, so there are still discussions about the process.

Further discussion about how other data outside the direct scope and control of the SRRTTF might fit this, like waste disposal data or activities, i.e. the "collateral" benefits that contribute towards overall progress.

Discussion items:

- Timeframes included so that the Task Force can begin to look at trends over time
- Annual summary of progress
- Quantifying identification and disposal of waste matter for each permit holder? Is there a PCB category when disposing of waste?

- Who will compile the data? It is part of individual permit requirements, but we need to compile information collectively. Is this a Task Force activity or a work group activity? Task force staffing?
- Website location for communicating measurable progress (year in review etc)

ACTION ITEM: Adriane will request that Ecology's Permit group attend a SRRTTF meeting to discuss what data is needed, how the data collected and what is the process for determining measurable progress. (COMPLETE: Permit group is available for the February 2015 meeting).

Executive Director for SRRTTF: Thoughts on Concept, Role, Skillet

The Task Force discussed the possibility of an executive director or other staff position. There is a need for a point person for grants and funding, facilitation, and other duties. The Task Force's Administrative & Contracting Entity (ACE) does not have a recommendation at this time, but would like Task Force input.

This person could handle collating the measurable progress summary, grant applications, etc. The Task Force discussed that this role would need to be well-defined and distinguished from a staff person for ACE who reports to and takes direction from the SRRTTF. Facilitation was mentioned as a possible role; however concern was raised over this possible role. An independent facilitator is an important function. A concern was mentioned about whether there would be enough funding for both an Executive Director and a facilitator. Discussion about whether this would be an Executive Director role or whether a staff administrator type role.

ACTION ITEM: ACE to create staffing suggestions, "Position Description" and bring it back to the SRRTTF for discussion.

Op-Ed

The edited version, slightly altered from the version posted to the SRRTTF website one week prior to the meeting, of the OP-Ed for the Spokesman Review was presented to the group.

The Task Force made several minor changes to the article. There was some discussion about the fact that the Spokesman-Review would probably edit/shorten the article. Some changes could be made (like putting the SRRTTF members in a by-line at the end).

Decision: SRRTTF approved the article with corrections. Doug Krapas will work with the Spokesman-Review with respect to publication, which may include editing by the newspaper. (UPDATE 10/6/14, Doug Krapas suggested that the article be submitted a member of the Task Force and not by his firm, as publishers may have concerns about letters submitted by PR firms.)

Events Outreach and Funding

Adriane Borgias gave a presentation at the Site Hazard Assessment Meeting and also the Sewer and Water District Association meeting.

The Columbia River Toxics Working Group, which is primarily a policy working group, is holding a meeting on October 23, to be at the Water Resources Center. Someone from the County will attend and other members of the SRRTTF are invited. Adriane Borgias will update the group on the sampling activities that are happening along the river. If SRRTTF members want to give a presentation or be on the agenda, contact Adriane Borgias ASAP as the agenda is being put together.

Communication Strategy

Chris discussed the proposal from the TTWG work group to reform the communications work group. The Task Force discussed the concept and expressed concern about funding being included in the list of tasks for a communication work group. There was also concern over adding another work group to the already busy schedule of Task Force members. Public Information Officers (PIOs) and the experts could provide the needed outreach communications strategy. The Task Force needs to provide guidance to the PIOs.

Kara Whitman has a student intern that can assist with developing some materials to post and/or hand out at the November 2014 Spokane River Forum meeting.

Other discussion items and suggestions brought up by Task Force:

- The PIOs need to be involved in the process for some time to get the “flavor” of the type of outreach needed (though the Inland Empire Paper PIO is fairly versed in Task Force activities).
- Big picture strategy. Avoid emergency communications.
- If we remove the goal of “respond to funding and communications opportunities...” we could put together a small team of representatives to get PIOs working on this.
- Ruckelshaus Contract: what is their role in this activity? Chris: the Ruckelshaus does have a role in this as part of its scope of work.
- Have PIOs attend the next meeting with the purpose of having them hear what the task force needs.

DECISION: The decision to reform the communication work group will be tabled at this time until ACE addresses the staffing question and reports back to the SRRTTF.

ACTION ITEM: The Ruckelshaus Center will review this and see what pieces fit within their contracted scope of work.

ACTION ITEM: Invite the PIOs to the next meeting so they can hear what the TF would like to do then the PIOs can meet and develop documents as they did before.

ACTION ITEM: Need to get a display ready for the Spokane River Forum

\$50 million Columbia River fund

Mike Peterson, Tom Agnew and Adriane Borgias drafted a letter of support for the legislation that would provide \$50 million to Columbia River water quality work. Tom explained that the letter is meant to show that the work the Task Force is doing is groundbreaking and connected to the funding opportunity.

Decision: The Task Force approved the letter. Bud Leber as Chair of the TTWG will sign and send on SRRTTF letterhead and include date and page number on each page. (COMPLETE)

Action Item: Adriane Borgias to send Word Version and email addresses to Bud Leber. (COMPLETE)

ACTION ITEM: The Ruckelshaus Center will pull together an electronic template with signatures of all voting members of the Task Force for future use.

Updates and Announcements

Adriane Borgias is reviewing the QAPP for Little Spokane River PCB assessment. Interested parties are requested to contact her if they want to review.

Action Item: Adriane Borgias to send copy to Galen Buterbaugh, Mike LaScoula, and Doug Krapas. (COMPLETE)

Public Comment: No public comment.

Next SRRTF Task Force meeting: October 22nd, 2014 at Liberty Lake Sewer & Water District, 9am to 12:30pm.

The next Technical Track Work Group Meeting is October 1st, 2014 from 10am-12pm at the Department of Ecology.
