

TSCA/iPCB/Green Chemistry Workgroup Meeting Summary
March 3, 2021

TSCA Members in Attendance

Ben Floyd (White Bluffs Consulting)
Brian Owen (IEP)
Caroline Hammett (IEP)
Cheryl Niemi (Ecology)
Craig Manahan (Ecology)
David Darling (ACA)
Doug Krapas (IEP)
Elsa Pond (WA DOT)

Gary Jones (Printing United Alliance)
Jeff Donovan (City of Spokane)
Lauren Heine (NW Green Chemistry)
Lisa Dally Wilson (Dally Environmental)
Mike Peterson (The Lands Council)
Robert Mott (CPMA)
Scott Braithwaite (ACA)

iPCB/TSCA Agenda Items Discussed:

1. WA HHWQC Lawsuits: Action: D. Krapas and others (i.e.: Ecology) to provide any updates on the following lawsuits

- a. Doug shared that there are new developments due to Biden requesting all environmental lawsuits to be held in abeyance. The DOJ filed two 100 day abeyances. The WA State vs. EPA lawsuit abeyance deadline ends on June 4, 2021. The Puget Soundkeeper Alliance & Makah Indian Tribe vs. EPA lawsuit abeyance deadline ends on June 25, 2021.

Previous Meeting Notes:

- b. WA State vs. EPA -WA State filed a lawsuit in federal court challenging reconsideration and approval of state standards on 06/08/19
 - EPA moved for summary judgment in this case in June 2020
 - Motion has been fully briefed and waiting for a decision from the court
 - Washington State and two intervening tribes have files amended complaints to challenge the substantive decision by EPA to withdraw the federal HHC
 - Answers to the amended complaints are due 11/9/20
 - A joint status report was filed on 11/12/20 in which the parties agreed to file an additional proposed schedule for any additional briefing in the case. The State of Washington has not made a decision on this question but the two intervening tribes have agreed that they do not need additional briefing to resolve the claims in their amended complaints.
- c. Puget Soundkeeper Alliance & Makah Indian Tribe vs. EPA – Action filed on 6/11/20 challenging EPA to withdraw federal HHWQC
 - Case assigned to same judge as 1.a. above
 - No further action has taken place in this case
 - An answer to the complaint by EPA was filed on 11/9/20

- A joint status report was filed on 1/12/20, but there has been no agreement on a briefing schedule to resolve the matter. The plaintiffs are reviewing the Administrative Record before they agree to a briefing schedule. Joint status report is to be filed on 11/12/20

2. Update on PCB EPA Method 1668 study of TiO₂ Pigments: Action: J. West & M. Ober to continue providing updates on the TDSC project

- a. M. Ober was not present but emailed the following update: *The members of the TDSC are meeting this Friday to discuss the aggregated data from our 3rd party QC group and to discuss and begin drafting the report that will be submitted to the SRRTTF. Also, based on discussions with Lara {Laura Floyd, White Bluff Consulting, Facilitators for SRRTTF} it looks like we will be presenting this to the TF at the May 26th meeting. (since there is no April meeting scheduled)*

Previous Meeting Notes:

- a. Data is sitting with QC for review before the report is drafted. A presentation of findings should be possible for the March or April SRRTTF meeting.
- b. M. Ober provided an update that all samples have been collected and submitted to the laboratory, and that laboratory testing of all samples is taking place concurrently. Preliminary data may be available for the February iPCB/TSCA and SRRTTF Meetings.
- c. The project has experienced multiple setbacks, including natural disasters (hurricanes) in the southern U.S., COVID delays and holidays. Sampling is expected to be completed by the end of next week (December 11, 2020). The TDSC remains optimistic that laboratory analysis will be completed in January, 2021 with a possible presentation to the SRRTTF at the February meeting (February 24, 2021).
- d. There are a total of four (4) facilities participating in the sampling: One has completed sampling, two are in process, and one was shut down due to a hurricane and is once again operational and has begun sampling.
- e. Approximately twelve to sixteen samples will be collected plus blanks
- f. All of the samples that are collected will be analyzed together to minimize the potential for background contamination and variability.
- g. SGS-AXYS in NC has estimated a 30 day turn around for analysis of all samples.
- h. Data analysis and the final report will be performed by Environmental Standards. They remain hopeful that a draft may be available for iPCB/TSCA workgroup review by the end of 2020.
- i. A final report will likely be available for the full SRRTTF during the spring of 2021.

- j. Training for sampling of the various TiO₂ pigments used in coatings, plastics and paper was completed in August and sampling is now dependent on manufacturer's availability.
 - k. There were requests on the format for presenting the data (range of results vs. aggregate), but Michael cautioned that the data must be presented in a manner to protect the confidentiality and proprietary nature of the participating manufacturers.
- 3. Education/Outreach: Action: M. Peterson to provide updates on the Education & Outreach Workgroup efforts and The Lands Council's national outreach campaign to expand knowledge on the iPCB issue:**
- a. M. Peterson shared that there are four people working on developing the national outreach campaign at The Lands Council. Their tasks include creating a spreadsheet of targets in the campaign, researching fish advisories, and developing the tool kit (outreach materials and website update). Names from ECOS and tribes have been added.
 - b. A scope of work should be prepared and shared with the workgroup in the next two weeks, and the workgroup is asked to provide comments by its next meeting.
Action: M. Peterson/Lands Council to provide scope of work to iPCB/TSCA Workgroup for comments

Previous Meeting Notes:

- a. M. Petersen shared that development of the outreach plan is ongoing. They are meeting with Kyle Shimabuku from Gonzaga to see if they have interest in helping. Gonzaga was included in the proposal for \$5,000 concerning funding allocation. M. Petersen shared that operating under the first 70% of the funding, \$3,500 is available for Gonzaga.
- b. M. Petersen agreed to share the project's scope of work and PR materials for iPCB/TSCA Workgroup review. The toolbox will consist of specific types of outreach for different groups: manufacturers, wastewater treatment, municipalities, agencies, etc.
- c. G. Jones shared that the EPA should be targeted instead of this national campaign.
- d. D. Krapas and M. Petersen shared that they have tried working through the EPA, GAO, tribes, state agencies, and ECOS.
- e. L. Dally Wilson shared that a list of colors potentially containing PCBs is needed. She asked if this information could be incorporated into the E & O's Toolbox. L. Heine agreed.
- b. Mike Peterson (The Lands Council) shared that E & O is working on its national campaign and has been navigating through an evolving scope. Research is ongoing into the Fish Advisories related to PCBs. E & O is focused on Spokane

and the Roanoke River. The group is hoping for additional funding and is working towards a scope and budget for SRRTTF consideration at the January meeting.

- c. Gary Jones (Printing United Alliance) offered to work with E & O to correct misinformation and provide industry-side perspective and collaboratively participate in the process.
 - d. Doug shared that the iPCB/TSCA Workgroup will continue to support the E & O activities as needed.
 - e. The Education and Outreach (E & O) Workgroup is taking the outcomes from the iPCB/TSCA Workgroup and the iPCB Workshops to develop E & O strategies on the iPCB issue. This will include working with other watersheds to implement many of the actions identified from these efforts. The E & O Workgroup intends to present a proposal outlining these strategies to the SRRTTF for consideration at the December meeting.
 - f. The iPCB/TSCA Workgroup will continue to support the E & O activities as needed.
 - g. Outreach from the Gonzaga research effort on iPCBs in Products to support a data base and a subsequent presentation at the Roanoke River Conference, resulted in numerous contacts in other watersheds that are interested in information exchange with SRRTTF efforts.
 - h. M. Peterson and others (Lisa Daly Wilson, Joel Breems, etc.) will take this request to develop an outreach strategy to the Education & Outreach group that may be better suited for this scope of work.
 - i. We will keep this project as a placeholder on the iPCB/TSCA workgroup to assure that a strategy is developed for outreach to these other watersheds.
 - j. Gonzaga and the Lands Council received an offer to present on the PCB data base development work for the SRRTTF at the virtual Roanoke River Conference on October 21-22.
 - k. A draft of the presentation was sent to iPCB/TSCA workgroup members on September 2nd with a request for comments by September 9th.
 - l. M. Peterson believes that their half hour presentation will be in the morning of October 21st.
 - m. Additionally, sharing the driver behind this need - the discrepancy between what is allowed in products under TSCA vs water quality regulations for PCBs.
4. **iPCB Workshop/2021 Proposed Projects: Action: D. Krapas to provide updates to 2021 projects developed by the iPCB/TSCA workgroup.**
- a. D. Krapas submitted a scope of work for Project #4 to the TTWG. This project ranked very high relative to other TTWG project proposals. The technical requirements of the projects are well suited to David Dilks performing the mass balance and might even be possible given his existing budget. **Action: D. Dilks**

to confirm that this scope of work can be conducted under existing budget, and if so, an estimated schedule for completion.

- b. L.D. Wilson shared that a more formal poll will be conducted in TTWG before projects are brought to the Task Force. David Dilks is looking into the project proposal now to verify if he can perform the work.
- c. In response to a question from G. Jones, D. Krapas clarified that this study will look into both sources and pathways using existing data in a mass balance. According to the scope of work, the sources of data will come from PCB concentrations measured by industrial and municipal treatment plants, PMF analysis conducted by Lisa Rodenberg of Rutgers University, fish tissue studies, water column data, sediment and biofilm data.
- d. D. Krapas shared that the Scopes of Works for Project # 2 and 5 are currently being drafted. It is suggested that these two projects be implemented by 3rd party contractors (i.e.: Gonzaga, Rutgers, etc.) since they are primarily research projects at this stage. A single page scope of work and a Request for Proposal are being developed for each. **Action: D. Krapas to provide Scopes of Work for Projects #2 and #5 for iPCB/TSCA Workgroup review and comment**
- e. D. Krapas raised the point that we should include the State of Washington PCB Purchasing Policy in Project #5, since the purpose is to identify how and if procurement policies on PCBs are being implemented. This would add the state to the previously addressed question about HP and Apple changing their requirements from 50 ppm to 0.1 ppm.
- f. C. Niemi and E. Pond identified a source at DES, Alexander Kenesson. D. Krapas offered to forward contact information to D. Darling, who will be asking for a status update on the DES PCB procurement policy. The group would like to arrange for Alexander to come present and answer questions at the iPCB/TSCA Workgroup meeting. C. Niemi and B. Floyd discussed having this meeting before inviting him to present for the full Task Force, so that technical questions can be explored in detail. The workgroup is asked to provide Alexander with questions to prepare for the meeting. **Action: D. Krapas to forward DES contact to D. Darling**

Action: C. Niemi & B. Floyd to arrange for DES to present to iPCB/TSCA Workgroup

- g. C. Manahan shared that he is in talks with HP and can confirm the company has been doing testing for PCBs as well as surveying and telling their suppliers about the issue. Manahan was asked to share his background: he is a chemist working with C. Niemi at the Department of Ecology and has experience working with Safer Products.

Previous Meeting Notes:

- a. Project #2: List of Pigments (Chlorinated vs. Non-Chlorinated)
- b. Project #4: Sources & Pathways of PCB-11
 - D. Krapas asked if David Dilks should be involved with the project.
 - M. Petersen shared that the route of exposure could be inhalation, but there isn't data. PCB 11 is hydroxylated and metabolizes, so while it doesn't show up in fish tissue studies, it could be present in a new form. He cautioned that health studies are long and complicated.
 - K. Rains said that the intent of the study matters. It should be to inform how the Task Force can reduce PCBs to the Spokane River. D. Krapas shared that this is why there is a distinction between this project and the industry group project.
 - K. Rains shared that Ecology will have to advise on the delisting of the Spokane River as Impaired.
- c. Project #5: Lower Procurement Limits Campaign
- d. Project #1: Newsprint/Graphic printing trials w/ Non-Chlorinated Inks/Pigments
 - The list of pigments created in Project #2 will be used
 - G. Jones shared that the trial would need a protocol to be established for the data collected and measured. Categories could include ink mileage, tonal densities, and performance. Jones said we should reach out to George Hughes to help develop the standard protocol. D. Krapas offered to collaborate on this.
- e. Project #6: Further Develop iPCB Education and Outreach Campaign
 - The group discussed whether this project should belong to the E & O Workgroup. M. Petersen suggested keeping it in this workgroup to address the technical input and resources from this group that will inform next steps. K. Rains supports collaborative approach with both workgroups with the iPCB/TSCA Workgroup supporting the technical aspects and the E & O Workgroup working on the outreach effort.
 - D. Krapas shared that the group should stay open to expanding the outreach message.
- f. Project #5: Lower Procurement Limits Campaign, Phase 1 – 3rd Party Research Effort
- g. D. Krapas asked if the current limits are being enforced. He suggested 3rd-Party scoping and asked if Kyle Shimabuku, from Gonzaga, might be interested in involvement. Project No. 4: Concerning PCB 11 Research
 - Karl Rains (Ecology) stated that Ecology could support this research if it is focused on source identification and reduction. The wording and purpose of this research effort must fit into the current scope and mission of the Task Force.

- Doug Krapas (IEP) and Mike Peterson (The Lands Council) agree that a better understanding of PCB 11 is needed due to its significance in the Spokane River watershed as the most prominent congener found in the water column.
 - Jeff Donovan (City of Spokane) emphasized that understanding the implications of specific PCB congeners is important in lieu of restricting all to the same level.
 - Gary Jones (Printing United Alliance) argued that we need a better understanding of PCB 11, because it is the most common PCB found in the Spokane River water column. There needs to be a better understanding of PCB 11's source and impact in order to know how to value/rank it. All PCBs are currently regulated in the same way, but there should be a way to rank PCBs so that the response can be better focused.
 - Lauren Heine (NW Green Chemistry) cautioned that embarking on ranking all PCBs is a very large project to tackle. There is a huge amount of information unknown about the health impacts of PCBs.
- h. Discussion turned to creating a different group to work on projects that might not qualify under the Task Force's mission. Project numbers 3, 4, 9, 10 and 11 fall into that category. These include evaluating the fate of PCB 11, developing a certification program for pigments, and the projects including petitioning the EPA. Doug Krapas and Mike Peterson, among others, agreed to work together in a separate group on PCB 11 research with a focus on identifying sources and valuing PCB 11's impact for work fitting the SRRTTF.
- i. Project No. 2: Developing industry list of pigments (Chlorinated vs. Non-Chlorinated)
- Elsa Pond shared that the WA DOT needs regulatory standards/language and a list of approved substances/products for its processes. Research by itself isn't enough.
 - Robert Mott (Mott Consulting, LLC) noted that Pigment numbers aren't representative of a chronological hierarchy. He also noted the need to be careful with this topic because certain employees and associations can be reluctant to get involved if they face pressure from executives.
 1. A Color Index reference tool is maintained by The American Association of Textile Chemists and Colorists and the Society of Dyers and Colourists.
 2. "Industrial Organic Pigments: Production, Properties, Applications" is a useful book by Klaus Hunger and Willy Herbst
 - Lisa Rodenburg (Rutgers) shared that "Made Safe" helps with the testing of ingredients and has built a database sharing this type of information without regulatory action.
- j. Project No. 1: Newsprint/Graphic Printing Trials with non-chlorinated pigments

- Doug commented that this project should be combined with developing the industry list of non-chlorinated and chlorinated pigments. Conducting the trials should be the second part of the project.
- k. Project numbers 6 and 7 were advised to be moved to the E & O workgroup with Mike Peterson being involved with both workgroups.
- l. Project No. 8: Petition EPA to perform Cost/Benefit Analysis and reevaluate TSCA
 - Karl Rains (Ecology) emphasized the need to do this project
- m. Workgroup members believed that it was important to see the votes of members who chose not to rank certain projects that did not fit the goals of the SRRTTF, were outside the abilities of the SRRTTF, or could not support for other reasons.
- n. It appears that some workgroup members misinterpreted the ranking system and prioritized the projects opposite of what was intended.
- Based on the above input from members, the project prioritization will be reevaluated, corrected of any misinterpretations, consolidated and revised. D. Krapas provided a revised summary of *2021 iPCB/TSCA Workgroup Project Proposals* for consideration and discussion.
- In regards to the Technical Considerations, Project 1.b. *Industry List of Pigments*, D. Darling inquired if the NWGC Whitepaper (pages 7 to 20) sufficiently covered this proposed scope: http://srrtf.org/wp-content/uploads/2019/07/Final20190628_iPCBs-and-Pigments.pdf

While this is a good start and example of what is being proposed, what is envisioned is a more comprehensive list of pigments manufactured with chlorinated and non-chlorinated processes.
- In regards to the Technical Considerations, Project 1.c. *Develop Certification Program for Products and/or Pigments*, Dr. Mott expressed concern that it may be difficult for industry to support since this would be creating a list of products not to buy. C. Niemi and others expressed that this does not need to be the case and that the intent can be a marketing tool to identify environmentally responsible products, similar to the vinyl flooring products RFCI Assure program: <https://www.floordaily.net/flooring-news/rfc-scsglobal-launch-lvt-certification-program>
- L. Heine suggested adding the development of a chlorinated versus non-chlorinated pigments list under Technical Considerations.
- The group had a robust discussion regarding the “Evaluate fate of PCB-11” under Technical Considerations to better develop potential projects. Suggestions were made to develop a paper/bibliography on PCB-11 related to existing work/developments (NWGC papers, work by the SRRTTF, hatchery study, etc.). D. Krapas suggested that perhaps this might be another good research project for Gonzaga.
- The slide decks and minutes from all of iPCB Working Group Meetings (Technical Considerations, Government/Regulatory, and Advocacy/Policy) were posted on the SRRTTF website: http://srrtf.org/?page_id=10188
- The outcomes and potential next step projects from the iPCB Workshop, the subsequent iPCB

Working Group Meetings, and the Road Paint Whitepaper are to be compiled for evaluation by the TSCA/iPCB Workgroup.

5. Safer Products WA: Action Ecology, C. Niemi to continue updates

- a. C. Niemi shared that everyone on the list-serve will have received invites to the Webinars on March 10 and 11 with speakers from Cradle to Cradle, Green Screen, and Safer Products. **Action C. Niemi to forward invite, Doug K. to forward to iPCB/TSCA Workgroup**
 - L. Heine shared that Cradle to Cradle Certified might be taking over the Healthy Printing Initiative. **Action L. Heine to provide introductions of SPC and C2C to D. Krapas**
- b. C. Niemi shared that DES PCB procurement information has been shared and a presentation is in the planning stage.
 - C. Niemi shared information about the Sustainable Packaging Coalition's (SPC) Safe and Circular Materials Collaborative. She said that participating in this collaborative would be a great opportunity to raise the PCB issue to SPC members. Only SPC members can participate.

Previous Meeting Notes:

- a. C. Niemi agreed to share information on the "Safer, Feasible, Available Analysis" public webinar to SRRTTF
 - b. E. Pond and C. Niemi agreed to contact the Department of Enterprise Services regarding PCB procurement implementation
 - c. C. Niemi did not have any new updates regarding the Safer Products WA program, so see the *Previous Meeting Notes* below for the most current status:
 - d. Ecology is currently in Phase 3 develop which is to develop any regulatory actions, including: take no action, require notice, reporting restrictions, or prohibit chemicals of concern.
 - e. Any chemical restrictions require that safer alternatives are feasible and available, and have included stakeholder consultation (CPMA, ACA, etc.).
 - f. Ecology determinations will be available for public comment by June 1, 2022 that will be followed by Phase 4 rulemaking.
 - g. D. Krapas distributed an announcement from C. Niemi regarding a presentation on the SPWA progress by Ecology on September 29th to the House Environment and Energy Committee Virtual Work Session: <https://www.tvw.org/watch/?eventID=2020091019> (starting at time 47:50).
 - h. Another webinar on Phase 3 development will be held on October 8 at 1:00. A report was submitted to the legislature that includes iPCBs in Paints and Printing Inks: <https://fortress.wa.gov/ecy/publications/documents/2004019.pdf>
 - i. Ecology's next steps include a public webinar in August to discuss the report
- 6. TTWG and Funding Groups: Action L. Dally Wilson & K. Rains to provide updates**
- a. D. Krapas shared K. Rains updates in his absence. K. Rains issued a boilerplate for grant proposals as funding opportunities. He is waiting for comments from others.

- b. L.D. Wilson said they are developing one page scopes for a number of projects through TTWG. The funding boilerplate will work with these projects.
- c. Concerning funding, Wilson said there are three grants available, but the group needs to determine whether each grant is appropriate and who would write the proposal. She also said that Centennial funding generally targets municipalities that have a lot of expenditures. Stormwater procedures have been funded. This type of funding would likely not be appropriate for the task force.

Previous Meeting Notes:

- a. L. Dally Wilson agreed to schedule a TTWG meeting before the next Task Force meeting. There should be an update on the SPMD project from David Dilks.
- b. K. Rains said that the funding group still needs to comment on and finalize the grant finding boilerplate
- c. D. Krapas shared that the Funding ask is ongoing in the legislature. Krapas encouraged members to continue reaching out in support.
- d. M. Petersen shared that he contacted Sen. Billig, Rep. Riccelli, and Rep. Ormsby. Billig responded.
- e. L.D. Wilson advised the group to consider alternative forms of funding grants. For example, SBIR (Small Business Innovative Research) grants could apply.
- f. Monsanto Settlement:
 - The SRRTTF sent letters of support to the Governor's office, House & Senate Leadership, and local legislators.
 - Meetings with legislators are being arranged for the month of December to discuss
- g. Funding Updates:
 - A draft Boilerplate for grant applications was developed by L.D. Wilson
 - A 2021 SRRTTF Work Plan has been developed that includes projects and funding options
 - The Funding Workgroup held a ZOOM meeting on November 3
 - Mike Peterson identified a Temper of the Times Foundation grant opportunity that could support the E & O communication efforts.
- h. A suggestion was made to remove the funding discussion from the agenda for the iPCB/TSCA Workgroup since it should not be the primary focus of this workgroup and it consumes valuable meeting time. While in general agreement, D. Krapas would prefer to keep as a placeholder for discussion (time permitting) since IEP has primary responsibility lobbying for legislative funding and expressed concerns over the availability of future funding due to the state's budget problems.
- i. TTWG and Funding Workgroups to develop a coordinated strategy and consider how best to use available funding to support SRRTTF efforts.
- j. Karl will put this request onto the Funding workgroup agenda for discussion and bring recommendations to SRRTTF for consideration.
- k. L. Dally Wilson and the TTWG have developed a list of potential future projects

7. EU Recast of POP Regulations:

Previous Meeting Notes:

- j. *Dr. Mott provided the following written summary regarding various PCB regulations*

and test methods:

Here are references to the PCB regulations in Canada:

The first reference is to the overriding PCB Regulations which provides the limitations and reporting requirements related to pigments and PCBs:

<https://laws-lois.justice.gc.ca/PDF/SOR-2008-273.pdf>

The specific sections related to pigments are:

Colouring pigment

11 (1) A person may manufacture, export, import, offer for sale, sell, process and use a colouring pigment containing PCBs produced incidentally if the concentration of the PCBs is less than 50 mg/kg.

Colouring pigment

35 The person who manufactures, exports or imports colouring pigment in accordance with section 11 shall prepare a report that is current to December 31 in each calendar year in which the person manufactures, imports or exports the colouring pigment and that contains the following information:

- (a) the name, civic and mailing addresses, telephone number, fax number, if any, and e-mail address, if any, of the person and of any person authorized to act on that person's behalf;
- (b) an indication of whether the person manufactures, exports or imports colouring pigment;
- (c) the quantity of colouring pigment, expressed in kilograms, the maximum concentration of PCBs in the colouring pigment, expressed in mg/kg, and the average annual concentration of PCBs in the colouring pigment, expressed in mg/kg, that is manufactured, imported or exported in that calendar year;
- (d) in the case of importing, the name, telephone number and civic and mailing addresses of the person from whom the colouring pigment is imported and, in the case of exporting, the name, telephone number and civic and mailing addresses of the person to whom the colouring pigment is exported; and
- (e) a certification that the information is accurate and complete and that is dated and signed by the person or by a person authorized to act on their behalf.

The second reference is to the Toxic Substances list which contains the definition of PCBs, which is the first chemical substance listed:

<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/substances-list/toxic/schedule-1.html>

1. Chlorobiphenyls that have the molecular formula $C_{12}H_{(10-n)}Cl_n$ in which "n" is greater than 2

k. Dr. Mott provided the following briefing in regards to various PCB regulations and test methods:

- Not much has changed in the U.S. except for the use of EPA Method 1668
- Regulations in Canada have recently been updated. Mono- and Di-chlorinated PCBs are not in the scope and there is no test method identified.
- European Union is confusing with so many amendments and corrections since the

original POP regulations in 1976.

- The most recent recast of POP regulations in July specified all chlorinated congeners of PCBs and the exemption of mono- and di-chlorinated congeners disappeared.
- l. Incidental generation of PCBs is no longer in the scope, and only existing regulations from 1984 reference the use of colorants and plastics. L. Heine recalled seeing incidentals addressed in the annex.
 - m. The regulations reference Analytical Methods APA 981 (<5ppm) and EPA Method 608. The recent recast of the European Union regulations regarding persistent organic pollutants appears to disallow any contamination of PCBs in products.
 - n. J. West provided the following links to information regarding the POP Regulations:
 - https://www.chemsafetypro.com/Topics/EU/new_changes_recast_POPs_regulation_EU_2019_1021.html
 - <https://www.tuvsud.com/en-us/e-ssentials-newsletter/consumer-products-and-retail-essentials/e-ssentials-10-2019/eu-pops-regulation-recast-is-now-published>
 - <https://www.intertek.com/consumer/insight-bulletins/recast-on-persistent-organic-pollutants-regulation-published/>
 - <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1021&rid=3> (the recast language itself)
 - o. Regarding PCBs, the recast appears to incorporate terms of a 1996 Council Directive concerning management of equipment (transformers, capacitors, etc.) containing PCBs.
 - p. L. Heine believes that the recast is also applicable to pigments.
 - q. Dr. Mott explained that in the EU and Canada, “PCBs” means 3 or more chlorination’s, so chemical companies do not even look for mono or di-chlorinated congeners.
 - r. L. Heine believes that the regulation is applicable to all 209 congeners.
 - s. Dr. Mott to locate the citation that identifies this exclusion and the test methods used in Europe and Canada to evaluate PCBs at the homologue level
8. **EPA research projects: Action EPA to provide updates to EPA sponsored research projects:**
- a. No EPA representatives were present for this meeting.
 - b. D. Krapas will reach out to EPA for updates to these research opportunities.
 - c. B. Floyd has been coordinating with Brian Nichol on Tetrach Report with Kaiser. Floyd offered to help facilitate reengaging the EPA representatives.

Previous Meeting Notes:

- a. C. Niemi shared that she has had no luck with locating an NTP contact.
- b. D. Krapas had a follow-up conversation with L. Edmondson on August 20, 2020 regarding the status of EPA projects:
 - Lucy stated that with the COVID situation, projects at EPA have slowed down

- Lucy had no specific updates on the EPA projects, but will attempt to get for the TSCA/iPCB Workgroup meeting in September which she should be able to attend.
 - Lucy will attempt to track down a contact at NTP for the TSCA/iPCB Workgroup
 - C. Niemi has also been working on locating a contact at NTP for follow-up on the NTP risk study of various Congeners and Aroclors.
- c. **iPCB Key words for Scholarly Articles:** Michelle stated during our February, 2020 call that EPA is resource limited and is focused on higher priority projects such as site clean-ups and iPCB product testing (see below Children's Product Testing), so this particular project has been assigned a lower priority and is currently on the back burner. **Action EPA, M. Mullin & L. Edmondson**
 - d. **Children's Product Testing:** Michelle stated during our February, 2020 call that this remains a work in progress, as EPA attempts to understand the variability of the results and other environmental influences (air emissions, dust adsorption, etc.). **Action EPA, M. Mullin & L. Edmondson**
 - e. **NTP risk study of various Congeners and Aroclors:** NTP is evaluating toxicity of PCB congeners 11, 95, 126, 153 and Aroclors 1016 and 1254. **Action EPA, M. Mullin & L. Edmondson**

9. Green Chemistry Considerations

- a. In an email, A. Borgias confirmed that there are no Green Chemistry projects in the queue for iPCB/TSCA workgroup consideration.
- b. C. Niemi shared information from green chemist Saskia VanBergen, about initiatives to do green chemistry with inks or paints. D. Krapas forwarded an email from Saskia to the workgroup about green chemistry innovations in the world of inks and paints. She shared three links: <https://colorifix.com/>; <https://www.kbcollsciences.com/>; <http://www.cyprismaterials.com/>. Saskia also mentioned potentially relevant sessions at the Green Chemistry and Engineering conference.
- c. D. Krapas spoke about the workgroup's green chemistry research looking into biosynthesis, bioengineering, and bioprocessing in developing more natural inks and pigments. He emphasized the need to assess reality, scalability, and reliability in inks. He argued that this research relates to Project #2 and developing a list of chlorinated, non-chlorinated pigments. He asked if there should be an additional category in that project for natural/bio-based pigments.
- d. C. Niemi and C. Manahan haven't worked with Saskia yet. Craig said they can look into green chemistry for potential pigment alternatives for Safer Products WA. He shared that there should be money available through Green Chemistry to look into this.
- e. D. Darling emphasized the need for industry support of new technology. He asked the

following questions about these new companies and technologies: Do they have any market share? How old are they? Have they gone through regulatory process/TSCA?

- f. G. Jones agreed with Darling, traditional companies need to be allowed to evolve their product line. Product performance is very important. He asked if these new alternatives and substitutes really work.
- g. D. Krapas asked if members of the ACA, CPMA, or PUA might be producing these natural/bio-based pigments. R. Mott shared that CPMA members likely wouldn't be producing those pigments. G. Jones said that most members of the organization he represents, the Printing United Alliance, are printers not pigment producers.
- h. C. Niemi mentioned the Green Chemistry and Commerce Council.
- i. R. Mott asked if bio-based pigment manufacturers are successful. He's aware of a bio-based red pigment available commercially as well as a chlorophyll based food additive. Mott is unaware of major commercial products.
- j. D. Krapas tried contacting Living Ink and hasn't heard back.
- k. Concerning Black Ink and chlorination, R. Mott said would be surprised if black is made from anything other than Carbon Black, which uses a controlled complete combustion and pyrolysis of natural gas, liquid petroleum, or coal.
- l. R. Mott explained that in order to understand the production process of pigments, we have to look first at its end-use. For example, FDA compliant products must be made in a certain way.

Follow-Up Discussion to Living Ink Presentation

- D. Krapas asked the group to consider possible collaboration with Living Ink moving forward similar to ongoing work with TiO₂.
- G. Jones asked if LI has EPA approval under TSCA product regulations and to verify what colors they produce. **D. Krapas to verify.**
- M. Petersen shared that the presentation was very interesting and made him wonder if Biochar has a future in producing Carbon Black.
- G. Jones shared that black ink is the most commonly used color for newsprint and commercial applications. Yellow also is in more demand than other colors.
- D. Krapas asked if it is known whether Black pigment production creates iPCBs. **D. Krapas to verify.**
- L. Dally Wilson suggested that there might be more companies like LI, and the Task Force might be able to work with a group of them. **L. Heine will reach out to the Sustainable Packaging Coalition (SPC) and the Healthy Printing Initiative** for leads on other groups developing green, iPCB-free solutions (solvents, pigments, etc.) for the printing industry.
- K. Rains and D. Krapas agreed that finding green alternatives will the group make progress with Project #5: *Lower Procurement Limits*

Campaign. K. Rains promoted being able to provide products and solutions that meet requirements. He believes that Task Force resources could be used to work with or help LI if it can lead to the identification and reduction of PCBs. E. Pond agrees.

Previous Meeting Notes:

- K. Rains shared that the tasks of the former Green Chemistry Group had been completed, so he believes there will be no rollover into the iPCB/TSCA Workgroup, but future projects will naturally fit into this group.
- C. Niemi will reach out to the Tech Team about green chemistry for inks and pigments.
- K. Rains will reach out to A. Borgias again to verify there is no task carryover.
- Action approved to add Green Chemistry to the iPCB/TSCA Workgroup Efforts.
- K. Rains suggested adding Green Chemistry considerations to the iPCB/TSCA Workgroup since it appears to be intertwined.
- B. Floyd expressed support since much of the past tasks by the Green Chemistry efforts have been completed.
- D. Krapas had been resistant in the past due to the significant workload of the iPCB/TSCA Workgroup, and suggested tabling this for further discussion once the project workload has been identified for 2021.