

State of California

DEPARTMENT OF TOXIC SUBSTANCES CONTROL COMMUNITY PROTECTION AND HAZARDOUS WASTE REDUCTION INITIATIVE ADVISORY COMMITTEE

MEETING SUMMARY – DRAFT

March 28, 2016

Cal Center Board Room, First Floor
8800 Cal Center Drive
Sacramento, California 95826

Committee Members in Attendance:

David Asti
Cynthia Babich
Ingrid Brostrom
Dawn Koepke
Nick Lapis
Oladele Ogunseitan, Ph.D.
Virginia St. Jean
Xonia Villanueva
Chuck White

CPHWR Initiative Team:

Paula Batarseh, Branch Chief
Natalie Marcanio, Team Lead and Senior Scientist
Jerry Lile, Senior Scientist
Eric Slaff, Senior Scientist
Lazaro Cardenas Jr., Outreach Coordinator
Amelia Hicks, Program Analyst
Anna Hostler, Office Technician

Also Present:

Greg Bourne, Facilitator, UC Davis Extension Collaboration Center
Rick Brausch, Chief, Policy & Program Support Division, DTSC
Ben Edokpayi, Media Relations Officer, Safer Consumer Products, DTSC
Barbara Lee, Director, DTSC
Francesca Negri, Chief Deputy Director, DTSC
David Weinberg, Battery Council International and Wiley Rein LLP

1. Introductions, Agenda, & Objectives

Mr. Bourne opened the meeting. The committee members, team members, and other attendees introduced themselves.

2. Review/discuss prior meeting summary and action items

Mr. Bourne explained the meeting agenda.

The prior meeting summary needed three changes:

- Ben Edokpayi's name needed to be added to the list of attendees.
- On page 12, Dr. Ogunseitan had suggested a third potential project: replacing lead-acid batteries entirely.
- On page 5, Dawn Koepke should be listed as representing the Green Chemistry Alliance rather than the SCP.

Mr. Bourne noted that the purpose of today's meeting was for everyone to be clear on the pilot project concept and to narrow down what we hope to do.

3. DTSC Pilot Project Proposal Form

Ms. Batarseh explained that following the last meeting, the team had put together the Pilot Project Proposal Form. Its purpose is twofold:

- To provide a consistent format for the team to gather and organize information, in order to evaluate them and move forward.
- To obtain Advisory Committee input and encourage the thinking process.

Ms. Batarseh walked the committee through the form.

Questions and Discussion

Mr. Lapis suggested adding some boxes to #3: ***Replicability*** and ***Scalability***.

Dr. Ogunseitan confirmed with Ms. Batarseh that the form is for the Advisory Committee rather than the public. He suggested a new box under #4 for information on existing state policy.

Regarding #3, Mr. White suggested ***Minimizes disposal to land, air, or water*** in place of ***Avoids land disposal***. Ms. Babich suggested the wording ***Avoid or at least minimize disposal to land, air, or water***. Dr. Ogunseitan raised the question of setting the target to zero. If we say it is not technically possible, that is a different concentration. Mr. Lapis suggested ***Avoid or at least minimize disposal to the extent possible***.

Ms. Brostrom offered a suggestion from the People's Senate: ***Reduce the impacts of hazardous waste treatment storage and recycling on communities near these facilities***.

Director Lee stated that generally she would like to see the committee come up with its own ideas, but she asked if Ms. Brostrom would agree to the addition ...***including illegal disposal***.

Ms. St. Jean suggested that since ***Source reduction*** was there, "***Viable***" ***alternative available*** should also be included. She also suggested ***Avoids impact shifting***.

Dr. Ogunseitan suggested ***Source reduction or elimination***.

Referring to the earlier discussion, Ms. Koepke asked if we would want to take a potential pilot project off the table, if the bar is pure elimination versus reduction. It is not just a matter of economics. Some technologies do not exist yet; having an opportunity to ***reduce*** impact and exposure is valid.

Mr. Bourne summarized the suggestions thus far.

Ms. Koepke suggested a section, possibly 4.1, for listing potential experts or industry representatives who may be able to contribute.

Mr. White suggested that the committee hear from the battery industry, for example – what do they think is doable? He then asked if we are focusing on newly generated waste, legacy waste, or both. Ms. Batarseh responded that at his point, we would like to keep everything on the table.

Ms. St. Jean suggested changing the wording of the first box in 4.0: ***Identify resources, tools, and/or experts that can be used to gather information in support of this pilot project.*** She also suggested adding wording to the fourth box of 4.0: ***Discuss other possible benefits in addition to decreasing the volume and toxicity of hazardous waste.***

Mr. White asked about the topic of small propane tanks – they are in the category of household hazardous waste. Mr. Brausch replied that this category would be fine. Mr. Lapis felt that at least one of the pilot projects should be household hazardous waste.

Ms. St. Jean mentioned the ongoing problem for many agencies of aerial marine flares.

Ms. Koepke gave the perspective that strict EPR frameworks are not the best approach. It needs to be a full encompassing approach – a shared responsibility model.

Ms. Brostrom expressed reluctance to place this initiative's limited resources into household hazardous waste when SCP is already looking at that area.

4. Overview of DTSC Potential Pilot Project Topics

Mr. Brausch directed the committee to the document Potential Pilot Project Topics – Draft. He emphasized that the list was not exhaustive.

Mr. Brausch reviewed the topics.

Director Lee stated that the more specific and focused the recommendation for a pilot project, the better, as it could be used to demonstrate real benefits. If the committee had ideas allowing leverage of partnerships with green business, she encouraged the members to bring them.

Director Lee spoke about a technology in its early stages: supercritical water oxidation (SCWO) for treatment of DDT-containing soils. It may make a good pilot project. It could demonstrate the technology to be more widely applicable; certain changes or advances could drive the cost down or address technical limitations.

Dr. Ogunseitan asked about impediments to the application of this technology to the site in Torrance. Director Lee answered that there have been no attempts so far; it has only been used in very limited circumstances outside of California. She will provide information to the committee members.

Dr. Ogunseitan confirmed with Director Lee that a pilot project on SCWO in Torrance would prove not that the technology works, but the scalability. Director Lee answered that such a project would result in understanding of a host of issues, including acceptance by the community, scalability, and cost.

Director Lee addressed the committee's concern that communities think that DTSC's key hazardous waste reduction strategy would simply be to leave the waste in place. DTSC is trying to find other ways to deal with legacy waste in landfills. If we can't deal with it, the choice arises of whether to leave it in place or truck it out. DTSC is trying to find alternatives to that.

Ms. Brostrom asked about the barriers to moving forward with cleanup technologies without the dedicated funding of pilot projects. Director Lee answered that the DDT site in Torrance is the Montrose Superfund site. There is a responsible party and insurance companies are funding the treatment of that site; it is a heavily-litigated process. We would have to secure their acceptance to pilot-test this technology. There is an EPA Record of Decision at the site, so absent a demonstration project like this, DTSC's ability to secure a change in the Record of Decision at the site is fairly limited.

Ms. Koepke stated that she was interested in providing General Atomics with an opportunity to give a presentation on this topic. Director Lee added that Jane Williams would have much information to present as well.

Mr. White commented that he had heard that the technology is extremely expensive. Director Lee added that the expense was in the energy use; Mr. White said that it was also in managing the materials through the process.

Ms. Babich described the current situation of the Montrose site and nearby communities, including a builder's plan for new homes.

Mr. Asti commented that he had also been interested in chemical oxidation. He noted that in 25 years as a professional geologist in eight different states, he had tried maybe all of the pilot project topics on the list. He knew which ones work and which do not, as well as which work quickly and which take a couple of decades.

Mr. Brausch continued taking the committee through the list of potential pilot projects.

Ms. Babich suggested looking at lead-acid battery storage combined with possible phase-out and replacement.

Regarding lead-acid battery alternative research, Dr. Ogunseitan noted that a solvent that might come into a pilot recommendation could also be subject to regulation under Safer Consumer Products.

Mr. White noted that the Governor has budgeted \$176 million for lead-acid battery remediation, and Green Chemistry effort is related to exploring alternatives; are we being redundant here in focusing on that topic? Mr. Brausch answered that SCP is not actually focused on it; it is being considered in tandem with the CPHWR Initiative.

Ms. St. Jean clarified that the Green Chemistry people have three priorities already that they cannot really change without legislation. Mr. Brausch stated that there are specific short-term impacts and challenges with lead-acid batteries for the CPHWR Initiative to address. The SCP will be looking at the subject to consider whether it gets added to the Work Plan.

Mr. Lapis suggested for the CPHWR Initiative not to use the existing Green Chemistry process, but to use its authority as an available tool.

Ms. Koepke clarified that the SCP Work Plan is one venue for the product chemical combinations we prioritize; there is also a petition process. The two separate issues are management and handling of what is already at Exide (a near-term issue that does not fall into the Green Chemistry/SCP realm), and future alternatives for lead-acid batteries. This Advisory Committee needs to decide whether to put forth a petition that lays out details to expedite what the SCP team should be looking at.

Ms. Brostrom suggested a pilot project on fee structures and economic incentives/disincentives in order to model behavior. Mr. Brausch responded that this could also be looked at as an internal tool within a project.

Mr. White was in favor of having discussions on *In-State Management of Hazardous Waste*. For the last 30 years, California has been exporting an ever-increasing amount of hazardous waste to other states. If it is a non-RCRA waste it basically goes to disposal in non-hazardous landfills.

Dr. Ogunseitan noted that one could envisage taxing particular categories of e-waste and household waste. For economic incentives, could we propose a new tax on something as a way to understand how it will impact the generation of wastes, alternatives, etc.? Another issue relates to the shipment of waste. He will try to write something up on asbestos.

Ms. Brostrom mentioned *In-State Management of Hazardous Waste*: it would not meet the goal of reducing the disposal of hazardous waste in California, but instead would increase it. She did not see how this project would meet the other goals of the program. It also violates the principle of shifting burdens. Mr. Brausch clarified that the title is misleading: the intent is to focus on those wastes being exported, as a special focus of reduction of generation in the state.

Ms. Babich was in favor of having the conversation that Mr. White had mentioned. The crux of many situations we face is how we clean up our communities without burdening others. However, the issue would not fit into a quick turnaround pilot. Mr. Brausch stated that it could play into other big-picture discussions of how the nine balancing criteria of NCP actually push us down pathways on which we may not want to go.

Ms. St. Jean requested to insert an economic incentive piece into **In-State Management of Hazardous Waste**. Source reduction and possibly Green Chemistry should also be included.

Mr. Lapis commented that we have a hard time with interstate commerce telling people that they cannot ship outside the state, but we can condition benefits from different incentive programs to those who keep the material here or treat it properly. As long as we are paying someone to do something, we can condition the funding on what they do, even if we cannot restrict their direct action. This is an available tool.

Ms. Brostrom asked whether we are looking to protect California communities only, or communities everywhere. How should we prioritize? Ms. Batarseh responded that pursuing issues such as source reduction and source elimination will have a benefit for everything as they are integrated into the projects.

5. Potential Pilot Project Topic Discussion

Ms. Brostrom explained a document she had distributed to the committee entitled California 2014 NAICS Activity Descriptions with 3 or More Facilities Reporting to CA TRI. It examined use of TRI pollution prevention data in order to discern which industries are making progress in pollution prevention.

Mr. Lapis suggested pharmaceuticals and sharps as potential pilot project topics.

Dr. Ogunseitan suggested asbestos, the fourth largest category of hazardous waste generated in California and sixth in terms of exporting to other states. There is no current recycling to speak of.

Mr. White suggested propane tank recovery.

Ms. Villanueva suggested three categories: refineries, oil waste and auto shredder waste. Ms. Brostrom added that they are interested in the industry-specific sector, as that would capture the most reductions for our communities; the source generator facilities themselves are located in communities of color, resulting in a dual project benefit from better practices. They agreed with Mr. Brausch that “metal shredder waste” would be a suitable broader category.

Ms. Brostrom said that in 2014, refineries had done only two pollution prevention activities. Ms. Marcanio commented that the section of the TRI form for reporting pollution prevention is voluntary, so many people do not take the time to report their activities.

Ms. St. Jean suggested that as organic solvents is a huge category, halogenated solvents might be a better category as it is narrower.

Dr. Ogunseitun commented that if we do not think of e-waste as post-consumer, California’s economy in terms of electronics manufacturing is a big contributor. Many solvents are used in this particular industry; it would be a good category.

Mr. Bourne asked if anyone had given thought to a lead battery-associated pilot.

- Ms. Babich mentioned temporary storage.
- Mr. White mentioned recycling facilities – an EPR-type program.
- Dr. Ogunseitun mentioned an agenda to discontinue them.
- Mr. Lapis mentioned more sophisticated recycling facilities.
- Ms. St. Jean agreed, mentioning short-term smart recycling technology – it is an ongoing waste stream for now.
- Ms. Brostrom agreed: the Exide and Quemetco communities both have lead contamination. Ms. Babich added that we have not been doing a good job at recycling.

Ms. Koepke felt that regarding the SCP program, we need to be careful not to pre-judge the outcome. It is an alternatives-based evaluation process. She also outlined the conflicting issues. We don’t want to transport waste out of state, but at the same time we are not willing to permit any new facilities; there is no ability to manage what is already here. Getting new alternative into the market is not a short-term solution. We want to push for reformulation and a ban without substitutes that work for all the products.

Ms. St. Jean stated that she wanted to see the two existing recycling facilities do a better job. We can probably come up with incentives to have these facilities pollute less in the short term, until we have the alternative of a battery with no toxic issues.

Mr. Bourne summarized the results of the committee’s feedback: they were requesting to have a speaker present at the next meeting on the battery issues as follows.

- Decreasing pollution at recycling facilities
- Looking at alternatives for the current batteries with their toxic components
- Setting in motion the discontinuation of lead-acid batteries to something else

Mr. White commented that lithium ion batteries are feasible for starting cars, but they cost about 10 times as much as lead-acid batteries. This would affect possible fees that could be placed on the latter.

Ms. Batarseh stated that the next step is to develop a Work Plan.

Ms. Koepke noted that it would be helpful to know what the current fees on batteries go toward. Mr. Brausch responded that it seems to be a manufacturer/retail core charge, operated on repair components of car engines. It is not a government fee that goes to a state or local agency.

Ms. Brostrom asked about the document Top Wastes Generated in California – DTSC Hazardous Waste Tracking System 2014; it seems to portray California as an importer. The team said they would verify over the lunch hour.

6. Pilot Project Focus Areas

Mr. Bourne recapped the projects the committee had just discussed.

- Batteries
 - Improving recycling
 - Exploring alternatives to lead-based batteries
 - Setting the agenda for discontinuing the use of lead-acid batteries
- Supercritical water oxidation for DDT
- Pharmaceuticals and sharp objects
- E-waste
- Household hazardous waste – for example, propane tanks
- Asbestos
- Oil refineries
- Metal shredders
- Oil waste
- Organic solvents
- Marine flares

Mr. Lapis asked if we are assuming that the actual Exide cleanup is being handled separately from this process. Ms. Batarseh confirmed.

Mr. White asked about the issue of minimizing contaminated soils. Mr. Brausch responded that we are not looking to hold up anything related to Exide projects in the short term.

Dr. Ogunseitan mentioned timing: if we come up with a pilot for a new way of cleaning soils to get the lead out, and the pilot is successful before the end of Exide's cleanup of its facility and the surrounding neighborhoods, it could possibly be integrated into Exide's cleanup. Mr. Brausch confirmed, although he didn't foresee the timing coming together that quickly.

Ms. Villanueva suggested looking at whether someone else in the country is doing a better job at recycling lead batteries without impacting communities surrounding the facility. Also, we could look at equipment used to recycle the batteries – reducing emissions and handling indoor air.

Ms. Babich suggested that because the Exide cleanup is progressing in phases, something found in this committee could be implemented in a future phase. Ms. Williams or Dr. Wells (the lead fall-out expert) could speak to the committee to give pointers and direct the focus.

Ms. Villanueva explained the document Guiding Principles from the People's Senate in Selecting Pilot Projects.

Ms. Koepke stated that she would appreciate more time for the projects. Going to committee members' respective communities to share information and then obtain feedback and

recommendations requires sufficient time. The business community needs to time come in and provide feedback as well.

Dr. Ogunseitan responded that his understanding was that the timeline specified for things to be done by a certain date, but if the committee needs to ask for extensions on specific outcomes, the other aspects of the timeline can be adjusted.

Ms. Brostrom suggested a staggered approach for the three pilot projects. The battery project would begin first, providing more time for the committee to think about the other two.

Ms. Babich stated that after being involved in it for so many years, she was ready to roll on the soil contamination project. Other projects will need more time for the committee to think about.

Mr. Bourne observed that the water oxidation project would run counter to the People's Senate Principle #4.

Ms. Brostrom stated that the People's Senate Principles had been derived from fears that DTSC would use the CPHWR Initiative as a way to have cleanups that are not as robust. The committee needs to get over the public distrust in order to have successful pilot projects. The committee must do the proper vetting to address the distrust. Given the vast array of pilot projects we could do, we are needlessly going into the one area Ms. Brostrom knew to harbor potential conflict.

Ms. St. Jean did not want for the committee to limit itself with #4. There may be some in situ contamination way to deal with something on site.

Ms. Koepke also did not want to take that item off the table. If we can get traction, this may be a viable technology that could be helpful in addressing some of those challenges elsewhere.

Ms. Brostrom explained the historical context which involved the Kettleman City initiative. The problem isn't so much the actual project, as the work needing to be done in repairing relationships. She also pointed out that there are hundreds of potential pilot projects here.

Ms. Babich agreed that there is a distrust problem. She would not propose anything that would put her community in danger of any additional harm (vapor intrusion, etc.). The SCWO technology is not brand new. However, it is cheaper to burn and cheaper to dig and haul. She did not think anything should be off the table, and added that she does put her trust more in individuals than in an agency.

Mr. Bourne pointed out that although the Guiding Principles were not to be voted on, they were a good vehicle for a robust dialogue. They also provide ideas for a direction to take. However, there are other ideas that need to go into this conversation.

Ms. St. Jean felt strongly that when we throw something away, we have to be very responsible about where we are putting it. She did not want it to go into another EJ area. She thought that each one of these decisions was its own project. This committee could easily add some technology for onsite (in situ) treatment, but we should be discussing some of these options on treating the waste and not adding to it.

Ms. Villanueva asked, if this is a Superfund site, why are the insurance companies not paying for the cleanup? Ms. Babich replied that this particular piece is not on the site. Montrose, the polluter for the DDT waste, is a client of the law firm Latham & Watkins, and the insurance company bond monies have already been allocated. Ms. Babich provided the details of the

situation. The community's biggest obstacle is going to be the U.S. EPA, which is stuck in a position where they have made a decision which they are going to stand by and push through. DTSC is involved because the site will be under the state cleanup program.

Mr. White expressed concern with the limitations of #4. Director Lee's earlier statement about looking at alternative technology to handle DDT-contaminated soil has merit, and shouldn't be excluded out of hand simply because it is a remediation project – particularly if it could result in a course of action that would protect the surrounding communities.

Mr. White stated that where a community is living on top of lead-contaminated soil, it is better to get the lead out of the community. Offsite redispersion of the contamination is a better option if you can be assured that the disposal repository has no pathway for compounds or molecules to migrate.

Mr. Bourne raised issues that the committee needed to consider.

- This committee has been chosen in order to liaison with all the major stakeholder groups in the state: industry, environmental justice, environment.
- In holding a public meeting, the first thing to think about is correct expectations. A large public forum will result in lots of ideas, and people need to understand that ideas go through this committee, then the Director.
- The committee needs to think through the value of the forums.
- DTSC needs to look at the timeline in considering proposed projects.

Ms. Koepke felt that those concerned (the committee, stakeholders, the EJ community, academia, the business community) all need to hear the dialogue together. This would prevent the committee members from inadvertently mischaracterizing something they have been told by a colleague in a particular industry sector.

Mr. Bourne stated that one possibility would be to move forward filling in templates and distributing them to the committee members' various networks for feedback. At the April meeting, experts on the battery issue and the oxidation process would present. At successive meetings other experts could come in to talk about other projects.

Ms. Batarseh agreed. The worst that could happen is to spend too much time up front trying to pick the perfect pilot project, engage everyone, and answer every question. Time would be lost for doing meaningful work and making a tangible difference. It is a balance.

Ms. Babich stated that transparency for our communities is going to be important. The website should contain more information than just the meeting minutes. She pointed out that the committee members are serving as leaders for their communities in this initiative.

Ms. Brostrom noted that in the past, the external stakeholder advisory group had taken six months to come up with their list of priority industries. She felt that the most important role that this committee plays is in the pilot projects selection – yet that is being given the shortest amount of time. She also felt that the committee's actions have been a bit scattershot, with 10 ideas thrown out that were the product of some thinking but no substantial research. She expressed concern about the usefulness of opinions on 10 ideas originating in a two-week period.

Ms. Koepke agreed on the need for more time to give quality recommendations, based upon engagement and feedback from our broader communities and sectors. She was not opposed to the staggered timeline method that had been suggested.

Mr. Lapis suggested keeping the existing timeframe while asking the public to fill out the form with their proposals for projects. Ms. Batarseh responded that offering the template without the benefit of explanation, we might receive ideas that are not as good and we might create confusion that needs to be explained.

Ms. Babich stated that she has been sending out all of the information as asked. Whether the groups give feedback is up to them, but we need to fulfill our role as leaders. Transparency is everything. We shouldn't be the gatekeepers of information either way. Ms. Batarseh offered to engage staff in that effort.

Ms. St. Jean felt that while the committee has been steered toward some of the proposed pilot projects, she has not had time to go through them all. She felt that we are not managing some of them responsibly, for example, low percentages being recycled. All the projects are good ones and will keep the committee busy.

She continued that it may be too soon to begin public participation with such a short amount of time to get a product out. Possibly we should make a model of how to include the public as the last phase. In another two years another committee may be doing something similar. However, it is going to be very difficult for this committee to reach consensus. When we add public input, with people who have possibly less science background, it might complicate the process. A committee goal could be to decide when public participation should happen.

7. Criteria for Selection

Mr. Bourne directed the committee to the Pilot Project Discussion document. He asked the committee if they wanted to hone in on which three or four of the *Pilot Project Selection Criteria Considerations* take precedence over others.

Mr. Lapis commented that the committee could spend the rest of the day on this question.

Dr. Ogunseitan commented that the *Scalable* aspect of the *Fundamental Pilot Project Aspects* may be unknown for some projects such as SCWO. Mr. Bourne replied that the *Scalable* aspect referred to a project that occurs in not just one place, but many other places. Mr. Slaff clarified that if at the end of the project it turned out not to be scalable, that was the process of the project – to see if there was that potential.

Ms. Brostrom commented that *Benefits to disproportionately impacted communities* would be important to her.

Mr. Bourne suggested moving that aspect to *Fundamental Pilot Project Aspects*; the committee agreed.

Ms. Brostrom mentioned a “Bang for the buck” criteria that was not on the list.

Mr. Asti agreed; resources are scarce. He was in favor of applying most of our resources toward the largest section of the problem.

Ms. Brostrom clarified for Mr. Slaff that she was interested in focusing on industries where the returns would eventually be large – a long-term perspective.

Mr. Bourne suggested an overlay of highest volume with highest toxicity over the most impacted communities. This would create a good three-layer filter for identifying projects. The question is, does data exist to create that overlay?

Ms. Brostrom said that she had asked for an overlay of hazardous waste facilities and what they accept in those communities with Cal EnviroScreen. Mr. Cardenas had looked into this idea and found nothing readily available. Ms. Marcanio offered some data that DTSC had obtained.

Mr. White commented that the *Pilot Project Selection Criteria Considerations* lacked recognition of economic consequences. Mr. Slaff suggested adding *Economic feasibility* to the list. Some of the group felt that this item was implicit in *Scalable*.

Dr. Ogunseitan felt the issue of economics and technical feasibility to be very important. A pilot project may be shown to be effective, but applying it on a one-acre site may be different from a 1,000-acre site; that is an economic consideration. It is not the committee's responsibility to make that decision.

Per the committee discussion, Mr. Bourne added three considerations:

- *Shifting to other communities/states*
- *Economic feasibility*
- *Single pollutant*

Ms. Babich stated that her site was one of a few in the country that have a Technical Impracticability Waiver for cleaning up the groundwater. This has created a sacrifice zone with people living on top of it. In looking at the cost of a project, the committee should consider it in the context of human health.

The committee voted on the *Pilot Project Selection Criteria Considerations* with the following results:

- Reduce high volume waste* 5
- Reduce high toxicity waste* 5
- Source elimination and reduction* 5
- Economic feasibility* 5
- Impacts to other environmental media* 3
- Avoiding disposal in land/air/water* 3
- Shifting to other communities/states* 3

Mr. Bourne noted that the last two could possibly be combined because of similar meanings. The rest of the criteria considerations had 2 or fewer votes. *Return on investment* could also be interpreted as *Biggest bang for the buck*.

Ms. Koepke suggested that people might not have understood the intent of *Return on investment*: not from a direct manufacturer benefit, but the highest value to be derived in the largest sense.

Mr. White asserted that in the private enterprise realm, *Return on investment* means the same as *Economic feasibility*.

Dr. Ogunseitan felt there may have been confusion around *Permanent*. He interpreted it as "A pilot project that only temporarily solves a problem is not worth pursuing."

8. Lead Acid Battery Potential Project and Proposal Form Exercise

Mr. Slaff explained the example document Community Protection and Hazardous Waste Reduction Initiative – Pilot Project Proposal Form completed with Spent-Lead Acid Batteries (SLABs) as the *Waste Stream*.

Ms. Koepke asked about using this approach rather than going through DTSC's own internal SCP program. Mr. Slaff answered that this was not a proposed approach – it was one of many examples on walking through the thought processes of developing a pilot project. DTSC is not promoting the form.

Mr. White felt that the *Pilot Project Details* were presupposing what the outcome was going to be. From an engineering standpoint, we would want to know how much lead is getting into the environment from lead-acid batteries as well as the sources. If lead-acid batteries are the number one source, there may be other ways to reduce emissions from lead battery processing such as tighter standards.

Mr. Bourne confirmed with Mr. White that the document might be changed to include the bigger picture – to say what portion of the stream of lead is coming from batteries.

Mr. Brausch stated that the CPHWR Initiative would not be compelled, nor would it be fair, to give a comparative analysis of different forms. We would want to focus on the contribution of this waste to the environmental condition, through all forms of its generation, management, transportation, recycling, and disposal.

Mr. Batarseh stated that the team would incorporate today's comments into the final form of the template, then send it out for additional comments.

Ms. St. Jean requested a place in the template to include all the places where SLABs come from – not just the automotive industry. The *Stakeholders* box does not provide enough room for all of the industries.

Ms. Brostrom asked about the level of information. Mr. Brausch replied that more information is better for assessment. The team will be looking at Ms. Babich's form for any information they can glean. Mr. Slaff added that they do not want to discourage anyone from submitting information if they do not have a fully fleshed out idea.

Ms. Koepke asked for clarification on whether the committee would be able to take the proposed pilot project ideas back to their constituents for evaluation. Mr. Brausch responded that the team was grappling with how to give the committee the best information for offering informed advice, while balancing against the timeframe.

Mr. Bourne suggested that the committee return for the April 20 meeting with their ideas written up. The end of April would be a deadline for anyone to submit a form. The April meeting would have presentations on the oxidation process and on batteries; possibly the group could then move to the next level of development, while providing the opportunity for the broader array of input. The May meeting would include a public forum. The final two projects would be narrowed down thereafter. The goal was to address the three interests that have been expressed of timing, inclusivity, and level of detail. Perhaps by June there would be enough detail to select the other two projects.

Dr. Ogunseitan confirmed that the committee is advising the Director about two other pilot projects, but she is not obligated to pick what the committee selects. Not knowing if the committee could reach a consensus on the top two, would it be better to make a profile of each of

these and present them, rather than trying to get to the last two – and have the Director pick from among the broader list. Mr. Brausch noted that a presentation for the Director could be done at the May meeting.

Ms. Brostrom felt that it would be good to have the ideas winnowed down for the Director.

Mr. Lapis stated that choosing the categories is just the first step. Choosing the actual pilot project will probably be more contentious. Mr. Bourne noted that depending on the dynamics, any reasons for disagreement could be submitted to Director Lee.

Ms. Koepke suggested that for the April meeting, anyone who is going to submit a proposal should show the committee some material ahead of the meeting. Mr. Bourne suggested that for anything to be discussed at the April meeting, it must come to DTSC a week ahead (April 13). Ideas from constituents could be put on the table at the May meeting.

Mr. Brausch requested that the committee member submit any particular facets or project descriptions that they have in mind.

(11.) Public Comments

Dave Weinberg stated that he had worked with the Battery Council International (BCI) for many years. He gave some information about the industry.

- The BCI is supportive of the committee getting the information it needs.
- There are about 32 million vehicles on the road in California.
- About 90% of the 2 million vehicles being registered every year are internal combustion engines.
- Lead-acid batteries are also used for many other things: backup power for homes with a FiOS internet connection, backup power for most cell phone towers, principal power source for front loaders and warehouse equipment, golf carts, wheelchairs, etc.
- Every car in California has a lead acid battery in it, including hybrids and electric vehicles.
- Stop/Start technology is the principal one for promoting better mileage and reducing the carbon footprint.
- Lithium ion batteries have limitations in power without sophisticated power management programs – they are not for 12-volt systems.

Mr. Weinberg addressed issues the committee had raised.

- There is next to no waste that comes out of lead acid battery manufacturing. Very little comes out of the remaining secondary smelter in California. On the DTSC list of air emissions in California, battery manufacturers ranked 41st last year.
- Lead acid batteries have nothing to do with high volume waste from current operations, high toxicity waste, and source elimination and reduction.
- Approximately 100% of lead acid batteries disposed of in the U.S. every year are recycled. The EPA has recognized the recycling program as the most effective in the world. It is a closed loop system economically.
- Only a dozen smelters now exist in the U.S. – you can only safely recycle car batteries if it is done on an industrial scale.

But for a press release that Governor Brown sent out on February 17, Mr. Weinberg doubted if the CPHWR Initiative would have considered lead batteries as a target for a pilot program. He urged the committee to keep an open mind as they gather information.

Committee Questions and Discussion

Mr. Lapis requested to know more about the different smelters and their emissions. Are there good models to help support more safe recycling of lead acid batteries?

Dr. Ogunseitan pointed out that 10 million people in the world are sickened by the lead in lead acid batteries. It is a global problem that needs to end. For years we heard the same arguments about lead in gasoline. Mr. Weinberg responded that the important point to keep in mind is not what was historically done, but what is being done prospectively with its challenges.

Ms. St. Jean stated that at the April meeting, she would like to hear Mr. Weinberg's opinion of best management practices and how we can avoid some of the pollution that has happened. Possibly Mr. Weinberg can help to devise a model of the ideal recycling plan and prevention of future EJ situations. She would also like to hear about whether European countries are looking at alternatives to lead acid batteries.

Mr. Weinberg recommended looking at the South Coast Air Quality Monitoring District Rule 1420.1, which sets forth the operating standards.

Ms. Brostrom offered two questions for the next meeting: has any thought has been given to extending the time that batteries are used; and how much investment has been put into finding alternatives? She also pointed out that communities living near Quemetco have reported many problems in contamination at the site; she cautioned Mr. Weinberg against using it as a success story. He asked her to try to identify when the contamination occurred.

Ms. Babich commented that the information had felt like propaganda. Mr. Weinberg responded that batteries last twice as long as they did 20 years ago and use half as much lead.

9. Next meeting – agenda and expectations

Mr. Cardenas stated that staff will notify the committee when the location for the April 20 meeting is confirmed.

10. Meeting evaluation and action items

Mr. Bourne stated that staff will detail a new timeline. April 13 is the deadline for templates on projects that the committee would like to have discussed at the April meeting.

Staff has made corrections to the Operating Protocols and Guidelines. They welcome any comments from the committee.

Mr. Lapis commented on the excellent quality of the meeting facilitation.

The meeting adjourned at 4:04 p.m.