IN WASHINGTON
c/o Wiley Rein LLP
1776 K Street NW
Washington, D.C. 20006
Tel. 202.719.7000
Fax 202.719.7207

March 9, 2018

Barbara A. Lee, Director
California Department of Toxic Substances Control
1001 I Street
P.O. Box 806
Sacramento, CA 95812

RE: Draft Three Year Priority Product Work Plan (2018-2020)

Dear Director Lee:

The Battery Council International[1] ("BCI") provides these comments on DTSC's proposal to include lead batteries in the Safer Consumer Products ("SCP") program's next Three-Year Priority Product Work Plan ("Work Plan").

BCI and BCI members have been working with DTSC on this issue for nearly two years, both as part of the Community Protection Hazardous Waste Reduction Initiative ("CPHWRI") and in the context of SCP evaluation. We have appreciated the agency's engagement with us. But we continue to believe the proposed listing would be inappropriate and unlawful.

We thus are encouraged by indications that the DTSC is still in the process of evaluating the information provided at last November's "Public Workshop on Lead-acid Batteries and Alternatives" and previously on the potential listing of lead batteries. We urge that analysis be completed prior to the publication of the revised Work Plan and, on the basis of that analysis and the additional information we are providing today, that lead batteries not be included in it.[2]

We do not repeat here our prior submissions, but instead focus on issues we have not previously addressed: the proposal to identify nonvehicular lead acid batteries on the list, and the need to make the Work Plan more transparent and useful.

---

[1] BCI is a non-profit trade association whose members are engaged in the manufacture, distribution, and recycling of lead batteries internationally and across North America. BCI members account for over 98% of U.S. lead battery production and 100% of its recycling (i.e., secondary lead smelting) capacity. The lead battery industry contributes $28.5 billion to the U.S. economy. (See Attachment 1). Our industry promotes lead battery recycling by collecting and recycling lead batteries, encouraging the enactment of mandatory lead battery recycling laws, and supporting ongoing consumer and industry education efforts. BCI members have approximately 1,000 employees in California employed in battery manufacturing, distribution, and recycling facilities.

[2] At the February 26, 2018 workshop, DTSC staff suggested that the agency was under a statutory obligation to include lead batteries in the 2018-2020 Work Plan. That is incorrect. The statutory provision referred to by DTSC only required DTSC to "revise its *2015–17 Priority Product Work Plan* to include lead acid batteries for consideration and evaluation as a potential priority product." Ca. Health and Safety Code, Section 25253.5 (emphasis added). DTSC is under no obligation to include lead batteries in the 2018-2020 Work Plan.

I. Lead Batteries are Not Appropriate for Inclusion as a Priority Product

The draft Work Plan proposes to identify five categories of lead batteries for further consideration: vehicular starting, lighting and ignition batteries; small, sealed forms of batteries; batteries used in mobility applications; uninterruptable power supply batteries; and utility-scale energy storage batteries.[3] While much of the information BCI previously provided DTSC was focused on vehicular batteries because those were DTSC's prior focus, that information also is relevant to the other battery types.[4] Our submissions include details on current and evolving regulations and safety measures, recycling capabilities and performance, and economic benefits of lead batteries. Even without more, we believe it sufficient to demonstrate that inclusion of any types of lead batteries in the forthcoming Work Plan would be inappropriate. In fact, any such listing would be counterproductive because it would divert DTSC's limited resources from products potentially presenting much greater risks.[5]

For example, nonvehicular lead batteries are made in the same types of highly controlled facilities as vehicular batteries, have the same recycling rate of 99%, and present unique advantages to users and society generally. We thus only summarize information on those issues here, to bridge to nonvehicular use issues. We note in this context, however, that the use, handling, and collection for recycling of lead batteries used in industrial and energy storage contexts is even more tightly controlled than the use, handling, and collection of products distributed to consumers. On the other hand, the disposal, storage, and recycling of alternatives to all of these uses–largely lithium ion batteries–present the same substantial difficulties that exist for potential automotive lithium ion batteries.

As to nonvehicular batteries, and like our prior submissions, the comments below are guided by the fact that Section 69503.2(a) of the SCP regulation requires the Department to weigh two primary factors in evaluating candidate priority products: (1) potential exposure to the chemical in the product, and (2) potential for exposure to that chemical to cause significant or widespread adverse impacts to human health or the environment.[6] DTSC also is to consider several secondary factors: (1) consideration of the extent to which existing state and federal regulations may be addressing the same concerns, (2) whether the listing would meaningfully enhance protection of public health and the environment, and (3) the availability of safer alternatives that are functionally acceptable, technically feasible, and economically feasible.[7] None of these factors support identification of vehicular or nonvehicular lead batteries as a Priority Product.

---

[3] According to BCI data, from 2012-2016, nonvehicular applications accounted for approximately than 22% of the volume of lead used in batteries. However, because mobility, uninterruptible power supply, and utility-scale energy storage batteries tend to be much larger than vehicle batteries, the unit volume percentage is significantly lower. *See* BCI National Recycling Rate Report, available at http://batterycouncil.org/general/custom.asp?page=RecylingStudy.

[4] Comments from BCI on DTSC's Evaluation of Lead-acid Batteries (Dec. 6, 2017), available at https://calsafer.dtsc.ca.gov/workflows/comment/11309 and incorporated by reference into these comments.

[5] See Attachment 2, G.J. Mays, A. Davidson, and B. Monahov, "Lead batteries for Utility Energy Storage, 15 Journal of Energy Storage 145-57 (2018).

[6] Cal. Code Regs., tit. 22 § 69503.2(a).

[7] Cal. Code Regs., tit. 22 § 69503.2(b)(2), (3).

a. A DTSC Listing Would Duplicate Existing Standards and Would Not Meaningfully Enhance Public Health and Environmental Protection

The SCP Regulation states that DTSC should not duplicate federal or state regulations unless duplication would result in additional public health or environmental benefits.[8] We already have provided DTSC with information demonstrating that, between Federal and California laws and regulations, no aspect of a vehicular lead battery's life cycle is unregulated. Those laws and regulations are equally applicable to nonvehicular batteries now identified in the draft Work Plan and cover lead production, lead battery manufacturing and recycling, occupational health for workers during manufacturing and recycling, environmental protections, transportation of new and used batteries, retail sales, wholesalers, recycling collection programs, disposal and wastes, recycling facilities, product labels and consumer or workers warnings, and all other life cycle aspects.

In addition, other laws and regulations uniquely apply to some nonvehicular lead batteries. Most notably, small sealed lead acid batteries used in office or home energy storage devices cannot be sold unless recycling systems are in place (Ca. Pub. Resources Code § 42451, *et. seq.*), and the batteries themselves must be handled as Universal Waste. (22 CCR § 66273.2). In addition, requirements of existing fire codes are directly designed to control any releases of hazardous materials from uninterruptible power battery banks in buildings (almost all of which rely upon lead batteries) in the event of a fire in that building.[9]

In short, because of the comprehensive and overlapping state and federal regulations already in place, it is unlikely that a Priority Product listing would result in additional public health or environmental benefits.

b. There is no Real-World Potential Exposure to the Chemical in the Product for Consumers or Workers

Regardless of their use, lead batteries do not present an exposure threat to consumers or workers. Lead exposures in California arise predominantly from legacy issues such as historical use of lead in gasoline, paints, and water pipes. These uses are largely discontinued and remaining uses are heavily regulated.

As BCI has previously detailed to DTSC, modern designs of all types of lead batteries prevent consumer and worker exposure to the lead and other constituents of potential concern. Further, in industrial mobility power, uninterruptible power, and energy storage settings, the general population has no access to the batteries. Dedicated trained employees or the battery suppliers generally maintain and replace the batteries, and the amount of lead in large batteries makes them so valuable that the suppliers are careful to assure recycling. For example, large-scale uninterruptible power storage batteries are stored in secured locations in facilities owned and maintained exclusively by the local utility or the building owner - locations to which general public access is forbidden. Similarly, pursuant to strict U.S. Occupational Safety and Health

[8] Cal. Code Regs., tit. 22 § 69503.2(b).
[9] *See* 2016 California Fire Code Section 608.

Administration requirements, workplace uninterruptible power and mobility power batteries are subject to extensive hazard communication requirements and are maintained by specialist workers in segregated work areas. 29 C.F.R. 1910.1200 *et seq.*; 29 C.F.R. 1910.178; 29 C.F.R. 1926.441.[10]

Furthermore, use of lead batteries in general consumer products is fast becoming obsolete due to the weight of lead batteries and other characteristics of alternatives. While two decades ago lead batteries powered cameras and even mobile telephones, those uses are now virtually nonexistent. Where lead batteries are still used by consumers due to their continued advantages in computer uninterruptible power and surge management equipment, and in some uninterruptible lighting systems—those batteries are of sealed types and there is no routine access by consumers to the batteries.

Lead battery industry workers are also well protected by their employers. Indeed, most of the lead batteries produced in California are for nonautomotive use, and the worker protection record of California manufacturers is exemplary. Nationally, as a result of extensive voluntary efforts by battery manufacturers and recyclers, at the end of 2017, average worker blood lead levels across the industry were below 11 µg/dL, more than 75% below federal requirements; available data on California operators is consistent with or better than these national averages.

The extensive protections afforded to consumers and workers mean that DTSC could not mandate meaningful improvements beyond those already required by regulation or already being voluntarily implemented by industry.

c. There is no Real-World Potential for Exposure to the Chemical to Cause Significant or Widespread Adverse Impacts to Human Health or the Environment

As discussed above, and as BCI has detailed to DTSC in prior filings, the lead battery industry is highly regulated at both the federal and state level, and California facilities are subject to the most stringent emission controls in the world. Those regulations apply equally to the manufacture and recycling of vehicular and nonvehicular batteries. As a result, current manufacturing and recycling practices have greatly reduced adverse impacts on both human health and the environment.

Data presented by BCI to DTSC has shown that those regulations, and the industry's own efforts, have substantially eliminated the potential for widespread impacts. The industry's unparalleled recycling success means that batteries simply do not go to landfills, and most states (including California) specifically prohibit landfill disposal. The unprecedented high recycling rate also means that the clear majority of lead used to manufacture new products each year is recycled post-consumer lead. This dramatically reduces the risk of negative impacts from lead mining and ore smelting. Lead batteries also have a low life cycle environmental impact relative

[10] *See also* OSHA's eTool for Powered Industrial Trucks (Forklift) – Electric, available at https://www.osha.gov/SLTC/etools/pit/forklift/electric.html.

to other battery chemistries, with low emissions of carbon dioxide, particulate matter, nitrogen oxides, sulfur oxides, and volatile organic compounds.

The modern, well-controlled facilities that manufacture and recycle nonvehicular batteries are either the same, or substantively similar to, those that manufacture and recycle vehicular batteries. As DTSC staff have recognized previously, the already heavy regulation of industrial lead use at battery manufacturing and recycling facilities in California means that, in total, lead emissions from battery manufacturing and recycling facilities account for less than 1.5% of all lead emissions in the state. Today, most emissions of lead come from leaded aviation gas used in piston engine aircraft and power plants. The very small percentage of emissions represented by the battery industry does not justify DTSC's attention and resource expenditure, when other sources more heavily contribute to the state's overall emissions and provide opportunities for much more substantial reductions.

d. The Proposed Alternatives to Most Current Lead Battery Uses Are Either Not Available or Would Result in Regrettable Substitution

The SCP regulation allows DTSC to consider, in listing, "whether there is a readily available safer alternative that is functionally acceptable, technically feasible, and economically feasible" prior to listing a product as a Priority Product.[11] As with vehicular batteries, however, there are no alternatives to current lead battery uses that guarantee no regrettable substitutions, today or in the foreseeable future.[12]

Because DTSC's workshop last November requested data focused on automotive uses, BCI and others presented data primarily on those uses. It conclusively showed that no alternative exists or is likely to exist for a long time. However, much of that data is applicable to other use categories. In particular, the recycling limitations and safety concerns for lithium ion batteries are applicable regardless of their use.

Some proponents of new battery technologies have asserted that lithium ion batteries can replace lead batteries in various applications, but their optimism overstates the benefits. Lithium ion batteries' primary difference is in energy density—meaning more energy can be stored in a smaller package. But that difference requires compromises on other key aspects of a system, most critically on cost and safety. Lithium ion systems also require additional fire safety considerations (discussed below), and require more complicated and expensive battery monitoring and management systems than lead battery systems. For example, the leading lithium-ion based battery uninterruptible power system for home solar arrays costs up to ten times as much per kilowatt-hour as a lead-acid battery system with similar performance. And, at the end of the product's useful life, homeowners and building owners often are required to pay for the hazardous waste disposal of lithium ion systems. The Electric Power Research Institute estimated in 2017

[11] Cal. Code Regs., tit. 22 § 69503.2(b)(3).

[12] The U.S. Consumer Product Safety Commission has adopted an agency priority to find solutions for the safety hazards posed by lithium ion batteries—including lithium iron phosphate batteries—in consumer products. The safety concerns identified by CPSC would be equally applicable to lithium ion batteries in the use scenarios DTSC is looking at. *See* CPSC, Status Report on High Energy Density Batteries Project (Feb. 12, 2018), available at https://www.cpsc.gov/s3fs-public/High_Energy_Density_Batteries_Status_Report_2_12_18.pdf.

that it would cost $91,500 to pay for the end-of-life dismantling of a 1 MWh lithium ion uninterruptible power system.[13] By contrast, the recycling value of lead batteries mean that most systems are dismantled at no cost to the owner.

Further, the influx of lithium batteries into energy storage applications in occupied structures has led to significant concerns among fire safety regulators. In 2013, the National Fire Protection Association (NFPA) issued a report on lithium ion battery hazards in energy storage applications that identified numerous new hazards posed by lithium ion systems.[14] And the International Code Council has been working on updates to the International Fire Code that significantly expand the fire safety requirements for lithium ion based energy storage systems far beyond those required for lead battery systems.[15] The first set of those improvements will be included in the 2018 edition of the International Fire Code; and additional new requirements are under development for the 2021 edition. These changes will require substantial changes to the way buildings are designed and built to ensure the safety of occupants in potential fires.

II. DTSC's Draft Work Plan Should More Clearly Explain the Plan's Significance and Existing Notification Procedures Should Be Revised

In addition to the reasons presented above and previously by BCI as to why lead batteries should not be listed in the SCP or even, for that matter, included in the new Work Plan, BCI's experience over the last years in working with the program has led us to identify a number of improvements in the Work Plan process itself which merit DTSC's consideration and action. We describe these in this section of our comments.

Most broadly stated, both the organization and level of detail in the Work Plan are likely to result in public misunderstanding as to the significance of inclusion of the various listed product categories. This can be avoided, however, with the handful of revisions suggested below.

a. DTSC's Explanation of the Meaning of Including a Product Category in the Work Plan Should Not Be Buried at the End of the Document

The following statement, which unfortunately is buried at the end of the Work Plan, is fundamentally important in understanding the role of the document. It should be given far more prominence in the final version of the Work Plan:

> Listing a product category in the Work Plan does not mean it is subject to regulation, and the simple act of listing a product category in the Work Plan does not create any new legal obligations. For example, the listing of a product category or specific product in the Work Plan does not mean that DTSC intends to prohibit

[13] *See* Electric Power Research Institute, Recycling and Disposal of Battery-Based Grid Energy Storage Systems A Preliminary Investigation, Table 2-2, available at https://www.epri.com/#/pages/product/000000003002006911/.
[14] NFPA Fire Protection Research Foundation report: "Lithium Ion Batteries Hazard and Use Assessment - Phase III"; available at https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Research-reports/Hazardous-materials/Lithium-ion-batteries-hazard-and-use-assessment.
[15] *See* https://cdn-web.iccsafe.org/wp-content/uploads/Energy-Storage-Systems-Fire-Safety-Concepts-in-the-2018-IFC-and-IRC.pdf; *see also* http://www.klausbruckner.com/blog/fire-codes-for-energy-storage-systems/.

> or restrict the sale of any products. The identification of a product category is also not meant to imply that we have made any determinations regarding the safety of any products that might be included within that category. The listing of a product category in the Work Plan means only that DTSC intends to evaluate products within that category.

DTSC is correct to seek to avoid a misunderstanding of the role of the Work Plan. Addition of a product category to the Work Plan does not mean that the product category will be identified as a Priority Product, that the listed product category poses any safety threat to consumers, or that it presents any environmental risk. But this is not widely understood. Thus, simply including a product category in the Work Plan creates misconceptions about product safety and uncertainty among users about future product availability. It may even discourage use of the products, resulting in great economic disruption or increased reliance on imported products at the cost of U.S. jobs, even though the Department has not concluded that criteria for proceeding further are met.

However, the paragraph quoted above currently is buried on page 20 of the Work Plan. That placement reduces the likelihood that it will be noticed and understood by the public. DTSC has a responsibility to the public and to product manufacturers to guard against bias in the Work Plan implementation process and to avoid public misunderstanding. The paragraph should appear at the front of the document and be highlighted.

b. DTSC's Rationale for Removing Previous Product Categories Should Be Explained in the Work Plan

The draft Work Plan provides no explanation for DTSC's removal of the fishing equipment and clothing product categories that appeared in the prior Work Plan. Both to underline the point made in the prior subsection that inclusion in a Work Plan does not mean listing is appropriate. But to fully inform the public, clear explanations for the Department's rationale should be provided.

For example, in response to a question from a member of the Green Ribbon Science Panel during the Panel's February 13, 2018 meeting, Karl Palmer explained that DTSC decided to remove clothing at least in part because of the agency's concerns about a complex supply chain originating outside of California, and the realization that it was the manufacturing process (outside of California) that posed the principal risks, not consumer exposures to chemicals in the finished products. Thus, listing would not result in meaningful changes or protections. For the reasons set forth in the prior section of these comments, and in BCI's prior submissions to DTSC, similar considerations lead to the same conclusion for lead batteries, and the same result should be reached.

More broadly, however, DTSC should provide an analogous explanation for each category listed in a previous plan that is no longer included. This will provide insight into the way DTSC applies the criteria for identifying listing candidates and assist the public and manufacturers to properly respond to future DTSC requests for input on product categories.

c. DTSC Should Be More Transparent About Its Decisions to Set Aside a Product Category

For some of the reasons just presented, DTSC should communicate with potentially-affected parties when a decision is made to not list a product previously included in a Work Plan.

DTSC staff have explained and demonstrated in practice that a Work Plan is a prioritization and planning document, not a tracking mechanism for listing proposals. Thus, and properly, the Work Plan does not require continued evaluation of a product category once DTSC has determined it does not merit further analysis, even if the plan itself remains unrevised. But, the Department currently does not provide an impacted industry or its customers meaningful notice of a decision not to proceed with listing until the next draft Work Plan is released, potentially many years in the future. This leaves impacted industries and customers under a cloud of doubt and unnecessarily struggling to understand their regulatory future.

This unfairness can be readily overcome. Once a decision has been made not to move forward with further analysis of a candidate product-chemical combination included in a Work Plan, DTSC promptly should notify the affected industry of the agency's decision, in a way that will allow the affected industry to inform others authoritatively of the agency's decision. Withholding the information that a product category decision has been made can only serve to harm the affected industry and create marketplace confusion.

d. The Work Plan Should Clarify That DTSC Has Discretion Not to Propose a Product-Chemical Combination from a Given Product Category

On pages 7 and 20, DTSC states (using slightly varying language) that it "will" identify product-chemical combinations for potential listing from the categories included in the draft Work Plan.

- "The Work Plan . . . identifies categories from which we will propose future Priority Products." (p. 7).

- "Priority Products will be identified from the seven product categories. . . ." (p. 20).

This language implies that DTSC intends to identify at least one Priority Product from each of the seven categories. That is unlawfully presumptive and misleading. Clearly, DTSC recognizes that it has discretion to decide not to pursue any listings in a particular product category. The draft Work Plan should be revised to indicate that DTSC is not required to propose listing candidates from the Work Plan categories. An appropriate way to do this would be to revise these statements as follows (replacement text in *italics*), and to take care to avoid such implications elsewhere in the final document:

- "The Work Plan . . . identifies categories from which we *may, or may not,* propose future Priority Products." (p. 7).

- "Priority Products *may, or may not,* be identified from the seven product categories. . . ." (p. 20).

III. Conclusion

Prematurely mandating that California consumers and businesses switch from a proven safe, economical, and proven battery technology to new and unproven battery technologies with known significant environmental and public safety risks, and unknown long-term impacts, would not meet the agency's statutory mandate. DTSC action on lead batteries may also have the unintended consequence of reducing the value and/or availability of recycling for lead batteries, upending the current closed-loop life-cycle. This could perversely cause *more* lead batteries to wind up in landfills or with less-responsible processors, a result nobody wants to see. These potential impacts can be avoided by prompt resolution of the question of listing lead batteries in the SCP and deletion of any discussion of those products from the final Work Plan.

If time pressures preclude DTSC resolving lead battery issues before the final version of the draft Work Plan is issued, it will be vitally important for the Department to address the issues discussed in Section II of these comments. Even if (as BCI believes is appropriate) DTSC can reach a timely decision that results in excluding lead batteries from the final Work Plan, making those changes will be good public policy.

As has been the case in the past, BCI will welcome the opportunity to meet with DTSC to discuss the concerns summarized above, or to provide other information that the agency may find helpful. We also appreciate the serious attention that has been given by DTSC to these matters and look forward to further cooperative and positive interactions.

Respectfully submitted,

/s/ *Kevin M. Moran*
Executive Vice President, Battery Council International

Attachments

cc: Grant Cope, Deputy Secretary for Environmental Policy
Meredith Williams, Deputy Director
Karl Palmer, Branch Manager