August 5, 2016

Bari Schreiner
Department of Ecology
Agency Rules Coordinator
PO Box 47600
Olympia, WA 98504-7600

Dear Ms. Schreiner:

On behalf of the Washington Toxics Coalition (WTC), I am submitting this petition in accordance with Washington’s Administrative Procedures Act (RCW 34.05.330), requesting an amendment to the Children’s Safe Products Act (CSPA) rule (WAC 173-334).

Pursuant to WAC 173-334-070 (4), WTC requests that the CSPA rule be amended to add chemicals to the reporting list of Chemicals of High Concern to Children (WAC 173-334-130). Reporting on the list as it currently stands has been extremely useful in identifying uses of toxic chemicals in children’s products. For example, as a result of the reporting, we have information on the use of a few phthalates and other chemicals in apparel, on certain flame retardants in car seats, and on the use of a siloxane in many different children’s products.

However, the list is limited in number and does not include some toxic chemicals that are used in significant quantities in consumer products. In particular, plasticizers, flame retardants, and stain-protection chemicals can be expected to be present at up to percentage levels in products. While some of these types of compounds are currently on the reporting list, the list is missing high priority chemicals that are widely used and may be found at high concentrations in children’s products. It is especially important to obtain information about the use of toxic compounds that meet the high priority chemical criteria in the law where exposure can be expected to be higher because of heavy use in products.

In addition, toxic flame retardants, phthalates, and perfluorinated chemicals are three important classes of chemicals that the Governor and Ecology have prioritized for action. It is important to gather information about the chemicals in these classes to make sure progress is being made when a chemical ban is put in place, to understand what substitutes are being used that may also be harmful, and to fill data gaps in the development of chemical action plans. The agency should be as comprehensive as possible in requiring reporting in these classes.
With this petition, we are requesting that the following chemicals that meet the legal criteria be added to the reporting list:

1. **Dipentyl phthalate (DNPP or DPENP) or Di-n-pentyl phthalate (CAS # 131-18-0).** DPENP is used as a plasticizer in PVC consumer products. DPENP is considered among the most potent phthalates regarding developmental effects and its toxicological profile is very similar to that of other antiandrogenic phthalates. Studies of DPENP exposure in laboratory animals have shown it to cause testicular atrophy and endocrine effects in rats and fertility impairment in rats and mice. DPENP is on the European Union's (EU) list of Substances of Very High Concern because it is toxic for reproduction. It is also an EU Priority Endocrine Disruptor Category 1 because of in vivo evidence of endocrine disrupting activity. The Chronic Hazard Advisory Panel on Phthalates (CHAP) recommended to the U.S. Consumer Product Safety Commission (CSPC) in July, 2014 that “DPENP should be permanently banned from use in children’s toys and child care articles at levels greater than 0.1%.” DPENP has also been detected in household dust and its metabolite MHPP has been detected in human urine. The general population can be exposed to DPENP through dermal contact with consumer products and DPENP contributes to cumulative phthalate exposure.

2. **Diisopentyl phthalate (DIPP) (CAS # 605-50-5).** DIPP is used in the manufacture of propellants and as a plasticizer for PVC and other polymers. DIPP has similar structure and physicochemical properties to di-n-butyl phthalate (DBP) and diisobutyl phthalate (DIBP) and so is used in a similar way. DIPP is considered a potential substitute for other phthalates. There is evidence that DIPP is an equal or more potent testicular toxicant than DEHP. It is suspected to have fertility reducing action because of its structural similarity to di-n-pentyl phthalate and dibutyl phthalate. DIPP is on the EU’s list of Substances of Very High Concern because it is toxic for reproduction. DIPP is not normally included in phthalate measurements in household dust and consumer products, therefore its presence may be underestimated.

3. **Bis (2-methoxyethyl phthalate) (DEMP) (CAS # 117-82-8).** DEMP is used as a plasticizer. It is considered likely to be used as a secondary plasticizer in combination with other phthalates. Reported effects of DEMP include decreased testes weight, abnormal sperm, decreased liver and kidney weights, decreased thymus weights and decreased red and white blood cell counts in rats. Studies have also shown reduced pup survival and developmental abnormalities in rats. DEMP metabolites have been shown to be teratogenic and embryotoxic. DEMP is on the EU's list of Substances of Very High Concern because it is toxic for reproduction. DEMP has been reported in toys at levels up to 40%.

4. **Diisobutyl phthalate (DIBP) (CAS # 84-69-5).** DIBP is a plasticizer that is used in nail polish, personal care products, lubricants, printing inks, and many other products. It can be used as a substitute for DBP. Epidemiologic studies have shown an association of human maternal urinary MIBP (a DIBP metabolite) concentrations
with measures of shortened anogenital distance in male offspring. Several studies reported associations of MIBP in humans with poorer scores on neurodevelopment tests. Reported effects from studies using laboratory animals include adverse effects on male reproductive organs and spermatogenesis in rats and mice, embroyotoxic, fetotoxic and teratogenic effects, and reduced fetal testosterone production. DIBP is on the EU’s list of Substances of Very High Concern because it is toxic for reproduction. It is an EU Priority Endocrine Disruptor Category 2 because of in vitro evidence of endocrine disrupting activity. It is on EPA’s TSCA Work Plan list because it meets the criteria for reproductive toxicity. The Chronic Hazard Advisory Panel on Phthalates and Phthlate Alternatives (CHAP) recommended to the U.S. Consumer Product Safety Commission in July, 2014 that DIBP should be permanently banned from use in children’s toys and child care articles at levels greater than 0.1%. DIBP has been detected in toys and MIBP has been detected in human urine samples in the U.S. general population; these levels have been increasing over time.

5. **Dicyclohexyl phthalate (DCHP) (CAS # 84-61-7).** DCHP is a plasticizer used in adhesives, sealants, fillers, putties, PVC, rubber and plastic articles and it can be found in fabrics, textiles and apparel. Reported effects from studies in rats include reduced prostate weight and anogenital distance, retained areola mammae, effects on the testes in males, increased number of litters with resorptions, decreases in testosterone and anti-Mullerian hormone (AMH/MIS), decreased ratio of follicle stimulating hormone (FSH) to inhibin B, increased thyroid weight and thyroid activity, and abnormal sperm. DCHP is an EU Priority Endocrine Disruptor Category 1 because of in vitro evidence of endocrine-disrupting activity. The Chronic Hazard Advisory Panel on Phthalates and Phthlate Alternatives (CHAP) recommended to the U.S. Consumer Product Safety Commission in July, 2014 that DCHP should be permanently banned from use in children’s toys and child care articles at levels greater than 0.1%. The chemical has been detected in household dust and indoor air as well as children’s articles such as modeling clay and pajamas.

6. **Diisooctyl phthalate (DIOP) (CAS # 27554-26-3).** DIOP is used as a plasticizer. Reported effects from studies in laboratory animals include decreases in the number of mouse litters per pair, live pups per litter, mean live pup weight and proportion of live pups. Reported effects also include increased number and percent of fetal resorptions, late fetal deaths, and malformed fetuses. Effects in male mice include reduced testis, epididymis, and prostrate weights, and reduced percentages of motile and abnormal sperm. Effects in female mice include reduced combined weights of ovaries, oviducts and uterus. DIOP is on EPA’s TSCA Work Plan list because it meets the criteria for developmental toxicity. The Chronic Hazard Advisory Panel on Phthalates and Phthlate Alternatives (CHAP) recommended to the U.S. Product Safety Commission in July, 2014 that DIOP should be subject to an interim ban from use in children’s toys and child care articles at levels greater than 0.1%. It has been detected in children’s products such as teethers, pacifiers, and bottle nipples.
7. **Decabromodiphenylethane (DBDPE) (CAS # 84852-53-9).** DBDPE is used as a substitute for deca-BDE, banned in Washington in 2007, and is structurally very similar. U.S. production has been reported at 50 to 100 million pounds per year; most use is expected to occur in hard plastics. A 90-day oral study in rats found hepatotoxicity as well as increased serum T3 thyroid hormone levels, with a LOAEL of 100 mg/kg/day (the only dose tested). There is evidence that DBDPE is persistent, with detections in household dust, sewage sludge, sediment, fish, and wildlife. The U.S. EPA has designated DBDPE as a high bioaccumulation hazard based on detections in "many different species including those higher on the food chain." The compound has been detected in numerous fish and bird species, herring gull eggs, peregrine falcon eggs, shellfish, and red panda.

8. **Dechlorane Plus (CAS # 13560-89-9).** Dechlorane Plus is a flame retardant believed to be used in electrical components including wires, cables, and connectors. Production was reported at 1 - 10 million pounds between 1986 and 2002; current levels were claimed confidential in 2012. Laboratory studies have found effects on liver, ovaries and lung, and the structurally similar dechlorane has been designated as a carcinogen. Dechlorane Plus is persistent and has been detected in air in the Great Lakes region and in the Arctic, in fish from the Great Lakes, Baltic sea and Japanese coast, in peregrine falcon eggs from Canada and Spain, in dolphins, in house dust, in sediment, and in breastmilk.

9. **1,2-bis(2,4,6-tribromophenoxy)ethane (BTBPE) (CAS # 37853-59-1).** BTBPE is a flame retardant introduced to replace octa-BDE and used in various plastic resins. There is evidence from both laboratory and epidemiological studies of impacts on thyroid, as well as findings from a rodent study that found behavioral and gastrointestinal effects and dermatitis. It is persistent and has been detected in house dust, indoor air, outdoor air in the Great Lakes and Arctic, tree bark, sediment, and in fish and wildlife including walleye, herring gull eggs and dolphins. Based on uptake studies in fish, researchers have determined BTBPE to have a high potential for bioaccumulation.

10. **Tricresyl phosphate (TCP) (CAS# 1330-78-5).** TCP is a flame retardant used in PVC and other plastics as well as in hydraulic fluids. TCP is a known neurotoxicant and laboratory studies have found it affects lipid metabolism and has widespread effects on reproduction, with exposure to male rats resulting in 100% infertility. TCP has been detected in house dust, indoor and outdoor air, sediment, surface water, drinking water, and fish. It has been found in breastmilk, and laboratory tests of bioaccumulation in fish suggest a high potential for bioaccumulation.

11. **Short-chain chlorinated paraffins (SCCPs) (CAS # 85535-84-8).** SCCPs are plasticizers and flame retardants used in plastics as well as in sealants, adhesives, and industrially as coolants and lubricants. According to the U.S.E.P.A., "SCCPs are persistent, bioaccumulative, and toxic to aquatic organisms at low concentrations. They can remain in the environment for a significant amount of time and can bioaccumulate in animal tissues, increasing the probability and duration of
exposure." The National Toxicology Program has designated the compounds as "reasonably anticipated to be human carcinogens." They have been listed as Substances of Very High Concern by the European Union. SCCPs have been detected in house dust, outdoor air, surface water, sediment, marine mammals, fish, terrestrial birds and seabirds, and breast milk.

12. **Perfluorooctanoic acid (PFOA) (CAS # 335-397-9) and related substances.**

PFOA and related substances are used in the production of stain-resistance compounds used on textiles, polymers with numerous applications, fire-fighting foams, coatings, surfactants, and other products. The European Chemical Agency (ECHA) has classified PFOA as toxic for reproduction and the International Agency for Research on Cancer has designated PFOA as a possible carcinogen based on epidemiological evidence linking exposure to kidney and testicular cancer. They are widespread in the environment as a result of industrial releases and from their use in consumer products. Precursor chemicals used commercially can degrade to PFOA biotically and abiotically after their release during production or from in-use products. PFOA does not degrade in the environment and has been designated by the European Union as persistent, bioaccumulative, and toxic (PBT), and is listed as a Substance of Very High Concern as a PBT and reproductive toxicant. Despite the USEPA PFOA Stewardship Program challenging manufacturers to end releases of PFOA, recent testing has detected the compound in consumer products. PFOA has been detected in house dust, surface water, drinking water, sediment, outdoor air, fish, marine mammals, polar bears and other biota, and human blood.

There is precedent on the list of Chemicals of High Concern to Children for listing chemicals and related compounds. For instance, several metals, such as arsenic, are listed along with related compounds; nonylphenol is listed along with isomer mixtures; and 3,3'-dimethylbenzidine is listed with dyes metabolized to 3,3'-dimethylbenzidine. For a sufficient understanding of the use of chemicals likely to degrade to PFOA, it is necessary to list PFOA along with related compounds. This is the approach taken in restrictions being considered by the European Union following a proposal by Germany and Norway. Their proposal, supported by the EU Risk Assessment Committee in September 2015, was to restrict "manufacturing, use, and placing on the market of Perfluorooctanoic acid (PFOA) and its salts, also including substances that may degrade to PFOA (PFOA-related substances)." The proposal provides further details on chemical structures of these PFOA-related substances.

These changes are appropriate now for the following reasons:

1) **Washington state should continue its leadership role under the new federal Toxics Substances Control Act adopted recently by Congress.** Since the reform passed by Congress will not do what is necessary to address the thousands of chemicals on the market, states will continue to have a clear role in obtaining information on what chemicals are used in products and taking action where necessary. It is a critical time for Washington to
continue its leadership role on chemicals and update its rule so that the information can be used in federal regulatory decisions, which will be lacking this important information.

2) In 2016, HB 2545 was enacted into law, which requires Ecology to consider whether six flame retardants should be added to the list. WTC supports adding these six flame retardants—IPTPP, TBB, TBPB, TCPB, TPP, and V6—to the list and will reserve our comments for the rulemaking process. It would be efficient and cost effective to consider other chemicals in the same rulemaking.

3) Thousands of chemicals are used in consumer products, yet the CHCC list has only sixty-six. Since the rule was originally adopted in 2011, the only change has been to add one compound and remove one. It is reasonable to add chemicals every three to five years. In addition to this petition, WTC has previously requested chemicals be added to the list. In the agency’s October 2013 Response to WTC Comments (attached) regarding adding additional chemicals it stated:

"Thank you for your thorough and well-researched comment. Additional modifications to the Reporting List of Chemicals of High Concern to Children are outside the scope of this rulemaking. Adding additional chemicals would require proposing new rule language and additional public comment. Ecology has elected to complete the current rule proposal, and plans to propose a more thorough update to the reporting rule in 2016, subject to the availability of resources at that time. We will consider the information contained in your comment at that time."

We request that the chemicals identified in our September 2013 comments also be considered in the same rulemaking.

We urge Ecology to take immediate and swift action to add these chemicals to the chemical reporting list in WAC 173-334. This action is needed to obtain critical information on the use of toxic chemicals in children’s products.

Sincerely,

[Signature]

Laurie Valeriano
Executive Director
WA Toxics Coalition
4649 Sunnyside Ave. N. Suite 540
Seattle, WA 98103
References


5. Bureau for Chemical Substances, Poland, 2013. Annex XV Dossier, Proposal for Identification of a Substance As A CMR 1A or 1B, PBT, vPvP Or A Substance Of An Equivalent Level of Concern: Dipentyl Phthalate (DPP) EC Number: 205-017-0, CAS Number: 131-18-0.


10. ECHA Candidate List of substances of very high concern for Authorisation (SVHC), http://echa.europa.eu/candidate-list-table

11. Environment Agency Austria (undated) Annex XV Dossier; Proposal for Identification of a Substance as a CMR Cat 1A or 1B, PBT, vPvB or a Substance of an Equivalent Level of Concern, Substance Name: Diisopentylphthalate (DIPP), EC Number: 210-088, CAS Number(s): 605-50-5.


September 6, 2013

Mr. Joshua Grice
Department of Ecology
PO Box 47600
Olympia, WA 47600
VIA Email: csparule@ecy.wa.gov

Dear Mr. Grice:

Please accept these comments on behalf of the Washington Toxics Coalition regarding amending Chapter 173-334 WAC, Children’s Safe Product Reporting Rule to add tris (1,3-dichloro-2-propyl)phosphate (TDCPP) (CAS # 13674-87-8) to the reporting list of chemicals. We fully support the addition of TDCPP to the list of chemicals and respectfully request the agency take this rulemaking opportunity to add other chemicals that meet the legal criteria for inclusion on the Chemicals of High Concern for Children (CHCC) list.

TDCPP

TDCPP should be added to the CHCC list for the following reasons:

1. The Department of Health has confirmed that TDCPP meets the toxicity and exposure criteria to be included on the list.

2. In late 2011, the State of California made a determination that TDCPP causes cancer and added it to their list of Proposition 65 (Prop 65) chemicals.

3. Recent testing demonstrates it is widely used in products. TDCPP has been detected in the foam of children’s products including changing pads, bassinet pads, and car seats. These are products that babies and older children contact for extended periods of time, and the flame retardant has been detected at levels averaging 2.6% and ranging up to 5%. When Washington Toxics Coalition commissioned testing of 20 foam-containing children’s products in 2011, TDCPP was found in 80% of the products.

4. TDCPP has been widely detected in house dust as well as in indoor air, breast milk, urine, surface water, and fish.
Reasons for Adding Additional Chemicals that Meet the Legal Criteria

There are several important reasons that the Department of Ecology (Ecology) should add other chemicals that meet the legal criteria in this rulemaking.

1. It is important to stay ahead of the curve and ensure companies are not just switching to chemicals that are high priority chemicals but aren’t yet on the reporting list. We already know that many companies have agreed to phase out TDCPP, but it is unclear what they are using. Particularly for flame retardants, it makes sense to identify as many as possible that meet the legal criteria and add them to the list. This way the public and the agencies will have the best chance at knowing what flame retardants companies have moved to as a replacements for polybrominated biphenyl ethers (PBDEs), Tris (2-chloroethyl) phosphate (TCEP) and TDCPP.

2. The work to identify additional chemicals that meet the legal criteria has already been done and the agency should now be regularly adding batches of chemicals to the CHCC list. It took more than three years for the Departments of Health and Ecology and the University of Washington (UW) Pediatric Specialty Unit to develop a comprehensive list of chemicals that met the criteria in the law. It is more efficient to take batches of chemicals from that list rather than to wait for petitions and add one or two chemicals at a time. Rulemaking takes significant resources and is not typically carried out more than once every 3-4 years.

3. Ecology’s reporting list has already proven to be an extremely valuable tool for state agencies and the public to obtain information about what chemicals are in products marketed for use by children. For example, it was because of reporting under the Children’s Safe Products Act (CSPA) that we learned that Graco is now using the flame retardant tetrabromohisphenol A (TBBPA) in baby and children’s products. This information helps consumers make decisions and helps Ecology prioritize action, particularly with regard to helping businesses find safer alternatives.

4. Adding chemicals to the list does not increase the workload burden on the agency. The majority of work has already been done to identify the chemicals and set up the database for reporting.

Additional Chemicals Should be Added to the Reporting List

We propose the following chemicals in these use categories be added in this rulemaking because they meet both the toxicity and exposure criteria in the law. In addition, all of them have been already identified as meeting the criteria in the law as part of the original CSPA rulemaking process.
1) Flame retardants

A) Short Chain Chlorinated Paraffins (SCCPs) (CAS 85535-84-8)

Toxicity: SCCPs meet the toxicity criteria in RCW 70.240.010 (6) (e) because they are persistent, bioaccumulative, and toxic (PBT) at low levels. These chemicals are listed on authoritative PBT lists including Washington State's and EPA's.

http://www.ecy.wa.gov/programs/swfa/pbt/list.html

Exposure: SCCPs meet the exposure criteria in RCW 70.240.030 (a), (b) and (c). According to EPA:

a) SCCPs are used as secondary plasticizers and as flame retardants in plastics, especially PVC. SCCPs are also used as plasticizers and flame-retardant additives in a variety of consumer products including: rubber formulations, paints and other coatings, and adhesives and sealants.

b) SCCPs have been measured in a variety of environmental media including air, sediment, surface waters, and wastewater. SCCPs have also been measured in a variety of biota, including freshwater aquatic species, marine mammals, and avian and terrestrial wildlife. In addition, SCCPs have been detected in samples of human breast milk from Canada and the United Kingdom, as well as in a variety of food items from Japan and various regions of Europe.

http://www.apa.gov/opptintr/existingchemicals/pubs/ecactionpln.html#posted

B) Dechlorane Plus (CAS 13560-89-9)

Toxicity: Dechlorane Plus meets the toxicity criteria in RCW 70.240.010 (6) (e) because it is a listed European Union Persistent Bioaccumulative Toxic chemical (PBT).

Exposure: Dechlorane Plus meets the exposure criteria in RCW 70.240.030 (b) and (c). According Ecology, the chemical has been found in house dust. There is additional information demonstrating it has been found in sediment, plankton, mussels, and fish, and recent evidence indicates it can bioaccumulate. It is incorporated into plastics that are used in consumer products used or present in the home.

This compound was on Ecology's original list of chemicals meeting the criteria for toxicity and exposure, but was eliminated because it is also a registered pesticide. Its use as a pesticide is irrelevant and it should be listed.
2) Plastic Building Block Chemicals:

There are many plastics used in children’s products and the existing CHCC list is not adequate to capture some of the most widely used chemicals. The following chemicals should be added to the list:

(A) 4,4’-Methylene bis (2-chloroaniline) (CAS 101-14-4)

Toxicity: The chemical meets the toxicity criteria in RCW 70.240.010(6)(b) for carcinogenicity according to EPA’s TSCA workplan chemical methods document. California has also listed it as a Prop 65 carcinogen.

Exposure: The chemical also meets the exposure criteria in RCW 70.240.030 (b) and (c). According to EPA it is widely used in consumer products and it is present in the ambient air.

(B) 4,4 Diaminodiphenylmethane (CAS 101-77-9)

Toxicity: The chemical meets the toxicity criteria in RCW 70.240.010(6)(b) for carcinogenicity. It was identified by the State of California as a carcinogen in 1988 and is a Prop 65 chemical.

Exposure: The chemical meets the exposure criteria in RCW 70.240.030 (c) because it is added or present in consumer products.

Ecology citation for presence in consumer products:


(C) Epichlorohydrin (CAS 106-89-8)

Toxicity: The chemical meets the toxicity criteria in RCW 70.240.010(6)(b) for carcinogenicity. It was identified by the State of California as a carcinogen in 1987 and is a Prop 65 chemical.

Exposure: The chemical meets the exposure criteria in RCW 70.240.030 (c) because it is added or present in consumer products.
3) Metals

The recent reporting to the agency shows that there are numerous metals used in children's products, but a number of toxic metals are missing from the CHCC list even though they meet the exposure and toxicity requirements. We recommend the following metals be added because they have all been identified by the state of California as carcinogens and they are added or present in children's and/or consumer products.

(A) Nickel and Nickel Compounds (CAS 7440-02-0)

Ecology children's product and consumer product citations:


DEPA No. 64, Svendsen, Nanna, Bjarnov, Erik, and Poulsen, Pia Brunn. Survey as well as health assessment of chemical substances in school bags, toy bags, pencil cases and erasers, 1-153. 2007. Survey of Chemical Substances in Consumer Products.


(B) Beryllium (CAS 7440-47-3)

Ecology consumer product citations:


Centers for Disease Control. Third National Report on Human Exposure to Environmental Chemicals. 2005

4) Dyes and Pigments

There were 1,000 reports for pigments and dyes in the first two rounds of reports submitted under the CSPS rule. This indicates a significant use of chemicals for this purpose in children's products. It is important that the list of chemicals used for this purpose is as complete as possible. The following chemicals used for pigments and
(B) Trichloroethylene (CAS 79-01-6)

This chemical solvent meets the toxicity requirements because it is listed on California's Prop 65 list and IRIS for cancer and the following sources of information clearly demonstrate it meets the exposure criteria:


(C) Acrylamide (CAS 79-06-1)

This chemical used to manufacture polymers meets the toxicity requirements because it is listed on California’s Prop 65 list and numerous other authoritative lists for cancer. It also meets the exposure criteria according to this source:


(D) 1,2,3-Trichloropropane (CAS 96-18-4)