

Testimony of

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Hearing on  
Strengthening Public Health Protections by Addressing  
Toxic Chemical Threats

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Chairman Boxer, Ranking Member Vitter, members of the Committee, thank you for the opportunity to testify today on “Strengthening Public Health Protections by Addressing Toxic Chemical Threats.” My name is Daniel Rosenberg, and I am a senior attorney in NRDC’s Health and Environment program.

NRDC is a nonprofit organization of scientists, lawyers, and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.3 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles, San Francisco, Chicago and Beijing.

Today’s hearing provides the Committee another opportunity to grapple with the legacy of the decades-long failure to adequately regulate the use of toxic chemicals in everyday commercial and consumer products – chemicals to which we are regularly exposed in our homes, cars, and schools, in the workplace and the marketplace. The failure even to assess thousands of chemicals used in commerce, and regulate those determined to be unsafe has led to a situation that is unacceptable to most Americans. This failure has meant that babies are born with man-made chemicals already in their developing bodies; that there is no credible assurance that exposure to those chemicals – individually or in an ever expanding number of possible combinations – is safe; and that such exposure may be contributing to the disturbing rise in the incidence of numerous diseases and conditions, including several types of cancer, learning and developmental disabilities, fertility problems, birth defects, “age-related” illness, and asthma.

Over the past generation, scientists have gained a greater understanding of the potential health and environmental threats posed by exposure to toxic chemicals. Over the almost 37 years since enactment of the Toxic Substances Control Act (TSCA), science has raised many new concerns about the potential health effects of individual chemicals, as well as classes of chemicals. While scientific understanding has been increasing rapidly, TSCA has remained virtually dormant for existing chemicals and inadequate to assure the safety of new chemicals.

Since 1976, scientists have linked exposure to toxic chemicals to a wide array of health risks. Research increasingly indicates, for example that exposure to low doses of certain chemicals, particularly in the womb or during early childhood, can result in irreversible and life-long impacts on health. It is now commonly known that some toxic chemicals persist in the environment, sometimes for decades, and build up in the food chain and in our bodies. It is now well recognized that some chemicals are able to disturb human and other hormonal, reproductive, and immune systems and that chemicals interact so that substances that individually may be considered “safe” at low levels can act in concert to harm health.

It’s no wonder, then, that so many major independent health and science organizations have expressed concern and called for steps to better characterize and address the risks from chemical exposure.

The President's Cancer Panel -- appointed by President George W. Bush -- found that "the true burden of environmentally induced cancer has been grossly underestimated." The American Congress of Obstetricians and Gynecologists has said: "Today, we know that expert obstetrical care, from preconception to delivery, can only do so much to ensure healthy birth outcomes. Chemicals that affect fetal programming and placental stem cells, the point at which significant damage can occur, may lead to multi-generational health care issues across the lifespan." The Endocrine Society -- the largest professional association of the nation's endocrinologists has stated: "The evidence for adverse reproductive outcomes (infertility, cancers, malformations) from exposure to endocrine-disrupting chemicals is strong, and there is mounting evidence for effects on other endocrine systems, including thyroid, neuroendocrine, obesity and metabolism, and insulin and glucose homeostasis."

The known and potential health impacts of exposure to toxic chemicals are a concern for much of the public. The public wants -- and deserves -- a federal system for assessing chemicals that would quickly eliminate or reduce the use of those chemicals already known to be unsafe, and that would enable the Environmental Protection Agency (EPA) to obtain the information and data it needs to determine the safety of chemicals that have not yet been assessed. It is time to dig ourselves out of a hole almost forty years in the making, and also identify safe and effective substitutes for chemicals that are dangerous dinosaurs -- rewarding in the marketplace those innovators that produce safer products.

The most important step that this Committee and Congress can take to help solve the problem of our current broken system for regulating toxic chemicals is to pass strong, effective legislation to reform the Toxic Substances Control Act (TSCA).

The Committee has several chemical safety-related bills pending before it, including the Chemical Safety Improvement Act, (S.1009) which has received the most attention recently. The bill has fundamental flaws that must be addressed, but NRDC continues to be willing to work to improve it.

Key problems with the bill as currently drafted include:

**No deadlines or minimum requirements** -- The key to making any statute work is ensuring that it has enforceable deadlines. Yet S. 1009 imposes no statutory deadlines for assessing chemicals or making decisions on whether to regulate them. The bill's sponsors argue that, unlike TSCA, the measure directs EPA to assess chemicals. But without any mandatory and enforceable schedule, action can be delayed indefinitely, and no one will be able to compel the agency even to start evaluating a chemical. There is also nothing in the bill requiring EPA to take action on a minimum number of chemicals. Long experience has shown what happens in response to statutes with such gaps -- nothing. In addition, the bill appears to stop the current work of EPA pending the development of multiple new frameworks and criteria (discussed below). Most of the history of TSCA can be summed up in two words: "nothing happened." TSCA reform must be written to make sure that something actually happens.

**Preemption of state authority** -- In the absence of meaningful regulation of toxic substances, states have stepped-in to fill the vacuum, enacting and adopting a host of measures to inform and protect the public including restrictions on specific uses of certain chemicals and use reporting requirements. Coupled with activity to restrict the use and sale of unsafe chemicals in the retail sector, these state actions -- many of which have been adopted with strong bi-partisan support at the state and local level -- have benefited citizens nationwide as manufacturers have dropped some uses of chemicals to maintain

a uniform approach, information available to all citizens has expanded, and the overall use and release of substances that do not stay within state boundaries have been reduced.

The CSIA imposes limits on the ability of States to protect their citizens – limits that are in critical ways worse than current law. S. 1009 blocks states from taking new action on a chemical as soon as the Environmental Protection Agency (EPA) has listed the substance as a “high priority” and scheduled an assessment. This is especially damaging because years could elapse between the time EPA schedules an assessment and the time it conducts the assessment and decides whether to regulate. Numerous chemicals deemed “high priority” by EPA could be languishing on the schedule, which as noted above, would be unenforceable. The waiver provision of the bill is too narrow and onerous to mitigate the fundamental flaws in the preemption section of the bill.

The bill also would preempt existing state laws on high priority chemicals, once EPA has adopted a restriction on the substance, even if the State provision may be broader in scope and more protective of the public but not directly in conflict with the federal provision. A powerful example of the work that has been done at the state level – and which must be allowed to continue – is the widely successful effort to reduce the public’s exposure to mercury, including phasing out its use in a variety of commercial and consumer products.

The declining use of mercury in the manufacture of consumer and other products illustrates the important role states have assumed in protecting public health and the environment. As you know, mercury is a powerful neurotoxin, adversely affecting childhood development at low concentrations. The principal exposure route for most Americans is the consumption of fish. In 2010, 81% of all state-issued fish advisories were due to the presence of mercury, covering most states. Twenty-five states have statewide mercury advisories for all their fresh water lakes and rivers, and 16 states have statewide advisories for all their coastal waters.<sup>1</sup>

This prevalence of mercury contamination throughout the country spurred states to reduce mercury releases arising from the life cycle of mercury-added products (manufacture through disposal). States within the New England and Great Lakes regions worked collaboratively to develop policy recommendations for the phase out of mercury product sales where alternatives are readily available.<sup>2</sup> Many states within these regions and other states as well, subsequently enacted legislation to phase out the sale of mercury in such products as thermometers, blood pressure cuffs, thermostats, switches and relays, and button cell batteries. At the present time, twelve states have comprehensive mercury product legislation (California, Louisiana, New York, Rhode Island, Vermont, Maine, Massachusetts, Connecticut, New Hampshire, Minnesota, Wisconsin, Illinois), while other states restrict sales of one or several of the products.<sup>3</sup>

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<sup>1</sup> U.S. Environmental Protection Agency (EPA) National Listing of Fish Advisories General Fact Sheet: 2010 National Listing [http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/general\\_factsheet\\_2010.cfm](http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/general_factsheet_2010.cfm).

<sup>2</sup> <http://www.glrc.us/documents/MercuryPhaseDownStrategy06-19-2008.pdf>;  
<http://www.newmoa.org/prevention/mercury/modelleg.cfm>.

<sup>3</sup> <http://www.newmoa.org/prevention/mercury/imerc/guidance.cfm>.

These state laws produced dramatic results. In 2001, the amount of mercury in products sold in the USA was approximately 130 tons. State laws prompted mercury use reduction to almost half that amount by 2007,<sup>4</sup> and to approximately 53.4 tons by 2010 (based on preliminary analyses of the 2010 data). The effect of the state laws extends beyond the 12 states, as major USA manufacturers of thermostats, batteries, and other products now produce only mercury free products instead of continuing to sell mercury products where still legally allowed.

It should also be noted that the information available on USA mercury product manufacture and imports is largely from the states. Fifteen states are now members of the Interstate Mercury Education and Reduction Clearinghouse (IMERC), where data from product manufacturers are collected every three years and systematically entered into a publicly accessible data base.<sup>5</sup> Despite EPA's 2006 acknowledgement that a national data base covering mercury use in both products and processes is needed,<sup>6</sup> TSCA has not yet been used to develop one.

In addition to the state activity, 140+ countries agreed on text for the Minamata Convention on Mercury earlier this year, which will require the global phase out of the production, sale, and trade of many of the same mercury products by 2020.<sup>7</sup> Several of these products are medical devices (fever thermometers and blood pressure cuffs), and thus are exempt from TSCA.

To be clear, NRDC seeks federal action on mercury products to complete the national transition to mercury free alternatives. For this reason, NRDC supports the Mercury Use Reduction Action of 2012, S. 3697, introduced by Senator Whitehouse in the last session of Congress. The bill would phase out the manufacture and sale of those products already targeted by the states, and address several outstanding issues related to the implementation of the Mercury Export Ban Act of 2008. We look forward to the reintroduction of similar legislation in this session of the Congress and hope that it will receive broad bi-partisan support.

The mercury product experience over the last decade is instructive in two ways. First, there has been comparatively little federal leadership and action on phasing out the use of mercury in products, even where the path forward has ample precedent and is relatively non-controversial because industry is already far down the road. Second, state involvement can be critical, and expertise sometimes often resides in the states.

S. 1009 also preempts states from taking any new action on chemicals deemed "low priority" by EPA. This is extremely problematic because under the terms of the bill, EPA can designate hundreds or even thousands of chemicals as "low priority" simply because the agency lacks sufficient data on hazard or exposure. States cannot seek preemption waivers for "low priority" chemicals under the bill. In addition, the bill contains a mechanism that would allow Governors to overwhelm EPA with special "expedited" petitions to designate chemicals as "low priority" – creating additional pressure on the

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<sup>4</sup> [http://www.newmoa.org/prevention/mercury/conferences/sciandpolicy/presentations/Wienert\\_Session3B.pdf](http://www.newmoa.org/prevention/mercury/conferences/sciandpolicy/presentations/Wienert_Session3B.pdf).

<sup>5</sup> <http://www.newmoa.org/prevention/mercury/imerc.cfm>.

<sup>6</sup> <http://www.epa.gov/mercury/archive/roadmap/index.html>, p. 38.

<sup>7</sup> [http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC5/5\\_7\\_e\\_annex\\_advance.pdf](http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC5/5_7_e_annex_advance.pdf).

See particularly Article 4 and Annex A.

agency when it will already be overburdened and under-resourced. Rather than ensuring that chemicals are safe for use in commerce the preemption of State action on chemicals deemed “low priority” by EPA, coupled with the other provisions in the bill, virtually ensure that hundreds or thousands of substances will simply be swept down the memory hole. The bill must have a mechanism to address potential concerns regarding chemicals for which EPA has not taken – and may never take – action, and particularly so if EPA’s deferral need not be based on a sufficient examination of data and information about the chemical.

The preemption section of the bill contains numerous other provisions that either make no sense or are just bad policy. For example, it would prevent states even from adopting protections *identical to* federal law, limiting those states’ ability to “co-enforce” the federal restrictions or requirements under State law. The bill could preempt state labeling laws – most notably Proposition 65 – if they are deemed to be restrictions on “distribution in commerce.” And the bill contains provisions that could pre-empt state court decisions and interfere with the current balance between plaintiffs and defendants in state tort actions.

It is my understanding that a number of other witnesses will be testifying at this hearing, including representatives of States who will likely have other concerns and additional analysis of the preemption provisions of S.1009 as well as other examples of its potential effects on current and future health and informational protections. Suffice to say that my brief summary above is not exhaustive.

Certainly it is neither tenable nor preferable for the entire burden of regulating chemicals in the marketplace to continue to fall on the states, which simply do not have the resources to do the job on their own. That is why a strong federal system for prioritizing , assessing and regulating chemicals is needed. However, there is no justification and no good policy purpose for adopting sweeping preemption legislation that would overturn an array of actions taken in states, directly and indirectly affecting chemicals, or preventing states from continuing to take steps to protect the public, unless they directly conflict with federal actions. States are just beginning to absorb the preemption provisions of the CSIA and determine how their state and local laws might be affected. The Committee should carefully consider and consult with States regarding the implications of any preemption provision.

**Unprotective safety standard** – The bill relies on the current standard in TSCA for determining whether a chemical is safe to use as intended. While the bill’s intent appears to be to drop cost in determining risk, the current language is not sufficiently clear to definitively accomplish that. Moreover, the standard of unreasonable risk should be made more protective. S. 1009 fails to define “vulnerable populations” and require that they be protected as part of the definition of the safety standard, or as part of a safety determination. The bill also fails to require EPA to consider aggregate exposure to multiple sources of chemicals, and does not account for ongoing exposure to legacy chemicals.

In addition, although the “least burdensome” requirement is deleted under S.1009, it appears that the same requirement is still incorporated in the bill for bans or phase-outs of substances, only without the two lightning rod words. It is unlikely that under the bill EPA would be able to make a decision to ban

or phaseout the use of a chemical any faster – or have it any more likely to be upheld under judicial review – than under the terms of the current law.

**Assessment methodology** – The bill’s technical language on how chemicals should be prioritized and assessed is cumbersome and it does not direct EPA to follow the assessment methods that have been recommended by the National Academy of Sciences, or even define “best available science” to include recommendations from the NAS. S.1009 – particularly in sections 4, 6 and 8, requires EPA to develop an elaborate structure of frameworks, criteria, guidances, processes and methodologies, many of which are overlapping, and most of which must be put in place before EPA can even begin prioritizing chemicals, let alone conducting safety assessments and determinations. For EPA to prioritize and assess chemicals it would be required to establish *five separate* “frameworks.” In addition to developing the five frameworks, before any prioritization and assessment can begin, EPA must:

- promulgate two sets of rules, which are subject to notice and comment;
- develop two sets of guidance documents, also subject to notice and comment;
- establish a risk-based screening process for prioritizing existing chemical substances, which is also subject to notice and comment; and
- develop a science-based methodology for conducting safety assessments, which is also subject to notice and comment and scientific peer review.

It is not clear how the frameworks relate to some of the rules, processes and methodologies. For example, before EPA can prioritize a chemical, it must develop not only a framework for prioritization, but also a risk-based screening process for prioritizing chemicals; the difference between these two is not clear.

Complying with all of these requirements, and subjecting the multiple rules and guidances to notice and comment (and in one case also scientific peer review) could tie EPA’s hands for years before it can even begin the business of prioritizing chemicals and conducting safety assessments<sup>8</sup>. EPA’s hands have been almost entirely tied for the entire 36 years of TSCA. TSCA reform should not increase the red tape EPA is bound by and further delay action already underway at EPA.

**What’s Missing** – In addition to the many problems with the substance of the introduced legislation – and the above list is not exhaustive -- is the problem of those provisions that are missing. These include any provision directing EPA to address the problem of communities heavily polluted by “legacy” chemicals. Objections that such a provision cannot be considered because it is “not within the structure of current TSCA” make little sense. In the first place, Congress decides what is and isn’t part of any law, and it can and has expanded and contracted the scope of many laws as it deems necessary. Second, TSCA itself has had several additional Titles added since it was initially enacted, to account for problems not addressed in the original bill – including Asbestos Hazard Emergency Response (Title II), Indoor Radon Abatement (Title III), and Lead Exposure Reduction (Title IV). Finally, there is significant precedent for Congress adding provisions to legislation outside its “natural scope” which at a minimum illustrates the ability of Congress to legislate outside the box when it wants to.

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<sup>8</sup> This section draws from an analysis by Eve Gartner of Earthjustice.

Nor does the bill contain any mechanism for EPA to take expedited action to address chemicals we already know are unsafe, including asbestos, and other PBTs, including toxic flame retardants. The single significant success of TSCA was the phase out of production and use of poly chlorinated biphenyls (PCBs) in the original law. The most prominent failure of TSCA has been the inability of EPA to ban most uses of asbestos, despite its well-known deadly health effects. 50 other countries have adopted a ban on asbestos. Meaningful TSCA reform should correct this clear failure under current law. And TSCA reform needs to provide EPA the ability, and the mandate, to address other instances of widespread contamination by known unsafe chemicals – particularly including persistent, bioaccumulative toxins (PBTs) via expedited action.

There are some other areas of the bill, such as where EPA is granted order authority to obtain information and require testing of chemicals that are step in the right direction but where the precise wording in the bill remains problematic. The Chemical Safety Improvement Act is a potentially viable legislative vehicle for advancing meaningful TSCA reform if its fundamental flaws are addressed. NRDC supports working on the bill to address its problematic provisions with the goal of developing a vehicle that can merit the support of a broad set of stakeholders (including NRDC). We welcome the opportunity to work with Committee members and their staff on this important effort to strengthen protections from toxic chemicals and successfully reform TSCA.

**The Strengthening Protections for Children and Communities from Disease Clusters Act (S.50) and The Community Disease Cluster Act (S. 53)** – TSCA is intended to address the potential for exposure to unsafe chemicals through the entire lifecycle of the chemical, from production to disposal. One legacy of careless production, use, and disposal practices of chemicals over many decades are the heavily polluted hazardous waste sites around the country, the worst of which are covered under the Superfund program. A less understood but still-pervasive concern for communities across the country are disease clusters, some tied to community exposure to toxic substances – and others of unknown origin. Senators Boxer and Crapo have introduced two pieces of legislation, The Strengthening Protections for Children and Communities from Disease Clusters Act (S.50) and The Community Disease Cluster Act (S. 53) to address this issue.

This Committee held a hearing on the problem of disease clusters in May, 2011. My former NRDC colleague Dr. Gina Solomon testified at the hearing. Here is an excerpt from Dr. Solomon’s testimony:

“Although it is difficult to conclusively prove what caused any specific disease cluster, we can gather invaluable clues and hints from these tragic events. The Woburn cluster, for example, provided a key clue linking trichloroethylene (TCE) with cancer in humans – something that has since been confirmed in multiple studies. The cluster in Fallon, Nevada also provided important scientific clues. Biological sampling in Fallon revealed community-wide exposure to tungsten with almost 80% of the participants having urinary tungsten levels above the 90th percentile in the National Health and Nutrition Examination Survey (NHANES), and the median tungsten levels were almost 10-fold higher than the 1999 NHANES median level for tungsten. Tungsten was not previously thought to be carcinogenic, but had never been adequately studied. This same metal subsequently showed up at elevated levels in Sierra Vista, Arizona, another

community affected by a childhood leukemia cluster. This tungsten is now undergoing testing by the National Toxicology Program to better understand its potential health effects.<sup>9</sup> Other disease clusters have revealed the cancer-causing properties of asbestos, the profound peripheral neuropathy caused by exposure to n-hexane, the complete wipe-out of sperm production from the pesticide DBCP (dibromochloropropane), and the liver cancers caused by vinyl chloride. All of these chemicals are now well-known to be human health hazards, and one of them – the pesticide DBCP – has been banned. The other chemicals, which fall under the purview of the Toxic Substances Control Act (TSCA), are still in widespread use today.

There is good reason to believe that only a small fraction of the links between the environment and disease has been revealed to date. Although there has been much focus on the genetic causes of disease, the scientific consensus has shifted to the position that most diseases are primarily caused by a combination of genetic and environmental factors. For example, a study of nearly 45,000 twins published in the *New England Journal of Medicine* evaluated the relative importance of genetic and environmental factors in cancer.<sup>10</sup> If the cancers were primarily genetic, identical twins (which share the same genome) would have more similar cancer patterns than fraternal twins (which only share the genetics of any siblings). The bottom line of this important study was that the vast majority of cancers are environmental rather than genetic. Statistically significant genetic effects were only seen for three cancers -- prostate, colorectal, and breast. In the case of breast cancer, less than one-third of the risk was due to inherited factors (potential range 4-41%); that means that about 70% of the remaining risk of breast cancer is due to environmental factors. For other cancers, the environmental component was even larger. The same principle is true for most other diseases, where environment is turning out to be more important than genetics.”

Due to a lack of resources, the limited statistical power in doing investigations of small communities or rare diseases, and a lack of knowledge about exposures, it is difficult for state and federal agencies to shed light on most disease clusters and their causes. People living in neighborhoods and communities that may be disease clusters are often lacking in technical and scientific resources to help them obtain the answers they need. Senators Boxer and Crapo have introduced two pieces of legislation to help assist people in communities with disease clusters. The Strengthening Protections for Children and Communities from Disease Clusters Act (S.50) would direct and fund federal agencies to swiftly assist state and local officials, and investigate community concerns about potential disease clusters and their causes and to create guidelines for a systematic and integrated approach to investigating disease clusters; improve coordination between various agencies at the federal, state, and local level; and support local advisory committees that can help improve the outreach to and involvement of

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<sup>9</sup> National Institute of Environmental Health Sciences. Tungsten and Selected Tungsten Compounds: Review of Toxicological Literature. Research Triangle Park, NC, 2003.

[http://ntp.niehs.nih.gov/ntp/htdocs/Chem\\_Background/ExSumPdf/tungsten.pdf](http://ntp.niehs.nih.gov/ntp/htdocs/Chem_Background/ExSumPdf/tungsten.pdf)

<sup>10</sup> Lichtenstein P, Holm NV, Verkasalo PK, Iliadou A, Kaprio J, Koskenvuo M, Pukkala E, Skytthe A, Hemminki K. Environmental and heritable factors in the causation of cancer--analyses of cohorts of twins from Sweden, Denmark, and Finland. *N Engl J Med.* 2000 Jul 13;343(2):78-85.

community members. The Community Disease Cluster Act (S. 53) would authorize EPA, in conjunction with the Department of Health and Human Services, to provide grants to communities to help pay for technical assistance. This bill would give communities in need a very modest level of support as they work through the process of addressing a reported disease cluster, including mitigation efforts. NRDC supports both of these bills.

**Summary and Conclusion** – The failure of Congress over many years to take necessary action to protect the public from exposure to unsafe chemicals, and ensure a federal program is in place that will effectively review the safety of chemicals in commerce should be of deep concern to every member of the Committee. TSCA reform is long-overdue, and should be at the top of the Committee’s agenda. But the Committee should take the time needed to report a bill that will truly improve chemical safety. Any legislation to reform TSCA must ensure that EPA will be able to protect the public by taking timely action to reduce or eliminate exposure to unsafe chemicals, and obtain the information it needs, to make informed assessments of the safety of new and existing chemicals, while recognizing the innovation and leadership of the states is preserved.

We look forward to working with every member of the Committee on legislation that earns and merits strong support from a broad array of members and stakeholders.

Thank you again for the opportunity to testify before the Committee.