



United States  
**CONSUMER PRODUCT SAFETY COMMISSION**  
 Washington, D.C. 20207

CPSA 6 (b)(1) Cleared

No Mfrs/Prvlbrs of  
 Products Ident. had  
 Excepted *none*  
 Firms Notified  
 Comments Processed.

MEMORANDUM

DATE: 4/23/01

TO : Kristina Hatlelid, HS  
 Through: Sadye E. Dunn, Secretary, OS  
 FROM : Martha A. Kosh, OS  
 SUBJECT: ANPR for Candle Wicks Containing Lead

ATTACHED ARE COMMENTS ON THE CH01-3

<u>COMMENT</u>	<u>DATE</u>	<u>SIGNED BY</u>	<u>AFFILIATION</u>
CH01-3-1	2/22/01	Erin Pigott	405 Clubfield Dr. Roswell, GA 30075
CH01-3-2	2/23/01	Judy Wilde	<a href="mailto:jwilde@huskey.com">jwilde@huskey.com</a>
CH01-3-3	3/02/01	Ricky Smith Rita Smith	<a href="mailto:smith@heartotexas.com">smith@heartotexas.com</a>
CH01-3-4	3/10/01	Jean Chacko	<a href="mailto:meier5@webtv.net">meier5@webtv.net</a>
CH01-3-5	3/14/01	Les Zenack P.E.	44 Condor Road Sharon, MA
CH01-3-6	3/27/01	Robert Hoffman M.D, President	American College of Medical Toxicology 777 East Park Dr P.O. Box 8820 Harrisburg, PA 17105
CH01-3-7	3/26/01	Kelli Dutrow M.A.	1101 Juniper Street Suite 504 Atlanta, GA 30309
CH01-3-8	4/19/01	David Richter	717 3 <sup>rd</sup> Ave., W Seattle, WA 98119
CH01-3-9	4/20/01	John DiFazio Sr. Counsel	Consumer Specialty Products Association 1913 Eye St, NW Washington, DC 20006

ANPR for Candle Wicks Containing Lead

CH01-3-10	4/21/01	Donald Meserlian P.E., VOSI Chairman	Voices of Safety International <u><a href="mailto:meserlian@msn.com">meserlian@msn.com</a></u>
CH01-3-11	4/23/01	John Root President	National Candle Association 1030 15 <sup>th</sup> St, NW Suite 870 Washington, DC 2005

February 22, 2001

Offices of the Secretary  
Consumer Product Safety Commission  
Washington, DC 20207-0001

**ANPR for CANDLE WICKS CONTAINING LEAD.**

**“Lead affects practically all systems within the body. At high levels it can cause convulsions, coma, and even death...”**

The United States Environmental Protection Agency  
Indoor Environments Division  
<http://www.epa.gov/iaq/lead/html>

Dear Consumer Product Safety Commission,

I am writing this letter in response to the CPSC's request for comments concerning the risks of illness associated with burning candles with wicks containing lead, the regulatory alternatives, and the economic impact.

Manufacturers typically use lead wicks in order to produce candles with a self-supporting wick. Metal cored wicks burn longer and are commonly used in scented candles, votives, pillar candles, and novelty candles. Lead wicks provide an even and slow burn rate.<sup>i</sup> However, lead melts at a relatively low temperature and a 1973 Environmental Protection Agency (EPA) study demonstrated as much as 20-35% of the lead in pure lead candle wicks is vaporized.<sup>ii</sup>

**1. Lead cored wicks emit unsafe levels of lead into the air.**

In 1974, the CPSC found no signs of a specific health risk posed by lead core wicks despite the well-known health problems associated with lead exposure.

However, a 1999 University of Michigan study conducted by Dr. Jerome Nriagu, revealed that some candles with lead wicks emitted unsafe levels of lead into the air. The study showed that lead emission rates for the tested candles ranged between 0.5 and 327 micrograms per hour. After burning the candle for one hour, the lead levels in the air of an enclosed space were estimated to range between 0.04 to 13.1 micrograms per cubic meter. The EPA has stated that levels of lead above 1.5 micrograms per cubic meter of ambient air are unsafe. After one hour, five of the tested candles emitted unsafe levels of lead into the air. Regular exposure to lead at these levels could pose a threat to the health of people with weak immune systems, children and the elderly.<sup>iii</sup>

According to the study, the candles produced in China and the United States released the highest levels of lead.<sup>iv</sup>

## **2. Unsafe levels of lead pose a serious health risk to the public.**

Exposure to elevated levels of lead can:

- Damage a child's central nervous system
- Damage children's kidneys
- Damage children's reproductive system
- Decrease intelligence
- Impair neurobehavioral development
- Decrease stature and growth
- Damage hearing
- Cause coma
- Cause convulsions
- Cause death<sup>v</sup>

## **3. Safe and effective alternatives to lead-cored wicks exist and are currently in use.**

There are safe alternatives to the use of lead wicks such as cotton wicks, paper-cored wicks, zinc-cored wicks and tin-cored wicks. Although paper and cotton-cored wicks do not release lead into the air, they are less rigid than zinc and tin and they have a higher burn rate. Therefore, they are not a viable alternative to lead because both the rigid and long burning benefits are lost.

In contrast to paper or cotton, candle makers have found that zinc cores transfer heat from the candle flame down into the candle wax providing a larger wax pool for the flame size. This allows a smaller flame in jar and container candles which keeps the jar cool yet still melts the wax.<sup>vi</sup>

Zinc-cored wicks are a widely used alternative to lead-cored wicks. Zinc is a nonferrous metal and like all nonferrous metals, it has traces of lead. However, the maximum lead content for zinc is .0004%, which is well below the .06% standard the CPSC is now considering banning.<sup>vii</sup>

According to a study by Ungers & Associates, Inc., a person would have to burn over 3,000 candles with zinc-cored wicks for four hours daily to exceed the EPA air quality standard for lead. Ungers & Associates, Inc. also used data from the University of Michigan study to estimate that a person would have to burn over 7,500 candles with zinc-cored wicks to exceed the EPA lead standard.<sup>viii</sup>

Paper and cotton are not adequate substitutes for lead-cored wicks; however, zinc-cored wicks perform the same functions as the lead wick but are not a health risk. The CPSC should ban lead wicks that emit levels of lead into the air that exceed the EPA's air quality standard for lead.

#### **4. United States candle manufactures support the ban on lead-cored wicks.**

The National Candle Association (NCA), which states it represents 95% of U.S. candle manufactures, supports a ban on lead-cored wicks for imported and domestic candles. The NCA claims that its members have voluntarily not used lead wicks in candle making since 1974.<sup>ix</sup> Therefore, banning lead would only affect 5% of U.S. manufacturers. If 95% of U.S. manufacturers voluntarily use alternatives, such as zinc or paper, then the use of these alternatives cannot be cost prohibitive.

#### **5. A voluntary ban will not protect the public.**

On January 8, 2001, Health Canada, a Canadian federal department, revealed that 23% of the candles with metal wicks manufactured in the United States and purchased for a study contained lead wicks.<sup>x</sup> This Health Canada study shows that although a voluntary ban by US manufactures has been in effect for almost 25 years, nearly a quarter of the candles with metal wicks produced in the US contain lead. This study demonstrates that the voluntary industry ban has not been effective and will not effectively protect the public in the future.

#### **6. Labeling will not protect the public.**

The only way to protect the public from lead emissions is a complete ban by the CPSC. Requiring manufactures to label their candles will not solve the problem of lead exposure. Lead candles will still be available and burned by the public releasing lead into the air. Even though zinc is available to manufactures as an adequate and cost effective substitute, under a labeling law, lead will still present a significant health risk.

#### **7. A ban on lead-cored wicks is the only way to protect the public**

The CPSC has the power to ban lead wick candles. The Consumer Product Safety Act authorizes the CPSC to initiate rulemaking to ban consumer products that present "unreasonable risk of injury" where "no feasible consumer product safety standard...would adequately protect the public from the risk of injury associated with such product." 15 U.S.C. §2057.

A voluntary ban on lead-cored wicks will be ineffective and a labeling law will not prevent lead emissions. Therefore, "no feasible consumer product safety standard...would adequately protect the public" and a ban on lead-cored wicks is necessary.

As a candle consumer, I support a ban on lead-cored wicks. A complete ban on lead-cored wicks is supported by the candle industry, and would only effect a small percentage of United States candle manufactures. Finally, there are safe and cost effective alternatives to lead-cored wicks currently available to manufactures.

Sincerely,

A handwritten signature in black ink, appearing to read "Erin K. Pigott". The signature is written in a cursive, flowing style with some loops and flourishes.

Erin K. Pigott

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<sup>1</sup> <http://unisci.com/stories/19994/1007992.htm>

<sup>ii</sup> Bridbord K, Medical Officer. Memo to Stanley Greenfield, Assistant Administrator for Research and Development, and Vaun A. Nwall, Special Assistant to the Administrator. Hazards of burning candles with lead. US EPA, Research Triangle Park, December 14, 1973

<sup>iii</sup> <http://www.umich.edu/~newsinfo/Releases/1999/Oct99/rl100699.html>

<sup>iv</sup> <http://www.umich.edu/~newsinfo/Releases/1999/Oct99/rl100699.html>

<sup>v</sup> <http://www.cdc.gov/nceh/lead/factsheets/leadfcts.htm>

<sup>vi</sup> [http://www.barkerco.com/wick\\_safety.htm](http://www.barkerco.com/wick_safety.htm)

<sup>vii</sup> [http://www.wicksunlimited.com/wick\\_safety.htm](http://www.wicksunlimited.com/wick_safety.htm)

<sup>viii</sup> [http://www.barkerco.com/wick\\_safety.htm](http://www.barkerco.com/wick_safety.htm)

<sup>ix</sup> [http://www.candles.org/Candlemaking/ga\\_wicks.htm](http://www.candles.org/Candlemaking/ga_wicks.htm)

<sup>x</sup> [http://www.hc-sc.gc.ca/english/archives/warnings/2001/2001\\_02e.htm](http://www.hc-sc.gc.ca/english/archives/warnings/2001/2001_02e.htm)

# The University of Michigan

News and Information Services  
News Release

412 Maynard  
Ann Arbor, Michigan  
48109-1399

October 6, 1999 (5)

## Some candles with lead wicks emit lead into the air

ANN ARBOR---A University of Michigan School of Public Health study of candles purchased from stores in southeast Michigan shows that some candles on the market today are made with wicks that have either lead or lead cores that emit potentially dangerous levels of lead into the air.



Nriagu

The study is by Jerome Nriagu, a professor of environmental health sciences, who examined lead emissions from 15 different brands of candles made in the United States, Mexico and China. He also examined the concentration levels of lead that lingered in the air in an enclosed space, such as a room measuring 12 feet by 12 feet and 10 feet high, after one hour and then again for five hours.

Nriagu's study showed that lead emission rates for the candles ranged between 0.5 and 327 micrograms per hour. After burning the candle for one hour, the lead levels in the air of an enclosed space were estimated to range from 0.04 to 13.1 micrograms per cubic meter, which compares to the U.S. Environmental Protection Agency recommendation of 1.5 micrograms per cubic meter for ambient air. After one hour, five of the candles Nriagu tested emitted unsafe levels of lead into the air that measured greater than 1.5 micrograms per cubic meter.

After five hours, the lead levels in an enclosed space ranged from an estimated 0.21 to 65.3 micrograms per cubic meter. Candles produced in China and the United States released the highest levels of lead into the air.

Regular exposure to lead in this manner in confined spaces could pose health risks to people with weak immune systems, especially children and the elderly, Nriagu said.

"Lead poisoning remains one of the most serious environmental health diseases in this country and other parts of the world. It affects many organ systems and biochemical processes with the most serious sequelae often occurring in the central nervous, cardiovascular and blood systems," Nriagu said.

Nriagu's findings are consistent with an Australian study due to be published in the journal, *Science of the Total Environment*. In that study, Mike van Alphen of Lead Sense, an independent consultancy in Australia involved in environmental lead testing, lead exposure investigations and consumer product testing, examined a single brand of candle sold in Australia. The candle he examined released up to 1,130 micrograms of lead per hour.

Studies have shown that the central nervous system of children is particularly sensitive to lead. Some of the most damaging neuropsychological effects of lead poisoning of young children include learning disabilities, reduced psychometric intelligence and behavioral disorders. These effects have been associated with chronic low-level exposure to lead and are believed to be irreversible.

Nriagu's study measured the rate of lead emission in a laboratory setting using a flux chamber. The lead released as candle fume was collected in nitric acid and analyzed by means of an atomic absorption spectrometer. In addition to measuring emission rates, he calculated concentration levels of lead in the air in an enclosed space after one hour and then again, for five hours.

"The half-life of lead in air obviously would make a difference in terms of it being inhaled. A recent study has shown that particles emitted by candles during a normal burn are sub-micron in size and should remain suspended in the atmosphere for some time. Even if a particle is deposited after only a short trajectory through the atmosphere, it adds to the lead burden in the house dust. Airborne lead represents a hazard in more ways than one," Nriagu said.

House dust is widely recognized as a primary route of childhood lead exposure through hand-to-mouth activities.

"Assuming that only 50 percent of the lead released is deposited in an area measuring 12 feet by 15 feet (such as a living room), we estimate that the loading of the lead to house dust will exceed the U.S. EPA guideline of 100 micrograms per square meter by burning one of the Chinese candles for a few hours. Our data thus shows that burning leaded candles can result in extensive contamination of the air and house dust with lead," Nriagu said.

In general, Nriagu found that metal cores in Chinese candles were made of either pure lead or lead alloy while those made in the United States or Mexico consisted of zinc or lead-containing alloys. Lead was detected in small quantities in emissions from zinc-based wicks, suggesting that the lead may be a common contaminant in the zinc, wick or wax. The levels of lead were small, but still may represent a health risk over a long period of time.

Not all candles are made with wicks that have metallic cores. The practice is primarily used with candles that are needed to burn longer such as scented or ceremonial candles. A metal core is used to provide rigidity to the wick which provides an even and slower burn rate, and to reduce the mushrooming at the tip. Since lead and its alloys melt at relatively low temperature, a large

**fraction of the wick core material is volatilized as the candle is burned.**

**"Because it is costly and difficult to control lead once it is released to the environment and medical treatment does not fully reverse the health effects, the optimal strategy for minimizing the risk involves the reduction or elimination of exposure in various forms. This study shows that there are still other important domestic sources of lead exposure that have escaped public scrutiny and legislative control. Leaded candles were recently banned in Australia, and we recommend a similar action in this country," Nriagu said.**

**Contact: Amy Reyes  
Phone: (734) 647-4411  
E-mail: [amelynr@umich.edu](mailto:amelynr@umich.edu)**

~~Stevenson, Todd A.~~

*Candle wicks 2*  
~~*Comment*~~

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**From:** Judy Wilde [jwilde@huskey.com]  
**Sent:** Friday, February 23, 2001 10:27 AM  
**To:** cpsc-os@cpsc.gov  
**Subject:** lead candle wicks

I am weary of people who don't watch their children. I am so tired of child safety everything. You can't get cleaning products open, lighters are so difficult to light with the child guards on them. I raised 7 children, now grown who never went around drinking cleaning products or playing with lighters, because I watched them. Tell the parents to monitor their children so the whole world doesn't have to do it for them. Tell them to forgo burning candles around the kids. Why should I and the candle industry be made to conform to parents who can't do their job.

Jusith Wilde

Stevenson, Todd A.

~~Stevenson~~  
candle wick  
wicket 3

From: Information Center  
Sent: Friday, March 02, 2001 4:08 PM  
To: 'smith@heartotexas.com'  
Cc: Stevenson, Todd A.  
Subject: RE: Candles with Metal Wicks

Hello,

Thank you for this information. We will pass it on to the appropriate personnel within our agency.

Please note that you can obtain CPSC publications, recalls and general safety-related information via our web site at [www.cpsc.gov](http://www.cpsc.gov). Click on the "Search" icon, scroll down the page and type in your topic.

slt

-----Original Message-----

From: Ricky and Rita Smith [mailto:smith@heartotexas.com]  
Sent: Wednesday, February 21, 2001 11:55 PM  
To: rscott@cpsc.gov  
Subject: Re: News from CPSC - Press Release and Public Calendar

I just thought you should know that home interior candles do have metal in the wick..

Rita smith

-----Original Message-----

From: rscott <rscott@cpsc.gov>  
To: CPSC Subscription List <cpscinfo-l@cpsc.gov>  
Date: Wednesday, February 14, 2001 6:45 PM  
Subject: News from CPSC - Press Release and Public Calendar

>FOR IMMEDIATE RELEASE

>  
> February 14, 2001  
>CPSC CONTACT: Jane Francis or Scott Wolfson  
> Release # 01-083  
>(301) 504-0580  
>  
>CPSC Votes to Begin Rulemaking to Ban Candles With Lead Wicks  
>Major Retailers Agree to Not Sell Lead Wick Candles  
>  
>WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission (CPSC)  
>voted to begin rulemaking that could lead  
>to a ban on candles with lead-core wicks. CPSC has determined that  
>candles using lead wicks could present a lead poisoning  
>hazard to young children.  
>  
>Studies have found that despite a voluntary industry agreement in the  
>past to remove lead from candle wicks, a small percentage  
>of candles sold today still contains lead in their wicks. The lead cores  
>are used to hold the wicks upright as they burn. The study  
>found that lead-core wicks could emit relatively large amounts of lead  
>into the air during burning. The emitted lead presents a  
>risk to children from exposure through inhalation and from ingestion of  
>lead that may settle on surfaces in the room. This  
>deposited lead could remain accessible to a child for an extended period  
>of time and allow exposure through direct mouthing of  
>surfaces or objects or by hand-to-mouth contact.  
>  
>Some of the candles emitted lead levels in excess of 2,200 micrograms  
>per hour - about five times the rate that could lead to  
>elevated levels of lead in a child. CPSC estimates that a level of 430

>micrograms per hour could result in hazardous exposure to  
>children.  
>  
>The CPSC found that burning a candle with a lead wick for four hours per  
>day, for 15 to 30 days, could result in blood lead  
>levels above the 10 micrograms per deciliter that is considered a health  
>concern for young children.  
>  
>Lead poisoning in children is associated with behavioral problems,  
>learning disabilities, hearing problems and growth retardation.  
>Because lead accumulates in the body, even exposure to small amounts of  
>lead can contribute to the overall level of lead in the  
>blood. It is estimated that approximately 1 in every 25 children under  
>the age of 6 in the United States has elevated levels of  
>lead in their blood; that is almost one million children nationwide. The  
>primary source of lead poisoning in the United States is  
>lead from paint in old homes.  
>  
>It is not possible for consumers to tell if the wicks of candles they  
>are using contain lead. CPSC analysis shows that metal  
>wicks, some of which could contain lead, are most likely to be used in  
>container, pillar, votive and tealight candles.  
>  
>Tapers, commonly used as dinner candles, use cotton wicks and do not  
>contain lead.  
>  
>To check a candle in your home, look at the top of the wick. If there is  
>metal, you will see it in the center of the wick. If you  
>have young children, do not burn candles with metal wicks or throw them  
>away. Rulemaking to set a federal ban would not go  
>into effect before the end of the year. Many retailers currently are not  
>selling candles with lead wicks, including:  
>  
> Pier 1  
> Gap  
> Wal-Mart  
> Michaels Stores  
> Winn-Dixie  
> Frank's Nursery & Crafts  
> Ahold/USA, parent of Stop & Shop, Giant, Tops and Peapod  
> Blyth, parent of PartyLite  
> Bullfrog Light Company  
> Atlanta Candle Factory  
> Mom's Kitchen Candles  
>  
>CPSC encourages other retailers to take steps and advise consumers of  
>their efforts to keep candles with lead wicks off store  
>shelves. Consumers should ask stores not specifically listed whether  
>their candles have lead free wicks.  
>  
>Safe alternatives to lead wicks, including zinc, tin, synthetic fibers,  
>cotton and paper, are readily available to manufacturers. A  
>federal ban would apply to all domestic and imported candles. It would  
>deter manufacturers from making non-conforming  
>>wicks, allow the U.S. Customs Service to stop shipments of  
>non-conforming candles, and make it easier for the CPSC to seek  
>penalties against companies for violations.  
>  
>Chairman Ann Brown and Commissioner Thomas Moore voted to begin  
>rulemaking, Commissioner Mary Sheila Gall voted to  
>grant the petition but to refer it to the Office of Management and  
>Budget for review. The statements of Chairman Brown and  
>Commissioners Moore and Gall are available below or by calling the  
>Office of the Secretary at (301) 504-0800.  
>  
>  
> Statement of the Honorable Ann Brown In Support of  
>Petition and Advance  
> Notice of Proposed Rulemaking To Ban Lead-Cored  
>Candle Wicks  
> February 13, 2001  
>

>I voted today to grant petitions submitted to the Commission, and to  
>issue an Advance Notice of Proposed Rulemaking  
>(ANPR), to ban candlewicks containing lead, and candles containing such  
>>wicks. Protecting children from dangers like lead in  
>candlewicks is what Congress created CPSC to do.

>  
>With respect to the White House request that CPSC submit its regulations  
>to OMB for review and approval until new  
>leadership is appointed at CPSC, Congress specified that it wanted CPSC  
>removed as far as possible from the influence of  
>partisan politics or political control. Influence in the form of  
>oversight by OMB or a change in political leadership was what  
>Congress wanted CPSC to avoid. Congress told the CPSC to protect  
>consumers from dangerous products - to protect  
>children from the behavioral problems and learning disabilities  
>associated with lead. That is what we are voting today to do.

>  
>Statement of the Honorable Thomas H. Moore in Support of  
>Granting the Petition  
>to Ban Lead-Cored Candle Wicks and Issuing an Advance Notice  
>of Proposed Rulemaking

February 9, 2001

>  
>Rather than restate what she has expressed so ably, I simply will agree  
>with Commissioner Gall's reasoning for issuing an  
>advance notice of proposed rulemaking to ban the use of lead in cored  
>candle wicks. I can not concur, however, on sending the  
>ANPR to the Office of Management and Budget for their review to  
>determine if it impacts "critical health and safety functions of  
>the agency ...." While I believe that we must give any President due  
>deference when he makes a request of us, I do not think  
>that the Consumer Product Safety Commission, an independent agency, can  
>comply with this request without seriously eroding  
>the power granted by Congress to the individual Commissioners. We would  
>certainly hope that this (and any of our proposed  
>regulations) would fit under a safety exception, but there is no  
>guarantee that OMB would agree with us. If they did not, the  
>memorandum from the President's Chief of Staff would require that the  
>proposed regulation be held up until a new agency head  
>appointed by President Bush "reviews and approves the regulatory  
>action."

>  
>The Consumer Product Safety Commission is not governed by a single  
>administrator. The Chairman of this Commission does  
>not have the authority to review and approve proposed or final  
>regulatory actions. In this regard, the Chairman is like any other  
>commissioner and has one vote as to whether to proceed on a particular  
>matter. I, for one, would not want to delegate my vote  
>on whether to proceed with a regulation to any Chairman, no matter how  
>much I might agree in general with that Chairman's  
>philosophy.

>  
>Nor do I think it would be wise from a policy standpoint to give any  
>power over the promulgation of our regulations, even on a  
>temporary basis, to an office of the Executive Branch, in this case the  
>OMB. The Congress, not the President, delegates the  
>powers of independent agencies to them. As such the Congress is the  
>Consumer Product Safety Commission's true steward  
>and we must be ever mindful of not subjugating the powers Congress has  
>given us to a review by the Executive Branch that was  
>never intended.

>  
>Statement of the Honorable Mary Sheila Gall In Support of  
>Granting of Petition  
>and Issuing an Advance Notice of Proposed Rulemaking to Ban Use  
>of Lead-Cored Candle Wicks

February 9, 2001

>  
>I voted today to grant a petition submitted to the Commission and to  
>issue an Advance Notice of Proposed Rulemaking

>(ANPR) to ban lead-cored candlewicks. The deleterious health effects of  
>exposure to lead are well known and documented.  
>While it appears that no specific case of lead poisoning can be tied to  
>exposure to candle fumes, exposure to such fumes is  
>cumulative with other sources of lead exposure. Moreover, exposure to  
>lead from burning candlewicks is through inhalation,  
>and not just ingestion, a mechanism with which many consumers may not be  
>familiar.

>  
>Other factors incline me to begin rulemaking in this case. The hazard  
>cannot be avoided by labeling, since the only way to avoid  
>the hazard is to forego burning, the intended use of the product. Nor is  
>there any "home test" by which consumers can determine  
>accurately whether candles have lead-cored wicks. Sophisticated  
>laboratory tests conducted by Commission staff have shown  
>that there is no correlation between the amount of lead in the  
>candlewick and the quantity of lead emissions produced when that  
>candle is burned. A ban, therefore, may be the only mechanism to  
>eliminate this hazard.

>  
>The Federal Hazardous Substances Act directs the Commission to defer to  
>voluntary standards where the standard would  
>eliminate or adequately reduce the risk of injury, and where it is  
>likely that there will be substantial compliance with the voluntary  
>standard. There has been a voluntary agreement since 1974 among candle  
>makers in the United States not to use lead wicks in  
>candles. Investigation by the Commission staff has shown that importers  
>of candles have not followed this voluntary agreement,  
>nor has it been followed universally by manufacturers within the United  
>States. The Commission will, during the course of  
>rulemaking, evaluate whether some other voluntary standard could meet  
>the statutory criteria of hazard reduction and substantial  
>compliance.

>  
>I also voted to submit the ANPR to the Office of Management and Budget  
>(OMB) prior to sending it to the Office of the  
>Federal Register (OFR) for publication. On January 20, 2001 a memorandum  
>entitled "Regulatory Review Plan" was  
>transmitted to the Heads and Acting Heads of Executive Departments and  
>Agencies on behalf of the President. This  
>memorandum, inter alia, directed executive branch agencies to refrain  
>temporarily from transmitting proposed or final regulations  
>to the OFR. The memorandum permitted agencies to request an exception  
>from OMB in the case of regulations that impact  
>critical health and safety functions of the agency. It encouraged  
>independent agencies, such as the Commission to participate  
>voluntarily in this review.

>  
>I recognize that the Commission is not required to submit this ANPR to  
>OMB prior to transmitting it to the OFR. But there is  
>no prohibition against the Commission cooperating voluntarily with the  
>President's memorandum. The Commission already  
>voluntarily performs actions set forth in executive orders that it is  
>not required to perform, such as the preparation of a  
>regulatory agenda. The actions requested by the January 20 memorandum  
>are less burdensome than the preparation of a  
>regulatory agenda, and are, by the express terms of the memorandum,  
>temporary. Moreover, I am certain that OMB will agree  
>that the exception for critical health and safety functions of the  
>Commission will apply to this ANPR and will acquiesce in its  
>publication in the Federal Register. Submitting the ANPR to OMB and  
>requesting an exception does not constitute review and  
>approval of the substance of the ANPR; it requires only a determination  
>that it "impacts critical health and safety functions" of  
>the Commission. Thus, the voluntary cooperation by the Commission with  
>the January 20 memo will not undermine or  
>compromise the Commission's independence.

>  
>The U.S. Consumer Product Safety Commission protects the public from  
>unreasonable risks of injury or death from 15,000 types of consumer  
>products under the agency's jurisdiction. To report a dangerous product

~~Stevenson, Todd A.~~

*Candle with  
wicket  
4*

From: meier5@webtv.net  
Sent: Saturday, March 10, 2001 6:55 AM  
To: cpsc-os@cpsc.gov  
Subject: candles with metal wicks

Please ban them before more children get lead poisoning. Scented  
candles also  
cause respiratory illnesses. Scented candles should all be banned. Do  
something before there is loss of life.  
Sincerely,  
Jean Chacko

*Candle  
wick  
commit  
5*

**Stevenson, Todd A.**

---

**From:** LZenack@aol.com  
**Sent:** Wednesday, March 14, 2001 11:32 AM  
**To:** cpssc-os@cpssc.gov  
**Subject:** ANPR for Candle Wicks Containing Lead

Dear Consumer Product Safety Commission:

I support your effort to ban or otherwise strongly restrict the sale of candles having a lead-containing wick. A voluntary standard may be less than effective, especially in view of the statement in your Federal Register announcement:

"In 1974, the Candle Manufacturers Association trade group made a voluntary commitment to eliminate lead from candle wicks. However, analyses by CPSC and by Public Citizen of the lead content of recently-purchased metallic wick candles show that wicks in some candles currently on the market continue to contain substantial amounts of lead."

In view of the considerable hazard involved with these types of candles, I urge your rapid and forceful action.

Regards,  
Les Zenack, P.E.  
44 Condor Road  
Sharon, MA  
781-784-4030



# American College of Medical Toxicology

*Candle Wicks Comment*

2001 MAR 30 AM 10:15

777 East Park Drive, P.O. Box 8820, Harrisburg, PA 17105-8820  
Phone: 717-558-7846  
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March 27, 2001

Office of the Secretary  
Consumer Product Safety Commission  
Washington, DC 20207-0001

Email: [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov)

**Re: ANPR for Candle Wicks Containing Lead**

To Whom it may Concern:

On behalf of the American College of Medical Toxicology, this letter is written in support of a **Mandatory Rule** declaring certain candle wicks containing lead and candles with such wicks be banned as hazardous substances.

The American College of Medical Toxicology (ACMT) is a professional, nonprofit association of physicians with recognized expertise in medical toxicology. The College is dedicated to advancing the science and practice of medical toxicology through a variety of activities. The primary mission of the ACMT is to ensure that patients exposed to poisons and toxic substances receive optimal care by direct contact with qualified medical toxicologists. Preventive activities are another key aspect of the ACMT mission.

As physicians called upon to provide recommendations on both the treatment and prevention of lead poisoning, we find the issue of lead-containing candle wicks completely in our purview. Particularly in the case of children, where lead can produce devastating consequences, we vigilantly seek to identify important sources of environmental lead and assist in efforts to eliminate them.

Data by Sobel et al<sup>1</sup> and others have demonstrated the degree to which candles with a lead-containing wick can contaminate the environment. In their investigations these authors found that such wicks can contain up to 118,000 µg lead, producing ambient lead concentrations as high as 54

Consumer Products Safety Commission  
March 27, 2001  
Page 2

$\mu\text{g}/\text{m}^3$ . This exceeds by as much as 35 times the US EPA standard of  $1.5 \mu\text{g}/\text{m}^3$ . Conservative estimates are that a 6 year old child could inhale the Consumer Product Safety Commission's recommended daily lead limit for children ( $15 \mu\text{g}$ ) in only 45 minutes.

Clinically, the effects of lead on young children can be severe, with the greatest injury to the central nervous system and the brain. Moreover, these effects are believed to be permanent. Of greatest importance, lead has *in situ* persistence like few other toxins; having a half-life in bone of as long as 20 years, absorbed lead remains in the body for decades, producing long-term effects and becoming a retained cache that, during pregnancy, can be released into the bloodstream and passed on to the developing fetus.

Because lead has such potential for harm to children (both current and future) it is vital to identify and effectively eliminate all significant sources. Neither a CPSC labeling rule nor voluntary standard is sufficient to assure the elimination of lead from candle wicks. The ACMT therefore petitions the CPSC to institute the **mandatory rule**, as other countries (Australia, New Zealand), have already done.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert S. Hoffman". The signature is stylized and somewhat cursive.

Robert S. Hoffman, MD  
President

*Candle Wick comment*  
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ANPR for Candle Wicks Containing Lead

OFFICE OF THE SECRETARY  
2001 APR -2 10 38 05

**To:** Office of the Secretary  
Consumer Product Safety Commission  
Washington, DC 20207-0001

**From:** Kelli L. Dutrow, MA  
1101 Juniper Street, Ste. 504  
Atlanta, GA 30309

**Date:** March 26, 2001

**"[T]here were more standards governing candles back in the Middle Ages than there are today...."**<sup>1</sup>

INTRODUCTION

Thank you for the opportunity to comment on the Commission's proposed rule regarding candle wicks containing lead and candles with such wicks. My comment will first address the physical, economic and social effects of lead poisoning. Second, I will present evidence supporting a relationship between lead-cored

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<sup>1</sup> David Urban, combustion engineer with NASA, quoted in Francesca Lyman, *Candles a Burning Controversy*, available at <http://www.msnbc.com/news/523325.asp?cp1=1> (referencing an "English law of 1381 that required chandlers (makers and sellers of candles) to assure the quality of their waxes and [wicks]. The penalties for a chandler dispensing bad wax in [fourteenth] century England were many, including, having the bad candle 'burnt before his [door], being put in a pillory, or finally, exile.") *Id.*

candle wicks and lead poisoning through the vehicle of house dust. Third, I will explore the question of whether a ban on such products is prudent in light of other alternatives. Finally, I will conclude by supporting the proposed rule as the most practical and ethical way to deal with this problem. I would appreciate your thoughtful consideration of these particular topics as they were included in the list of solicited information in the ANPR and are particularly relevant to the proposed rule.

#### **I. LEAD POISONING AND THE RISKS ASSOCIATED WITH LEAD-CORED CANDLE WICKS**

Although health experts have been aware of the potential hazards associated with leaded candle wicks for at least twenty five years,<sup>2</sup> several recent studies have reinvigorated the effort to eliminate those risks. Jerome Nriagu, a professor of environmental health sciences at the University of Michigan, completed one study in October 1999.<sup>3</sup> Mike van Alphen of the independent consulting group "Lead Sense" completed a similar

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<sup>2</sup> See National Candle Association, *Candlemaking and Ingredients*, available at [http://www.candles.org/Candlemaking/qa\\_wicks.htm](http://www.candles.org/Candlemaking/qa_wicks.htm)

<sup>3</sup> See University of Michigan, News and Information Services, *Some Candles with Lead Wicks Emit Lead Into The Air*, Oct. 6, 1999 [hereinafter Nriagu Study], available at <http://www.umich.edu/~newsinfo/Releases/1999/Oct99/r100699.html>

study in Australia.<sup>4</sup>

Professor Nriagu examined both lead emission rates and ambient lead accumulations from a variety of candles made in the United States, Mexico and China.<sup>5</sup> His study demonstrated that the lead emission rates for those candles ranged from 0.5 to 327 micrograms ( $\mu\text{g}$ ) per hour.<sup>6</sup> The ambient accumulation in an enclosed space ranged from 0.04 to 13.1  $\mu\text{g}$  per cubic meter after the candles burned for an hour.<sup>7</sup> The United States Environmental Protection Agency (EPA) recommends that ambient air contain no more than 1.5  $\mu\text{g}$  of lead per cubic meter.<sup>8</sup> Within one hour of burning, five of the candles Professor Nriagu tested resulted in ambient levels greater than the recommended 1.5  $\mu\text{g}$  per cubic meter and after five hours, the ambient concentration ranged from

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<sup>4</sup> See *Australian World First with Ban on Candles that Can Cause Lead Poisoning*, 7 J. LEAD EDUCATION AND ABATEMENT (LEAD) DESIGN GRP [hereinafter *Australian Study*], available at <http://www.lead.org.au/lanv7n4/L74-3.html>

<sup>5</sup> See Nriagu Study, *supra* note 3.

<sup>6</sup> See *id.*

<sup>7</sup> See Nriagu Study, *supra* note 3.

<sup>8</sup> See Environmental Protection Agency, *Indoor Air Quality: Lead* [hereinafter *EPA Indoor Air Quality*], available at <http://www.epa.gov/iaq/lead.html>

0.21 to 65.3 µg per cubic meter.<sup>9</sup> These results were consistent with the Australian study, where one brand of candle released up to 1,130 µg/hour.<sup>10</sup>

The fact that lead is a "harmful environmental pollutant" is not new information.<sup>11</sup> Nor is the fact that children are particularly sensitive to lead exposure.<sup>12</sup> In fact, in 1991, the Secretary of the Department of Health and Human Services called lead the "number one environmental threat to the health of children in the United States."<sup>13</sup> Others have called childhood lead poisoning a "'silent epidemic' which can have grave lifelong consequences."<sup>14</sup> What is new is the fact that "[c]andles are fast becoming one of the most unrecognized causes of poor indoor air quality."<sup>15</sup>

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<sup>9</sup> See Nriagu Study, *supra* note 3.

<sup>10</sup> See Australian Study, *supra* note 4.

<sup>11</sup> See EPA Indoor Air Quality, *supra* note 8.

<sup>12</sup> See *id.*

<sup>13</sup> *Id.*

<sup>14</sup> Martha Mahoney, *Four Million Children at Risk: Lead Paint Poisoning Victims and the Law*, 9 ST. ENVTL. L.J. 46 (1990).

<sup>15</sup> Charles Downey, *Sweet Smelling Danger?*, WebMD Medical News (quoting Diane Walsh Astry, Executive Director American Lung Association's Health House Project), available at <http://www.webmd.com/printing/article/1668.50139>

Children are more at risk for lead poisoning because "lead is more easily absorbed into growing bodies, and the tissues of small children are more sensitive to the damaging effects of lead."<sup>16</sup> Children are most commonly exposed to lead through lead based paint and household dust.<sup>17</sup> Children are thought to have a higher exposure to lead because they frequently get lead dust on their hands and then put their hands, and other lead dusted objects, in their mouths.<sup>18</sup> In other words, through "normal hand-to-mouth behavior."<sup>19</sup>

When doctors first became aware of a relationship between blood lead levels and health risks, the threshold for concern was 60 µg/dL.<sup>20</sup> Since then, the Centers for Disease Control and

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<sup>16</sup> EPA Indoor Air Quality, *supra* note 11; Environmental Protection Agency, Consumer Product Safety Commission and Department of Housing and Urban Development, PROTECT YOUR FAMILY FROM LEAD IN YOUR HOME [hereinafter Protect your Family] (brochure), available at <http://www.epa.gov>

<sup>17</sup> See Mahoney, *supra* note 13.

<sup>18</sup> See EPA Indoor Air Quality, *supra* note 11.

<sup>19</sup> Mahoney, *supra* note 13 at 50; Centers for Disease Control, *What Every Parent Should Know About Lead Poisoning in Children*, available at <http://www.cdc.gov/nceh/lead/faq/cdc97a.htm>

<sup>20</sup> See Mahoney, *supra* note 13.

problems, headaches,<sup>25</sup> cerebral palsy, visual-motor deficiencies, seizures, coma and death<sup>26</sup> There is also an inverse relationship between blood lead levels and IQ scores in children.<sup>27</sup> Because lead accumulates in the body without being excreted, children with high levels face increased risks with every year of life.<sup>28</sup> Children are even at risk in the womb,<sup>29</sup> because "[t]here is no

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<sup>25</sup> See *id.*

<sup>26</sup> See Centers for Disease Control and Prevention, *What Every Parent Should Know About Lead Poisoning in Children*, available at <http://www.cdc.gov/nceh/lead/faq/cdc97a.htm>; see also Mahoney, *supra* note 13 at 50.

<sup>27</sup> See Peter A. Briss et al., National Center for Environmental Health, Centers for Disease Control and Prevention (CDC), Atlanta, and Harvard University School of Public Health, *Costs and Benefits of Universal Screening Program for Elevated Blood Lead Levels in 1-year-old Children*, available at <http://www.cdc.gov> (stating the results of two recent studies - one of which showed that a 1µg/dL increase in blood lead level at age two results in a loss of 0.257 points of IQ at school age, and one which showed a 0.185 point loss in IQ for the same increase in blood lead level).

<sup>28</sup> See *id.* at 51.

<sup>29</sup> See Mahoney, *supra* note 13 at 51.; Nriagu Study, *supra* note 3.

Prevention (CDC) has lowered the threshold for intervention to 10 µg/dL.<sup>21</sup> The number of children with elevated blood lead levels has declined over the years,<sup>22</sup> but today, an estimated 900,000 children in America under the age of six still have elevated blood-lead levels.<sup>23</sup> Lead toxicity in adults has been associated with reproductive and digestive problems, high blood pressure, nerve disorders, trouble with memory and concentration, muscle and joint pain.<sup>24</sup> In children, elevated blood levels can lead to central nervous system damage, growth retardation, hearing

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<sup>21</sup> See Howard L. Sobel et al., *Lead Exposure from Candles*, 284 JAMA 180 (2000); Peter A. Briss et al., National Center for Environmental Health, Centers for Disease Control and Prevention (CDC) and Harvard University School of Public Health, *Costs and Benefits of Universal Screening Program for Elevated Blood Lead Levels in 1-year-old Children*, available at <http://www.cdc.gov>

<sup>22</sup> See National Health and Nutrition Examination Survey (NHANES), reported at <http://www.cdc.gov/nceh/lead/factsheets/leadfcts.htm> (illustrating that "the percentage of U.S. children with elevated blood lead levels has dropped from 88.2% in the late 1970s to 4.4% in the early 1990s.") *Id.*

<sup>23</sup> See *Protect your Family*, *supra* note 15.

<sup>24</sup> See *id.*

protective barrier to the transplacental transport of lead...."<sup>30</sup>  
Thus, children of mothers who were exposed to lead during pregnancy have an increased risk of mental retardation and impaired development.<sup>31</sup>

In addition to the well documented impact lead exposure has on health, increased blood lead levels can have a pervasive negative impact on society. In 1991, social cost was a primary factor in the Bush administration's effort to reduce lead poisoning in children.<sup>32</sup> Dr. James Mason, then Assistant Secretary for Health at the Department of Health and Human Services, stated that unless the government aggressively confronted the lead problem, "'society is going to pay a horrendous cost' for criminal justice, welfare and remedial education that will be necessary for those harmed by lead exposure."<sup>33</sup> Others point to the loss in stock of "human capital"

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<sup>30</sup> Marc Rhainds et al., *Lead, Mercury, and Organochlorine Compound Levels in Cord Blood in Quebec, Canada*, ARCHIVES ENVTL. HEALTH (1999), available at 1999 WL 12426382.

<sup>31</sup> See *id.*; see also Mahoney, *supra* note 13 at 51; Australian Study, *supra* note 4.

<sup>32</sup> See Associated Press, *Lead-Reduction Plan Assailed Bush Proposal Sounds Good, But Falls Short, Democrats Say*, San Diego Union-Tribune, Feb. 22, 1991, at AA7.

<sup>33</sup> *Id.*

as the critical social cost associated with lead poisoning of children.<sup>34</sup>

Alternatively, lowering blood lead levels could result in significant economic and social benefits.<sup>35</sup> The CDC has isolated several primary categories of benefits, two of which are particularly relevant to this discussion: "1) improvements in lifetime earnings attributable to reductions in lead-induced problems with intelligence or behavior and 2) reduction in lead-related special-education costs."<sup>36</sup>

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<sup>34</sup> See Mark D. Agee & Thomas Crocker, *Parental Altruism and Child Lead Exposure: Inferences from The Demand for Chelation Therapy*, 31 J. HUMAN RESOURCES 677 (1996), available at 1996 WL 10551212 (stating that "[a] substantial part of an adult's stock of human capital is accumulated through childhood," and addressing the fact that "[c]hildren...cannot independently contract for the resources required to support investments in this human capital," and concluding that parental control over the factors contributing to lead exposure is paramount in reaping a return on that investment.) *Id.*

<sup>35</sup> See Briss et al., *supra* note 27; Associated Press, *supra* note 32; Agee & Crocker, *supra* note 34.

<sup>36</sup> Briss et al., *supra* note 27 (estimating that "a 1µg/dL reduction in a child's [blood-lead level] at age 2 compared with the [blood-lead level] that would have otherwise occurred, would

## II. PREVALENCE OF LEAD-CORED CANDLE WICKS

Approximately \$2.3 billion worth of candles are sold every year in the United States.<sup>37</sup> Over the past decade, candle sales have increased by ten to fifteen percent annually.<sup>38</sup> "[T]he most important factors affecting candle sales are color, shape and scent."<sup>39</sup> One of the primary reasons for the increase in sales is America's fascination with aromatherapy,<sup>40</sup> as evidenced by the

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result in an average \$1169 increase in lifetime earnings discounted to the present.") *Id.*

<sup>37</sup> See David Brown, *Group Warns of Lead in Candles; Survey Shows 3 Percent Had Tainted Wicks Despite Voluntary Domestic Ban*, Wash. Post, Feb. 25, 2000, at A02; see also American Lung Association's Health House, *The Story of Candles: Humans Have Always Sought Light; The Latest "Candle Craze" Goes Beyond Creating the Illusion of Comfort* [hereinafter ALA Health House], available at <http://www.healthhouse.org/new/candlestory.htm>

<sup>38</sup> See National Candle Association, *Candle Industry Facts*, available at <http://www.candles.org/CandleIndustry/index.htm>

<sup>39</sup> *Id.*

<sup>40</sup> See ALA Health House, *supra* note 37 (stating the association's belief that "[a]s we become more technology driven, many of us are reverting to an illusion of past comfort by burning candles - lots and lots of candles. The increase in the use of candles, fueled by a growing preference for aromatics has

fact that "[f]ragrance is increasing in importance as a special element in the selection of [home] candle[s]." <sup>41</sup> Candles can be found in seven out of ten homes in America. <sup>42</sup> Most consumers burn candles for less than three hours per occasion, and the majority burn one to two candles at a rate of one to three times per week. <sup>43</sup> Lead cores are found most often in scented candles. <sup>44</sup> The reason is that scent is created by adding oil to the candle wax. <sup>45</sup> The more oil that is in a candle, the softer the candle is, and the more rigid the candle wick has to be to stand up when the candle melts. Lead is used to strengthen candle wicks and also makes the wick burn hotter and more slowly which causes the scented materials in the wax to vaporize better and enhances the aroma. <sup>46</sup> Metal wicks are also sometimes used in "container" type

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brought inferior candle products to market.") *Id.*

<sup>41</sup> National Candle Association, *supra* note 38.

<sup>42</sup> *See id.*

<sup>43</sup> *Id.*

<sup>44</sup> *See Safety Alert! It is Better to Curse the Darkness Than to Light This Kind of Candle*, 16 HEALTH LETTER (2000), available at 2000WL 12977264; see also Nriagu Study, *supra* note 3.

<sup>45</sup> *See Francesca Lyman, Candles: A Burning Controversy*, available at <http://www.msnbc.com/news/523325.asp?cp1=1>

<sup>46</sup> *See Safety Alert! It is Better to Curse the Darkness*

candles, which make up a third of all candle sales.<sup>47</sup>

Lead-cored wicks, which are most often found in overly aromatic candles, glass enclosed candles, and candles imported from overseas<sup>48</sup> emit lead into the air when they burn - but also contribute to an excessive buildup of the household dust or "soot,"<sup>49</sup> that children are likely to ingest. "It's really like having a little smelter in your house, a lead smelter."<sup>50</sup> The fact that sales of aromatic candles are increasing is cause for alarm since this is where lead-cored candle wicks are often used.

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*Than to Light This Kind of Candle*, 16 HEALTH LETTER (2000), available at 2000WL 12977264.

<sup>47</sup> See Brown, *supra* note 37.

<sup>48</sup> The National Candle Association reports that an estimated twenty percent of candles sold are foreign-made. See National Candle Association, *supra* note 38.

<sup>49</sup> Joe Frey, *Are Scented Candles Damaging Your Home?* (stating that "[a] candle must have the right amount of wax, air, and wick in order to burn cleanly. If any foreign particles are introduced into that formula, the burning mixture is thrown off-kilter, causing the candle to emit more soot." ) *id.*, available at <http://www.insure.com/home/candles.html>; see also Australian Study, *supra* note 4.

<sup>50</sup> See Brown, *supra* note 47 (quoting Sidney Wolfe, Director, Public Citizen's Health Research Group).

As the market for scented candles continues to grow, so might the use of lead-cored wicks.

The candle industry voluntarily agreed to stop using lead wicks in 1974,<sup>51</sup> and today, most candle wicks manufactured in the United States are 100% cotton.<sup>52</sup> However, a recent study by the Public Citizen's Health Research Group (PCHRG) indicated that lead-cored candles have been creeping back into the market place.<sup>53</sup> The results of this study showed that three percent of

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<sup>51</sup> See National Candle Association, *supra* note 2; see also *Safety Alert! It is Better to Curse the Darkness Than to Light This Kind of Candle*, 16 HEALTH LETTER (2000) (stating that [i]n 1974, Russell Train, then Administrator of EPA, had already warned that 'inhabitants of homes in which lead-wicked candles are burned could be exposed to substantial incremental quantities of lead which, if continued on a regular basis, would pose a significant risk to health especially among children with already elevated lead body burdens. In my opinion [he said,] candles represent an unnecessary incremental source of lead that can readily be controlled.)

*Id.*, available at 2000WL 12977264.

<sup>52</sup> See National Candle Association, *supra* note 2.

<sup>53</sup> See Howard L. Sobel et al., *Lead Exposure From Candles*, 284 JAMA 180 (2000).

randomly purchased candles contained lead wicks.<sup>54</sup> It appears as though most of the 100% lead-cored wicks are found in imported candles.<sup>55</sup> But some American manufacturers apparently never stopped using 100% lead-cored wicks,<sup>56</sup> and many continue to make wicks containing smaller amounts of lead mixed with zinc or tin.<sup>57</sup> Currently, wicks that contain zinc and tin are not considered to pose a health risk though they may contain a small amount of lead.<sup>58</sup> Considering the grave consequences associated with lead poisoning, it would be prudent to reevaluate the safety of these "mixed" metal wicks as a next step in the CPSC's mission to eradicate lead exposure due to candles.<sup>59</sup>

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<sup>54</sup> See *id.*

<sup>55</sup> See National Candle Association, *supra* note 2; see also Nriagu Study, *supra* note 3.

<sup>56</sup> See Brown, *supra* note 47.

<sup>57</sup> See Nriagu Study, *supra* note 3.

<sup>58</sup> See Amy Reyes, *Some Candles Emit Dangerous Levels of Lead*, available at <http://www.unisci.com/stories/19994/1007992.htm>; National Candle Association, *supra* note 2 (stating that zinc wicks have been used safely for twenty years, and that "a person would have to burn over 3,000 candles with zinc wicks for four hours a day to exceed the EPA's air quality standard for lead.") *Id.*

<sup>59</sup> In Australia, "[a]ny quantity of lead in the wick of

### III. IS A BAN THE RIGHT ANSWER?: ALTERNATIVE SOLUTIONS AND PAST ACTIONS

Lead-cored candles have already been banned in Australia and New Zealand.<sup>60</sup> In issuing the Australian ban on September 1, 1999, Joe Hockey, Minister of Financial Services and Regulation, stated that "lead emissions from any source pose an unacceptable public health risk...[and] candles pose a risk to public health if burned in a confined space."<sup>61</sup> Lead-cored candles were banned in New Zealand on June 24, 2000.<sup>62</sup> It is significant that the history of the issue in New Zealand parallels that in the United States. New Zealand Consumer Affairs Minister Phillida Bunkle describes their process as follows: "When these products were first discovered on the market, suppliers had been co-operative in withdrawing them from the shelves when asked to do so.

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the candle makes it a prohibited product." Australian Study, *supra* note 4.

<sup>60</sup> See Australian Study, *supra* note 4; New Zealand Ministry of Consumer Affairs, *Poisonous Candles Banned*, available at [http://www.consumer-ministry.govt.nz/m\\_lead\\_candles.html](http://www.consumer-ministry.govt.nz/m_lead_candles.html)

<sup>61</sup> *Safety Alert! It Is Better to Curse the Darkness Than to Light This Kind of Candle*, 16 HEALTH LETTER 12 (2000), available at 2000WL 129772.

<sup>62</sup> See New Zealand Ministry of Consumer Affairs, *Poisonous Candles Banned*, available at [http://www.consumer-ministry.govt.nz/m\\_lead\\_candles.html](http://www.consumer-ministry.govt.nz/m_lead_candles.html)

However the candles keep creeping back into the market and my officials have advised me that the most effective way to protect the public is to ban their supply."<sup>63</sup> Thus, lead-cored candles were declared "unsafe goods" under section 31 of the New Zealand Trading Act.<sup>64</sup> That the ban is considered serious in that country is evidenced by the fact that individuals who violate the ban could be fined up to \$30,000 and companies could face fines up to \$100,000.<sup>65</sup>

The National Candle Association (NCA), of which ninety five percent of all U.S. candle manufacturers are members, supports the proposed ban on lead-cored candles.<sup>66</sup> Atkins & Pearce, Inc., the largest wick manufacturer in the U.S., did not comply with the voluntary ban, but stopped making leaded wicks in 1998 at the request of the NCA.<sup>67</sup> The industry is currently using zinc and tin to mimic the rigidity and slow burning that could previously only be gained through lead-cored wicks.<sup>68</sup> With all of the apparent support in the industry - it is curious why there is still a problem with this product. Some suggest that

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<sup>63</sup> See *id.*

<sup>64</sup> See *id.*

<sup>65</sup> See *id.*

<sup>66</sup> See National Candle Association, *supra* note 2.

<sup>67</sup> See Brown, *supra* note 47.

<sup>68</sup> See National Candle Association, *supra* note 2.

"[v]oluntary agreements never work."<sup>69</sup> If that is true in this country, as it was in New Zealand, the Commission must take other actions - actions with repercussions for noncompliance.

The mission of the Consumer Product Safety Commission (CPSC) is to "protect the public against unreasonable risks of injuries and deaths associated with consumer products."<sup>70</sup> The CPSC has the authority to designate and ban "hazardous substances" under the Federal Hazardous Substances Act (FHSA).<sup>71</sup> The CPSC has concurrent authority to regulate the risks of injury associated with certain consumer products under the Consumer Products Safety Act (CPSA).<sup>72</sup> It is essential that the CPSC regulate products pursuant to the appropriate statute.<sup>73</sup> The CPSA requires less stringent procedures for rulemaking and regulation than does the

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<sup>69</sup> *Id.* (quoting Sidney M. Wolfe, Director, Public Citizen's Health Research Group)

<sup>70</sup> Consumer Product Safety Commission, *Who We Are - What We Do For You*, available at <http://www.cpsc.gov/cpsc/pub/pubs/103.html>

<sup>71</sup> 15 U.S.C. § 1261(1960).

<sup>72</sup> 15 U.S.C. § 2079(d) (1972).

<sup>73</sup> See *Aqua Slide 'N' Dive Corp. v. Consumer Product Safety Comm'n*, 569 F.2d 831 (1978); *ASG Industries, Inc. v. Consumer Product Safety Comm'n*, 593 F.2d 1323 (1979).

FHSA.<sup>74</sup> As a result, choice of law is a frequent point of contention for manufacturers of products regulated under the CPSA who argue that they were deprived of the formal rulemaking procedures required under the FHSA.<sup>75</sup>

The CPSC has made the appropriate choice to act pursuant to the FHSA in proposing the ban on lead-cored candles for several

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<sup>74</sup> 15 U.S.C. § 1262(a)(2) (1960); 15 U.S.C. § 2058 (1972);

<sup>75</sup> Gulf South Insulation et al. v. United States Consumer Product Safety Comm'n, 701 F.2d 1137, 1148-50 (1983) (holding that the CPSC improperly regulated urea-formaldehyde foam insulation (UFFI) under the CPSA because the manufacturers should have been afforded a full evidentiary hearing under the FHSA and "[r]ulemaking under the CPSA is to be the exception, not the rule.") *Id.*; C.P. Chemical Co., Inc. v. United States and U.S. Consumer Product Safety Commission, 810 F.3d 34, 39 (1987) (stating that "the Commission *must* proceed in compliance with the more formal procedures of the [FHSA], rather than those under the CPSA, unless it makes a finding that the risk of injury could not be regulated sufficiently under the FHSA, or that it is in the public interest to proceed under the CPSA.") *Id.*; see also Aqua Slide 'N' Dive Corp. v. Consumer Product Safety Comm'n, 569 F.2d 831 (1978); ASG Industries, Inc. v. Consumer Product Safety Comm'n, 593 F.2d 1323 (1979).

reasons: first, because the FHSA applies to *household* products,<sup>76</sup> where candles are most often used, second, because it will afford opponents the broadest opportunity to challenge the rule pursuant to the high scrutiny inherent in the formal rulemaking procedures of the FHSA, and finally, because the FHSA *already bans* "children's products containing hazardous amounts of lead."<sup>77</sup> Congress intended for the Commission to regulate products posing an "unreasonable risk" of harm to the public.<sup>78</sup> The Commission is to consider need, feasibility and economic impact in defining unreasonable risk, and is not to prohibit the sale of a product based on speculation.<sup>79</sup> But, "[a] severe economic impact on an industry, or on a significant segment of an industry cannot, in and of itself, be held to render a safety rule unreasonable."<sup>80</sup>

The wealth of documentation establishing the physical,

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<sup>76</sup> 15 U.S.C. § 1261.

<sup>77</sup> Consumer Product Safety Commission, Office of Information and Public Affairs Release No. 94-049, *CPSC and Concord Enterprises Announce Recall of Certain Crayons Because of Lead Poisoning Hazard*, available at <http://www.cpsc.gov/cpscpub/prerel/prhtml94/94049.html>

<sup>78</sup> *ASG Industries, Inc. v. Consumer Product Safety Comm'n*, 593 F.2d 1323 (1979).

<sup>79</sup> 593 F.2d 1323.

<sup>80</sup> 593 F.2d 1323, 1337.

social and economic risks associated with lead poisoning, the history of lead use in candle wick making, the relationship between household dust and candle soot and twenty five years of failed attempts at a voluntary ban establish that lead-cored candle wicks pose a real, and unreasonable risk of harm to the public.<sup>81</sup> Thus, the CPSC is acting well within its authority to promulgate a rule banning lead-cored candle wicks and candles containing such wicks.

There are other alternatives to announcing a ban on lead cored candles. Intervention strategies such as education, medical screening, and improved home dust sampling have been shown to have some limited effect on reducing blood lead levels in children.<sup>82</sup> However, critics suggest that this so-called "medical" approach "[uses] children as 'mine canaries' or 'lead detectors' and...[that] it is difficult to see how a plan premised on the poisoning of children can ever be characterized

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<sup>81</sup> See Discussion *supra* Parts I and II.

<sup>82</sup> See Briss et al. *supra* note 11; Environmental Protection Agency, Executive Summary Report No. 747-R-95-007, *Sampling House Dust for Lead*, available at [http://www.epa.gov/lead/exec\\_s~1.htm](http://www.epa.gov/lead/exec_s~1.htm); Environmental Protection Agency, Executive Summary Report No. 747-R-95-009, *Effect of In-Home Educational Intervention on Children's Blood Lead Levels in Milwaukee*, available by calling 1-800-424-LEAD.

as 'prevention,'"<sup>83</sup> because it is inherently reactionary. The "medical approach" was used to implement the Lead Paint Poisoning Prevention Act<sup>84</sup> up until 1987, when the Act was amended in favor of more aggressive abatement techniques.<sup>85</sup>

I would suggest these methods be used in conjunction with a ban on lead-cored candles. The ban will address the long-term solution, but the "medical approach" will target the short-term problems which exist because so many people already own the candles. Education, home screening and sampling may help identify at risk individuals who are not aware of the ban. In addition, these intervention strategies might serve to assist children whose parents have chosen to ignore the risks and continue using the banned substances.

The fact that the CPSC has had success in the past with similar product bans lends support to this proposed rule. The Commission banned paint containing lead in 1977 to "reduce the risk of lead poisoning in children who may ingest paint chips or peelings."<sup>86</sup> Crayons that contain lead are also banned as

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<sup>83</sup> Mahoney, *supra* note 13 at 54-55.

<sup>84</sup> 42 U.S.C. § 4831 (1971).

<sup>85</sup> See Mahoney, *supra* note 13 at 55-56.

<sup>86</sup> Consumer Product Safety Commission, Office of Information and Public Affairs Release No. 77-096, *CPSC Announces Final Ban on Lead-Containing Paint*, available at

hazardous substances.<sup>87</sup> In 1994, the CPSC recalled a number of imported crayons because they "contain[ed] enough lead to present a lead poisoning hazard to young children who might eat or chew on the crayons."<sup>88</sup> At that time, the CPSC reiterated the fact that although lead-based paint is considered to be the *primary* cause of lead poisoning, "it is important to eliminate other contributors to lead poisoning."<sup>89</sup> Crayons must also be labeled as "non-toxic" before they can be imported into the United States.<sup>90</sup> I would suggest that the proposed candle rule also require labeling as it increases accountability and provides an additional prophylactic layer to the process.

In 1996, the CPSC recognized the potential for lead poisoning from imported vinyl mini-blinds.<sup>91</sup> Lead is added to

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<http://www.cpsc.gov/cpscpub/prerel/prhtml77/77096.html>

<sup>87</sup> See Consumer Product Safety Commission, Office of Information and Public Affairs Release No. 94-055, *CPSC Announces Recalls of Imported Crayons Because of Lead Poisoning Hazard*, Apr. 5, 1994, available at

<http://www.cpsc.gov/cpscpub/prerel/prhtml94/94055.html>

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> See Cathy F. Bowen, Assistant Professor, Pennsylvania State University, College of Agricultural Sciences, *Lead Poison*

mini-blinds to stabilize the plastic in the blinds. Eventually, however, the plastic deteriorates and a lead dust accumulates on the surface of the remaining plastic.<sup>92</sup> In 2000, Ace Hardware Corp. agreed to cooperate with the CPSC and recall the tainted mini-blinds.<sup>93</sup> There are several similarities between the vinyl blind history and the current candle issue. First, lead is added to both products as a stabilizer. Second, it is the breakdown of the product that creates a lead dust that can be ingested by children. Third, the action the CPSC took in both instances was to first give the industry the opportunity to self regulate. It is too soon to tell whether the mini-blind industry will comply with the CASC recommendations since the hazard was only identified five years ago. Conversely, the candle industry has had over twenty five years to eliminate lead-cored candles, and it has failed.

#### IV. CONCLUSION

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*in Imported Mini-blinds, available at*

[http://www.penpages.psu.edu/penpages\\_reference/28603/286031019.HT](http://www.penpages.psu.edu/penpages_reference/28603/286031019.HT)

ML

<sup>92</sup> See *id.*

<sup>93</sup> See Consumer Product Safety Commission, Office of Information and Public Affairs Release No. 00-122, *CPSC, Ace Hardware Corp. Announce Recall of Vinyl Window Blinds, available at* <http://www.cpsc.gov/cpscpub/prerel/prhtml00/00122.html>

"The only way true prevention can be accomplished is to remove lead from the environment before it enters the body of a child."<sup>94</sup> Children can not choose for themselves whether to assume the risk of using toxic products. They are at the mercy of their parents regarding their exposure to lead-cored candles. One role of government is to protect those who can not help themselves. As between the candle industry and a helpless child - the candle industry is in the best position to abate the harm caused by lead-cored candles. An overwhelming majority of industry participants supports this ban.

Candles, and particularly scented or decorative candles, are a non-essential product in modern society. The risks associated with allowing these products to remain on the market far exceeds the benefits of a better smelling or better looking home. This is not to trivialize the wellness value of aromatherapy and visual comfort. But, these same results can be achieved through less harmful means. Why not fill the home with natural flowers, herbs and spices? Or perhaps purchase scented candles with safer wicks? There has been no discernable consumer outcry against the proposed ban - so arguably consumers would be satisfied indulging in other sources of sensory bliss.

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<sup>94</sup> Mahoney, *supra* note 13 at 55 (citing CONSERVATION LAW FOUNDATION OF NEW ENGLAND, INC., A SILENT AND COSTLY EPIDEMIC: THE MEDICAL AND EDUCATIONAL COSTS OF CHILDHOOD LEAD POISONING IN MASSACHUSETTS (1987)).

Allowing the industry to self-regulate has not completely eradicated the risk. The industry is apparently willing to assume the costs associated with eliminating lead-cored candles from the market. The fact that the industry supports this ban, and that statistics show the tainted candles represent a small percentage of candle sales, indicate the economic cost of the ban would be minimal. However, the physical, economic and social costs of lead poisoning are overwhelming and largely irreversible. For the reasons set forth, I strongly support a CPSC rule that would ban candle wicks containing lead and candles with such wicks.

~~Stevenson, Todd A.~~

*Lead  
Candle  
Wicks  
J*

**From:** David Richter [davidric@microsoft.com]  
**Sent:** Thursday, April 19, 2001 6:08 PM  
**To:** cpsc-os@cpsc.gov  
**Subject:** ANPR for Candle Wicks Containing Lead

I support a ban on candle wicks containing lead.

Further, I support a ban on all consumer products containing any persistent bioaccumulative toxin. I would support rule-making by the CPSC in this regard. I consider the more narrowly targeted ban on candle wicks containing lead to be a good first step.

David Richter  
717 3rd Ave. W.  
Seattle, WA 98119

Lead  
in all  
wicks



Filed Electronically: [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov)

April 20, 2001

Office of the Secretary  
Consumer Product Safety Commission  
Washington, DC 20207-0001

Re: ANPR for Candle Wicks Containing Lead; 66 FR 10863 (February 20, 2001).

The Consumer Specialty Products Association (CSPA) supports efforts by the U.S. Consumer Product Safety Commission, consumer advocates, public health officials and industry representatives to eliminate the use of lead-core candle wicks. Although American candle makers voluntarily stopped using lead-core wicks more than 25 years ago, imported candles with lead-core wicks are still available for purchase, despite the ready availability of feasible alternatives.

CSPA, the leading consumer specialty products association with more than 200 member companies including prominent leaders in the air care industry, strongly supports an outright U.S. ban on the production and sale of candles with lead-core wicks. The U.S. candle industry removed lead-core wicks from their products 25 years ago when the health effects associated with lead use became understood. With everything known now, it is irresponsible for manufacturers to continue using lead-core wicks in their products and would be indefensible for the Commission to continue to allow candles with lead-core wicks to be sold. Thus, CSPA urges expedited promulgation of a mandatory rule and vigorous enforcement of the 0.06 percent lead standard for wicks.

Such support is consistent with CSPA's tradition of promoting awareness of the health, safety and environmental impacts of specialty products such as candles. For more than 85 years, CSPA has been dedicated to ensuring high standards for specialty products. In support of this mission, CSPA's scientific committees regularly develop and promote standardized testing methods, helping to ensure that key performance and safety assessments meet standards established by the industry and regulatory agencies. The ban on lead-core wicks is particularly important, considering the increase in popularity of candles in recent years; last year more than 300 million candles were sold in the U.S.. CSPA and its members will continue efforts to help provide consumers with information so that they can make informed decisions about the products they bring into their homes.

Very truly yours,

/s/John DiFazio  
Senior Counsel

*For more than 85 years, the Consumer Specialty Products Association (CSPA) has fostered the growth and reputation of the consumer specialty products industry by providing legislative, regulatory, scientific and educational services to more than 2,000 dedicated professionals representing more than 200 member companies. CSPA is organized into seven divisions: Aerosols, Air Care, Antimicrobial Products, Detergents, Pesticides, Industrial & Automotive Specialty Chemicals, and Polishes & Floor Maintenance Products.*

Serving Makers of Formulated Products for Home and Commercial Use Since 1914.

*Lead in candle wicks* 10**Stevenson, Todd A.**

**From:** donald meserlian [meserlian@msn.com]  
**Sent:** Saturday, April 21, 2001 6:42 PM  
**To:** cpsc-os@cpsc.gov  
**Cc:** Kahlow, Barbara  
**Subject:** Advance Notice of Proposed Rulemaking (ANPR) for Candle Wicks Containing Lead.- VOSI Comments/V50.1

Voices of Safety International (VOSI) is a National Institute of Standards & Technology (NIST) recognized standards development organization (SDO) that has an approved voluntary standard, VOSI V50.1 "Universal Specification/Test Method for Classifying and Minimizing the Lead (Pb) Content of Metal Core Candle Wicks & to Ban Metal Core Imported Candles" which addresses all aspects of the subject ANPR. See <http://www.voicesofsafety.com> "About VOSI"... "Public Health"... "Review Standard"... "View Research Report"... "Vote/Comments" .. and "Submit".

The following comments pertain to Federal Register/Vol. 66, No. 34/Tuesday 2/20/01/Proposed Rules, CPSC 16 CFR Part 1500 "Candle Wicks Containing Lead and Candles with such Wicks, pgs. 10863 - 10865:

#### A. Background/Comment

The following statement is incorrect: "Information obtained from the petitions and subsequent Commission staff investigations indicates that burning candles containing metallic-cored wicks with a lead content exceeding 0.06% by weight may result in potentially toxic levels of air emissions of lead."

Both the HP 003 Public Citizen petition and VOSI V50.1 specify a 0.01% maximum lead content. VOSI V50.1 was submitted to the CPSC commissioners prior to the ANPR but was not included in the Federal Register.

The 0.06% standard is the current standard for the maximum lead content in paints. The same standard for candle wicks should not be used since the ingestion of lead in paint chips is only by infants who have pica.

Lead accumulates in the body thought one's lifetime therefore the CPSC cannot set limits based only on what's safe for infants and children since they both grow up to become adult

"Metal core wicks may be primarily of lead or may be primarily of zinc or tin with a lesser lead content." . The VOSI Research Report, RR 7-V50.1 (Same title as V50.1) , Table 1. proves that tin core wicks exceed the 0.01% HP 003 and VOSI V50.1 maximum lead whereas zinc core wicks meet this requirement. V50.1

requires that both lead and tin core wicks be banned and only zinc core wicks accepted for domestically manufactured candles; imported candles are not permitted to have metal core wicks in order that custom inspectors can visually check that there is no metal core in the wicks of candles. Both paper and fiber core wicks provide the same structural requirements as metal core wicks.

#### B. The Risk of Illness

More than a million children have blood lead levels in excess of the maximum recommended

level of 10 micrograms/deciliter. The American Conference of Governmental Industrial Hygienists (ACGIH) Biological Exposure Level (BEI) for lead for an adult is 30 micrograms/deciliter. (1995-1996 Threshold Limit Values (TLV) & Biological Exposure Indices (BEIs)). The TLV, based on inhalation of lead is 50 micrograms/cubic meter. "Lead cored candles can emit up to 2200 micrograms of lead per hr.". Based on an average candle time of 3 hrs. (Table 3 RR7-V50.1 Research Report) 6600 micrograms of lead would be emitted. If this candle was burned in a closed room 8" x 8' x 8' 456 micrograms of lead/cubic meter would be generated or 9 times the maximum permissible amount for inhalation. This proves that the maximum level of lead in a candle wick should be based on inhalation rather than ingestion and the level should cover a lifetime. This is why the 0.01% rather than the 0.06% based on ingestion, should be used. You confirm that the limit should be based on inhalation when you state: "Lead emissions present a risk to consumers through inhalation of airborne lead and through contact with lead deposited onto surfaces in the room".

### C. Relevant Statutory Provisions

The Federal Hazardous Substances Act (FHSA) requires that a hazardous substance (lead in candle wicks) be banned since cautionary labeling would be inadequate for the protection of the public health and safety.

VOSI V50.1, par. 4.2 states: "The CPSC should ban the use of tin and lead core (candle wicks) (exceeding 0.01% lead) in accordance with the HP 003 Public Citizen petition.

The FHSA requires that the CPSC evaluate all voluntary standards (VOSI V50.1) that are submitted in response to an ANPR. 15 U.S.C. par. 1262(g). The Commission should find that V50.1 is likely to "eliminate or adequately reduce the risk of injury" caused by excessive lead inhalation of burning candles and should propose this standard as a Commission regulation.

In addition there will be "substantial compliance with this standard" since the only domestic manufacturer of the zinc cores used in candle wicks provides an MSDS which specifies a 0.006% maximum lead content of their zinc cores. The banning of BOTH lead and tin cores will insure that the 0.01% will be automatically met by the zinc cores. V50.1, par. 2.7 states: A material certification should be provided by the zinc alloy wire manufacturer (V50.1, ref 2.3 Wire Industries) indicating the maximum % lead.

The largest manufacturer of candle wicks in the U.S., Atkins & Pearce, does not supply either lead or tin core wicks and only supplies, zinc, cotton and fiber cored wicks.

Based on the preceding FHSA requirements being met by VOSI V50.1, "the Commission must provide Federal Register notice and opportunity to comment that it intends to end the rulemaking and rely on the VOSI V50.1 voluntary consensus standard".

The National Technology Transfer and Advancement Act (NTTAA) of 1995 also requires that voluntary standards be used by federal agencies such as the CPSC. NIST has established the Interagency Committee on Standards Policy (ICSP) with a representative for each federal agency. Colin Church is the ICSP representative for the CPSC and he should review the subject standard and research report to confirm my statements and promote the use of V50.1 by the CPSC.

### D. Regulatory Alternatives.

This states: "The Commission should defer to the voluntary standard (VOSI V50.1) in lieu of

issuing a mandatory rule". This confirms what I previously stated concerning ending the rulemaking and relying on the V50.1 standard.

E. Both Australia (1999) and New Zealand (2000) have "banned the sale of lead wicks in their country". This further confirms that the U.S. follow their lead. V50.1 would completely ban all metal core wicks in imported candles and only permit tin core wicks in domestically manufactured candles.

Many domestic candle manufacturers are not members of the Candle Manufacturers Association (CMA) which can only recommend lead reduction policies be adhered to by their members. This explains why the efforts of the CMA ,since 1974, have been inadequate in reducing the problem of lead in candle wicks. VOSI V50.1 can now solve the problem in a cost effective manner.

#### F. Economic Considerations

Candle sales in 2001 are predicted to be \$3.2 billion, Approximately 20% of 1999 sales were from imported candles with approximately half of these sales from the far east.

There are approximate 350 commercial candle manufacturers in the U.S. They can be easily advised that only zinc core wicks are permissible per VOSI V50.1. Substituting non metal cores for metal core wicks "will not increase costs to candle manufacturers or consumers". This proves that the VOSI V50.1 standard is cost effective and will not adversely affect manufacturers or consumers and will only improve the health of all candle users.

Donald C. Meserlian, P.E., VOSI Chairman

*Lead in candle wicks***Stevenson, Todd A.****From:** donald meserlian [meserlian@msn.com]**Sent:** Sunday, April 22, 2001 8:47 AM**To:** Kahlow, Barbara**Cc:** cpsc-os@cpsc.gov**Subject:** Earthe Day/VOSI/CPSC-How we can work together to make Earth Day Meaningful**To:** Barbara Kahlow, Deputy Staff Director Subcommittee on Energy Policy, Natural Resources & Regulatory Affairs, House Government Reform Committee**Refs:** 1. "Chair's Message-Earth Day Approaches" by Tina Schwejda; "The Jersey Sierran" (Sierra Club), April-June 2001

2. VOSI Comments on CPSC Advance Notice of Proposed Rulemaking (ANPR) for Lead in Candle Wicks

Happy Earth Day, 4/22/01!!! Today is the 31st. anniversary of Earth Day . Ref. 1 states: "Earth Day was a truly astonishing grassroots explosion. It achieved everything I had hoped for. At long last, the environment was on the national agenda, where it will remain as a constant reminder for this and future generations" said Gaylord Nelson, founder of Earth Day. "On April 22, 1970 twenty million people demonstrated their concern over what was happening to the natural world around them - polluted rivers, lakes, trout streams, ocean shores, the air we breathe and much more. The people cared BUT THE POLITICAL ESTABLISHMENT SEEMED OBLIVIOUS TO IT ALL".

This is where VOSI is attempting to make a difference and to make Earth Day meaningful beyond a photo-op for our "environmentally concerned" political leaders.

Ref. 2 is our first attempt to require a government agency to heed the health needs of people above the profitability of an industry. The candle industry wants a maximum level of lead in candle wicks which is 6 times greater than the 0.01% maximum requested by "Public Citizen" and VOSI V50.1 "Universal Specification/Test Method for Classifying and Minimizing the Lead (Pb) Content of Metal Core Candle Wicks & to Ban Metal Core Imported Candles" The 0.06% industry requested limit allows the industry to use tin wicks although zinc wicks, which meet the 0.01% limit is the only metal core wick manufactured by the larges candle wick supplier in America! The candle industries reason for wanting tin is to "use up inventory". NOT AT THE EXPENSE OF PEOPLE'S HEALTH (my response).

This is VOSI's first test for determining whether the principle of HUMANISTIC CAPITALISM, wherein the best aspects of the capitalistic economic system is preserved while forcing manufacturers to be responsible and aware of the adverse effects of their products on the health and safety of the people and the environment.

VOSI is using the National Technology Transfer & Advancement of 1995 (NTTA) as a sword to accomplish this long needed revolution in human values.

I am asking you to insure that the CPSC utilizes VOSI V50.1 and that they notify me of their decision on this first step in forcing government agencies to be more responsive to the need of all governments to protect the health and safety of their citizens and to protect the environment.

I started VOSI less than three years ago. In addition to addressing the problem of lead in products and the environment our 200 member organization has a standard for removing mercury (Hg) from vaccines and have initiated a Task Group to write a standard for arsenic (As) in drinking water.

In addition to Earth Day, April is also National Autism Awareness Month. As the father of an adult son, who was developing normally until he received a DPT shot 34 years ago (at age 2), I am thankful that VOSI V50.2 and its associated research report on 1400 children has finally proved that children who receive all of the American Academy of Pediatrics (AAP) recommended vaccinations are 14 TIMES MORE LIKELY TO BECOME LEARNING DISABLED AND 8 TIMES MORE LIKELY TO BECOME AUTISTIC COMPARED WITH CHILDREN WHO WERE NEVER VACCINATED. See [www.voicesofsafety.com](http://www.voicesofsafety.com) ... "Public Health"..V50.2 Standard to remove mercury from vaccines ."Review Standard" .... "View Research Report"..... "Vote/Comment" and "Submit"

This e mail will be forwarded to all VOSI members and our VOSI/ICSP and International liaison committees.

All readers are invited to view the V50.2 Standard and Research Report and to submit their comments.

Hopefully the founder of VOSI, Donald Meserlian,P.E. will be more successful in protecting both the environment and the health and safety of people than the founder of Earth Day!

Donald C. Meserlian,P.E., VOSI Chairman

**Stevenson, Todd A.**

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**From:** VOSI [voicesofsafety@hotmail.com]

**Sent:** Monday, April 23, 2001 10:50 AM

**Subject:** To All VOSI, ICSP & International Committee Members: Earth Day/VOSI/CPSC-How we can work together to make Earth Day Meaningful

To All VOSI, ICSP & International Committee Members:

This is VOSI's first attempt to make the writing of standards for improving the health and safety of people and the environment a means of achieving a long needed revolution as to how governments put the interests of business ahead of what governments are supposed to be doing.

Since our government needs to be reformed we logically have used the House Government Reform Committee as the means for enforcing the National Technology Transfer & Advancement Act (NTTAA) of 1995.

I am asking all members of the Interagency Committee on Standards Policy (ICSP) to start being more responsive to VOSI and its standards. VOSI should not have to call upon the Government Reform Committee to force people to do their jobs which is to review applicable VOSI standards and commenting on same. The chairman of the ICSP, Belinda Collins (NIST) should insure that the members of her committee enforce the NTTAA.

All members of our International committee should review our standards since they apply to peoples health, safety and the environment worldwide.

Please send all comments to [meserlian@msn.com](mailto:meserlian@msn.com)

Donald C. Meserlian, P.E., VOSI Chairman

----- Original Message -----

**From:** [donald meserlian](mailto:donald_meserlian)

**To:** Kahlöw, Barbara

**Cc:** [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov)

**Sent:** Sunday, April 22, 2001 8:46 AM

**Subject:** Earth Day/VOSI/CPSC-How we can work together to make Earth Day Meaningful

To: Barbara Kahlöw, Deputy Staff Director Subcommittee on Energy Policy, Natural Resources & Regulatory Affairs, House Government Reform Committee

Refs: 1. "Chair's Message-Earth Day Approaches" by Tina Schwejda; "The Jersey Sierra" (Sierra Club), April-June 2001

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we breathe and much more. The people cared BUT THE POLITICAL ESTABLISHMENT SEEMED OBLIVIOUS TO IT ALL".

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Ref. 2 is our first attempt to require a government agency to heed the health needs of people above the profitability of an industry. The candle industry wants a maximum level of lead in candle wicks which is 6 times greater than the 0.01% maximum requested by "Public Citizen" and VOSI V50.1 "Universal Specification/Test Method for Classifying and Minimizing the Lead (Pb) Content of Metal Core Candle Wicks & to Ban Metal Core Imported Candles". The 0.06% industry requested limit allows the industry to use tin wicks although a zinc wick, which meet the 0.01% limit is the only metal core wick manufactured by the largest candle wick supplier in America! The candle industries reason for wanting tin is to "use up inventory". NOT AT THE EXPENSE OF PEOPLE'S HEALTH (my response).

This is VOSI's first test for determining whether the principle of HUMANISTIC CAPITALISM, wherein the best aspects of the capitalistic economic system is preserved while forcing manufacturers to be responsible and aware of the adverse effects of their products on the health and safety of the people and the environment, can be put into practice by the use of VOSI standards.

VOSI is using the National Technology Transfer & Advancement of 1995 (NTTA) as a sword to accomplish this long needed revolution in human values.

I am asking you to insure that the CPSC utilizes VOSI V50.1 and that they notify me of their decision on this first step in forcing government agencies to be more responsive to the need of all governments to protect the health and safety of their citizens and to protect the environment.

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This e mail will be forwarded to all VOSI members and our VOSI/ICSP and International liaison committees.

All readers are invited to view the V50.2 Standard and Research Report and to submit their comments.

Hopefully the founder of VOSI, Donald Meserlian,P.E. will be more successful in protecting

both the environment and the health and safety of people than the founder of Earth Day!

Donald C. Meserlian, P.E., VOSI Chairman



## National Candle Association

1030 - 15th Street, NW, Suite 870 • Washington, DC 20005 • (202) 393-2210 • Fax: (202) 393-0336  
<http://www.candles.org>

April 23, 2001

Ms. Sadye Dunn  
Secretary  
U.S. Consumer Product Safety Commission  
Washington, D.C. 20207

Re: ANPR for Candle Wicks Containing Lead

Dear Ms. Dunn:

The National Candle Association (NCA) submits these comments regarding the ANPR for Candle Wicks Containing Lead. The NCA is the major organization of the candle-making industry. It includes over 70 North American candle manufacturers, and these members manufacture about 90% of all candles made in the United States. There are over 80 associate members of the NCA that are world-wide suppliers to the industry, including makers of wax, wicks, fragrance, machinery, molds, dyes, packaging/container materials and other industry-related products and services.

NCA members are committed to using only safe candlewicks and are committed to removal of all lead core wicks from the market. The NCA strongly supports a regulatory ban on the use of candlewicks with greater than 0.06% lead (Pb) content.

### **Current Use by Domestic Manufacturers**

Extensive industry surveys indicate that the use of lead cored wicks among U.S. manufacturers is negligible. The NCA and its members voluntarily discontinued the use of such wicks in the early 1970s. Over the past year, the NCA has been very active in spreading awareness regarding the use of lead core wicks and has undertaken to have domestic producers make a pledge not to use such materials. Using both NCA and associate

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member resources, a comprehensive listing of the domestic industry, including the very small producers, has been assembled. At this point over 400 of these domestic manufacturers of candles have made the pledge to not use candlewicks containing over the 0.06% lead (Pb) referenced in the staff recommendation. We feel that we have directly contacted a broad majority of this fragmented market, and that we can reasonably conclude that the use of lead (Pb) core wicks has been broadly discontinued domestically.

### **Types of Wire Cored Wick**

It is important to make the distinction between lead cored wicks, and other metal cored wicks. Most notably, zinc wire cored wicks have accounted for approximately 15% to 20% of domestic candle production in recent years. Zinc cored wicks have trace amounts of lead. The zinc core wicks that are used domestically have an average lead (Pb) content of less than 0.01%. Tin core wicks were available until the middle of last year. These tin core wicks had a lead (Pb) content of roughly 0.08%, and we estimate accounted for less than one percent (1%) of domestic production when they were discontinued in mid-2000.

Closed chamber burn tests of both zinc and tin core wicks have indicated that the emission of airborne lead (Pb) from both tin and zinc cored wicks is below the detection limit of the experiment apparatus used (see Ungers). As a result, we believe that a regulatory ban with a lead (Pb) limit of 0.06% is appropriate.

### **Cost of Substitution and Testing; Burden to Small Manufacturers**

Given the broad indications that U.S. based manufacturers are compliant with a 0.06% limit, we do not see any cost or hardship associated with a 0.06% standard for U.S. based manufacturers. This of course applies to small manufacturers as well. Additionally, the largest domestic wick supplier attests that the cost of testing and certification of the 0.06% limit in the wick is negligible. Material vendors to the wick manufacturers can certify the lead (Pb) content of raw materials at

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negligible cost, and the wick manufacturer can in turn make the certification to candle manufacturers.

### **Imported Candles with Lead Wicks**

The evidence suggests that the most significant sources of candles with wicking materials exceeding the 0.06% lead (Pb) level are imported. Lead core wicks are thought to still be widely used in China and Mexico. The NCA has made presentations to the Latin American Candle Association, and a letter has been sent to some 200 known Chinese and Far Eastern candle manufacturers, alerting them to the serious concerns over lead cored wicks. We do not believe that domestic manufacturers are importing raw lead (Pb) cored wick into the U.S. for production.

### **Effectiveness of Labeling, A Voluntary Standard, or A Mandatory Rule**

Given that the most significant source of candles with wicks containing more than 0.06% lead (Pb) are imports, the NCA is of the opinion that a regulatory ban will be the only effective means to eliminate these products from the domestic market. In light of our support of a mandatory rule, we view that a voluntary standard would be ineffective and potentially counterproductive, particularly with regard to initiating action by U.S. Customs. In all cases a mandatory rule would supersede a voluntary standard. We view a labeling rule as insufficient. Therefore, we would not be inclined to pursue either a voluntary standard or a labeling rule to address the issue of lead candlewicks.

### **Other: Domestic Industry Sales**

The Federal Register gives estimates for retail sales of candles in the U.S. as \$2.3 billion in 1999, and indicates that sales are expected to rise to \$3.2 billion in 2001. We agree with the 1999 estimate of \$2.3 billion, but would not project \$3.2 billion for 2001. Sales appear to have been flat over the past two years.

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The safety of candles is top priority for the National Candle Association, and we are committed to cooperating fully with the Consumer Product Safety Commission.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John Root", with a stylized flourish at the end.

John Root  
President

# FACSIMILE TRANSMISSION



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FROM: NCA

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TO:

Name: Mr. Dunn / Secretary

Company: US CPSC

Fax #: 301 504 0127

COMMENTS: filed comments

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