

UNITED STATES CONSUMER PRODUCT SAFETY COMMISSION 4330 EAST WEST HIGHWAY BETHESDA, MARYLAND 20814

Memorandum

Date:

August 11, 2009

- TO : Pool and Spa Safety Team
 FROM : Todd A. Stevenson, Director Table Secretary
- SUBJECT : Comments Regarding Technical Guidance on Unblockable Drains (July 2009 CPSC Staff Draft) Request for Comments Published on the CPSC website on July 15, 2009 Comments due by August 5, 2009

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
1	7/17/09	Rich Young General Manager	Aquatic Commercial Industries richy@awuacom.us
2	7/17/09	Richard A. Persek President	Perfectly Pure Pools, Inc. PO BOX 15678 West Palm Beach, FL 33416
3	7/18/09	Richard Moss General Manager	New Castle Country Club nccc@newcastlecc.org
4	7/18/09	Nic Rolenc	Aqua Palace Spa and Pool Council Bluffs Iowa
5	7/19/09	Eric Bohrer	Eric_J_Bohrer@yahoo.com
6	7/20/09	Todd Williams Project Manager	Paddock Industries, Inc. PO BOX 11676 (29731) 555 Paddock Parkway Rock Hill, SC 29730

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
_	- (2 -) (2 -)		
7	7/20/09	Dennis Prather	metro_pool@sbcglobal.net
8	7/20/09 8/3/09	Leif Zars Chairman, ASME A112.19 APSP/IAPM)-16	leif@garypools.com 9.8
9	7/21/09	Bonnie Snow Owner/CEO	BeeSafety Systems 795 W. Center St. #2 Provo, UT 84601 <u>beesafesystems@gmail.com</u>
10	7/21/09	Rich LaPierre Ode	ssa Montour Central School District 300 College Ave. Odessa, NY 14869
11	7/20/09	Donald R. Machen, PE CPO	East Park Pool Association, Inc. Los Alamos, NM 87544
12	7/20/09	Ricky Kelley	susierickykelley@bellsouth.net
13	7/20/09	Ericka Murphy Project Manager	St. Louis County Health Dept. 111 S. Meramec, 2 nd Floor Clayton, MO 63105 <u>emurphy@stlouisco.com</u>
14	7/21/09	Diane Holm Public Information Officer	Lee County Public Safety PO BOX 398 Fort Myers, FL 33902-0398 DHolm@leegov.com
15	7/23/09	Steve Jillson Environmental Engineer II	Dept. of Health and Human Services Division of Public Health State of Nebraska PO BOX 95026 Lincoln, NE 68509-5007 <u>steve.jillson@nebraska.gov</u>
16	7/22/09 Ros	eann and Robert Aeschlima	n Sycamore Sports Pool Kokomo, IN <u>blastfactory@comcast.net</u>
17	7/28/09 Facilit	Ric Patterson ties Maintenance Supervisor	City of Issaquah <u>RicP@ci.issaquah.wa.us</u>
18	7/27/09	Nate Lofeffelholz	MBA Architects

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
		Project Coordinator	3823 Creekside Lane Holmen, WI 54636
19	7/28/09	George S. Pellinton, PE Vice President	<u>Nate@mba-architects.com</u> Vac-Alert Industries <u>George@vac-alert.com</u>
20	7/29/09	Thomas C. Werblow City Engineer	City of North Platte, Nebraska WerblowTC@ci.north-platte.ne.us
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24	7/30/09	Riitta Kulinski, CPO, LGI Pool Director	Milwaukee Country Club riitta@photobyrk.com
25	7/30/09 Supervising E	Colleen Maitoza Environmental Specialist	Sacramento County, CA 10590 Armstrong Ave., Ste.B Mather, CA 95655 <u>Maitozac@saccounty.net</u>
26	7/30/09	David Talbot Pool Service Tech	AHOY Pool Service 2506 Via Rojo Carlsbad, CA 92010 <u>ahoypools@sbcglobal.net</u>
27	7/30/09	Roberto A. Flores Orozco	rflores@hidroklear.com
28	7/30/09	Sabrina Taylor	sbagrooven@gmail.com
29	7/30/09	Jack D. Osman, Ph.D.	The Wellness Farm Pool, Inc. 19310 Dutton road Stewartstown, PA 17363 josman@zoominternet.net
30	7/30/09	Marvin B. Hizenbaugh Executive Director	Edgebrook Swim & Tennis Club <u>bradix1@comcast.net</u>
31	7/30/09	Jim Bennett Chief Engineer	La Jolla Beach and Tennis Club, Inc. JBennett@ljbtc.com
32	7/31/09	Kim Bierwert	KBIERWER@smith.edu

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
33	7/31/09	Gary Siggins Principal Engineer - Swimming Pool, Spa and Whirlpool Bath Equipment	Underwriters Laboratories 455 East Trimble Road San Jose, CA 95131-12130 Gary.L.Siggins@us.ul.com
34	8/1/09	Daryl Matzke, PE Senior Project Manager	Ramaker & Associates, inc. 1120 Dallas Street Sauk City, WI 53583
35	8/2/09	Theodore F. Glaser Vice President, Board of Directors	Our Club Health and Fitness, Inc. Indian Harbour Beach, FL
36	8/2/09	Saundra Escuder	aqualerose@yahoo.com
37	8/2/09	Mark	markleo123@shaw.ca
38	8/3/09	Tony Milford	tmmilford@dhr.state.ga.us
39	8/3/09 8/4/09	Richard A. Martin Business Manager, Recreational Water Program	NSF International 789 Dixboro Road Ann Arbor, MI 48105 <u>Martin@nsf.org</u>
40	8/3/09	Scott Heusser CPO, CPOI Estimator/Project Manager	Custom Pools & Patio 4048 Chinden blvd. Boise, ID 83714 workemailaddress@aol.com
41	8/3/09	Bill Soukup Con President	nmercial Pool & Spa Supplies, Inc. 1167 East Hwy 36 Maplewood, MN 55109 <u>billsoukup@commercialpool.com</u>
42	8/5/09	Alan Korn Executive Director and General Counsel	Safe Kids USA 1301 Pennsylvania Ave. NW Suite 1000 Washington, D.C. 20004 www.usa.safekids.org
43	8/4/09	John M. Smieszek Director of Construction	Waveyard 8912 E. Pinnacle Peak rd. #F9-664 Scottsdale, AZ 85255 jsmieszek@waveyard.com
44	8/4/09	Paul Kulik	p_kulik@yahoo.com

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
45	8/4/09	Danielle Kazmier Executive Director	Pool Safety Council PO BOX 34100 Washington, D.C. 20043 www.poolsafetycouncil.org
46	8/3/09	Daniel W. Kirkeby Maintenance Supervisor	Ruhr Development Inc. danielkirkeby@yahoo.com
47	8/3/09	Charlie Smith	chasdsmith@valornet.com
48	8/3/09	Russ McCarty Property Director CPO	Dunigan Family YMCA 6846 Oak Grove Rd. Evansville, IN 47715 <u>Mccarty@ymca.evansville.net</u>
49	8/3/09	Sharon M. Casselman Assistant Director	City of Springdale Parks and Recreation <u>sharonc@springdale.org</u>
50	8/4/09	Chris Hawley	chawley@ci.lincoln.ca.us
51	8/3/09	Laura Hendley Environmental Health Spec	Lewis and Clark County, MT 1930 9 th Avenue Helena, MT 59601 <u>LHENDLEY@co.lewis-clark.mt.us</u>
52	8/4/09	Philip A. Tapscott Safety Manager	Decatur Park District 620 E. Riverside Dr. Decatur, IL 62521 <u>ptapscott@decparks.com</u>
53	8/4/09	David Stingl	Stingl Products Jager100@aol.com
54	8/4/09	Albert J. Tursi	YMCA of the USA Al.tursi@ymca.net
55	8/4/09	Lynita M. Docken Public Swimming Pool Manager	Wisconsin Dept of Commerce Safety and Buildings Division Program Development PO BOX 2689 Madison, WI 53701-2689 Lynita.Docken@Wisconsin.gov
56	8/4/09	Susan Campbell	Oklahoma City-County Health Dept

<u>COMMENT</u>	<u>DATE</u>	SIGNED BY	AFFILIATION
57	9 (4 /00	Marco Englishin DE	Susan_Campbell@occhd.org
57	8/4/09	Marc D. Franklin, PE	Park Hill Smith & Cooper 900 S. Lincoln Street Amarillo, TX 79101 <u>MFranklin@team-psc.com</u>
58	8/4/09	Chris Seris Manager of the Mizzou Aquatic Center	MizzouRec Service and Facilities <u>www.MISSOUREC.com</u>
59	8/5/09	Diane Hahn President	Country Lane Condominium Dianeh2114@aol.com
60	8/5/09	David Harling Owner	Big State Pools Cypress Texas bigstatepools@sbcglobal.net
61	8/5/09	James P. Burkhart General Manager	CastleRock Pools & Spas jim.burkhart@castlerockpools.com
62	8//5/09	Becky L. Gildea Senior Project Manager	Wallover Architects 941 Wheatland Ave., Suite 304 Lancaster, PA 17603
63	8/5/09	Richard N. Wolfe, CPO	richardwolfe@mindspring.com
64	8/5/09	Steve Dunn Vice President, Sales <u>Sale</u>	Commerical Pool Systems, Inc. es@CommericalPoolSystems.com
65	8/5/09	Carvin DiGiovanni Assoc Senior, Technical Services	tiation of Pool & Spa Professionals 2111 Eisenhower Avenue Alexandria, VA 22314-4695
66	8/5/09	Tracynda Davis, M.P.H. Director Environmental Health Program	National Swimming Pool Foundation 4775 Ganby Circle Colorado Springs, CO 80919-3131 www.nspf.org
67	8/5/09	Penny Shaver Water Safety Consultant	Alpine Pool Services pennyshaver@embarqmail.com

COMME	ENT DATE	SIGNED BY	AFFILIATION
68	8/5/09	Dave Schwartz, PE Principal	Water's Edge Aquatic Design 11205 W 79 th Street Lenexa, KS 66214 <u>www.wedesignpools.com</u>
69	8/5/09	Stephen Dauchert	The Redwoods Group www.redwoodsgroup.com
70 re	ec'd 8/13/09	Steven Hawksley VP, Technical Service Director	Neptune-Benson <u>www.NeptuneBenson.com</u> <u>www.DefenderFilter.com</u>

From:	Rich Young [richy@aquacom.us]
Sent:	Friday, July 17, 2009 2:32 PM
То:	CPSČ-OS
Subject:	Unblockable drain covers

To insure these drains meet the standards, we have insisted on each drain situation be submitted to a licensed engineer for approval and stamp.

Swimming pools are the easy ones... water parks with high flows for water features present a difficult call.

We provide a drawing indicating the open area, maximum possible flow characteristics and picture to the engineers and they calculate the velocity through the grate.

This is really the only way to insure "non-blockable" grates are truly non-blockable. This transfers the liability from the contractor or owner to a licensed professional.

Thanks,

Rich Young General Manager Aquatic Commercial Industries California Contractor Rich Young Aquatic Commercial 408-741-5871 Fax: 408-867-1216 Cell: 408-316-9905 richy@aquacom.us

I am using the Free version of <u>SPAMfighter</u>. We are a community of 6 million users fighting spam. SPAMfighter has removed 86903 of my spam emails to date. The Professional version does not have this message.

From: Sent: To: Subject: Richard A Persek [Richard@PerfectlyPurePools.com] Friday, July 17, 2009 5:06 PM CPSC-OS Unblockable Drain Guidance

I think you guys have pretty much beat this issue to death by now. Looks good.

Richard A. Persek President Perfectly Pure Pools, Inc. P.O. Box 15678, West Palm Beach, FL 33416 Phone: 561.436.8050 Fax: 561.615.3668

From: Sent: To: Cc: Subject: New Castle Country Club [nccc@newcastlecc.org] Saturday, July 18, 2009 10:17 AM CPSC-OS rpmoss@hotmail.com Unblockable Drain Guidance

Gentlemen: Technical guidance should include specifications or allow for a field fabricated sump. Also, maximum flow rates acceptable should be specified. What about gutter drains and vacuum inlets? If the gutter drains and vacuum drains are unblockable due to the distance between them do they need to have a certified cover? Our existing pool is fabricated from steel and there would be no commercially available certified cover to fit these inlets.

Richard Moss General Manager New Castle Country Club nccc@newcastlecc.org

From: Sent: To: Subject: Nic Rolenc [a355_2673@yahoo.com] Saturday, July 18, 2009 12:46 PM CPSC-OS Comments

We need to find someone that is going to enforce these laws, before someone gets hurt. Is that what it is going to take to get someone to enforce the VGB Pool and Spa Saftey Act is someone getting hurt? Why dont you prevent it before it happens? I still have one hotel that is not compliant that I know of in my town and I have the drain covers that they need and the SVR's that they will need. They always tell me the samething every time I am there " The drain covers are on order". I have them in stock along with the SVR's they just need to find someone that is going to start enforceing them. What good is a law if no one is there to enforce it?

Nic Rolenc Aqua Palace Spa and Pool Council Bluffs Iowa

From:	eric bohrer [eric_j_bohrer@yahoo.com]
Sent:	Sunday, July 19, 2009 9:49 AM
To:	CPSC-OS
Subject:	Unblockable Drain Guidance

I have read your 2 draft documents on Unblockable Drains ("Staff Draft Technical Guidance" and "Technical Memorandum").

Before reading the new drafts, I was not sure if "Unblockable Drains" specified any requirements for the sump.

After reading the new drafts, including the first paragraph of the Memorandum, I still am not sure.

My guess is that, for my single-drain public pool, I do not need to enlarge the sump, even though it is less than 18" by 23" - as long as the new drain cover meets the minimum size requirement and provides sufficient water flow when covered by an 18" by 23" object.

I suggest your website can be clearer as to whether there are any sump requirements for Unblockable Drains.

Thank your, Eric Bohrer Eric J_Bohrer@yahoo.com

From: Sent: To: Subject: Todd Williams [todd.williams@paddockindustries.com] Monday, July 20, 2009 4:30 PM CPSC-OS Unblockable Drain Guidance

I concur that a frame/grate cover must measure in excess of 18" x 23" or have a diagonal measurement greater than 29". If you are heading towards large unblockable drains as not needing replacement, then I think you are going down wrong path. All frame/grates should be replaced with approved certified compliant product. This will set a new base to track expiration dates on product labels. This area is being missed by owners and state health departments currently.

Size should not be only criteria for unblockable drains. We need to review the recommended and safe flows for frame/grates in analysis of solution. A suction outlet that cannot be shadowed by the area of the 18x23 Body Blocking Element and that the rated flow through the remaining open area cannot create a suction force in excess of the values in table 1(ASME Code).

Most people still look at this as though it is only body entrapment. There are five forms of entrapment:

- -Hair entrapment
- -Limb entrapment
- -Body suction entrapment
- -Evisceration/ disembowelment
- -Mechanical entrapment

This is why proper testing protocol per ASME code must be adhered to whether it be a testing agency(NSF) or engineer. If engineers can approve product, then they need to keep a file on tested results and make label for product to be compliant.



Todd Williams Project Manager P.O. Box 11676 (29731) 555 Paddock Parkway Rock Hill, SC 29730 T: 803.324.1111 X119 F: 803-328-1160 www.PaddockIndustries.com www.ApprovedMainDrains.com

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From: Sent: To: Subject: Dennis Prather [metro_pool@sbcglobal.net] Monday, July 20, 2009 1:11 PM CPSC-OS Unblockable Drain Guidance

I'm confused. Aquastar has a 4" * 32" channel drain they state is unblockable. Based on your definition is it. Is it covered in the diagonal definition?

From:Leif Zars [leif@garypools.com]Sent:Monday, July 20, 2009 12:33 PMTo:CPSC-OSSubject:"Unblockable Drain Guidance"

This proposed wording falls right in line with the proposed definition by our Committee on this subject which is:

Unblockable Drain: A suction outlet that cannot be shadowed by the area of the 18x23 Body Blocking Element and that the rated flow through the remaining open area cannot create a suction force in excess of the values in table 1.

4

Leif Zars Chairman ASME A112.19.8 APSP/IAPMO-16

From:Leif Zars [leif@garypools.com]Sent:Monday, August 03, 2009 11:13 AMTo:CPSC-OSCc:'Carvin DiGiovanni'; 'Robert Rung'Subject:"Unblockable Drain Guidance"

CPSC:

Upon viewing the APSP responses, I feel that the improved definition below is more appropriate. It more accurately defines that we are talking about the "open" area of a suction outlet, and also more appropriately references the source for Table 1.

I will endeavor to have my committee accept these two revisions for clarity.

A suction outlet such that its perforated(open) area cannot be shadowed by the area of the 18x23 Body Blocking Element of ANSI/ASME A112.19.8-2008a and that the rated flow through the remaining open area cannot create a suction force in excess of the values in table 1 of that Standard.

Sincerely,

Leif Zars Chairman ASME A112.19.8 APSP/IAPMO-16

From: Sent: To: Subject: Bonnie & Teri Snow [beesafesystems@gmail.com] Tuesday, July 21, 2009 1:23 AM CPSC-OS Unblockable Drain Guidance

Staff:

As the manufacturer of a large unblockable drain system that is compliant with ASME A112.19.8a-2008 and listed with CPSC I would like you to record that I think the Virginia Graeme Baker Pool and Spa Safety Act has more than adequately defined the term Unblockable.

I am concerned with some of the comments that have circulated through the Association of Pool and Spa Professionals and particularly the members of the ASME/IAPMO Committee who have numerous times made major modifications to the standard in what has appeared to many as an attempt to further their own products and patents while keeping others out of the market.

Currently their is mention of the wording in Troy Whitfield's memorandum as "falling right in line with the proposed definition of our Committee" that was sent to Carvin DiGiovanni by Leif Zars, Chairman ASME A112.19.8 APSP/IAPMO-16. Their definition being **"Unblockable Drain:** A suction outlet that cannot be shadowed by the area of the 18x23 Body Blocking Element and that the rated flow through the remaining open area cannot create a suction force in excess of the values in table 1." I don't really comprehend what "cannot be <u>shadowed</u> by" means, yet the definition as it is written in the Virginia Graeme Baker Pool and Spa Safety Act and the Troy Whitfield memo is definitive and accurate <u>as it is written</u>. This appears to me to be another attempt to delay and harm the selling of Unblockable products that are meeting with some favorable recommendations by consumers. I have had several consumers tell me that they have compared the BeeSafe Systems option to all other compliant products and that they see our product as better than the alternatives of dual drains and/or compliant covers with SVRS (and other) type devices. We market our BeeSafe System simply as an Unblockable and ASME A12.19.8 compliant product. I would like to bring my product to the Commission to have them actually see the value and determine if this product could be considered under the heading "Other Systems" but nevertheless would still object to a re-definition of the VGB Unblockable terminology.

To further emphasize my opinion that CPSC has already well defined Unblockable in the Act I send this additional comment from the APSP group discussion. Submitted on July 20, 2009 as an almost ridiculous interpretation of the APSP attempt at defining Unblockable with this comment from a committee member: "If there is a minimum dimension to avoid torso entrapment, a square would be a worst case. A 29" diagonal would allow a 20.5" minimum dimension, so wouldn't it be simpler to specify, a 20.5" x 20.5" square, or a rectangular shape with diagonal measurement greater than 29"? --- Does this imply that circular shapes of any size are non-compliant?" sent by Jim Brennan of Arch Chemical Inc.

My recommendation of the best option of course is circular and Unblockable with only the outer portion open to flow and with a diameter of 46" that gives a separation across the diameter equal to the minimum separation of dual drains, no need for equalizer lines, and simply a better answer to suction entrapment.

Again my comment to the Commission is that the Act already has a good definition of Unblockable and needs to stand firm that a new definition with ambiguous terminology is another set back that will alert consumers that the final acceptable compliant products are not necessarily those listed. The concern of many I have talked to (especially my previous co workers in environmental health at the county level) is that with interpretations still under comment they don't know if any option the consumer can choose will be compliant a year from now or when the ASME Committee next meets. With this comes the attitude that what is now approved cannot yet be

installed, so the pools continue to wait to come into compliance. It is imperative to finalize the standard so pool owners, installers, suppliers, manufacturers and health inspectors can all work together to make pools compliant and save lives by resolving entrapment hazards associated with pool and spa main drains. With this comment period soon ending, please don't allow the "ASME Committee" to continue to put interpretation to comment periods that are only harming the enforcement of a good law that can save lives.

Sincerely, Bonnie Snow

Bonnie Snow, Owner/CEO BeeSafe Systems

795 W. Center St. #2 Provo, UT 84601

801-375-6881 Phone 801-691-5761 Fax 888-306-0121 Toll Free

beesafesystems@gmail.com www.beesafesystems.com

From: Sent: To: Subject: Rich LaPierre [RLAPIERR@gstboces.org] Tuesday, July 21, 2009 6:07 AM CPSC-OS Pool Drains

We had our drains replace 5 years ago and they put in 2 - 18" x 18" drains 12 ' apart off of a 6" drain line that was split to suck from both drain. We did install new drains covers but I can not believe it was possible for a human or 2 to get suck down at the same time to these drains as they where.

Red Odessa Montour Central School District 300 College Ave. Odessa NY 14869 607-594-3341 ext 2073 Fax 607-594-3976

From: Sent: To: Cc: Subject: Donald Machen [d.r.machen@ieee.org] Monday, July 20, 2009 6:08 PM CPSC-OS thurman-gaye@prodigy.net Unblockable drain comment

CPSC:

I am responding to your request for comments on the mandated unblockable pool drain and the covers that meet the ASME/ANSI standards, ASME/ANSI A112.19.8.

The East Park Pool Association, Inc. of Los Alamos, NM installed the drain covers as required and found that they did function as advertised, however, the mandated covers increased our face water velocity by nearly a factor of 4 over the drain covers that were designed and installed by Paddock Pool Company nearly 50 years ago. The water velocity through our original drain covers was < 0.75 ft/sec and considered safe, but the diagonal dimension was 25" and not 29".

It is a matter of opinion as to what is safe here: We felt that our low velocity grates were better than the mandated grates but perhaps someone could totally block an 18" x 18" grate in contrast to an 18" x 23" grate?

Donald R. Machen, PE CPO East Park Pool Association, Inc. Los Alamos, NM 87544

----- Original Message -----From: <u>News from CPSC</u> To: <u>Talley@nlpi084.prodigy.net</u>; <u>Thurman</u> Sent: Friday, July 17, 2009 6:45 AM Subject: Unblockable Drains and the VGB Pool and Spa Safety Act

To the pool and spa safety community:

Topic: Unblockable Drains and The Virginia Graeme Baker Pool and Spa Safety Act

CPSC staff has drafted technical guidance and a technical memo regarding unblockable drains and unblockable drain covers and the Virginia Graeme Baker Pool and Spa Safety Act. CPSC staff is seeking public comment on the issue.

You may view these documents by visiting our main Web page: <u>www.cpsc.gov</u>, see the box marked "What's Hot", or open the documents below to review the guidance and get instructions for submitting comments.

- Staff Technical Guidance on Unblockable Drains: <u>http://www.poolsafety.gov/unblockable.pdf</u>
- · Memorandum on Unblockable Drains: <u>http://www.poolsafety.gov/unblockdrain.pdf</u>

The deadline for submitting comments is August 5, 2009.

Thank you,

1

Kathleen Reilly Office of Public Affairs Consumer Product Safety Commission <u>www.PoolSafety.com</u>

From: Sent: To: Subject: Ricky Kelley [susierickykelley@bellsouth.net] Monday, July 20, 2009 6:03 PM CPSC-OS Unblockable drain guidance

Does this commentary mean that the commercially available large aspect drain covers properly attached to an existing drain will not be required to have the secondary safety layer. (ie. svrs, cutoff, vent.)? When we were refitting drains earlier in process this was not going to meet compliance regs. Now after many dollars spent and much time invested, not to mention aggravation, these covers are going to comply? I am all for it but sure could have been better for my customers and myself. The shape of these covers always did make sense for reducing suction hazard.

From:Murphy, Ericka [EMurphy@stlouisco.com]Sent:Monday, July 20, 2009 4:55 PMTo:CPSC-OSSubject:Unblockable Drain GuidanceAttachments:Ericka Murphy.vcf

I disagree with the Staff interpretation. There are 2 layers of entrapment protection required on each commercial pool. The first layer is an ANSI compliant outlet that reduces the risk of all entrapment categories. The outlet consists of the cover/grate, sump, and outlet pipe. The second layer of protection is a means of eliminating the increasing suction pressure when someone is attached to the cover. These second methods include dual or multi drain systems, safety vacuum release systems, engineered vent pipes, gravity drainage, and oversized, unblockable outlets (cover/grate, sump, and outlet pipe).

It is unacceptable to allow only part of the first layer of entrapment protection, an unblockable cover, to be installed when the rest of the outlet is not ANSI compliant. To not have the second layer of protection on a single outlet because the first layer is installed is completely subverting Congress' intention for safe swimming pools.

I am the engineer responsible for enforcement of entrapment and suction entrapment compliance for commercial swimming pools in St. Louis County, Missouri. The St. Louis County Health Department permits approximately 1100 commercial pools. We are in the process of assessing and verifying compliance with a local ordinance modeled after the Federal Act language. The Department measures each outlet pipe and sump for ANSI compliance, observes the cover is VGB 2008 compliant and is installed correctly, and then inspectors verify the flow rates are below the cover maximum when the pool is operational. We are verifying sumps, pipes and covers when they are empty of water and utilizing the "diver" method on pools that contain water.

Please contact me via email or at the phone number listed below for any additional information.

Ericka Murphy St. Louis County Health Department Project Manager

314-615-8959 Work emurphy@stlouisco.com

111 S. Meramec 2nd Floor Clayton, MO 63105

From:	Holm, Diane [DHolm@leegov.com]
Sent:	Tuesday, July 21, 2009 4:21 PM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

While I find your definitions scientifically accurate, as a water safety educator of the general public, I find them difficult to understand and maneuver. Please consider creating a lay person's interpretation of the Unblockable Drain Guidance for the public pool owner/operator in simple common language, and suggestions for the home pool owner as well. One doesn't have to be well educated to own a pool; perhaps safety instructions should be written in the news standard of an 8th grade education or below.

Thank you for creating a guidance tool.

Diane Holm Public Information Officer, Lee Cnty. Public Safety PO Box 398 Fort Myers, FL 33902-0398 Phone (239)533-3939 Fax (239)485-2605 Cell (239)357-3540 From: Sent: To: Subject: Jillson, Steve [Steve.Jillson@nebraska.gov] Thursday, July 23, 2009 9:52 AM CPSC-OS Unblockable Drain Guidance

Dear Sir/Madam:

It is the opinion of the State of Nebraska that if a pool/spa installs an "unblockable drain cover" that meets the requirements of ANSI/ASME A112.19.8 and measures in excess of 18" by 23" or has a diagonal measurement greater than 29" the intent of the Virginia Graeme Baker Pool and Spa Safety Act is met regardless the size of the original drain cover or sump provided that the unblockable drain cover remains attached. A pool or spa that installs an "unblockable" drain cover does not need to install a second anti-entrapment device. However, the State of Nebraska would request that the manufacturer or a design professional evaluate the installation to make sure the flow rates are properly controlled.

15

Thank you for the opportunity to review and comment on this issue and we hope a resolution on this issue will be forthcoming.

Steve

Steve Jillson Environmental Engineer II Department of Health and Human Services Division of Public Health P.O. Box 95026, Lincoln, NE 68509-5007 (402) 471-6448 fax: (402) 471-6436 email: <u>steve.jillson@nebraska.gov</u>

From: Sent: To: Subject: Roseann Aeschlimanj [blastfactory@comcast.net] Wednesday, July 22, 2009 8:29 PM CPSC-OS Anti-entrapment drain act

Although we support drain covers to help prevent entrapment and injuries, the additional changes mandated for singledrain pools will put us out of business. In older pools, like ours, this change will cost over \$20,000. Neighborhood pools are very difficult to manage financially and I believe this change is so costly it will not only affect small pools, but many city pools and recreation centers. With today's economy we all struggle to keep our head "above water" financially every season – this will be our demise.

Roseann and Robert Aeschliman Sycamore Sports Pool Kokomo, Indiana

From:	Ric Patterson [RicP@ci.issaquah.wa.us]
Sent:	Monday, July 27, 2009 11:15 AM
То:	CPSC-OS
Subject:	"Unblockable Drain Guidance"

To: Office of the Secretary U.S. Consumer Products Safety Commission

I would like to see something in the final guidance that states gravity Drainage Systems with multiple drains not less than 11"x11" need only to install compliant drain covers to be in compliance with VGB act.

17

Thank you,

Ric Patterson Facilities Maintenance Supervisor City of Issaquah 425-837-3375

From:	Nate Loeffelholz [nloeffel@mba-architects.com]
Sent:	Monday, July 27, 2009 10:42 AM
To:	CPSC-OS
Subject:	Unblockable Drain Guidance
Subject:	Unblockable Drain Guidance

To whom this may concern,

Our firm has be assisting pool owners in becoming compliant using the safest most economical solution that is unique to their particular drain system. It is my belief that unblockable covers, such as the Neptune Benson 30"x30" cover, is a safe affordable option for pool owners. This is something that is safe, cheaper than cutting concrete, and typically can be installed very quickly reducing down time and labor cost. If the cover is installed per the manufactures installation instructions the drain is safe. If the grate is cracked, broken or missing, It needs to be the responsibility of the pool owner to check daily the integrity of the cover and make the replacement when necessary. If you would like a suggestion, I believe in Minnesota there needs to be a daily written log of someone checking the pool grate to make sure it's ok. To me there is no difference if you have a 18"x36" Lawson cover over a figure 2 sump that say is cracked or broken and a kid sticks his hand through the missing grate and gets it stuck in the pipe. The original cover was safe, became unsafe, and should have been replaced. So it is not the cover or the cover & sump but the negligence of the pool owner to get it replaced. I have young kids and safety is my top concern and that is what the cspc's decision needs to be based on. Please also keep in mind that these covers, if tested and installed correctly, are a safe and affordable option for pool owners.

. Thanks,

nate loeffelholz Project Coordinator MBA Architects 3823 Creekside Ln. Holmen, WI 54636 Phone: (608) 785-2760 Fax: (608) 785-2750 Nate@mba-architects.com http://www.mba-architects.com/

From: Sent: To: Subject: George Pellington [george@vac-alert.com] Tuesday, July 28, 2009 5:53 PM CPSC-OS Unblockable Drain Guidance

July 28, 2009

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway, Suite 502 Bethesda, MD 20814-4408

Re: Unblockable Drain Guidance

The Virginia Graeme Baker Pool and Spa Safety Act does not provide a clear definition as to what constitutes an unblockable drain. The Act does make clear that the intent of the legislation is to provide layers of protection against suction entrapment. The VGB Act was written to protect bathers, especially children who are most vulnerable, from the life threatening suction forces created by a circulation pump. These suction forces are most problematic when a suction outlet or drain cover is missing or broken.

Given the intent to provide layers of protection against suction entrapment, it is not plausible to conclude that the Act intended to equate a single unblockable drain cover with a single unblockable drain. Should the unblockable drain cover become missing or broken, the sump underneath the cover must also be an unblockable sump. If not, and the sump underneath poses an entrapment threat, there must be an additional layer of bather protection.

It is my conclusion that the VGB Act and its interpretation should err on the side of safety. A single unblockable drain cover should not be permitted to classify a blockable single drain sump as an unblockable drain. The term unblockable drain in the Act should be interpreted to mean the combination of the cover and the sump, and both must be unblockable.

Thank you for this opportunity to provide guidance on this important safety issue. Please feel free to contact me if you need any further input or clarification regarding the above statements.

Best regards,

George S. Pellington, P.E. Vice President Vac-Alert Industries, LLC Office: 772-978-0000 Cell: 561-346-2271

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From:Werblow, Thomas C. [WerblowTC@ci.north-platte.ne.us]Sent:Wednesday, July 29, 2009 12:12 PMTo:CPSC-OSSubject:"Unblockable Drain Guidance"Attachments:ole0.bmp

It is the opinion of the City of North Platte, Nebraska that if a pool/spa installs an "unblockable drain cover" that meets the requirements of ANSI/ASME A112.19.8 and measures in excess of 18" by 23" or has a diagonal measurement greater than 29" the intent of the Virginia Graeme Baker Pool and Spa Safety Act is met regardless the size of the original drain cover or sump provided that the unblockable drain cover remains attached. A pool or spa that installs an "unblockable" drain cover should not need to install a second anti-entrapment device.

فليتكم

Thank you for the opportunity to review and comment on this issue and we hope a resolution on this issue will be forthcoming.

Sincerely,

Thomas C. Werblow, City Engineer City of North Platte, Nebraska

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From:	mike westelaken [m_westelaken@hotmail.com]
Sent:	Thursday, July 30, 2009 10:55 PM
То:	CPSC-OS
Subject:	"Unblockable Drain Guidance"

The publication is very good, however I feel that is does not go far enough. As a CPO I feel that the publication should state clearly in no uncertain terms that as part of the daily openning routine either the CPO or the lifeguards must show a daily record of checking the unblockable drain for cracks and/or damage and if either is detected the pool is not permitted to open until the condition is corrected. I realize this means that someone, probably a lifeguard will have to dive down to the bottom and inspect the drain daily. The other stipulation should be that who ever does the visual inspection must be the person signing the daily log for the inspection. It should also be made very clear to the people doing the inspecting that this does imply liability for this person should an accident occur and it is blatantly obvious that the damage is old and should have been noticed. This might help insure that people don't cut corners and sign the log without actually doing the inspection, or pools taking chances with faulty drains until routine maintenance programs correct issues.

Thank you for seeking my input Mike Westelaken

Stay on top of things, check email from other accounts! Check it out.

From: Sent: To: LESLIE MILAM [bill-lesliemilam@msn.com] Thursday, July 30, 2009 8:33 PM CPSC-OS

this forced regulation, and oversight by the federal government is shameful. the business I work for complied, at great expense, because of Virginia's unfortunate accident. certainly no one needs die through severe negligence. there were already laws to attack those businesses and operators who choose to run facilities such as those. since installation, not one instance can be found that our pools and facilities were checked for compliance. is it the feds, is it the states, is it the county, is it the city? a few voices with money behind them, now decide for the majority. they are indignant with the thought of personal responsibility. Here's one CPO, that finds this matter a mockery of people's rights and personal responsibility. I am sure, however, that the manufacturer of the drain covers with their nice logo stamped on the product is happy with the system. Don't you think the next step should be mandatory lifeguards, or perhaps a "swim M.D."? Bill Milam

From:Judy Barkley [jbarkley1@centurytel.net]Sent:Thursday, July 30, 2009 4:42 PMTo:CPSC-OSSubject:unblockable drain covers

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The Salmon City pool did all of the work we needed to do to meet the compliance requirements. To do so cost the city about \$10,000. Making requirements with no financial assistance puts struggling communities in a budget mess.

From: Sent: To: Subject: Riitta Kulinski [riitta@photobyrk.com] Thursday, July 30, 2009 4:19 PM CPSC-OS Unblockable Drain Guidance

Dear Secretary,

•

Upon reading the Unblockable Drain Guidance technical draft, I have only one concern. What is the possibility that two or more presons of significant size could use their bodies to completely cover the drain, thus creating a vacuum? It would more than likely require the parties to premeditate the attempt, but if it can be done, it should be considered as a possibility.

2 1

Thanks,

Riitta Kulinski, CPO, LGI Pool Director Milwaukee Country Club

From:	Maitoza. Colleen [Maitozac@saccounty.net]
Sent:	Thursday, July 30, 2009 4:33 PM
To:	CPSC-OS
Cc:	Tracynda Davis
Subject:	Unblockable Drain Guidance

The guidance document seems a little puzzling. When it says, "...a drain coupled with a drain cover..." do you really mean "...a sump coupled with a drain cover..."? I think of the drain as being the actual pipe not the sump. No one would build a pipe to meet the unblockable definition so even if the sump was unblockable the pipe would still be smaller. There does not appear to be a requirement in the ASME/ANSI standard for the sump to be unblockable only the reference to the unblockable cover. Also, is the document saying that unblockable drains with smaller sumps need a second anti-entrapment system in case the cover is missing or broken? It seems to be alluding to this but really any cover that is broken or removed would be out of compliance, even in a multiple drain situation. The guidance document should be written so it is clear what is supposed to be enforced, this I'm afraid has made it more confusing.

Colleen Maitoza Supervising Environmental Specialist 10590 Armstrong Ave., Ste. B Mather, CA 95655 916-875-8512

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If you are not the intended recipient, please contact the sender immediately and permanently delete the original and any copies of this email and any attachments thereto.

From:Ahoy Pools [ahoypSent:Thursday, July 30,To:CPSC-OSSubject:"Unblockable Drain

Ahoy Pools [ahoypools@sbcglobal.net] Thursday, July 30, 2009 3:47 PM CPSC-OS "Unblockable Drain Guidance"

To whom it may concern:

I am a pool service tech in So. California with a CPO and a C-61/D-35 contractor's license. I completely agree with the interpretation of the definition of an" unblockable drain" written by CPSC staff.

My comment is on the VGB law itself where it says "In addition, if the pool has a single main drain (other than an unblockable drain),the operator must either disable the drain or install...etc". This line has caused some confusion among pool operators in California because public pools here are required to have a main drain(s) by code. In other words, disabling the main drain is not an option here.

1

Thank you for reading my comment,

David Talbot AHOY POOL Service 2506 Via Rojo Carlsbad, Ca. 92010 · /
From:rflores@hidroklear.comSent:Thursday, July 30, 2009 3:23 PMTo:CPSC-OSSubject:"Unblockable Drain Guidance"

High

Importance:

I would put design samples so people can view and realize some of the choices they have, level of comprehension are different with each individual, also if you need assistance with translating the final draft in Spanish, I will be more than happy to assist you.

I do CPO training in Spanish and I know this will be a great benefit on your quest to inform, by also reaching the Hispanic operators.

Roberto A. Flores Orozco Mexico: oficina (664)684 9776 (664)634 1464 Mobil Nextel (664)261 0509 Nextel Id 152*154252*1 Estados Unidos: (619)

From:	rflores@hidroklear.com	
Sent:	Thursday, July 30, 2009 3:14 PM	
To:	CPSC-OS	
Subject:	"Unblockable Drain Guidance"	

Are you going to have the unblockable drain (VGB) information in spanish?

From: Sent: To:	rflores@hidroklear.com Thursday, July 30, 2009 3:14 PM CPSC-OS
Subject:	[Possibly Spam]: Are you going to have
Importance:	Low

Importance:

the unblockable drain (VGB) information in spanish?

From: Sent: To: Subject: sabrina taylor [sbagrooven@gmail.com] Thursday, July 30, 2009 2:43 PM CPSC-OS pool drains feedback

I just wanted to voice that this is a good rule for shallow pools, hot tubs ect. Drains 10 feet down and more this is a silly rule that is closing pools and unnecessarily impacting tax payers and other community pools. More time on allowing pools to update, and states to update their state laws, as well as raise money for the costly project.

-28

Thanks,

Sabrina Taylor

From:	Jack D. Osman [josman@zoominternet.net]	
Sent:	Thursday, July 30, 2009 2:30 PM	
То:	CPSC-OS	
Subject:	Unblockable Drain	

Our pool is in full compliance with the law.

I have noticed that automatic vacuum systems become stuck on the compliant drain covers.

With Certified Pool Operators running the pool and Red Cross (or other) certified lifeguards, most of these problems the lead to the VGBA being passed, could have/would have never happened. As I understand the situation, the child drowned in a private home-based pool – without properly certified pool operators or guards... and a non-attentive adult supervisor. Since homes with pools are not required to abide by the VGBA, or have guards or certified pool operators -- it is likely that accidental drownings, unfortunately, will continue to occur.

Education, education, and education; focus, focus, focus; training, training, training of parents/families with pools is the only thing that I know of that might help minimize these heart-wrenching accidents.

Jack D. Osman, Ph.D. *The Wellness Farm Pool, Inc.* 19310 Dutton Road Stewartstown, PA 17363 717-993-3081 josman@zoominternet.net Integrity is an uncompromising adherence to moral and ethical principles -- a solidness of spiritual character -- even when no one is watching.

From:	Brad Hixenbaugh [bradhix1@comcast.net]
Sent:	Thursday, July 30, 2009 2:03 PM
To:	CPSC-OS
Cc:	'Laura Halter'
Subject:	Unblockable Drain Guidance

To: Office of the Secretary U.S. Consumer Product Safety Commission

The "unblockable" drain needs to be defined and considered when the Virginia Graeme Baker Act is being applied.

This Act is causing water facilities to spend thousands of dollars unnecessarily when the have existing "unblockable drains". In our own facility we have two main drains (in series) that measure 24"x24". Both are at the bottom of our 12' deep diving section. It would be virtually impossible to block either of these drains, let alone both of them at the same time. The estimated cost to bring these drains into compliance with the VGB Act is approximately \$15,000.00. We are a non-profit organization and this is a tremendous cost to comply with a government regulation that should not even apply in our case. The inclusion of a section in the Act that would allow "unblockable drains" to be exempt from complying would resolve this situation.

I firmly agree with the VGB Act as it applies to drains that are a danger to entrapment and drowning, but it should not be applied to "unblockable" drains.

respectfully,

Marvin B Hixenbaugh Edgebrook Swim & Tennis Club Executive Director 2,1

From:	Jim Bennett [JBennett@ljbtc.com]
Sent:	Thursday, July 30, 2009 1:29 PM
То:	CPSC-OS
Subject:	unblockable drain covers

We have a spa where a drain cover of that size will not fit. I believe the current guidelines are sufficient. A large drain of that size will not fit in all of the bodies of water.

Jim Bennett

Chief Engineer La Jolla Beach and Tennis Club, Inc. p 858-551-4632 f 858-551-4686 Mechanical Engineer Certified Engineering Operations Executive Certified Pool and Spa Operator EPA 608 Certified Refrigerant

From:Kim BieSent:Friday,To:CPSC-0Subject:unblock

Kim Bierwert [KBIERWER@smith.edu] Friday, July 31, 2009 10:56 AM CPSC-OS unblockable drain guidance

As one of many operators who have dealt with the VGB compliance at several pools, I welcome this interpretation of the unblockable drain especially for installations at grater then 5 feet of depth. The law's intent was to create a reasonably safe and a secure swimming.spa environment. The unblockable drain of this defined size would be very difficult to block, especially when installed at depths of greater than 5 feet. At such depths it would almost take an intentional act to block this size drain. One cannot legislate or interpret for 100% of eventualities and I believe that this interpretation is very reasonable and safe.

Kim Bierwert



Underwriters Laboratories

7/31/2009

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway, Suite 502 Bethesda, MD 20814-4408

RE: Technical Guidance on Unblockable Drains

To Whom It May Concern:

The July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains defines an Unblockable Drain as (1) meets ANSI/ASME A112.19.8 and (2) has dimensions in excess of 18" x 23" or has a diagonal measurement greater than 29."

UL believes the second part of the definition requires clarification as "in excess of" and "greater than" are not defined. Under the proposed definition, a cover having dimensions only a fraction of an inch larger than 18 x 23 or having a diagonal dimension a fraction of an inch larger than 29 inches would be considered unblockable.

With the high flow rates anticipated for covers of this size, a cover of such dimensions might not pass the Body Entrapment Test from ASME A112.19.8-2007.

For a suction fitting to be considered unblockable it should meet three criteria: (1) meet the requirements of ANSI/ASME A112.19.8-2007; (2) have dimensions in excess of 18"x 23" or have a diagonal measurement greater than 29"; and (3) pass the Body Entrapment Test from ANSI/ASME A112.19.8-2007

Units that met this criteria would then allowed to be marked "Unblockable." Since such a marking would only be referenced during installation and initial inspection, this marking would not need to be on the cover or grate. It could be allowed to be on the packaging of the cover or grate.

Very truly yours,

Harry L. Siggins

Gary Siggins Principal Engineer – Swimming Pool, Spa and Whirlpool Bath Equipment Underwriters Laboratories Inc. 455. East Trimble Road San Jose, CA 95131-1230 Tel: 408-754-6594 Fax: 408-689-6594 Email: Gary.L.Siggins@us.ul.com

Lauren.Starck@us.ul.com From: Sent: CPSC-OS To: Subject: Attachments:

Friday, July 31, 2009 3:38 PM Unblockable Drain Guidance Unblockable Drain Guidance.doc

Hello,

Attached are Underwriters Laboratories' comments on CPSC's Technical Guidance on Unblockable Drains.

Regards,

Lauren Starck, Policy Analyst Underwriters Laboratories, Inc. 1850 M Street NW, Suite 1000 Washington, DC 20036 lauren.starck@us.ul.com P: 202.530.6164 // M: 202.669.6397 // F: 919.316.5729 - For more information about UL, its Marks, and its services for EMC, quality registrations and product certifications for global markets, please access our web sites at http://www.ul.com and http://www.ulc.ca or contact your local sales representative. --

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From:	Daryl Matzke [dmatzke@ramaker.com]
Sent:	Saturday, August 01, 2009 2:04 AM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

To: CPSC Office of the Secretary: From: Daryl Matzke, P.E. Ramaker & Associates Date: August 1, 2009 Re: Public Comment Submittal for Unblockable Drain Guidance

Thank you for the opportunity to comment on the CPSC Draft Technical Guidance for Unblockable Drains. Working closely with the State of Wisconsin Department of Commerce, Ramaker & Associates has had the opportunity to address VGBA compliance for hundreds of pools. One of the surprising aspects of this endeavor has been the variations in pool types, designs and construction methods encountered. It has become very apparent that flexibility is required to achieve VGBA compliance in a cost effective manner. Though there is not a one size fits all solution, we have found that installation of an unblockable drain grate/cover to be a very accommodating solution that appears to fully meet the intent of VGBA.

The effectiveness of the unblockable drain is especially evident when compared to alternate approvable antientrapment devices or systems including SVRS's, suction limiting vent systems or automatic pump shut-off systems. These systems are not inherently safe and as readily acknowledged do not offer protection against hair entanglement or evisceration. When I look back at the evolution of VGBA, I struggle to understand the justification for acceptance of mechanical devices for VGBA compliance.

Because of my fundamental apprehensions regarding the use of these alternate systems, I was shocked when someone pointed out to me that one could conclude the following from the second paragraph of the draft technical guideline – "unblockable drains may not be considered compliant because they lack a second anti-entrapment system". I truly hope that the intent of the paragraph was not this conclusion.

The last sentence of this of this paragraph seems to be stating the obvious – "If the drain cover is removed or broken,, the pool and spa would be out of compliance." If a pool owner cannot maintain a cover, should one expect them to properly maintain secondary anti-entrapment systems? I would hope that through licensing, inspection and education, we could become comfortable with the idea that pool owner's must take responsibility for the fundamental elements for safe operation. If we are not comfortable with this, should we consider a requiring the installation of three or four multiple anti-entrapment systems? At what point is it appropriate for us to recognize and accept a certain level of risk? Upon filling a pool with water, we are accepting risks. Requiring a secondary anti-entrapment system for something that is already considered unblockable seems to go beyond reasonable expectations.

Upon review of the following text from the VGB Act, it is readily apparent that single drains other than unblockable drains were required to have secondary systems.

(c) PUBLIC POOLS.-

- (1) REQUIRED EQUIPMENT.-
- (A) IN GENERAL.-Beginning 1 year after the date of enactment of this title-

(i) each public pool and spa in the United States shall be equipped with anti-entrapment devices or systems that comply with the ASME/ANSI A112.19.8 performance standard, or any successor standard; and

(ii) each public pool and spa in the United States with a single main drain other than an unblockable drain

shall be equipped, at a minimum, with 1 or more of the following devices or systems designed to prevent entrapment by pool or spa drains that meets the requirements of subparagraph (B):

One of my cohorts in the swimming pool industry offered the following conclusion regarding VGBA compliance with the installation of an unblockable drain: If the cover is unblockable, it is compliant - END OF STORY. If the cover is broken, it is not compliant - END OF STORY. When broken, it does not matter if the cover is unblockable or not – it is not compliant. I fully support this conclusion.

I hope that upon finalization of the Technical Guidance for Unblockable Drains that these thoughts have been given consideration.

Respectfully yours,

Daryl Matzke, P.E. | Senior Project Manager Ramaker & Associates, Inc. | 1120 Dallas Street, Sauk City, WI 53583 Office: 608-643-4100 | Fax: 608-643-7999 dmatzke@ramaker.com www.ramaker.com www.buildawaterpark.com

From:tedjokes@earthlink.netSent:Sunday, August 02, 2009 2:44 PMTo:CPSC-OSSubject:"Unblockable Drain Guidance"

I believe that the standard has been `over engineered' as it requires `approved' covers on Gravity Drain filter systems.

7 .

By their nature, it is impossible to have an injury resulting from blocking a Gravity Drain as there is no suction.

Theodore F. Glaser Vice President, Board of Directors Our Club Health and Fitness, Inc. Indian Harbour Beach, FL

From: Sent: To: Subject: Saundra Escuder [aqualerose@yahoo.com] Sunday, August 02, 2009 1:05 AM CPSC-OS "Unblockable Drain Guidance"

This is a very important issue. You Guys are doing a great job. Whatever A Public pool or Spa or even private pools should have to meet these standards. I'm for this! Keep up the good work.

Saundra Escuder

"If Not Now! When? www.scienceofgettingrich.net/gifts/from_god.html

Saundra

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From:	Mark [markleo123@shaw.ca]
Sent:	Sunday, August 02, 2009 3:35 PM
То:	CPSC-OS
Subject:	anti-entrapment drain covers

I believe that this is a great idea on top of the cover you might wanna consider adding a second anti-entrapment device as a mandatory measure to help stop entrapment and eviscerations. I would also like to know what your opinion is able making this law applicable in Canada..

From:
Sent:
To:
Subject:

Tony Milford [tmmilford@dhr.state.ga.us] Monday, August 03, 2009 8:56 AM CPSC-OS vgba comments

I am a health inspector for Richmond County in Augusta, GA. I have been confused about the reason for the law and most of my clients are also. Our state laws already addressed single main drain entrapment hazards on public pools which we were already enforcing. The accident that inspired this bill happened in a private spa that of course would not be inspected by a government agency. The greater danger logically would seem to be in a backyard pool or spa that does not have to meet any standards for safety.

It seems that the bill places an extra monetary burden on businesses that already had to comply with having the correct anti-vortex cover without the benefit of any real extra entrapment protection. Do the added layers of protection or safety vacuum release systems really work in a real life situation?

From: Sent: To: Subject: Attachments: Wolfson, Scott Monday, August 03, 2009 11:51 AM CPSC-OS Unblockable drain cover comment 090729 NSF Comments on CPSC Unblockable Interpretation.pdf

From: Martin, Rich [mailto:Martin@nsf.org]
Sent: Wednesday, July 29, 2009 11:17 AM
To: Wolfson, Scott; Whitfield, Troy
Subject: Troy and Scott, I have a couple things to discuss, I will call later, topics are below

- 1) Our *draft* comments on the CPSC draft interpretation defining Unblockable Drain topic
 - a. Before sending this into the OS of CPSC, I wanted to get your thoughts on a few items
 - b. NSF staff reviewed and I compiled the comments in the attached PDF,
 - c. If you don't have the ability to open the PDF, let me know and I will fax it.
- 2) Reference to NSFs web-site is incorrect on CPSCs site www.poolsafety.gov
 - a. It currently shows a trade association website (APSP), which is not NSF International
 - b. The correct reference should be <u>http://www.nsf.org/info/pools</u>

C Pool/S	oa Safety and Drowning Prevention: Pool and Spa Safety: L	inks to Other Pool/Spa Safety an - Windows Inte
CO	 Ittp://www.poolsafety.gov/resources/links.html 	650 ,
\$	Pool/Spa Safety and Drowning Prevention: Pool and S	∆ • 6
	Third Party Testing	g Labs and Certifying Organizati
	IAPMO (International www.iapmo.org/Page	Association of Plumbing and Mechanical Offic
	NSF International: <u>wa</u>	ww.apsp.org
	Underwriters Laborat	tories: <u>www.ul.com/global/eng/pages</u>
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- 3) Reference to makers of products on the CPSC site
 - a. Some of the referenced products have not been evaluated/tested as compliant such as large sizes for Lawson
 - b. Some of the products do not comply with the ASME A112.19.8 std.
 - c. It would be good to reference the web-site search engines of the accredited test labs so user/installers can confirm the products really do comply with the ASME A112.19.8 Std. Consider adding the following sentence.
 - i. "Search these websites for covers that have been tested/certified to ASME A112.19.8 requirements"
 1. NSF International http://www.nsf.org/Certified/Pools/
 - 2. Research & Testing, IAPMO http://pld.iapmo.org
 - 3. Underwriters Laboratory <u>http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.html</u>

1



Sincerely,

Richard A. Martin

NSF International

Business Manager, Recreational Water Program

789 Dixboro Road, Ann Arbor, MI. 48105 U.S.A.

Office Phone (+1) 734-769-5346

Office FAX (+1) 734-827-7175

WEB http://www.nsf.org/info/pools

Live Safer, Swim Safer

Virginia Graeme Baker Pool and Spa Safety Act

July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains¹

The Virginia Graeme Baker Pool and Spa Safety Act, (Pub. L. 110-140, 121 Stat. 1795), is designed to prevent drain entrapments and eviscerations in pools and spas. The law became effective on December 19, 2008. The law requires that public pools and spas have drain covers that meet the ASME/ANSI A112.19.8 standard-on every drain/grate. In addition, if the pool has a single main drain (other than an unblockable drain), the operator must either disable the drain or install a second anti-entrapment device or system. This can take the form of an automatic shut-off system, gravity drainage system, Safety Vacuum Release System, or suction-limiting vent system.

Section 1403(7) of the law defines an "unblockable drain" as "a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard." The Consumer Product Safety Commission staff ("CPSC staff" or "staff") has interpreted this definition to include a drain coupled with a drain cover of specific dimensions (an "unblockable drain cover") that meets the requirements specified in ASME/ANSI A112.19.8. In addition, the drain cover must measure in excess of 18" x 23" or have a diagonal measurement greater than 29". Staff has determined that when a drain cover with these specifications is in place, a human body cannot sufficiently block it to create a suction entrapment hazard. In this instance, the drain is an unblockable drain provided that the unblockable drain cover remains attached. If the drain cover is removed or broken, the drain is no longer an "unblockable drain" and the pool or spa would thus be out of compliance, both because it lacks an ASME/ANSI A112.19.8 compliant drain cover and because it lacks a second anti-entrapment system_A

Staff is seeking public comments on this guidance. Comments must be received by August 5, 2009.

Please mark your comments "Unblockable Drain Guidance" and send them to the Office of the Secretary at <u>cpsc-os@cpsc.gov</u> or if you are unable to submit comments by e-mail, you may submit written comments to:

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway Suite 502

¹ These comments are those of CPSC staff, have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

Bethesda, MD 20814-4408

Comments must be received by the date noted above. CPSC staff will assess comments that are received and take account of such comments when finalizing the guidance and making a recommendation to the Commission to take final action. Please note that you will not receive a direct response to your comments.

Virginia Graeme Baker Pool and Spa Safety Act

July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains¹

The Virginia Graeme Baker Pool and Spa Safety Act, (Pub. L. 110-140, 121 Stat. 1795), is designed to prevent drain entrapments and eviscerations in pools and spas. The law became effective on December 19, 2008. The law requires that public pools and spas have drain covers that meet the ASME/ANSI A112.19.8 standard on every drain/grate. In addition, if the pool has a single main drain (other than an unblockable drain), the operator must either disable the drain or install a second anti-entrapment device or system. This can take the form of an automatic shut-off system, gravity drainage system, Safety Vacuum Release System, or suction-limiting vent system.

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1529-0001.pdf

Dear Office of the Secretary <u>cpsc-os@cpsc.gov</u> U.S. Consumer Product Safety Commission 4330 East West Highway Suite 502 Bethesda, MD. 20814-4408

Thanks for alerting NSF International of your efforts to define "unblockable drain". I have submitted comments on behalf of NSF Staff in the attachments (one as a scan the other active pdf)

I hope these comments are helpful to you in your efforts to better inform the recreational water industry about compliance with the VGBP&SSA. It's important to independently evaluate, test, and certify to the full set of requirements in the ASME standard to ensure public health protection.

Please contact me if you have any questions about product evaluation, testing, etc. related to the ASME A112.19.8-2007 or a-2008 addendum. NSF also tests and certifies other consumer products for the pool & spa industry and we are happy to answer questions should you have any.

Below is a link to the NSF Official Listings where you can quickly and easily determine which products have been tested by NSF International as fully complying with ASME A112.19.8-2007/a-2008.

http://www.nsf.org/Certified/Pools/Listings.asp?TradeName=&ProductType=ASME1908&PlantState=&PlantCountry=&PlantRegion =&submit1=SEARCH

Below is a link to the Search Engine of NSF International Tested, Audited, Certified Pool and Spa products.

http://www.nsf.org/Certified/Pools/

Please contact me if you need other information.

Sincerely,

Richard A. Martin

NSF International

Business Manager, Recreational Water Program

789 Dixboro Road, Ann Arbor, MI. 48105 U.S.A.

Office Phone (+1) 734-769-5346

Office FAX (+1) 734-827-7175

WEB http://www.nsf.org/info/pools

Live Safer, Swim Safer

Virginia Graeme Baker Pool and Spa Safety Act

July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains¹

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Summary of Comments on CPSC Staff Draft Technical Guidance on Unblockable Drains July 2009

	Page: 1
	Author: Martin
	Subject: Note Date: 7/29/2009 9:44:42 AM
	making in a SME/ANSI A112.19.8 Insert -2007 or any successor standard". This language is consistent with the VGBP&SSA and
	¹ / ² the June 16, 2009 explanatory memo from CPSC. It helps prevent confusion about old products being accepted or old versions the standard.
	Author: Martin
	Subject Cross-Out
	Date: 7/29/2009 9:42:20 AM
	TRamove the words "standard on" and insert "for"
	Author: Marlin
	Subject: Note
	Dele; 7/29/2009 9:43:31 AM Combinent the word "all" before the word "the" It is important that products fully comply with the ASME standard. This will help preven
	is more the word all before the word the in its important that produces fully comply with the ASME standard. This will reppreven incompletely evaluated products from being installed and creating risk for swimmers.
	Author: Martin
	Subject: Note
	Date: 7/29/2009 9:44:28 AM
	(m)After the ASNE/ANSI A112.19.8 insert ~2007 or any successor standard". This language is consistent with the VGBP&SSA en "the June 16, 2009 explanatory memo from CPSC. It helps prevent confusion about old products being accepted or old versions fits elandard.
\searrow	Author: Martin
	Subject; Highlight
	Dete: 7/29/2009 9:54:13 AM
	Steff at NSF were a bit surprised at the inclusion of this sentence. If it is to be included in the interpretation, the following two not
	would help to substantiate the assertion,
	Author: Marlin
	Subject Note
	Date: 7/29/2009 9:54:31 AM
	The algert fest fully termined to the latest worker opening to
	Author: Martin
	Subject Note
	Date: 7/29/2009 9:54:48 AM
	Author, Martin
	Subject inserted Text
	Date: 7/29/2009 9:55:16 AM The VGBP&SSA refers to the current alanderd or successor stendard. Until such time as a new standard is
	A reserve tendences that votor-soon returns to the current interpret of successor stendard. Unit such me als mer standard is Available with such a definition, CPSC will utilize the definition and interpretation herein. A successor standard is currently being developed under APSP/APMC-16, hits graft standard contains a definition for "unblockable drain".

Comments from page 1 continued on next page

Summary of Comments on CPSC Staff Draft Technical Guidance on Unblockable Drains July 2009

Page: 1

Sequence number: 1
Author: Martin
Subject: Note
Date: 7/29/2009 9:44:42 AM
After the ASME/ANSI A112.19.8 Insert "-2007 or any successor standard". This language is consistent with the VGBP&SSA and
the June 16, 2009 explanatory memo from CPSC. It helps prevent confusion about old products being accepted or old versions of
the standard.
Sequence number: 2
Author: Martin
Subject: Cross-Out
Date: 7/29/2009 9:42:20 AM
TRemove the words "standard on" and insert "for"
Sequence number: 3
Author: Martin
Subject: Note Date: 7/29/2009 9:43:31 AM
insert the word "all" before the word "the" It is important that products fully comply with the ASME standard. This will help prevent
Incompletely evaluated products from being installed and creating risk for swimmers.
Sequence number: 4
Author: Martin
Subject: Note
•
Date: 7/29/2009 9:44:28 AM
After the ASME/ANSI A112.19.8 Insert "-2007 or any successor standard". This language is consistent with the VGBP&SSA and
the June 16, 2009 explanatory memo from CPSC. It helps prevent confusion about old products being accepted or old versions of
the standard.
Sequence number: 5
Author: Martin
Subject: Highlight
Date: 7/29/2009 9:54:13 AM
T Staff at NSF were a bit surprised at the inclusion of this sentence. If it is to be included in the interpretation, the following two notes
would help to substantiate the assertion.
Sequence number: 6
Author: Martin
Subject: Note
Date: 7/29/2009 9:54:31 AM
insert text "fully certified to the latest ASME Standard"

Sequence number: 7 Author: Martin Subject: Note Date: 7/29/2009 9:54:48 AM

Comments from page 1 continued on next page

insert text "provided the cover is properly installed and the water is flowing at less than or equal to the certified flow rate."

Sequence number: 8 Author: Martin Subject: Inserted Text Date: 7/29/2009 9:55:16 AM

Insert sentences "The VGBP&SSA refers to the current standard or successor standard. Until such time as a new standard is available with such a definition, CPSC will utilize the definition and interpretation herein. A successor standard is currently being developed under APSP/IAPMO-16, this draft standard contains a definition for "unblockable drain"."

From:	Scott Heusser [workemailaddress@aol.com]
Sent:	Monday, August 03, 2009 11:37 AM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

To Whom It May Concern,

Thank you for your diligent efforts in helping create a safer experience for millions of bathers every year.

In the July CPSC Staff Draft Technical Guidance on Unblockable Drains it reads, "If the drain cover is removed or broken, the drain is no longer an 'unblockable drain' and the pool or spa would thus be out of compliance, both because it lacks an ASME/ANSI A112.19.8 compliant cover and because it lacks a second anti-entrapment system".

- This scenario hold true of EVERY drain that is installed in a pool or spa regardless of a secondary layer of protection. The removal of the grate is the key factor of non-compliance as described above.
- Currently accepted secondary layers of protection offer little or no protection from the other forms of entrapment such as hair entrapment, limb entrapment, mechanical entrapment or evisceration. In the scenario described above, the risks of at least two types of entrapment (limb and evisceration) climb significantly following the removal of a grate, regardless of the secondary layer of protection.
- If the CPSC were to require a secondary layer of protection on pools and spas that have been retrofit or built with "unblockable" drains, the owners of those pools would be unduly burdened to add an additional device or design feature which is questionable in its effectiveness in providing protection from an exposed suction point.

The ANSI/ASME A112.19.8 standard clearly addresses the issue of preventing accidental grate removal and longevity of the fastening systems. If anything, this portion of the standard should be enhanced to prevent just such a circumstance as described in the quote above.

The issue of suction entrapment is only in part an engineering issue. In numerous cases entrapments and eviscerations were the direct result of a lack of maintenance either through ignorance or apathy. Local jurisdictions should be encouraged to team with reputable pool contractors, associations and operators to develop codes which mandate training for pool operators and demonstrated competence for contractors and service companies. These codes can be based upon currently existing standards & training programs for the construction & maintenance of pools, spas and other water play features that expose bathers to the hazard of drowning via suction entrapment.

Thank you for your consideration of my comments.

Best Regards,

Scott Heusser CPO, CPOI Estimator/Project Manager Custom Pools & Patio 4048 Chinden Blvd Boise, ID 83714 Phone (208) 345-2792 ext 118 Fax (208) 345-0232 Cell (208) 869-1826 "Lead, follow or get out of the way"- Thomas Paine

NOTICE:

This e-mail message and any attachments to it may contain confidential information. The information contained in this transmission is intended solely for the use of the individual(s) or entities to which the e-mail is addressed. If you are not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that you are prohibited from reviewing, retransmitting, converting to hard copy, copying, disseminating, or otherwise using in any manner this e-mail or any attachments to it. If you have received this message in error, please notify the sender by replying to this message and delete it from your computer. Use of any attachment constitutes acceptance of responsibility for interpretation of said attachments and user waives any claims against Custom Pools, Inc. that may be connected thereto.

From:Bill Soukup [billsoukup@commercialpool.com]Sent:Monday, August 03, 2009 11:05 AMTo:CPSC-OSSubject:Unblockable coversAttachments:Stingl 3 seconds.pdf

To whom it may concern:

REF: unblockable covers should not need SVRS

See attached instructions for the Stingl SVRS. I clearly states that it can take up to 3 seconds to operate. This is way too slow to be effective.

Commercial

Bill Soukup President Commercial Pool & Spa Supplies, Inc. 1167 East Hwy 36 Maplewood, MN 55109 651-766-6666 Fax 651-765-9924 billsoukup@commercialpool.com

Use ANSI/ASME A112-19.8 approved Drain Covers

To prevent hair entrapment we STRONGLY recommend that you use Anti-Entrapment drain covers that meet ANSI/ASME A112-19.8 standards. Anti-Entrapment drain covers are only effective to a specific flow rate. To be sure you are not exceeding the flow rate stamped on the cover, please contact your pool builder or pool service professional.

Pressure

As used in this document, the term "pressure" can refer to positive pressure (above atmospheric pressure) or negative pressure (vacuum below atmospheric pressure.)

Press a button

As used in this document, the term "press a button" means to momentarily press then release the button. In cases where a button needs to be held, the instruction will indicate this directly.

INSTALLATION

SR-500 Specifications

Technical Specifications – SR-500

Response Time:	under 3 seconds from event detection
Enclosure:	NEMA 3R (Intended for outdoor use. Provides a
	degree of protection against falling rain and ice
	formation. Meets rod entry, rain, external icing,
	and rust-resistance design tests.)
Visual Alarm:	Optional
Audible Alarm:	24V AC
Operating Environment:	-40 to 140 degrees F (-40 to 60 degrees C),
	0-95% RH,
Size:	H = 9.0"; W = 5 1/2"; D =4.0-
Packaged Weight:	4 lbs.

Technical Specifications – Remote Alarm

Voltage: 24 V AC Operating Environment: Suitable for Indoor\Outdoor Size: H = 9.0"; Dia. = 3.0" Weight: 1 lbs.

Note: Specifications subject to change without notice.

PROTECT HOSE IN FREEZING CONDITIONS!!!

If the pump is operated in an area where the ambient air temperature can fall below 32°F, the hose must be protected from freezing by wrapping with heat tape.

Pre-Installation Checklist

1. All Ports (drains, skimmers, vacuum lines, etc.) MUST BE FREE OF DEBRIS PRIOR TO INSTALLATION. Clogged ports will disrupt the normal vacuum level.

- 2. Backwash or otherwise clean filter as per manufacturer specification.
- Clean pump trap basket and skimmer basket(s). 3.
- Inspect main drain cover. (Also Inspect Spa Drain if present) Drain covers 4. must be free of obstruction, securely fastened w/ stainless steel screws, and in sound condition w/ no cracks or breaks.
- 5. Repair any leaks in circulation system before installation. Leaks will cause the formation of air bubbles that disrupt the normal vacuum level.
- Set all valves to normal operating position. Vacuum port valve(s) should be 6. closed and dedicated vacuum line(s) should be capped in pool. Installations with pool and spa combinations, with a single pump, we recommend you consult your pool builder or service professional about closing the spa drain line during regular filtration.
- Pump should be run prior to installation and left in fully primed condition. 7.
- 8. ALL CHECK VALVES MUST BE REMOVED FROM SYSTEM! Check values can cause a dangerous vacuum condition to remain even after pump shut off.



(4)

From: Sent: To: Subject: Bill Soukup [billsoukup@commercialpool.com] Monday, August 03, 2009 11:03 AM CPSC-OS Unblockable covers

To whom it may concern:

I would really like to see, before your department makes any more decisions, per congress's desire, follow ASME standards. Your department should hire 2-3 independent PE's to properly interpret the language in the ASME standards. I strongly recommend you don't follow are become influenced by manufacturers of products that will benefit from your decisions. The PE's should be able to remain objective, will understand the ASME terminology, and give proper advice.

ommericial

Bill Soukup President Commercial Pool & Spa Supplies, Inc. 1167 East Hwy 36 Maplewood, MN 55109 651-766-6666 Fax 651-765-9924 billsoukup@commercialpool.com

From: Sent: To: Subject: Bill Soukup [billsoukup@commercialpool.com] Monday, August 03, 2009 11:02 AM CPSC-OS Unblockable drain covers

To whom it may concern:

I just heard a rumor that you are going to require SVRS's even with unblockable drain covers. I really hope this isn't the case. It will be contrary to the wording in the Federal Regulation. Plus, they have been very, very problematic and will be a waste of money for each pool that installs one. For example, one of the key SVRS's manufacturers states in the instructions that it takes up to 3 seconds to operate. That is too late. If you take our cover and/or the Eureka brand covers, no person could become entrapped because an 18 x 23 covers 90% of the population. Our cover is 28 x 30, the smallest Eureka is 26 x 26. This would make it almost impossible to block. The covers are also maintenance free and in no way problematic. The SVRS's could cause more deaths because the falsely shut the pool pump down for various reasons. No, or low chlorine will kill more people than entrapment would have.

ommercial 440.3*** SUPPLIES.

Bill Soukup President Commercial Pool & Spa Supplies, Inc. 1167 East Hwy 36 Maplewood, MN 55109 651-766-6666 Fax 651-765-9924 billsoukup@commercialpool.com

From: Sent: To: Subject: Bill Soukup [billsoukup@commercialpool.com] Monday, August 03, 2009 11:01 AM CPSC-OS Unblockable drain covers

To whom it may concern:

I wanted to make sure you have seen the APSP (Association of Pool & Spa Professionals) report on pool drain covers. I think this report offers more support that pools with unblockable drain covers do not need to use SVRS's.

"B. THE 2 PLANE OPTION IS RECOGNIZED IN SEVERAL CONSENSUS STANDARDS

i. While the CPSC staff interpretation of "single main drain" and "multiple drain" under section 1404 (c) correctly identifies a minimum spacing of 3 feet from center to center, as specified in section 4.7 of ANSI/APSP-7, the interpretation does not recognize 12

the 2_{nd} portion of this section, which permits, as an alternative to a 3 foot separation, that the drains be on "2 different planes, i.e. one (1) on the bottom and one (1) on the vertical wall, or, one (1) each on two (2) separate walls."

The CPSC participated in the ANSI Consensus Review Process for the ANSI/APSP-7 standard, as it has for several other ANSI/APSP and ANSI/NSPI standards. While the CPSC does not cast a ballot in this process, it has provided comments on many of these standards and related drafts. At no time did the CPSC raise any concern or objection with regard to the separate plane issue. ii. As noted above, the ANSI/APSP-7 standard has now been adopted into the 2009 IRC and 2009 IBC.

iii. The placement of multiple drains on 2 different planes accomplishes the same safety result as the 3 foot distance, in that it is not possible for a single bather to block both outlets. In addition to the position of the two drains, all drains must be tested and pass the ASME/ANSI A112.19.8 – 2007 body block test which means a single drain would be effective in preventing bather entrapment. iv. The option of placing of multiple drains on 2 different planes as an alternative to 3 foot spacing is also specifically recognized in section 7.2.1 of the ASME/ANSI A112.19.8 2007 Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs. This standard is referenced in Section 1404(b) and has been adopted by the Act as the national "Drain Cover Standard." It is also referenced in 1404 (c) (i), and in the CPSC Staff Interpretation of 1404 as a controlling standard on drain cover safety.

 v. The placement of multiple drains on 2 different planes is specifically recognized in the ANSI/APSP-6 1999 American National Standard for Portable Spas, section 8.2.2.
 C. THERE ARE NO REPORTED ENTRAPMENT INJURIES IN SPAS
THAT COMPLY WITH THESE STANDARDS AND SUCH INCIDENTS ARE NOT REASONABLY FORESEEABLE.

i. These products have had an excellent safety record. Communications with the APSP/ANSI-7 writing committee and ANSI/APSP-6 writing committee confirm that we are not aware of a single reported entrapment incident involving a portable spa with multiple drains on separate planes. 13

ii. Underwriters Laboratory has advised us that in their twenty plus years of testing and certifying portable spas, they are not aware of a single reported entrapment incident involving a portable spa with multiple drains on separate planes.

Underwriters Laboratory supports this comment. *iii*. We have communicated with representatives of most of the leading manufacturers of portable spas who confirm that none of them are aware of a single reported entrapment incident involving a portable spa with multiple drains on separate planes.

iv. Portable spas also have much smaller drain openings and lower suction force and therefore have not been associated with the types of entrapment injuries that SVRS or shut off devices are designed to address, such as body or limb entrapment. Entrapment protection in these spas is also provided by ASME 19.8 compliant covers as required by the Act and ANSI/APSP-7, and by reduced flow rate.
v. A CPSC Incident Report, task # 021219HCC1219 was reviewed and we agree with the conclusions in the case file that

states: "The incident described in this report appears to involve 2 drains for a single pump which were less than 3 feet apart. According to the description provided, these outlets appear to have been LOCATED ON THE SAME PLANE on the bottom in the foot-well area of the spa. The "Post Incident" section of the report states "the secondary pump has two suction returns both located in the bottom foot well area," and that, according to the engineer retained by the victim, "the spa....violates NSPI standards..." A letter to the Commission from counsel for the victim of April 25, 2003 also states that the two outlets that were involved in this incident were on the same plane on the bottom of the spa and thus were not in compliance with ANSI/NSPI standards."

Bill Soukup President Commercial Pool & Spa Supplies, Inc. 1167 East Hwy 36 Maplewood, MN 55109 651-766-6666 Fax 651-765-9924 billsoukup@commercialpool.com



August 5, 2009

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway Suite 502 Bethesda, MD 20814-4408

RE: Unblockable Drain Guidance

Dear CPSC Secretary:

On behalf of Safe Kids USA, a member of Safe Kids Worldwide (hereinafter "Safe Kids"), I am writing in response to a request for comments about the CPSC staff's technical guidance on the unblockable drains provision of the *Virginia Graeme Baker Pool & Spa Safety Act* (VGB Act). Safe Kids respectfully disagrees with the CPSC staff's contention that an otherwise swimming pool or spa with a single main drain can be made "unblockable" by the simple installation of a drain cover that meets certain dimensions.

I. <u>"Unblockable Drain" Not "Unblockable Drain Cover" Triggers Additional Layer of</u> <u>Protection Exemption</u>

According to the VGB Act, Section 1404(c)(1)(A), public pools and spas in the U.S. must be equipped with both an anti-entrapment drain cover and another layer of anti-entrapment protection unless the pool or spa has an "unblockable drain". Significantly, "unblockable drain" is defined earlier in the Act as "a <u>drain</u> of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard" (emphasis added). In other words, if a drain, <u>as opposed to a drain cover</u>, is of a certain size and possesses characteristics that make entrapment impossible, then the second layer of protection is not needed.

Safe Kids believes that the CPSC staff is misguided in their reading of the Act by erroneously allowing a drain coupled with a drain cover of specific larger dimensions to be considered an "unblockable drain". A dangerous drain outlet cannot be made fully safe by only using an antientrapment drain cover. The Act, in our view and by its plain language, does not allow for an

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www.usa.safekids.org

exemption to the requirement for a second layer of protection simply by using an "unblockable drain cover" of certain larger dimensions over an otherwise hazardous single drain outlet. Safe Kids recognizes that the marketplace may already have or will have in the future an effective unblockable drain cover, but the law does not contemplate an exemption of the additional layer of protection in that situation. Safety demands and the Act requires that the all-important second layer of anti-entrapment protection also be used.

II. Staff Interpretation May Allow a Dangerous Scenario

If use of the so called "unblockable drain cover" triggers an exemption of the additional layer of protection, there would be a significant entrapment risk should that drain cover come off (and they often do). In fact, the staff mentions this very possibility and the accompanying dangerous risk it poses in its technical guidance. Such a situation would create a serious threat to swimmers and bathers, and if staff guidance allowed that potential scenario to exist, it would thwart the intent of the law. In the end, the law should be interpreted so as to require an additional layer of protection if the single main drain itself is not unblockable.

Safe Kids is extremely appreciative of the CPSC's work to enforce the VGB Act, and hopes that the staff will reconsider its interpretation of unblockable drains. The VGB Act was carefully crafted so as to best protect swimmers, especially children, from suction entrapment. The Act should be implemented and the marketplace policed in a manner consistent with that goal. We hope that the CPSC staff would revise its technical guidance to ensure that an "unblockable drain cover" is no substitute for an "unblockable drain". As always, Safe Kids looks forward to working with the CPSC on this and other issues in the future.

Sincerely,

Alan Korn Executive Director & General Counsel



From:Tanya Chin Ross [tross@safekids.org]Sent:Tuesday, August 04, 2009 1:02 PMTo:CPSC-OSCc:Alan KornSubject:Unblockable Drain GuidanceAttachments:CPSC Unblockable Drain Cover Letter Safe Kids Aug 2009.pdf

Please see the attached letter from Safe Kids USA regarding the CPSC staff's request for public comments on the unblockable drains technical guidance.

Thank you.

Tanya Chin Ross, M.P.A. Senior Public Policy Associate Safe Kids Worldwide (202) 662-0606 phone (202) 393-2072 fax

From: Sent: To: Subject: John Smieszek [jsmieszek@waveyard.com] Tuesday, August 04, 2009 2:05 PM CPSC-OS Pool & Spa Safety Act

We are currently in design on a number of special use pools. I am trying to determine how the Virginia Graeme Baker Pool and Spa Safety Act will affect our designs. Please let me know who I can contact to discuss our pool details specifically. We want to make sure that we are in complete compliance.

Thanks,



John M. Smieszek Director of Construction 8912 E. Pinnacle Peak Rd. # F9-664 Scottsdale, AZ 85255 480-563-8881 Office 602-380-8787 Mobile jsmieszek@waveyard.com www.waveyard.com

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From:	Paul Kulik [p_kulik@yahoo.com]
Sent:	Tuesday, August 04, 2009 1:59 PM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

I have a hot tub that is on a multiple drain system and have some concerns regarding the covers. The covers are designed in a way that it reflects a residential hot tub system.

The last I heard was that the CPSC was in the process of still designing those type of drain covers. I was wondering if you have made a decision on the design and type of drain cover that we will need.

Paul 970-274-1143 <u>p_kulik@yahoo.com</u>

Pool Safety Council



Pool Safety Council P.O. Box 34100 Washington, DC 20043

August 4, 2009

Todd Stevenson Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway Suite 502 Bethesda, MD 20814

Email to cpsc-os@cpsc.gov

RE: Unblockable Drains Guidance

Dear Mr. Stevenson,

The Pool Safety Council (PSC) is pleased to have the opportunity to offer comments on the July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains ("Guidance"). As one of the main forces behind enactment of the Virginia Graeme Baker Pool and Spa Safety Act ("VGB"), our members are anxious that VGB be used to the maximum extent possible to enhance pool safety and reduce the incidents of entrapment drownings across America.

The philosophy behind passage of VGB is simple. All pools will be far safer if equipped with just a few safety devices including a proper drain cover and an anti entrapment device that instantly interrupts pump suction during an entrapment emergency. In other words, all pools should have these "layers of protection" specifically enumerated in the bill.

VGB thus requires all PUBLIC pools with a single main drain to be equipped with a conforming drain cover and an approved anti entrapment device within one year of passage of VGB. That year has come and gone and while many public pools are in compliance with VGB, other public pools still do not contain the safety devices mandated by the bill. They still lack the layers of protection necessary to make those pools safe.

Among the single main drain public pools exempted from the layers of protection requirement were public pools with so called "unblockable drains." VGB defines an unblockable drain as "a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard." Such a drain cannot by definition create a suction force sufficient to entrap a swimmer and hence poses no threat to public safety.

I. Current Staff Attempts to Provide a Precise Measurement for what Constitutes an "unblockable drain" are arbitrary and erroneous.

Beside the definition quoted above, VGB offers no further guidance as to exactly what constitutes an unblockable drain. Surely, however, Congress intended this to be a very narrow exception to the layers of protection requirements of the bill. One example most frequently discussed during PSC's meetings with staff and members during VGB's Congressional consideration were the extremely large drains covered by grates on very large public pools where the grate was substantially larger than one human body. The belief was that such large surfaces could not conceivably pose an entrapment problem. The staff's current effort to define "unblockable" by using a measurement of 18" by 23" is troubling as it does not take into account the back of an adult male's arms in addition to his back. Together that could certainly constitute a surface larger than 18" by 23" and thus would enhance the chances of entrapment.

PSC strongly disputes the Guidance that a surface of 18" by 23" renders a drain unblockable. A much stricter standard should be required to categorize any drain as "unblockable."

II. Contrary to the Guidance, there is no such thing as an "unblockable drain cover."

VGB offers a definition of "unblockable drain." It also offers guidance for which drain covers conform to the requirements of VGB. There is no definition, however, of "unblockable drain cover," nor is such a term discussed at all in the legislation. This is because the hazard is with the drain itself, not the cover. The cover is designed to mitigate the dangers of the drain, but it cannot change the nature of the drain itself.

CPSC's investigation into the February 26, 2009 entrapment of Tim McIntyre confirms this point as the bather was entrapped in a spa fitted with an unblockable drain cover.

Hence, PSC strongly disagrees with anything in the Guidance that purports to define a term that does not appear anywhere in the VGB legislation.

III. No drain cover can change a single main drain into an "unblockable drain."

PSC strongly disagrees with the Guidance that a drain smaller than 18" by 23" can be made "unblockable" and hence exempt from the layers of protection merely by attaching a larger drain cover measuring 18" by 23". As discussed above, such a view confuses a "drain" with a "drain cover."

Second, the Guidance cannot account for the fact that an "unblockable drain cover" almost certainly will become detached, a frequent problem with low maintenance public pools. The Guidance suggests that the pool would then be out of compliance with VGB but then there would be no anti entrapment device available to insure swimmer safety. Such a situation defies common sense and surely represents a tortured construction of the statute.

Finally, and most important, such an interpretation would create a loophole larger than the rule itself. If all single drain pools could be brought into conformity merely by attaching a larger drain cover, the whole "layers of protection" philosophy would be rendered null and void. Surely Congress did not intend a result that would allow public pools to avoid one of the layers of protection merely by installing a slightly larger drain cover.

IV. This question has been reviewed previously.

In September, 2008, we understand that the Commission staff looked at a drain cover that was being marketed as a device that could transform a drain into an unblockable drain and thus satisfy all requirements of VGB. After review, we were advised that staff concluded that the drain cover itself did not obviate the need for the other layers of protection.

It is critical that CPSC continue to form their own judgments on these key safety issues and not be unduly influenced by arbitrary standards (such as APSP-7) adopted by private trade groups that may not be sufficient to carry out the purposes of VGB.

Conclusion

The VGB policy of requiring virtually all public pools with a single main drain to have multiple layers of protection, including a conforming drain cover and an anti entrapment device, is good public policy. To dilute these protections in any way is to compromise public safety and exposes young swimmers to unnecessary risk.

Sincerely,

Danielle Kazmier Executive Director Pool Safety Council

CC: Alan Korn, Safe Kids

From:	danielle@poolsafetycouncil.org
Sent:	Tuesday, August 04, 2009 12:31 PM
То:	CPSC-OS
Cc:	ian.rayder@mail.house.gov; Alan Korn
Subject:	Unblockable Drain Guidance
Attachments:	8.4.09 CPSC Draft Technical Guidance on Unblockable Drains.pdf

Dear Mr. Stevenson,

Please find attached our comments on the July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains. We hope the CPSC will take them into consideration.

Thank you for your consideration.

Danielle Kazmier Executive Director Pool Safety Council www.poolsafetycouncil.org From: Sent: To: Subject: Daniel Kirkeby [danielkirkeby@yahoo.com] Monday, August 03, 2009 7:10 PM CPSC-OS Unblockable Drain Guidance

My main concern is the lack of clarification. What I mean is I work for a company that has hotels in Iowa, Minnesota and Wisconsin. All 3 states have different interpretations and guidelines laid out for this bill. There needs to be a mandated minimum acceptable by all states so that there are no misconceptions. If I understand the bill correctly "Skimmers" are not considered as one of the drains in question. However it is in Wisconsin and currently to my knowledge nobody makes an unblockable drain cover for a "skimmer" drain. To many Chiefs and not enough Indians, it's about time to start working together on this.

Daniel W. Kirkeby Maintenance Supervisor Ruhr Development Inc.

From:	charlie smith [chasdsmith@valornet.com]
Sent:	Monday, August 03, 2009 10:04 PM
То:	CPSC-OS
Subject:	single main drain cover

True safety starts with common sense. Your basic premise of this senerio does not make sense. The law was written for these things to be installed correctly. Common sense tells the owners to check for proper working order before pool is opened. If the cover is removed the pool should not be opened thus not technically out of compliance. Secondly if the cover is removed or broken the size of the drain still should not be suction entrapment issue but a mechanical entrapment issue which does not require a secondary backup system. Again the safety of this issue is common sense, proper inspections before the pool is opened on a daily basis and a physical hands on inpectionsbe performed prior to swimmers allowed in pool.

From:Russ McCarty [mccarty@ymca.evansville.net]Sent:Monday, August 03, 2009 12:24 PMTo:CPSC-OSSubject:Unblockable Drain Guidance

To whom it may concern:

As a safety minded person and employee, I fully understand the intent of this regulation. However, It is my opinion that the VGBA was very poorly thought out as to who it affected and the attached cost ramifications that were needlessly endured by many pool facilities. Specifically those with Gravity Fed Systems which are of no apparent risk to anyone. Our pool is only four years old and the new drain covers are of no use to this type of pool. As a matter of fact, now that we have covers that rise *above* the surface of the pool floor, there have been three instances where people have stubbed their toes stepping across the covers. I do not think that the engineers put a lot of thought into the process. This whole agenda became a government led hype fest that cost a lot of facilities extravagant amounts of money. Three Thousand dollars for one drain cover? And this was cheap compared to some pools. We spent over Ten Thousand dollars for an un-needed over priced product. Can you read between the lines on this issue? To make matters even more aggravating, the covers were not even manufactured before the deadline occurred. That is our typical government at it's best with military style overpricing of a yet to be produced product. To tell you the truth, we talked about filling in the pool and making it into Sand Volley Ball Courts. Our board of directors decided against it so we purchased the drain covers. The only silver lining that I found was that our contractor installed the covers for us at no cost. It makes me wonder what will be next!

Sincerely,

Russell McCarty Property Director/CPO Dunigan Family YMCA 6846 Oak Grove Rd. Evansville, IN 47715

From:	Sharon Casselman [sharonc@springdale.org]
Sent:	Monday, August 03, 2009 4:43 PM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

To Whom It May Concern:

Having just read the Technical Guidance on Unblockable Drains draft, I find myself in shock yet not surprised! For months prior to the VGB Act going in to effect I voiced my beliefs to local and state officials that secured drains larger than 18"x23" were in fact *unblockable* and did not pose an entrapment hazard, yet the new law required replacement of all drain covers and the deadline was loaming. Despite my experience of 30 years in aquatics and my belief that our (2) drains, 36"x12", 37" diagonally, were unblockable I chose to be proactive and compliant so we replaced the covers at a cost of \$2,600.00.

After nine months of the law being in effect, the CPSC staff defines an unblockable drain cover as being "larger than

18" x 23" or have a diagonal measurement greater than 29 (inches)". CPSC Staff has determined that when a drain cover with these specifications is in place, a human body cannot sufficiently block it to create a suction entrapment hazard. No kidding. Why is it is only now that the CPSC defines an *unblockable drain* and not prior to the VGB Act going in to effect? To say the definition is long over due is an understatement.

Facilities that meet the requirements of the proposed definition by CPSC of an *unblockable drain* that have not replaced the drain covers are the lucky ones. For those of us that tried to do our best to be proactive law-abiding professionals, despite our aquatic knowledge, tough toenails!

If Congress and CPSC would have sought input and *listened* to the aquatic professionals, I shutter to think how much money everyone who has been impacted by the VGB Act could have saved. It's no wonder the government gets such a bad rap with this kind of bureaucracy.

Can CPSC or the Congress define VGB Act REFUND?

Sincerely, Sharon M. Casselman Assistant Director City of Springdale Parks and Recreation 513-346-3910

From: Sent: To: Subject: Chris Hawley [chawley@ci.lincoln.ca.us] Tuesday, August 04, 2009 5:19 PM CPSC-OS unblockable drain guidance

This is unclear to me. Is this unblockable drain for pools that have one main drain or for all pools?



From:	Laura Hendley [LHENDLEY@co.lewis-clark.mt.us]
Sent:	Monday, August 03, 2009 3:04 PM
То:	CPSC-OS
Subject:	"Unblockable Drain Guidance"

Makes sense. Seems like unblockable drain covers should be required to be much more securely fastened than other VGB compliant suction fittings, if that's the only barrier to possible entrapment hazard. I have seen several main drain covers that were unsecured because swimmers, especially in unsupervised pools, tamper with the drain covers and pull them off. I have seen many drain covers modified to fit on existing sumps that are not properly secured, or the screws strip out. Seems like an unblockable drain cover should be very hard to get off.

Laura Hendley, R.S., CPO Environmental Health Specialist Lewis and Clark County, Department of Environmental Health 1930 9th Avenue Helena, MT 59601 (406)447-8352

51

From: Sent: To: Subject: Phil Tapscott [ptapscott@decparks.com] Tuesday, August 04, 2009 11:05 AM CPSC-OS Unblockable Drain Guidance

In response to "Technical Guidance on Unblockable Drains" I would like to respond and list facts in reference to our local public pool. Fairview Public Pool has 2 drain covers measuring 24" x 48" each. These particular covers are 14 feet apart feeding into a gravity drainage system and they share a common drain line. Based on this information our drain covers exceed the 18" x 23" dimension stated in section 1402(7) of the law defining as an unblockable drain. It is a fact that based on our large drains it is humanly impossible for them to be blocked to create a suction entrapment hazard.

Our local public health department and Illinois Public Health Department are aware of our situation and they have mentioned that this is not an uncommon complaint with the number of large pools throughout Illinois. We are also having a very difficult time finding a drain cover manufacturer to supply the replacement drain covers we would need for our pool. After long discussions with several drain cover manufacturers we have concluded it would take extensive time, material and labor for us to comply with this law even though it would not be a safety improvement based on the facts listed above.

Philip A Tapscott Safety Manager Decatur Park District 620 E. Riverside Dr. Decatur, IL 62521 Off. (217) 422-5911

From:	Jager100@aol.com
Sent:	Tuesday, August 04, 2009 11:50 AM
To:	CPSC-ÓS
Cc:	Jager100@aol.com
Subject:	Unblockable Drain Guidance

Office of the Secretary U.S. Consumer Product Safety Commission

I was greatly disappointed to read the CPSC staff interpretation of Unblockable Drains and hope that my technical guidance will not go unheeded.

My concern come from the following statement from the June 16th CPSC memorandum.

Based on these dimensions, outlet cover measurements in excess of 18" x 23" (or a diagonal measurement greater than 29") would provide a means to render the outlet 'unblockable' and subsequently, the sumps below (drains) would be inaccessible and unblockable providing the outlet cover remains in place.

I have concerns that the 18" x 23" measurement is to small. By simply making an 18 x 23 template out of cardboard, one can see that way more than 1% of the US population could easily shadow this.

This interpretation allows for large covers (greater than 29") to be installed onto small diameter sumps. There is no testing for this in the current ASME A112.19.8 standard and it creates a very hazardous situation. These covers are installed on uneven pool (plaster) surfaces and will be easily broken or removed by pre-teen and teenage bathers. As a member of the ASME A112.19.8 committee, I suggest this not be allowed until the standard can be amended to include testing to address this hazard.

The July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains states;

If the drain cover is removed or broken, the drain is no longer an 'unblockable drain" and the pool or spa would be out of compliance.....

These covers are easily removed or broken and I don't think the victim is going to care that drain is no longer in compliance. Even at a pool with a lifeguard, (small percentage and best case scenario) the odds of this going noticed and all bathers removed from the pool are very small. In unguarded pools (vast majority) it will never be caught.

Congress drafted the Act to prevent drowning of children. I helped in the drafting of the bill. The unblockable drain was meant to be an exemption for the very large water parks, such as Disney World or Six Flags, that have huge drains.(6' x 6' and larger)

I sincerely hope you find my comments persuasive,

David Stingl Stingl Products

From: Sent: To: Subject: Reilly, Kathleen Tuesday, August 04, 2009 12:27 PM CPSC-OS FW: Message from Email Form

Kathleen Reilly US Consumer Product Safety Commission Public Affairs Specialist Tel: (301) 504-7222 <u>kreilly@cpsc.gov</u> PoolSafety.gov

From: emailform@cpsc.gov [mailto:emailform@cpsc.gov] Sent: Monday, August 03, 2009 9:58 AM To: Information Center Subject: Message from Email Form

08/03/2009 09:58:13

Name = Albert J. Tursi Organization/Affiliation = YMCA of the USA Daytime Phone = 267-880-3390 E-mail address = <u>al.tursi@ymca.net</u>

Message = In reference to the VGBA comments due bu August 5, 2009, I would like to offer the following: There is confusion about the need to comply with the issues of hair and finger entrapment. Although the document refers to unblockable drains, many organizations, including branches and associations of the YMCA, feel they are in compliance if they have multiple drains, drain sizes exceeding the "unblockable by a body" category, or a safety vacuum release system. By simply referencing the ASME/ANSI standard number, they do not realize the need to meet the hair and finger entrapment requirement. I feel better clarification needs to be made to eliminate confusion.

SAFETY AND BUILDINGS DIVISION Program Development P. O. Box 2689 Madison, Wisconsin 53701-2689 TTY: Contact Through Relay

Jim Doyle, Governor Richard J. Leinenkugel, Secretary



August 4, 2009

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway, Suite 502 Bethesda, MD 20814-4408

Re: Unblockable Drain Guidance

Dear Secretary Mills:

Thank you for soliciting public comments on the technical guidance for unblockable drains. Wisconsin's Safety and Buildings Division's staff review plans for VGBA compliance and each of the 1100 pools reviewed to this date will have on site inspection for compliance.

The July 2009 draft guidance is confusing but appears to have the potential to negate the approved use of the unblockable ASME/ANSI A112.19.8 drain covers installed over small sumps without an additional system such as an SVRS or gravity system.

Would the guidance require an "unblockable sump" to accompany an unblockable grate for full VGBA compliance? In our original correspondence with the CPSC, both equalizer covers and main drain grates could be installed over a pipe or small sump when the manufacturer's installation instructions permitted the installation. At that time, the probability of incidence was considered the second level of protection for equalizers. Secondary protection was not addressed for the main drain installation.

Wisconsin's concern linked to the technical guidance is the retroactivity if the CPSC determines that unblockable sump is necessary. Would those pool owners who installed the grates over the small sumps or listed covers directly on equalizer pipes be required to remove the covers and replace them with the unblockable sump and grate or install a secondary means of protection? Would the manufacturers of the grates be responsible for the alterations where these covers have been installed?

We urge the CPSC to make their determination quickly and communicate it to the states as soon as possible.

Sincerely,

Lynita M. Docken Public Swimming Pool Program Manager

From:Docken, Lynita M - COMMERCE [Lynita.Docken@Wisconsin.gov]Sent:Tuesday, August 04, 2009 4:29 PMTo:CPSC-OSSubject:Unblockable Drain GuidanceAttachments:August 5 2009 comment.doc

August 4, 2009

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway, Suite 502 Bethesda, MD 20814-4408

Re: Unblockable Drain Guidance

Dear Secretary Mills:

Thank you for soliciting public comments on the technical guidance for unblockable drains. Wisconsin's Safety and Buildings Division's staff review plans for VGBA compliance and each of the 1100 pools reviewed to this date will have on site inspection for compliance.

The July 2009 draft guidance is confusing but appears to have the potential to negate the approved use of the unblockable ASME/ANSI A112.19.8 drain covers installed over small sumps without an additional system such as an SVRS or gravity system.

Would the guidance require an "unblockable sump" to accompany an unblockable grate for full VGBA compliance? In our original correspondence with the CPSC, both equalizer covers and main drain grates could be installed over a pipe or small sump when the manufacturer's installation instructions permitted the installation. At that time, the probability of incidence was considered the second level of protection for equalizers. Secondary protection was not addressed for the main drain installation.

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We urge the CPSC to make their determination quickly and communicate it to the states as soon as possible.

Sincerely,

Lynita M. Docken Public Swimming Pool Program Manager

From:	CAMPBELL, SUSAN [Susan_Campbell@occhd.org]
Sent:	Tuesday, August 04, 2009 3:13 PM
To:	CPSC-OS
Cc:	CAMPBELL, SUSAN; PRATT, JOHN; Wallis, David L.
Subject:	Unblockable Drain Guidance comments

Sirs,

This interpretation is reasonable given the fact that the ASME/ANSI standard was adopted and that's what they specify. The unblockable cover does not and should not require an SVRS.

16

The SVRS only addresses suction entrapment, not the other entrapments that can occur without approved covers (evisceration, limb) and in some cases with approved covers (mechanical, hair).

Missing drain covers – the real hazard – is addresses by requiring the new covers to be secured with stainless steel attachments to a mudring or sump in good condition or to the concrete, gunite, shotcrete (not plaster) of the pool. The problem is that there was no training provided on how to evaluate the mudring, sump, etc. for structural integrity. The drain cover now has to be tested and made of approved materials. It turns out that the other white good in the system need to meet the same standards.

We conducted seminars for the pool builders and installers and explained to them that if the mudring or sump was plastic and not in good repair they needed to replace it. (They become brittle and crack or break). I think we are getting good compliance so far given the situation and the economy.

I have talked to people in other states and jurisdictions that have gone the route of SVRS on everything and it's a disaster. They aren't installed correctly, they aren't tested, they are not maintained, there is no alarm, etc., etc. They give people a false sense of security. Devices may be fine for facilities that have full time maintenance but we don't think they will be taken care of at many of the smaller hotel and apartment facilities and probably not at the homeowners associations.

These are not hi-tech facilities. Many of the decided to install dual drains or unblockables for the same reason they are passive solutions.

We also restrict flow through the drains to 1.5 fps so even if they block part of the unblockable drain it will still not be a problem.

We have used 12x12 for 10-15 years as unblockable with no problems. There was research done on them that found the average adult could roll off the 12x12.

SUSAN CAMPBELL MES RPES

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From: Sent: To: Subject: Marc Franklin [MFranklin@team-psc.com] Tuesday, August 04, 2009 5:29 PM CPSC-OS Unblockable Drain Guidance

Dear Commission,

I have just recently begun getting familiar with the rules, but want to voice my concern regarding the minimum size requirements of 18"x23" or 29" diagonally being considered acceptable by the commission. If a drain cover meets the requirements of ASME/ANSI A112.19.8 and does not pose an entrapment or evisceration danger to the public by means other than the minimum sizes, I feel it should be acceptable. Cuurently, manufacturers such as Larson Aquatics have ASME/ANSI A112.19.8-approved covers that are less than the proposed minimum sizes. I feel that the covers meet this requirement by providing a cover of such shape (slightly domed) that a human body cannot physically take the shape of and cause to become completely clogged, or a human body cannot cover a sufficient area to cause enough suction to create an entrapment or evisceration danger. These covers provide sufficient open area to maintain the velocity below 1.5 fps at the specified flowrate, and are sufficient for many older, smaller pools.

Thank you for your consideration of the public's comments.

Marc D. Franklin, P.E.

PARKHILLSMITH&COOPER

in 1747 Se Di Chano se Son (China 1940), Toping 2001 (British Shine Shine (China 1977), Shine (China 1977), Shine (Chi

From:Seris, Christopher C. [serisc@missouri.edu]Sent:Tuesday, August 04, 2009 7:12 PMTo:CPSC-OSSubject:Unblockable Drain Guidance

Secretary of the U.S. Consumer Product Safety Commission,

I am writing to you to express my concern with the Virginia Graeme Baker Pool and Spa Safety Act and the problems I have had ensuring that the facilities I manage are compliant with the law.

As of August 4, 2009 I have five of our six bodies of water in compliance with the law. The sixth body of water is drained and under repair and upgrade as I write this.

I am very disappointed with the implementation of this law because of the inability to secure the compliant drain grates I needed for our facilities. I needed twenty seven grates for the six pools. In three of the pools the "answer" to the problem was to screw grates to the bottom, covering the sump after applying a new suction fitting. The new grates have a profile of about three inches in height, and while there is no sharp edge, there are now very large "bumps" on the bottom of the pools, two of which are hot tubs. This was the "answer" because the drain sizes I have in those bodies of water ARE NOT MADE by the manufacturers of the compliant grates.

Also, it has taken almost a year to get our new grates completely installed due to the unavailability of compliant grates on the market.

I am also disappointed in the vast range of interpretations of the law. I received three different interpretations of the law and recommendations on what it would take to become compliant. When I sent the specifications to bid, I received bids of \$35,000 and \$170,000. I think this illustrates how uninformed

Chris

Chris Seris

Manager of the Mizzou Aquatic Center MizzouRec Services and Facilities (573) 882-9004 (office) (573) 268-9793 (cell) (573) 884-2834 (fax) <u>WWW.MIZZOUREC.COM</u> Home of the Missouri Grand Prix 58

From:emailform@cpsc.govSent:Wednesday, August 05, 2009 12:45 AMTo:CPSC-OSSubject:Message from Email Form

08/05/2009 00:39:24

Name = Diane Hahn Organization/Affiliation = President Country Lane Condominium Daytime Phone = (510)795-1783 E-mail address = <u>Dianeh2114@aol.com</u>

Message = The Virginia Graeme Baker Pool and Spa Safety Act didn't give anyone enough information in advance to complete the safety standards. You gave more information on how to switch to digital television and to stop driving while talking on one's cell phone then on this law. There hasn't been any announcement on the news about this law it is like a quiet secret. When I called government offices such as Feinstein, Boxer, Schwarzenegger, Torrico and Stark they didn't know anything about the law. Also, this law doesn't apply to single-family home's backyard pools. How many children have drowned in these pools? This was a total surprise to condoninium communities and a big hardship. Condominium communities rely on monthly assessments to pay their blls. When a large expense like putting in new drains comes to the board it has a major impact on the owners. There should have been a time span as to when the work needed completion. I don't believe all public pools and spa should have been impacted. We are a private condominium community and only owners and quests can use the pool but the law considers us a public pool. I don't feel this law was thought out properly. It didn't consider the impact on the loss of water during this drought period nor did it take into consideration the economic times we are in. There are owners who are in foreclosure and now they have this extra expense. Since government officials have changed the law on collections from foreclosures the condominium community will suffer again because the assessments will never be collected from the bank. I can understand public pools where familites and children from all communities pay to swim on an annual basis but our community doesn't have a children's pool. Our pool starts in three feet of water and the drain with the entrapment cover is in 6 feet of water. There was a California law passed that no one under 14 years of age is permitted in the spa. I am still wondering why Mr. Baker's granddaughter was in the spa anyway. Pediatrician's recommend that children should not go into spas. They consider it a hazardous environment for children because of the temperature. Government should stop trying to legistrate laws for peoples' responsibilities. Parents should be held accountable to insure their own children's safety.

From:david harling [davidharling@att.net]Sent:Wednesday, August 05, 2009 8:17 AMTo:CPSC-OSSubject:unblockable drain guidance

To whom it may concern:

It is my opinion that a "unblocked drain" is one that can't become an entrapment to a swimmer. Being this is the case, it needs to be allow to be part of the standard as an exemption as read by the "unblockable drain guideline". Safety is always the main purpose of any good proposal and this guideline has safety as a high priority.

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Please consider these "unblockable drain guidance" guidelines to be adoped as writen.

Regards,

David Harling owner of Big State Pools Cypress Texas e-mail: <u>bigstatepools@sbcglobal.net</u>

From:	jim.burkhart@castlerockpools.com
Sent:	Wednesday, August 05, 2009 9:57 AM
То:	CPSC-OS
Subject:	Blockable Drain & Pump Size Guidance

August 5, 2009

Office of the Secretary U.S. Consumer Product Safety Commission

Subject: GPM Ratings on Blockable Dual Drain Covers & Pump Size

This is regarding Dual 8" drain covers used both residentially and commercially that had minor modifications in order to comply with VGB.

Dual blockable drains (two drain covers 3 feet apart) have standards that date back to 1987 with the modification of the 2003 standard and further restated in 2007 are only indirectly mentioned in the VGB act.

VGB should be updated with specific language that addresses dual drains and their usage with <u>given pump sizes</u> in order to specifically require compliance with the 2003 standard.

In practical application here is a theoretical installation with two new VGB compliant drain covers that are tested and rated at 70 gpm when placed 3 feet apart on the wall of a pool or spa. If a builder/plumber or service tech installs for example a 2HP pump that would be very appropriate for a spa jet pump or a pump for a waterfeature on the pool and flows 100GPM through this dual drain confirguration, 70 GPM will flow through one cover and 30GPM will flow through the other cover creating the possibility of entrapment and clearly violates the 2003 standard. The 2003 standard states essentially that each of those drain cover must be able to take 100% of the flow of the pump.

In fact a 70 GPM rating for a wall installation is so low as to be considered unusable in the real world of pumps.

Therefore the issue is not just the cover and more importantly I must say, it is the size of the pump that produces suction on those covers.

Anti-entrapment must have the consideration of multiple layers nor can one cannot simply look at the cover to determine if it is compliant.

Enforcement through full review of proposed or existing pump sizes for the covers being used must be done at the city and county level to comply with the known standards starting with 2003 through VGB.

For our children,

James P. Burkhart

General Manager CastleRock Pools & Spas, LLC

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62

From:	
Sent:	
To:	
Cc:	
Subject:	

Becky Gildea [bgildea@walloverarchitects.com] Wednesday, August 05, 2009 11:41 AM CPSC-OS Ted Wallover Unblockable Drain Guidance

To The CPSC:

We have been an Aquatics Design Professional Firm in the commercial pool industry for over thirty years. The effort that has been put forward in writing this new federal law and the rally to become compliant has been necessary yet nerve racking by all who are involved.

The new law is a necessity for pool safety nationwide, however, it did not address the many commercial pools that were above and beyond compliance prior to the law coming into effect. It has been our experience with the 30 +/- clients/facilities that our firm has acquired since December 2008 in a response to VGB compliance, that the majority of them were already compliant, but did not have the new certified covers. These facilities range from motel/hotel pools, Municipal Pools, University competition venues, basic high school pools, Aquatics training centers, therapy pools and water parks including slides and lazy rivers.

For several of these facilities the new law was a beneficial audit of their systems and required modifications that were necessary and completed, however, the majority of these facilities were not under a direct suction condition to begin with and putting on the new approved covers was just an additional expense. Many of these facilities were forced to go through all of these required compliance reviews and unnecessary modifications that were pointless because the facility was already safe. The pools were not under any direct suction conditions and the cover grates were already oversized, but were not certified covers.

- The new law did not take into account that pools that gravity feed to a balance/surge tank and are not under a direct suction condition.
- Some of these over sized "unblockable" drains sumps do not have certified or certifiable covers or grating
 available. For example, sumps located in lazy rivers that measure 4 feet by 6 feet and 2 feet deep and have
 anywhere from six to twenty sumps to be field fabricated, including testing and certification. The testing called
 out in the ASME A112.19.8-2007 requires each and every field fabricated cover to be tested and certified. The
 cost of this testing for the large number of large drain sumps in a water park is huge.
- No allowances were given for drains located at 12 foot of depth or more.

Our biggest concern with the new law is that it appears that the new requirements have ignored the "golden rule" design standards of maximum: 1.5 fps through the grate, 3 fps through the drain box and 6 fps at the pump suction. This "rule" was calculated to prevent entrapment (hair entrapment will not occur at 1.5 fps or less) and is a very safe design standard.

Many of the manufacturers in good conscience are still designing and certifying their covers to the 1.5 fps or less rule, but many are not and say their covers are certified at xxx gallons per minute, but when the calculations are run, it means the cover is operating at 4-5 feet per second. This is not a safe flow rate for any cover in any pool. We think by leaving out this requirement in the new law, it is counterproductive to the intended purpose of the law and will show to be a safety issue in the future.

Our suggestion to the CPSC is to request information and guidance from the Aquatics Design Professional Community for any future modifications to this law and not to the construction/manufacturing or supply Community. The Aquatics Design Professional Community has been looking for a government response to pool safety for thirty years, and have the education, experience and good conscience to assist in the proper manner with the modifications of this necessary law.

If we can be of any service to the CPSC in relation to Pool Safety, please do not hesitate to contact our office.

Edwin M Wallover III, AIA President

Becky L Gildea Senior Project Manager

Wallover Architects 941 Wheatland Avenue, Suite 304 Lancaster, PA 17603

717.295.7754 717.295.5577 fax

From:	richard wolfe [richardwolfe@mindspring.com]
Sent:	Wednesday, August 05, 2009 12:04 PM
То:	CPSC-OS
Cc:	innesbrookl@sentinelcorp.com
Subject:	UNBLOCKABLE DRAINS-HOT TUBS

SUBJECT: UNBLOCKABLE DRAINS-HOT TUBS

The use of the torso of a large male assumes that there is room for the head (and legs) to lay down flat. However, in the case of a hot tub with limited space at the bottom due to vertical sides, that may not be the case. Even with two drains not quite 36 inches apart, space is limited and constricted.

Please consider the total space available when accepting or rejecting the arrangement. An engineer might be able to accept this drain arrangement.

With smaller bodies, drains could be less than 36 inches apart and still allow sufficient flow of water to prevent entrapment.

Thanks for your consideration,

Richard N. Wolfe, CPO

From: Sent: To: Subject: Steve Dunn [Steve@CommercialPoolSystems.com] Wednesday, August 05, 2009 1:34 PM CPSC-OS Unblockable drain

August 5, 2009

CPSC

Our comments regarding an unblockable drain since the test block does not really represent a human body other than its size that the covers should be a minimum of 1" greater in both width and length than the test block, making the unblockable drain a minimum of 19" x 24". For safety reasons I'd much rather see the minimum be 24" x 24".

The test block does not represent a human body at all. I should know. I have been entrapped on the throat of a skimmer and if the suction can pull my skin away from the body the approximate 1 ½" of the coping stone to seal the throat then the test block does not replicate the human body. I think if you were to get a better test block method that is more human like you will find that some of the drain covers that have been certified will fail under the new tests just like they will with the new hair tests.

I've been involved with entrapments/anti-entrapment for ten years so I have more experience with this subject than most people.

Steve Dunn Vice President - Sales Commercial Pool Systems, Inc. Voice & Fax: 925-938-7665 Email: Sales@CommercialPoolSystems.com

From:	Carvin DiGiovanni [CDiGiovanni@APSP.org]
Sent:	Wednesday, August 05, 2009 3:38 PM
То:	CPSC-OS
Cc:	Whitfield, Troy; Bernice Crenshaw
Subject:	"Unblockable Drain Guidance"
Attachments:	APSP Unblockable Comments to CPSC - 8-5-09.pdf; APSP Support on Cover Grate Formula
	Examples.pdf

To: CPSC Office of the Secretary

From: Carvin DiGiovanni, APSP

Attached please find APSP's comments to the CPSC on "Unblockable Drain Guidance"

Thank you for the opportunity for the industry to comment.



Carvin DiGiovanni Association of Pool & Spa Professionals 2111 Eisenhower Ave Alexandria, VA 22314 (703) 838-0083, ext. 149 FAX (703) 549-0493 e-mail: cdigiovanni@apsp.org



2111 Elsenhower Avenue Alexandria VA 22314-4695



703.838.0083 703.549.0493 fax www.APSP.org

August 5, 2009

To: CPSC Office of the Secretary

Re: "Unblockable Drain Guidance"

The following is submitted on behalf of the Association of Pool and Spa Professionals (APSP) in response to the Commission's request for public comment on July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains. These comments are also supported by the members of the Writing Committee for the ANSI/APSP -7 2006 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins.

The definition in the Draft Technical Guidance requires that a drain must measure in excess of 18" x 23 or must have a diagonal measurement in excess of 29". While we appreciate the desire of the Commission to provide simple and easily verified dimensional criteria to allow operators to determine whether a drain and cover are unblockable, we respectfully submit that the A112.19.8-2007 Standard for Suction Fittings in Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs (as referenced in Section 1404 of the VGB Act) is based on performance criteria under specified conditions and does not lend itself to such simplification. Section 5 of this standard establishes a performance test using an 18" x 23" blocking element with specified corner radii, which must be removable with an applied force of 120 pounds or less. Manufactured unblockable covers are calculated or tested in this manner and certified by a nationally recognized testing laboratory (NRTL) to this criteria. Field fabricated covers must be certified as unblockable by a Registered Design Professional. This blocking element represents the 99 percentile male torso. Similar language is found in section 5.5.2 of the ANSI/APSP-7 standard.¹ Owners and operators of pools seeking to determine whether the cover(s) in their facilities are unblockable should be advised to check the certification for manufactured covers or the Design Professional, who must test and approve all field fabricated covers in any event.

Attached is a series of Cover Grate Formula Examples calculated in accordance with Section 2.3.1.2 of the ANSI/ASME A112.19.8-2008a standard. The calculations show that a cover or outlet with a diagonal of 29.2 inches can, under certain conditions, create a dangerously high entrapping force of up to 6366 pounds for the 99 percentile male torso. As also demonstrated, one might take an existing 18 x 18 outlet and add two "stubby" channels of 3" x 6", making a

¹ The ANSI/APSP-7 standard also recognizes as unblockable any outlet that is 3" or greater in width and 31" or greater in length.

length of 30 inches. The 99 percentile male torso would be able block the original square, and part of the channels, leading to a calculated force of 1413 pounds, well exceeding the 120 pound limit. Hence, the possibility exists that a cover would exceed or appear to exceed the 29" diagonal, and yet still not be unblockable. This further demonstrates why the attempt at simplification, while understandable, would run afoul of the 19.8 criteria, and, therefore, the VGB Act.

For these reasons, we suggest that the Commission reference the performance test found in 19.8. As an alternative, the Commission might wish to consider the following language which is consistent with the 19.8 and ANSI/APSP-7 Standards as well as the pending draft APSP/IAPMO -16 Standard.

"Unblockable Drain: A suction outlet such that its perforated(open) area cannot be shadowed by the area of the 18x23 Body Blocking Element of ANSI/ASME A112.19.8-2008a and that the rated flow through the remaining open area cannot create a suction force in excess of the values in Table 1 of that Standard. For manufactured products, this is calculated or verified by laboratory testing in accordance with the Standard. For field- built outlets, this is calculated in accordance with Section 2.3.1.2 of the Standard."

We thank the Commission for its time and consideration.

Carvin DiGiovanni,

Senior Director, Technical and Standards
COVER/GRATE FORMULA EXAMPLES - See last page for Figures

For a suction outlet cover/grate that is partially blocked, Section 2.3.1.2 of ANSI/ASME A112.19.8 2007 gives the allowable flow in terms of geometric and hydraulic characteristics. The entrapping force is the area of the blocked holes times the differential pressure $F = a_{B'}\Delta p$

The differential pressure is the loss coefficient C times the dynamic head of the water flowing $in_p = C \cdot \frac{\rho}{2} \cdot v^2$ the opening

The velocity is the flow divided by the remaining unblocked area

$$v = \frac{Q}{a_R}$$

Eliminating velocity and differential pressure from these equations, we obtain the formula on page 4 in the standard shown below with example.

Example: Suppose we consider a channel cover partially blocked by a 99 percentile male whose strength allows a 120 pound removal effort.

Without data on the flow resistance of the openings, use the conservative value of standard Use 45 % opening in uniformly perforated area f := .45

From the Figure for the 3 x 31 perforated area,

 $A_T := 3in \cdot 3lin$ $A_T = 93 \cdot in^2$ $A_T = 0.646 ft^2$ $A_B := 76.969 n^2$ $A_R := (16.032) in^2$ For information, the diagonal is $\sqrt{3^2 + 31^2} = 31.145$

$a_B := f \cdot A_B$		$a_{B} = 34.636 \text{ in}^{2}$	$a_{B} = 0.241 \text{ ft}^{2}$	
$a_{\mathbf{R}} := f \cdot \mathbf{A}_{\mathbf{R}}$		$a_{\rm R} = 7.214 {\rm in}^2$	$a_{\rm R} = 0.05 {\rm ft}^2$	
$a_{\mathrm{T}} := a_{\mathrm{B}} + a_{\mathrm{R}}$		$a_{\rm T} = 41.85 {\rm in}^2$	$a_{\rm T} = 0.29 \mathrm{l} \mathrm{ft}^2$	(ref only)
C := 2.1	dimensionless			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

 $\rho := 1.94 \frac{\text{slug}}{\text{ft}^3}$ Flow Q is to be determined from the formula of Section 2.3.1.2

The result is

F := 120lbf

 ft^3 of Section 2.3.1.2 $Q := a_R \cdot \sqrt{\frac{F}{C \cdot \frac{\rho}{2} a_B}}$ $Q = 0.784 \frac{ft^3}{sec}$

Q = 351.911gpm Perforated Channel 45%

The velocity through the openings in unblocked condition will be

$$V := \frac{Q}{a_{T}} \qquad V = 2.698 \frac{f}{s}$$

 $V = 2.698 \frac{ft}{s}$

This will be checked by actual hair testing

 $Q = a_R \sqrt{\frac{F}{C\frac{\rho}{2}a_B}}$

where

aB = largest area of the openings in ft2, that can be blocked by the torso specimen in the most demanding position

2.3.1.2 Entrapping Force Criterion for Q

- area of the openings in fl2that remains unblocked
- $a\tau$ = total area of the openings in ft2 in the cover/grate
- C = flow coefficient based on the design of the openings in the cover/grate. It shall be taken at 2.1 unless otherwise demonstrated by calculation or test.
- F = allowable lifting load that can be exerted by a conscious entrapped person. It is taken at 120 lbf (534 N), about half the weight of the 99th percentile male whose weight is already entirely balanced by buoyancy.
- Q = limiting flow rate in ft3/sec based on the allowable entrapping force

4

- p = mass density of water
- = 62.4 lb/ft = 1.940 slugs/ft 32.16 ft/sec

Now consider a cover with uniformly perforated area 18 x 23 inches with open area of 55% . f := 0.55 (The actual size of a product would be larger due to support and fastening functions)

The areas "A" refer to gross area, and "a" refers to the corresponding open area. Outer frame is not considered at all.

diag := $\sqrt{(18in)^2 + (23in)^2}$ For reference, the diagonal is diag = 29.206 in $A_T := 18in \cdot 23in$ $A_T = 414in^2$ The total area is $A_{B} := 18in \cdot 23in - 4 \cdot (4in)^{2} + \pi \cdot (4in)^{2}$ $A_{B} = 400.265 in^{2}$ $a_{B} := f \cdot A_{B}$ $a_{B} = 1.529 ft^{2}$ The area of the 99 percentile model. with 4 in radius corners, is $A_R = 13.735 \text{ in}^2$ $a_R := f \cdot A_R$ $a_R = 0.052 \text{ ft}^2$ The remaining area is $A_R := A_T - A_R$ $Q = 0.326 \frac{ft^3}{s} \qquad \qquad \boxed{Q = 146 \text{ gpm}}$ $Q := a_{\mathbf{R}} \cdot \sqrt{\frac{F}{C \cdot \frac{\rho}{2} a_{\mathbf{B}}}}$ Unacceptably low flow rating As before. for such a large (18 x 23)outlet with 55 % open area. $Q_{expected} := 1.5 \frac{ft}{s} \cdot A_T \cdot f$ $Q_{expected} = 2.372 \frac{ft^3}{s}$ $Q_{expected} = 1065 \, \text{gpm}$ Expectation would be on the order of 1.5 fps through the open area. Suppose the outlet was mistakenly operated at this "expected" flow. Qexpected. The entrapping force can be obtained by rearranging the formula Fmistake = 6366 lbi This is dangerous, even for a strong man

Next let us consider the remaining area needed to achieve an expected flow. Rearranging, we have a formula useful for preliminary design

 $a_{\text{Rneeded}} := \frac{Q_{\text{expected}}}{\sqrt{\frac{F}{C \cdot \frac{\rho}{2}} a_{\text{B}}}} \qquad a_{\text{Rneeded}} = 55.022 \text{ in}^2 \qquad A_{\text{Rneeded}} := \frac{a_{\text{Rneeded}}}{f} \qquad A_{\text{Rneeded}} = 100.039 \text{ in}^2$ Then the needed total area of the perforated portion of the Treeded := A_B + A_{\text{Rneeded}} \qquad A_{\text{Tneeded}} = 500.305 \text{ in}^2

That would be, for example, a square of side

This is very close to a traditional 24 x 24 inch grate,

Side := $\sqrt{A_{\text{Tneeded}}}$

Side = 22.37 in with space for frame, providing a flow rating of $Q_{expected} = 1065 \text{ gpm}$ at f = 0.55

Discussion: A hypothetical 18 x 23 perforated area (29.2 inch diagonal) leaves a very small open area remaining when blocked by the 99 percentile man. The allowable flow is only 146 gpm, making such a product commercially impractical. It is less than half the rating of a much smaller Channel If the more typical flow rating, corresponding to some local codes of 1.5 fps through the open area is used, the entrapping force exceeds three tons on the 99 percentile man, making it dangerous as well.

A nominal 24 x 24 is better suited for this prduct category.

+ Torso Specimen = Body Blocking Bement

Torso Specimen/Body Blocking Bement Above

Top Center is specimen on arbitrary large grate

Right top is the specimen partially blocking a 24 x 24 cover/grate, showing the Area Blocked and the Area Remaining allowing flow

Near right shows a 3 x 31 channel diagonally. Note this position is chosen to be the most challenging, maximizing the Area Blocked and minimizing the Remaining Area.

At far right is the specimen blocking a rectangular grate with rectangular perforated area 18×23 allowing flow only through small area at corners producing a commercially useless flow rating



Channel conversion of 18 x 18

Now consider an existing cover with uniformly perforated area 18×18 inches with open area of 55%, with (2) 3×6 channels added to create diagonal greater than 30".

For reference, the diagonal isdiag := $\sqrt{(30in)^2 + (3in)^2}$ diag = 30.15 inThe total area is $A_T := 18in \cdot 18in + 3in \cdot 12in$ $A_T = 360 in^2$

The area of the 99 percentile model, covers the original 18 x 18, plus part of the channels

The remaining area is

$$Q := a_{\mathbf{R}} \cdot \sqrt{\frac{F}{C \cdot \frac{\rho}{2} a_{\mathbf{B}}}}$$

 $A_{\mathbf{R}} := 3 \cdot (30 - 23) \text{ in}^2$

Expectation would be on the order of 1.5 fps through the original open area.

Suppose the outlet was mistakenly operated at this "expected" flow. This likely the requirement for the original installation The entrapping force can be obtained by rearranging the formula



 $A_R = 21 \cdot in^2$ $a_R := f \cdot A_R$ $a_R = 0.08 ft^2$

 $A_{B} := 18in \cdot 18in + (23 - 18) \cdot 3in^{2}$ $A_{B} = 339in^{2}$ $a_{B} := f \cdot A_{B}$

From:Tracynda Davis [tracynda.davis@nspf.org]Sent:Wednesday, August 05, 2009 4:46 PMTo:CPSC-OSSubject:unblockable drain guidanceAttachments:CPSC DRAIN DRAFT - final.doc

Attached are comments to the unblockable drain technical guidance.

Thank you for your consideration.

Tracynda

Tracynda Davis, M.P.H. Director, Environmental Health Programs National Swimming Pool Foundation 719-540-9119 www.nspf.org

Encouraging healthier living through aquatic education and research

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Healthy Pools. Healthy Bodies.

4775 Granby Circle · Colorado Springs, CO 80919-3131 719.540.9119 · 719.540.2787 (FAX) · www.nspf.org

August 5, 2009

Mr. Todd Stevenson Office of the Secretary US Consumer Product Safety Commission 4330 East-West Hwy., Suite 502 Bethesda, MD 20814

Dear Secretary Stevenson:

RE: Unblockable Drain Guidance

Thank you for the opportunity to provide feedback regarding the proposed changes for unblockable drain requirements.

The National Swimming Pool Foundation (NSPF) is a 501(c) (3) non-profit organization and the leading educator of people who operate, manage, and inspect public pools and spas. In the past five years, NSPF instructors have trained and certified over 90,000 professionals using the Certified Pool/Spa Operator[®] certification program. NSPF provides a free e-newsletter, the *Prevention Advisor*, to help keep aquatic facilities abreast of changes in technology and regulations. In addition, NSPF hosts the World Aquatic Health[™] Conference and various other meetings such as the National Swimming Pool Environmental Health Leader meeting to disseminate information to aquatic professionals. NSPF also funds prevention and health benefit research to better ensure that prevention strategy is backed by sound science.

The National Swimming Pool Foundation submits the following comments:

- 1. The first paragraph, third sentence states that the ASME standard applies to "every drain/grate". In *Section 1.1.5 Exclusions* of the *ASME/ANSI A112.19.8-2007* standard, it is stated that skimmers and vacuum connection covers are excluded from the standard. A skimmer equalizer fitting is part of a skimmer.
- 2. The first paragraph, last sentence offers the form of approved second entrapment device but neglects to mention that a second drain hydraulically balanced with the first is also an unblockable drain.
- 3. The second paragraph, first sentence defines an unblockable drain, but this definition is confusing as it does not define what a drain is or is not.
- 4. The second paragraph, last sentence is not accurate when it states that a drain with a missing cover is not compliant with the ASME standard because "it lacks a second anti-entrapment system". Any drain cover that is removed or broken is out of compliance. Therefore, this is a contradictory statement. In addition, every secondary level of protection has a level of risk.

Mr. Todd Stevenson Page 2 August 5, 2009

5. The draft guidance appears to negate the approvals of ASME/ANSI A112.19.8 drain covers where the manufacturer's installation instructions permit the covers to be installed over small or nonexistent sumps. The term "sump" is not defined in this draft guidance. One could interpret that the guidance is alluding to sumps; however, this needs to be clarified.

I have conferred with six state pool officials in the last week. It is extremely disconcerting that each official I spoke with interprets this draft guidance differently. I have personally written to CPSC for clarification regarding this very issue. However, to date, I have not received a written or verbal response. This is extremely concerning because CPSC has been charged with the dissemination of education and has received federal funding for this purpose. As can be seen from the above, this has not yet been successfully accomplished.

The federal law was passed 19 months ago. If CPSC is choosing to create stricter guidance than was previously held in interpretation, it is unfair to the thousands of owners and operators who worked diligently to comply based on the only guidance CPSC had available.

We believe the CPSC, in conjunction with the federal law, is making a good faith effort to protect patrons at swimming pools. NSPF has been doing this for years as well, but the lack of clear and accurate guidelines places all of us in untenable situations. Clarification, not more confusion, is needed. We encourage you to strive for clarity and to engage health officials, many who have been crafting laws and guidance for entrapment prevention for years, in these technical guidance interpretations.

Thank you for your time and consideration.

Sincerely,

-Tracynd Daves

Tracynda Davis, M.P.H. Director of Environmental Health Programs National Swimming Pool Foundation

From:PENNY SHAVER [pennyshaver@embarqmail.com]Sent:Wednesday, August 05, 2009 6:56 PMTo:CPSC-OSSubject:"Unblockable Drain Guidelines"Attachments:cpsc public 8 5 09.docx

Please accept my comment regarding : "Unblockable Drain Guidelines"

y

see word doc attached.

Thank you,

Penny Shaver Water Safety Consultant Alpine Pool Services 817-880-4699 To:

Office of the Secretary

U.S. Consumer Product Safety Commission

4330 East West Highway

Suite 502

From:

Penny Shaver

Water Safety Consultant

Alpine Pool Services

RE: "Unblockable Drain Guidance"

I'm in agreement with adding layers of protection to all single suction ports regardless the size of the covering and/or sump.

Sincerely,

Penny Shaver-Water Safety Consultant

Alpine Pool Services

817-880-4699

From:	Dave Schwartz [DSchwartz@wedesignpools.com]
Sent:	Wednesday, August 05, 2009 5:21 PM
To:	CPSC-OS
Subject:	comments on VGB guidance on unblockable drains

Good afternoon. Thanks for the opportunity to comment.

The current VGB language requires that the installed drain assembly meet ASME/ANSI standards. VGB says that single drains must have secondary protection such as a SVR device, implying that single drains are ok. I understand that ASME/ANSI does not allow single drains. This is a conflict. Perhaps an exception can be offered.

The ASME/ANSI standard is a testing standard and VGB is an application/design standard. Each has a different focus and value. More thought on the application and design conditions and issues would be helpful. Better coordination with the ASME/ANSI document is needed.

The structural testing for grating used in field built drains is challenging to provide. Manufacturers are reluctant and the material configurations do not lend themselves to direct analysis.

We design large public, school and commercial pools. With direct design experience with several hundred pools, we have never had an entrapment issue. We use surge tanks and large double main drains. I am concerned that designers and builders will begin to rely on smaller, less durable fabricated drain assemblies that can structurally crack or fail and leak pool water.

Thanks for your help with this critical safety item. A great deal of unnecessary confusion surrounded compliance with VGB. We saw numerous unscrupulous contractors, designers, and pool builders use fear to charge pool owners \$20,000 to \$40,000 to replace a few drains. The work typically could have been done for less than \$5,000. In most cases we did not charge our current clients for our assistance. We even developed a few details that allowed their staff to install the upgraded drain materials.

Implementation and notification through state health departments and county health departments first could have helped. I understand that most owners procrastinated anyway.

Thanks for all you do.

Dave Schwartz, P.E. Principal

water's edge aquatic design

Water's Edge Aquatic Design 11205 W 79th St Lenexa, KS 66214 Phone: (913) 438-4338 Fax: (913) 438-1465 www.wedesignpools.com

From:	Stephen Dauchert [sdauchert@redwoodsgroup.com]
Sent:	Wednesday, August 05, 2009 4:43 PM
То:	CPSC-OS
Subject:	Unblockable Drain Guidance

Importance:

High

My Comments are in red:

Section 1403(7) of the law defines an "unblockable drain" as "a drain of any size and shape that is connected to one or more working drains, implements a gravity drainage system, or a human body cannot be sufficiently blocked by a human body to create a suction entrapment hazard." The Consumer Product Safety Commission staff ("CPSC staff" or "staff") has interpreted this definition to include a drain coupled with a drain cover of specific dimensions (an "unblockable drain cover") that meets the requirements specified in ASME/ANSI All2.19.8. In addition, the drain cover must measure in excess of 18" x 23" or have a diagonal measurement greater than 29". Staff has determined that when a drain cover with these specifications is in place, a human body cannot sufficiently block it to create a suction entrapment hazard. In this instance, the drain is an unblockable drain provided that the unblockable drain cover remains attached. If the drain cover is removed or broken, the drain is no longer an "unblockable drain" and the pool or spa would thus be out of compliance, both because it lacks an ASME/ANSI Al12.19.8 compliant drain cover and because it lacks a second anti-entrapment system.

Stephen Daulit

Stephen Dauchert The Redwoods Group | <u>www.redwoodsgroup.com</u> Office: 800-463-8546 x719 Local: 919-462-9730 x719 Cell: 919-271-9110 <u>sdauchert@redwoodsgroup.com</u>

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From:	Steve Hawksley [shawksley@neptunebenson.com]
Sent:	Thursday, August 13, 2009 10:30 AM
То:	CPSC-OS
Cc:	dmatzke@ramaker.com
Subject:	Office of the Secretary CPSC Request for Public Comment
Attachments:	2823_001.pdf

We have reviewed the attached document and take exception with the inference that pools should incorporate a secondary anti entrapment device in the event that an unblockable cover is missing or broken. Regardless if the pool has single or multiple unblockable drain covers, if one is missing or broken the facility is out of compliance and is to be closed for repairs. Neptune-Benson's NSF certified AEGIS cover specifically states in our instructions,

"DO NOT USE FACILITY IF COVER IS MISSING, BROKEN, OR CRACKED" In our opinion this is sufficient without any further code revision requiring secondary devices.

Regards,

Steven Hawksley – VP,Technical Service Director	AEGIS		
401.821.2200 x221 800.832.8002 Cell 401.480.9986 www.NeptuneBenson.com www.DefenderFilter.com	Neptune-Benson Discover the World of Aquatopia.	And Shot A	
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Virginia Graeme Baker Pool and Spa Safety Act

July 2009 CPSC Staff Draft Technical Guidance on Unblockable Drains¹

The Virginia Graeme Baker Pool and Spa Safety Act, (Pub. L. 110-140, 121 Stat. 1795), is designed to prevent drain entrapments and eviscerations in pools and spas. The law became effective on December 19, 2008. The law requires that public pools and spas have drain covers that meet the ASME/ANSI A112.19.8 standard on every drain/grate. In addition, if the pool has a single main drain (other than an unblockable drain), the operator must either disable the drain or install a second anti-entrapment device or system. This can take the form of an automatic shut-off system, gravity drainage system, Safety Vacuum Release System, or suction-limiting vent system.

Section 1403(7) of the law defines an "unblockable drain" as "a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard." The Consumer Product Safety Commission staff ("CPSC staff" or "staff") has interpreted this definition to include a drain coupled with a drain cover of specific dimensions (an "unblockable drain cover") that meets the requirements specified in ASME/ANSI A112.19.8. In addition, the drain cover must measure in excess of 18" x 23" or have a diagonal measurement greater than 29". Staff has determined that when a drain cover with these specifications is in place, a human body cannot sufficiently block it to create a suction entrapment hazard. In this instance, the drain is an unblockable drain provided that the unblockable drain cover remains attached. If the drain cover is removed or broken, the drain is no longer an "unblockable drain" and the pool or spa would thus be out of compliance, both because it lacks an ASME/ANSI A112.19.8 compliant drain cover and because it lacks a second anti-entrapment system.

Staff is seeking public comments on this guidance. Comments must be received by August 5, 2009.

Please mark your comments "Unblockable Drain Guidance" and send them to the Office of the Secretary at <u>cpsc-os@cpsc.gov</u> or if you are unable to submit comments by e-mail, you may submit written comments to:

Office of the Secretary U.S. Consumer Product Safety Commission 4330 East West Highway Suite 502

¹ These comments are those of CPSC staff, have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

Bethesda, MD 20814-4408

Comments must be received by the date noted above. CPSC staff will assess comments that are received and take account of such comments when finalizing the guidance and making a recommendation to the Commission to take final action. Please note that you will not receive a direct response to your comments.