

LOG OF MEETING

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DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: ASTM Subcommittee F15.45 for Candle Products-
Fire Safety Task Group

DATE OF MEETING: December 3-4, 2003

DATE OF LOG ENTRY:

SOURCE OF LOG ENTRY: Allyson Tenney, Engineering Sciences

LOCATION: Columbus Courtyard by Marriott, Columbus, Ohio

CPSC ATTENDEES: Allyson Tenney, Engineering Sciences

NON-CPSC ATTENDEES: ASTM F 15.45 Fire Safety Task Group members

SUMMARY OF MEETING:

Members of the ASTM F15.45 Fire Safety Task Group (Candle Products) met at the Courtyard by Marriott in Columbus, Ohio and conducted by Chairman Jim Becker. The group continued developing a fire safety standard for candles. Minutes from the meeting are attached.

The next meeting of the task group is scheduled for January 14-15, 2004 in Columbus, Ohio.

AMERICAN SOCIETY FOR TESTING AND MATERIALS

FIRE SAFETY TASK GROUP
OF SUBCOMMITTEE FOR CANDLE PRODUCTS (45)
OF F-15 COMMITTEE ON CONSUMER PRODUCTS

Courtyard by Marriott Downtown Columbus

Columbus, OH

December 3-4, 2003

Revised Minutes

Wednesday, December 3, 2003

The task group is meeting for the sixteenth time since its organization.

Chairperson Jim Becker welcomed George Pappas Jr. who is representing Lumi-Lite. George Pappas Sr. is recovering from a recent illness and we wish him a speedy recovery. The group reviewed the minutes of the last meeting held October 8-9, 2003 in Columbus. The minutes were approved on a motion made and seconded.

Jim Becker reported that he received a copy of a new proposed Canadian candle regulation titled Proposed Candles Regulations and Proposed Order Amending Schedule I to the Hazardous Products Acts (Candles and Wicks). TBTCAN8103, issued on 11/27/03. It is out for comments. Deadline date for comment is February 5, 2004.

The 4 Requirements included in the Canadian Regulation:

1. Mandatory bi-lingual label and safe use instructions.
2. Maximum allowable lead content of 600mg/km for cores of metallic candlewick.
3. Continued prohibition of candles that may spontaneously re-light when extinguished (Canadian b-day candles that relight have already been banned from CANADA).
4. Requirement for test methodologies that conform to good laboratory practices.

Jim Becker called Health Canada, issuer of this purposed regulation and will get a call back hopefully next week. Tom thinks that they are playing "Catch-Up" to the USA. Jim said Canada maintains a close liaison with the CPSC. Jim will inform us after he gets an update. Many ASTM standards could be taken directly into Canada.

Bob Moss led the **Candle Accessories update**. They proposed a test method and invited David Edenburn. Dave developed some methodologies and the group had a conference call to discuss. Basically, they ended up by looking at ASTM F963 Toy standard; Annex 5. There is a test method assessing flammability of toys as a finished good provided by Allyson Tenney. Bob passed along the information and felt that it would be a potential starting point for a test method for a finished good. Dave drafted verbiage around that annex. The candle accessories group will take that back and review. It incorporates what is in the toy standards and applies it to candle accessories. They are still working on verbiage around that point. It will take longer than anticipated, but still aiming to ballot for spring or summer of 2004. Becker pointed out importance of flame spread. The European standard is 40mm/minute. Carletta Ooton struggles with the need to go much beyond 6 inches. Dan Zipes said if it is too stringent, people will ignore it. People who import aren't going to look at standard at all. It will preclude making candle accessories. Dan's fear is that people will bypass system. He doesn't think we should go too far to one side. Allyson says it is an ongoing issue and is waiting for groups' comments and draft. Bob Moss said the draft Dave wrote is not a consensus document. Alison said at this point she does not have much to add, but will take the information back to the CPSC. Jim Becker said that 6 inches sounds like a large distance, Dan said that if 6 inches is good enough for kids' toys, what's the difference between that and a candle accessory. Jim Hoebie said CPSC considers impact of standards on manufacturers. He commends ASTM committee and is looking forward to giving something to Allyson to get a reaction. It's hard to tell if rules are too stringent or lack stringency at this point. Jim feels we are heading in a good direction, no matter what the requirement is, it

will make some changes in manufacturing industry. Allyson says that flame spread and this issue is two directional. Bob said this is a consensus process, everyone can express their opinion and he can see rationale for both. Allyson will send language to Bob for carpet standard. Allyson has directional issue with accessories. We as a group want to have something in place, and feel that we at least have a beginning. Rob said that most toys aren't designed to be used near a source of ignition and said the standard should be designed to reduce fires. Dave said that it is easier to use a burn rate that is already recognized. He explained that Europeans have 40 and 75 mm. 3inch/min-constitutes serious fire and used by fire marshals to test HB Plastics. (4in/minute is automotive standard) Tom states China doesn't have expertise. all factories are not capable of making specific materials. Tom said there are thousands of factories that can deliver to specification. Jim Hoebel suggested possibly working with Chinese factories to help create guidelines for materials. Carletta's concern is that if we can't decorate candles or rings, people will go to there own yards and collect natural materials, which is an even greater safety issue. Dan expressed the same concern and said we need to find a balance between being creative and preventing fires. Dave said in last draft, he used 963 test methodologies but made 3 changes:

1. Ignition source (candle isn't a recognized source since it's not reproducible). Dave substituted candle for 12 mm needle point.
2. Changes in ignition time
3. Burn rate of 40mm/min.

Bob said in original test there was up to a 60 second ignition. 963 has a shorter ignition time, but what Dave did was extend ignition time, but kept flame stationary. David Morrison asked where you ignite object. Dave said you light on the end of the axis. Should 12mm needle flame be surrogate? Carletta said that they use a candle flame. It's simple and inexpensive from an equipment standpoint as well. Bob said in garment industry there is a standardized flame, but in this test feels a candle would be fine. Jim said not to put much importance to fact that there is a regulation from CPSC and feel that it's the only way to go. Its true there is a wealth of experience with CPSC, but we should feel open to new suggestions. Dave feels candle is fine, but he used candles from different countries and had calibration curves all over the place. This discussion is helpful for the group to make their final decisions. Bob questioned the 2 day conditioning. Tom said that 4 hours is common across many consumer products. Bob said 48 hours is a long time. Dave said that the 2 day condition is from UL. Allyson said there are lots of conditioning standards. Some are 4 hours some are 6. Bob said 48 hours is longer than usual. Allyson said textiles don't go 48 hours, and they are the most susceptible to humidity and other factors. Bob would expect something less than 24 hours would do. Dave said plastics absorb moisture slowly. If you choose to burn before 48 hours, the test is less stringent. Tom indicates that Nylon is susceptible to moisture whereas polypro is not as susceptible. Becker said inclusion of UL standard and ASTM is no problem at all.

Becker drafted verbiage on potpourri burners. Group had consensus that we shouldn't go there, but we have had 3 CPSC product recalls in tealights since our last meeting, two recalls in October and one in November. Allyson comments that they are still concerned with burners and see incidents. She would like to see the language Jim Becker has proposed. **He asks for Group's comments, suggestions and concerns.**

Safety Requirements for End of Useful Life - Geoffrey wrote up proposal for language. He sent this to Jim a few weeks ago, but did not realize he had to come up with conclusion for tealights. Basically, it's to include use of color changing thermo graphic indicators or a temperature measuring device like a thermocouple. He wasn't sure what we had concluded regarding votive containers to use as tests. Geoffrey is suggesting that we would add votives and tealights also. Tapers and b-day candles are excluded. Bob said for 4.3 he changed verbiage and shared with group his comment. Becker said that in 4.3.2.1 should be changed to "for all applicable candles". Dave comments that obviously you don't want it to burn through or deform. Also important is what it sits on. He said there could be additions that state that plastic shouldn't melt or deform. Bob said when wick clip gets dislodged; flame travels over to side and burns containers. He has seen 2 instances, 1 case there was a stamping for tab, and the stamp was at the same level of feet. Tealight didn't have room for air to dissipate, but it burnt hole in bottom of tealight. Bob said temperature sensor on bottom of tealights would indicate potential problem. Jim Becker said we haven't covered deformation, melting. Carletta asks if we care if it deforms if material we are using if it will never catch on fire? Tom asks if it matters if it distorts 10% of initial shape. Dave says that deformation isn't bad but could lead to problems later on. Mark said molded cups can be under stress and deform at a low temperature. Dave said that they could "creep" as well but could be less than 10%. Mark asks if we could

look at other things that could occur as a result of plastic deformation. Are there other ways to define deformation? Tom raises issue of lots of potential things that can go wrong, but unless it happens, it shouldn't be an issue. Deformation could lead to spillage. Jim Becker asked if we specify V0 clear materials, Dave said 2 Polycarbonate and PVC would pass. Carletta struggles with specifying material or V0 plastics if companies are able to design tealights to not allow flame to drift. Carletta and other want to avoid standard that restricts creativity and design. Her point is that if something is done differently in designed you don't have to use all V0 materials. Tom doesn't think there is enough data to support that deformation is cause of recalls. Allyson feels using term deformation may be a problem. Becker suggests verbiage being at 15% deformation. Dave said in terms of deformation, we should not allow container to come in contact with the flame. If it can come in contact with flame, you'll need to add flammability specification. Bob said there was a case where flame didn't impinge bottom of cup, but it still burnt hole through it and scorched surface it was on. Thomas asked if there are flashover instances. Bob and Bill said both have witnessed it. Bob said that super heat and insulation is affected by the surface tealights are on. If you were to burn on something that dissipates heat, you won't have that problem. Jim Becker asks if 50% deformation would be acceptable. Dave asks what kind of deformation, Jim Becker says dimensional. On three recalls, high flames were at fault which leads to secondary ignition. Dave Buri points out that tealights alone may not have been the issue at all. If we look at what the failure is, maybe cover by saying it can't come in contact with plastic and must be contained in vessel. Bill agrees it's not a fire hazard until something ignites or has a form of secondary ignition. Dave struggles with why pillars that sometimes lose their side walls due to guttering are different from tealights that deform. Allyson asks if tealights walls ignite, would it be covered in Secondary Ignition, Group says it is covered. Thomas says there are many other indicators that you'll have to start looking at as well like carbon heads, curling wick, etc. Tom said there are hundreds of millions of plastic tealights that have mild deformation but are not hazardous. Bill agrees. Discussed 4.3.2.1 and made changes.

Dave questions what "burns through bottom of candle" means. He has seen competitor candles with a foil like label. Buri struggles with labels not being perfectly centered underneath the wicks, such as a 3 wick candle. Bob said companies use a label as a fire barrier. Comments that there will be too much interpretation of "bottom of the candle". Jim likes indicating 300 degree F, but then the problem is where you would measure it. Dan says that instructions on the label say burn until 1/2 inch remains. Are we ignoring those instructions? Jim prefers eliminating language and relying on 300 degree F. Possibly use temperature gauge that is wider that covers entire candle. Bill said he feel concern for 3 wick pillars, a paper method would do, and maybe put indicators where wicks should be. If wicks are perfectly in line, the paper would catch it. Leaning towards indicators and surrogates, Jim is proposing to eliminate "burn through bottom of candle" and put 300 degrees F. Any suitable method would be acceptable. Jeff said for a pillar you could just use a filter paper or some other substrate. Bob said temperature indicators are nice, but it will be up to manufacturer's discretion. Becker said we will leave to everyone to determine for themselves how they will indicate that. **Group voted on who would like to see verbiage in standard: 2 individuals said yes - the remaining individuals want to remove the language. Alternative is whoever does testing should have flexibility to choose that whatever they use to indicate temperature. Becker takes another vote where the latter was approved.**

Becker was reminded that there has been legislation introduced into Congress called **Home Fire Safety Act** and lists PS-59 as the standard that should be used for candle products. He wants to bring awareness to the Group. If it is passed, it will make whatever CPSC develops mandatory. Would CPSC consider major changes to standard that has been adopted? Allyson said that they need to consider comments and would rather not speculate whether changes will or will not be made. Jim says Congress overrides it all. If congress tells CPSC to adopt standard, CPSC has no choice but to do so. One change that has already happened is that they have dropped cigarette from the scope of this. Reason is that there is another piece of legislation from Massachusetts is putting in cigarette legislation, and would be more likely to get in through if they take it out of the fire safety act. If it does get passed in current form, the standard will be adopted and be mandatory for all manufacturers involved. Valerie says NCA feels it will not be likely that this bill would pass. For candle industry, Congress and CPSC are favorable of industries that demonstrate compliance with voluntary standards, and when that happens they don't feel need to have government step in. Congress has a lot of things to do, and this may not be high on his priority list. Valerie thinks fire marshals point is that industries need to do what Candle industry is doing. Becker will keep us updated if

there is any movement in that aspect. Valerie shared that Canada has picked up our labeling requirement as of 2 weeks ago. On small packages, the label needs only to say "do not leave burning candles unattended."

Next point of discussion on **End of Useful Life is verbiage on measuring devices**. Geoffrey included it in 5.2.2.7. Bob has a note to add to this. Geoffrey has proposed a change in 5.2.4.3.A. Possibly change it to: For all applicable candles, place a temperature measuring device in contact with the bottom of the candle or its container. Issue brought up regarding candles that have concave bottoms. A thermocouple would have to be placed in contact with the concave surface. "For containerized candles, the temperature measuring device should be in contact with the outside bottom surface" Tom suggested, "Place it in the closest proximity at the bottom of the candle closest to the flame." Mark asked if we are concerned with the base of the candle, or the temperature of the surface it is sitting on. Carletta asks why even care about the base of the candle if it is not in direct contact with the surface. Jim Becker says that the temperature we want to know is the surface temperature where the candle is intended to rest. Dan said that there are candles that are hung on the wall and feels we should get away from specifying the "bottom" of the candle as being the area to test. Dan and Bob discussed that the backside of candles and wall sconces are a separate issue that should be discussed. 4.3.2.1-Becker suggested changing it to "supporting surface temperature". Valerie asks if we can include something about stability. Rob asks about candles that are supported by sconces. Bill mentions to maybe define the type of structure. Rob suggests, "At no point beneath the candle should the temperature of 300 degrees be exceeded." Dave suggests, "At no point should the surface exceed _____ temperature." Buri questions whether 300 degrees is realistic. If container is 300 degrees, the fuel pool temperature would be extremely hot. Tom supports Dave's point of view that no point to exceed 300 degrees, and to measure the candle itself, and put thermocouples in closest proximity of the flame. Bob & Thomas suggest saying that "surface directly underneath" candle should be tested. Jim says maybe we should exempt candles that don't have contact with surface. Allyson needs an explanation as far as the temperature is concerned.

Jim Hoebel motions this topic and moves that this requirement applies to freestanding candles and not containerized candles. He feels that pillars and freestanding candles can be measured. Tom clarified that Valerie said issue is really with pillars. Thomas inquires whether tealights should be included. Dave said temp if they don't flash are usually very low. Allyson asks why we are exempting containers. Tom says that we don't see safety issues associated with containers. Jim Hoebel doesn't feel we have enough experimental data that would motivate him to push forward vigorously with containers now. He wants to table it and get the job done. **Question: Are we measuring bottom candle temperature or surface temperature?** Jim Becker says another change in this section is in burn time for tealights. Current standard says 4 hours; Bob suggested some language for candle test procedure.

We were going to take a vote. Bob wants to clarify that whenever they had a scorch results, said there is nothing in the data stating that the temperature of the bottom of the candle was so hot that it caused fires. The container candle seems that it would not get hot enough to burn a hole through the bottom of the candle. Bob is proposing to leave out 300 degree F because of the ambiguity involved. Jim has misgivings, because the tests George & Bob did, George's data showed that every time there was scorching, he had a flashover event in that type of candle. So he already failed PS-52, which is already covered. George had recreated a failure event. Thomas said supporting surface is better than burn surface. David questioned if the wick is almost burned through but you have afterglow, is that a problem? He agrees it's a simple answer to a complex problem. Dave has seen candles where wicks are designed to drown, but don't, and scorch the foil. The foil folds away. If it did ignite, that would be covered under Secondary Ignition. Jim is hopeful that we are separating containerized candles from pillars and free standing. Allyson says small sample sets may not be accurate and feels the temperature indicator is one more way to make sure it is safe. Jim is uncomfortable because there may be situations where wick isn't in contact with surface but there is still intense heat. Allyson doesn't feel excluding candle types is the answer, and doesn't see difficulty in including all candle types. Dave doesn't see surface igniting because candle got too hot, and usually there would be flashover before surface ignited. Mark points out that the substrates the candles are on are not indicated. Dave does multiple levels of testing, they have QA tests which are more stringent, that's considered an abuse test. They do statistical burns on QA surfaces and are done on a metal surface. Thomas feels that pillars and containers are different and maybe should be treated differently due to the fact that containers have a "built-in" barrier. Bob feels that the substrate should be what is commonly used in the home. David suggests changing language to "At no point should the flame

touch the supporting surface." Becker would like to table this topic for the next meeting. Until then, he and Bob Moss will continue to develop language that explains proposal that flame will not touch the surface (section 4.3.2.1).

Gel Candles

David Morrison didn't really have opportunity to come up with consensus and brought language as a draft. They mentioned that a candle containing gel candles should be allowed to burn 8 hours. 5.2.1- Changed the word "should" to "shall." David has tried hard to get a gel candle to flash and hasn't seen that yet. They have used large wicks and fragrances that aren't very soluble. Dave Buri comments that his experience with gels is that if they are burned for 8 hours, not as much carbon buildup occurs, so secondary ignition is less likely to occur. He feels that 4 hour cycles are more accurate. Jim Becker mentions that in majority of candle, the candles were not all the way burned to the bottom before it flashed. Dave Buri says carbon buildup gets hung up on the wick and could lead to secondary ignition. Jim Becker and Group decide to leave it at 8 hours. David says that if you require a minimum flash point for fragrance, it is not a design criterion, but a performance issue. Jim feels language is too soft. To reduce the likelihood of candle flashover, the fragrance should have minimum flashpoint of 170 degrees F. Flashpoint is a note and solubility is a requirement. Dave said according to ASTM leave in permissive language, which leaves it stronger than a note. David questions whether the note should talk about differential and how they determine melt pool temperature, or should we just leave flashpoint of fragrance in the note? Dave said in previous discussions that for smaller candle makers, they aren't able to figure out flashpoints. They can easily go to fragrance manufacturer and ask for 170 degree F. flashpoint temperature. Jim remembers critical parameter to control was solubility. There were several people that felt solubility was what we needed to pay attention to. D-56 is a closed cup method you could get to 176 degrees without a problem. **Bob will get information regarding fragrance methods to David Morrison. Continue note one in 5.2.1 with one less permissive and add information regarding flashpoint method. Note 2 will now be a part of the requirement. There was a suggestion to include "Gel Base Fluids" in the terminology section to define what exactly it is. Jim suggests we should also define "syneresis".**

Dave says if we have unsophisticated market for gel candles, we should streamline standard and publish document (like a lab manual) to inform candle makers. It would act as a guide. Jim comments that last sentence of the second test should give guidance of a minimum time period. Jim Becker questions whether we need to include anything about long term tests at all. Are there any that past the first one and don't pass the long term one? This needs clarification as to which tests to do, or if all need to be done. Becker suggests that third test should be a non-mandatory note that is information for testing on the solubility issue. David says they feel comfortable with the first method. If it passes first test but fails 2 & 3, David would feel uncomfortable. Bob asks if in David's experience, whether candles have passed first and did not pass the second. The first test is more stringent. The first test does not test the finished good, whereas the second test does test the entire system. Dave Edenburn thinks both tests should be required. Jim Becker suggests that final paragraph perhaps be another note. Mark agrees with Jim Hoebel that a time interval should be added in second test. Jim Becker asks whether there should be a minimum time frame for the first test. Charlie suggests striking last sentence all together. George feels long term stability test should be a requirement. David and Charlie don't think that there should be a requirement. Becker asks for a vote on whether long term tests should be required. Hoebel asks if there is anything gained by letting it sit on the shelf for an extended time, and Charlie didn't feel that it is necessary. George says that paraffin candles are more stable and are unlikely to change after 6 months, but that is not so with Gel. He questions whether there are components that the manufacturer adds to the gel components that may affect solubility. **Jim Becker would like David and Charlie to revise their draft for the January meeting.**

Dave Buri has developed language about not trimming a wick as a **more stringent test**. If a manufacturer chooses to not trim the wick, that would be more stringent. If it will be a note, it would go under section 5. Dave suggests that candles placed closer together would be a more stringent test as well. Currently, Dave spaces candles 8 inches apart. Jim Hoebel feels that one thing is missing, and that would be that it's "acceptable" to use a less stringent test. Include a note that if you can test to a more stringent standard you comply with the standard. Geoffrey likes it as a note and would rather have it say that it is up to the manufacturer to prove that it is a more stringent test. Jim Becker has concerned about putting candles closer together because that would affect performance. It would make it difficult from a safety standard because the temperatures of a vast amount of candles radiate large amounts of heat and could err on the safety side.

Jim Becker questions why burn time was left out, Dave Buri responds that contaminants build up in wick after extinguished and relit, and that cycles allow for more potential of carbon buildup and other impurities to burn away. Dave said that trimming the wick removes junk out of candle and reduces flame size. Bob feels that if a note about stringent testing is added, we need to let manufacturers document that that particular test is more stringent, but feels we shouldn't point out what the more stringent tests are. **Allyson will be sending information regarding more stringent tests that is currently used by CPSC.** Carletta feels that she will simulate abuse for liability purposes. Some candles are trimmed, some are not. Thomas questions whether most of us feel that consumers do or do not trim wick. Dan says that his sales representatives specifically tell consumers to trim wick. Carletta says that 60% of consumers do not trim wicks. Rob points out that it should be a candle manufacturer's responsibility to assume that consumers won't trim the wick. Dan feels that they shouldn't have to do something different than what they say to do on the label. Bill questions if there are other standards out there that states a procedure. Hoebel says if you are developing standard it is important to simulate real world. Even if instructions say to trim, the real world doesn't trim. Dave sees an untrimmed wick as a foreseeable misuse. Dan asks if there is a study that says consumers don't trim the wick. Jim Becker states that if this is proposed, all candle manufacturers will have to retest all candles they currently produce. Carletta says number one candle concern is consumption. Valerie reminds group that this is suppose to be a broad standard that every candle maker in the industry can adhere to.

Should group insert language into standard that addresses more stringent test conditions as a note?
Yes 7 No 4.

Remaining Issues List

MIL STD 105 will be replaced with ANSI document, E-122, Rule of 3 concept (that Allyson will pass to Becker). Mark will be giving Jim Becker information as well.

We will be removing definitions that are in the terminology standard.
Group felt that dimensions, shape, size, use, content should define votives. Jim Becker will talk to Eileen and share our thoughts.

Flame Height

David and Thomas both felt that it is a topic that has been addressed and we should move on. Jim Becker explained the rationale that manufacturers because of the variability of the flame must target flame height considerable less than 2 inches. **There is a rationale for why we have decided on 3 inches, so we will not change this requirement.**

Secondary Ignition

If the wick is curled over and drawing fuel from either capillary action or adhesion, it is NOT considered secondary ignition. Group has decided to leave it as is. Buri feels there is leaning in wicks, typically in pillars, wick may draw from two ends; if it's still one flame, but if it breaks off and supports secondary ignition, it is covered in secondary ignition.

Alternative language for end of useful life, suggestions include: Extinction, termination, burnout, burn limit, discontinued burn, substation of flame, completed burn, completed ignition terminus. George suggests changing "useful" to "intended." Dave says European standard says "End of Life." **Group decided to leave it as is.**

Container Failure

Bob feels we need to be more specific on defining cracking and breaking in container failure. If we are allowing melting of a tealight cup, the consumer might feel that that is a failure. Bill doesn't want anything stating that if the container holds the fuel, that it is safe. Bob feels that we need consistent language. **We decided to change "Container Failure" to "Container Cracks or Breaks".**

Tealights

Should they be included in stability tests? By definition as a Filled Candle, tealights are included in stability tests. Jim Becker will include tealights in standard.

Wick Centering/ "Wick Walking" Requirements were tabled.

Reigniting Candles (Birthday in particular)

Canadian's have and are continuing to prohibit reigniting birthday candles. Rob says if you are mimicking them, you are either going to ban them or ignore the standard. Allyson says there is nothing to support saying that there is evidence that they should be banned. There are no IDI's either. Birthday candles are generally attended when lit. **This topic is tabled.**

Outdoor candle applicability's?

Currently, the only thing they are excluded from is flame height.

Do we want to continue to exclude these candles from flame height requirements? Yes. Allyson said stability, end of useful life, and possibly a label requirement. David asks if they should be tested for a longer time period? There is a voluntary label stating that it should be used outdoors.

Candle Burn Performance Test

Group decides to not specify votive container size.

Tabled

Exploding candle

Fuel pool temp.

Maximum container temp.

Addition-wick trimming at manufacturer (if trim length is specified on products, they must be trimmed to that length at time of manufacturer.) George has strong feelings. **This topic will be discussed at our next meeting.**

Task Group Member/Company Meeting Attendees

Wednesday, December 3, 2003

Jim Becker, Candle Solutions
Geoffrey Faires, The Dial Corp.
George Pappas, Jr., Lumi-Lite Candle Co.
Dave Buri, S.C. Johnson, Inc.
John Witham, Candle-Lite, Inc.
Rob Harrington, Blythe Industries, Inc.
Christy Wheeler & Thomas Dierker, Atkins & Pearce, Inc.
William Comber, Libbey Glass
Tom Mazurek, The Limited
Carletta Ooton, Bath & Body Works
Robert Moss, SEA, Ltd.
Mark Gerwitz & Bill Hartke, Bureau Veritas Consumer Products & Services
Jim Hoebel, Consumer
Tom Acklin, Autograph Foliages
Allyson Tenney, CPSC
Valerie Cooper, NCA
David Morrison, Penreco
Charles Moses, Arizona Chemical Company
Dan Zipes, Home Interiors & Gifts
Dave Edenburn

Thursday, December 4, 2003

All attendees from the previous day, less John Witham, Tom Mazurek and Tom Acklin.