

## Gallarzo, Wednesday R

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**From:** Garcia, Daniela  
**Sent:** Monday, August 14, 2017 8:36 AM  
**To:** Gallarzo, Wednesday R  
**Subject:** FW: [EXTERNAL] Re: (External):RE: Tub Spout Diverters - Draft Test Plan

**From:** Marc Esser [mailto:marc@negawattconsult.com]  
**Sent:** Monday, August 7, 2017 10:22 AM  
**To:** Anderson, Mary <M3AK@pge.com>  
**Cc:** Charles Kim <Charles.Kim@sce.com>; Garcia, Daniela <DGarcia3@semprautilities.com>; Barbour, John L <JBarbour@semprautilities.com>; Osann, Ed <eosann@nrdc.org>; Bo White <bo@negawattconsult.com>  
**Subject:** [EXTERNAL] Re: (External):RE: Tub Spout Diverters - Draft Test Plan

All,

There doesn't seem to be a time tomorrow that works for everyone, switching to doodle poll....

<https://doodle.com/poll/xkd37m2g8a6efbpt>

Thank you  
Marc

On Fri, Aug 4, 2017 at 10:51 PM, Marc Esser <[marc@negawattconsult.com](mailto:marc@negawattconsult.com)> wrote:

All,

sorry about the late update; we are still working on a revised test plan, and now also on a comment tracker. Some of the suggestions we received are quite detailed, so it takes a little more time than we anticipated to go through everything.

I haven't heard back from some of you regarding a call; considering the many suggestions I think it will help to walk through them as a team. Please let me know if that's agreeable to all, and if so, what time is best for each of you. Tuesday afternoon 12:30pm and 3pm are still open for us and SoCalGas.

Thank you, and have a great weekend  
Marc

On Wed, Aug 2, 2017 at 11:19 AM, Marc Esser <[marc@negawattconsult.com](mailto:marc@negawattconsult.com)> wrote:

Mary & Team,

thank you for your feedback. We are working on a revised version of the test plan that incorporates several of your ideas, as well as other comments we have received. We should have that ready before the end of the week.

For some of your suggestions, it would help if we could discuss first. What is everyone's availability for a call early next week? We'll share an updated test plan beforehand. We are available anytime Tuesday between 12:30 and 5pm, for example.

Marc

On Mon, Jul 31, 2017 at 3:04 PM, Anderson, Mary <[M3AK@pge.com](mailto:M3AK@pge.com)> wrote:

I have a few overall comments on the test plan. Please let me know if you have any questions. Thanks!

Mary

- The plan could be more detailed. It almost seems like the description in the General Test Setup and Methodology section was based on how one particular test lab currently operates the test. A more robust test plan that includes not only testing for leakage in accordance with ASME 112.18.1 - 2012 (i.e. 15,000 cycles), but testing out to 20,000 or 25,000 cycles to better understand product durability and EUL would better serve the IOUs and CEC.
- Details about the proposed testing timeframe would be useful information to include in the plan so that we know if we can anticipate the availability of the test results before the CASE Report is docketed.
- The testing plan briefly describes the leakage test using the container method (i.e. graduated cylinder) and a scale. However, ASME 112.18.1 - 2012 allows two methods for measuring leak rates, the container method and the fluid / flow meter method. Since the standard gives the test lab the option of choosing the measurement method, it would be ideal if the test plan includes both methods so that the results can be compared for a better assessment of data accuracy.
- The test plan states that the leakage rate will be determined by weighing the mass of the water (in grams) that is captured in the graduated cylinder. The test plan should include a brief explanation of why mass is measured, and how it will be converted to the measurement units used in ASME 112.18.1 - 2012 (mL/min or gallons per minute).
- The test plan does not provide a reason for why testing will be limited to three showering events per diverter. A brief explanation would be useful.
- The test plan does not describe how automatic-resetting vs. manual-resetting diverters will be identified for the sample set. The auto-resetting feature is apparently not commonly advertised on product packaging or in product literature (e.g., tech spec sheets), nor is it apparently true that all lift-type and pull-type diverters are designed to be auto-resetting. The test plan proposes sampling two

automatic reset and two manual reset diverters for each diverter type (e.g., lift-type, pull-type, push-type, turn-type) at varying flow rates but does not include any details on how auto vs manual will be discerned, or if the testing process will include exploration into the industry's claims about 1) the prevalence of auto-resetting diverters on the market, and 2) that most lift- and pull-type diverters are designed to automatically reset to the tub spout position once the shower valve is shut off. The test plan is also silent on whether they aim to include products from various manufacturers in the sample set.

- For the tested auto-resetting diverters, will the test lab report the number of failures? According to ASME 112.18.1 a failure results when the auto-resetting diverter does not automatically reset to the tub spout position once the shower is shut off. Furthermore, how will the test lab know if a particular diverter is designed to auto-reset if it's not marked on the packaging or in the product literature? In other words, how will the know if it has failed or not?

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**From:** Charles Kim [mailto:[Charles.Kim@sce.com](mailto:Charles.Kim@sce.com)]  
**Sent:** Monday, July 31, 2017 10:40 AM  
**To:** Garcia, Daniela; Anderson, Mary; Barbour, John L; Osann, Ed  
**Cc:** Marc Esser; Bo White  
**Subject:** RE: (External):RE: Tub Spout Diverters - Draft Test Plan

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Dear Daniela,

I do not have major comments. If I may, I want to point out that two decimal point accuracy may not enough when we trying to differentiate between 0.00 and 0.01 gpm.

I am wondering if ASME A112.18.1-2012 has the test water pressure defined or not. How many times do you need to repeat the test? If multiple, do we ask them to report only average or range or confidence interval?

Thanks.

**Charles J. Kim, P.E.**

Sr. Engineer

Energy Codes and Standards

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**From:** Garcia, Daniela [<mailto:DGarcia3@semprautilities.com>]

**Sent:** Monday, July 31, 2017 8:35 AM

**To:** Charles Kim <[Charles.Kim@sce.com](mailto:Charles.Kim@sce.com)>; Anderson, Mary <[M3AK@pge.com](mailto:M3AK@pge.com)>; Barbour, John L <[JBarbour@semprautilities.com](mailto:JBarbour@semprautilities.com)>; Osann, Ed <[eosann@nrdc.org](mailto:eosann@nrdc.org)>

**Cc:** Marc Esser <[marc@negawattconsult.com](mailto:marc@negawattconsult.com)>; Bo White <[bo@negawattconsult.com](mailto:bo@negawattconsult.com)>

**Subject:** (External):RE: Tub Spout Diverters - Draft Test Plan

All-

Just a reminder to please get back any test plan comments and edits at the earliest.

Thank You,

*Daniela Garcia*

SoCalGas Customer Programs

Project Manager – Building Codes and Appliance Standards

555 W. 5<sup>th</sup> Street, Los Angeles, CA 90013 | ML: GT19A6

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**From:** Garcia, Daniela  
**Sent:** Friday, July 21, 2017 1:52 PM  
**To:** Charles Kim <[Charles.Kim@sce.com](mailto:Charles.Kim@sce.com)>; Anderson, Mary <[M3AK@pge.com](mailto:M3AK@pge.com)>;  
[Jessica.Lopez@energy.ca.gov](mailto:Jessica.Lopez@energy.ca.gov); Barbour, John L <[JBarbour@semprautilities.com](mailto:JBarbour@semprautilities.com)>; Osann, Ed  
<[eosann@nrdc.org](mailto:eosann@nrdc.org)>  
**Cc:** Marc Esser <[marc@negawattconsult.com](mailto:marc@negawattconsult.com)>; Bo White <[bo@negawattconsult.com](mailto:bo@negawattconsult.com)>  
**Subject:** RE: Tub Spout Diverters - Draft Test Plan

If we could please have any comments by Friday, July 28<sup>th</sup>.

Thank You,

*Daniela Garcia*

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**From:** Garcia, Daniela  
**Sent:** Friday, July 21, 2017 1:24 PM  
**To:** 'Charles Kim' <[Charles.Kim@sce.com](mailto:Charles.Kim@sce.com)>; 'Anderson, Mary' <[M3AK@pge.com](mailto:M3AK@pge.com)>;  
'[Jessica.Lopez@energy.ca.gov](mailto:Jessica.Lopez@energy.ca.gov)' <[Jessica.Lopez@energy.ca.gov](mailto:Jessica.Lopez@energy.ca.gov)>; Barbour, John L  
<[JBarbour@semprautilities.com](mailto:JBarbour@semprautilities.com)>; 'Osann, Ed' <[eosann@nrdc.org](mailto:eosann@nrdc.org)>  
**Cc:** 'Marc Esser' <[marc@negawattconsult.com](mailto:marc@negawattconsult.com)>; Bo White <[bo@negawattconsult.com](mailto:bo@negawattconsult.com)>  
**Subject:** Tub Spout Diverters - Draft Test Plan

All,

Attached please find the Tub Spout Diverters Draft Test plan for your input and comments.

Thank You,

*Daniela Garcia*

SoCalGas Customer Programs

Project Manager – Building Codes and Appliance Standards

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