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Memorandum

DATE: December 8, 2021

TO: The Commission
Alberta E. Mills, Secretary

THROUGH: Austin Schlick, General Counsel

Mary T. Boyle, Executive Director

DeWane Ray, Deputy Executive Director for Safety Operations

FROM: Duane E. Boniface, Assistant Executive Director,
Office of Hazard Identification and Reduction

Kristen Talcott, Project Manager,
Division of Human Factors,
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SUBJECT: Staff Responses to Questions for the Record about the draft Notice of Proposed Rulemaking (NPR) Questions for Clothing Storage Units

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This memorandum provides staff responses to questions for the record from Commissioner Feldman about the draft NPR for Clothing Storage Units.

Questions from Commissioner Feldman

1. *Dr. Talcott mentioned she would need to get back to us on the cost-benefit question. The benefits analysis was fairly straight-forward. The cost analysis, on the other hand seemed to have significant variability, ranging from $5.80 to $30 per unit annually (note, I pulled the $30 amount from the legal memo, but $25 was in the PowerPoint p. 41, not sure why there is this discrepancy, but not sure it matters that much for the question). Despite this range, if we are reading the slide deck (p. 41) correctly, staff used the $5.80 figure for a $250m cost estimate, the very low end of the cost estimate. Was that simply for the sake of the Congressional Review Act? If so, can we get additional information about what staff believes the most likely costs associated with the rule, including the range for any cost estimates? Also, can staff provide any assumptions behind the*

estimates? I know this is a long question, and happy to walk through with staff if that helps clarify.

Staff provided a preliminary assessment of the proposed rule's potential benefits and costs. The potential costs of the proposed rule highly depend upon the actual modifications that are required for the CSUs to comply with the rule. Furthermore, staff found one model that would already comply with the tip-over moments proposed, and thus, would incur no costs.

The Draft Preliminary Regulatory Analysis, Tab H in the staff briefing package, provides extensive details on assumptions, including those made for potential costs of modifications. These costs were for five CSU models, for which staff evaluated potential modifications to meet the draft proposed rule, as outlined in Tab M. These potential modifications included the addition of one or more drawer interlock systems, reducing drawer extensions, extending the feet or front edge of the CSU forward, raising the front of the CSU, or adding weight to the back or rear of the CSU, each modification presents a range of potential costs, as discussed in Tab H. Staff requests comments on these assumptions. Of the potential modifications for which staff was able to estimate the potential cost (*i.e.*, five units that were involved in tip-over incidents and for which staff evaluated potential modifications), the lowest costs were about $5.80 for one of the units, based on assumptions that decreasing the drawer extensions by 1 inch and adding 24 pounds of counterweight would achieve complying results. Several of the product modifications for the other four units that were evaluated included one- or two-drawer interlock mechanisms in combination with reductions in allowable drawer extensions, extending the front feet, and using heavier counterweights; many of these estimates were significantly higher than $5.80 per unit. One of the analyzed units could meet the proposed requirements with just an interlock. The potential product modifications and their estimated costs are summarized in Table 7 of the Draft Preliminary Regulatory Analysis in Tab H (page 354 in the briefing package).

Even assuming the low cost of about $5.80 per unit (based on one of the CSUs evaluated by the staff), assuming annual sales of at least 43 million units, the annual cost of the draft proposed rule would be around $250 million. As you asked, staff used this low cost estimate specifically to demonstrate that the draft proposed rule would be considered a major rule under the Congressional Review Act.

Staff welcomes comments on the costs and benefits of the draft proposed rule. Staff notes that we looked at only five CSU models out of the hundreds or thousands available on the market, and that the units analyzed were models that had been involved in tip-over incidents.

2. *Dr. Talcott wasn't sure about the incident data post-rule promulgation with the Australia/New Zealand (AU/NZ) or the European Union (EU) standards, but it would be*

helpful to note (and support our assertion that these rules are insufficient), if we can see what happened in those countries post rule. It seems that one key difference is the use of a metric to account for carpeting, which seems to be a factor in a significant majority of incidents. Does staff agree?

Staff's analysis of the AS/NZA and European (EN) standard, as outlined in Tab F of the briefing package, was to evaluate how those standards align with the hazard patterns seen in the United States, finding that those standards do not adequately address the hazards outlined in the briefing package.

AS/NZA 4935 is a voluntary standard prepared by Standards Australia's and Standards New Zealand's Joint Technical Committee, and approved in 2009. The AS/NZA standard does not consider filled drawers or the impact of carpets, which staff described as primary hazards in the briefing package. In addition, although AS/NZA uses a higher test weight than ASTM F2057-19, 64 pounds, this weight is not adequate to represent the forces from a child climbing a CSU, especially when combined with the shorter (2/3) drawer opening extension in the AS/NZA standard. The only data staff has pertaining to tip-over incidents in Australia and New Zealand is described at the Australian Competition and Consumer Commission website For suppliers: toppling furniture and TVs | Product Safety Australia.

EN 14749:2016 is a European Standard that was approved by the European Committee for Standardization (CEN) in 2015, and supersedes EN 14749:2005, which was approved in 2005, as the original version. EN 14749:2016 applies to all CEN members. The EN standard does not consider the impact of carpets, and does not adequately address filled drawers in combination with multiple open drawers, which staff described as primary hazards in the briefing package. Staff also assesses that the standard does not adequately address the additional moments from horizontal forces and dynamic forces when a child climbs. Staff does not have data on tip overs in the EU.

Discussions of these and other standards are provided in Tab F of the briefing package, which includes more detailed descriptions of why staff found them to not be adequate to address the U.S. hazards described in Tab C and Tab D of the briefing package.

3. *Noting the importance of carpet in the incidents, is carpeting less prevalent in NZ/Australia and the European Union than it is in the United States? This will also be useful in terms of understanding why those standards wouldn't be effective.*

Staff did not analyze the prevalence of carpeting in Australia, New Zealand, or the European Union. Staff's analysis of the AU/NZ, EU and other standards was to evaluate whether those standards adequately address the hazard patterns seen in the United States, finding that those standards do not adequately address the hazards, as outlined in the briefing package Tab F.

4. *Given that none of the other standards require the use of carpet or attempt to simulate carpet, but given that seems to be such a significant factor in our incident data, why is staff recommending a proxy for carpet in the methodology versus requiring the use of actual carpet?*

   A CSU on a carpet/pad is less stable than one on a hard, level, and flat floor. Carpet can reduce the amount of weight that a CSU can hold before tipping over by a few pounds to a few dozen pounds. Based on testing of CSUs on carpeting, as described in Tab P, staff determined that the reduction in stability from a common carpet and pad combination was equal to the effect of tilting the CSU an average of 1.5 degrees forward, as described in Tab D.

   Staff is recommending a proxy for carpet (tilting the CSU 1.5 degrees forward) versus requiring the use of actual carpet to ensure consistency with the testing methodology and repeatability of the test results. Using actual carpet and padding introduces test variability due to the variability of the density of the pad and the pile characteristics of the carpet, as well as the need to precondition the carpet by letting the CSU settle, and the potential effect of previously tested/compressed carpet on test results.

   It is also worth noting that ASTM Furniture Subcommittee members have discussed using a 1- to 2-degree angle to simulate the effect of carpet on stability. Their most recent proposal would use a ½-inch block to raise the back legs of the CSU, which results in an angle greater than 1.5 degrees for many CSUs. This specific test method was first proposed in November, and it has not been balloted. ASTM members have also expressed multiple concerns with using actual carpet in testing.

5. *Did staff consider a 15(j)-enforcement mechanism for the hangtag requirement? Because the presence of a hangtag would be a readily-observable characteristic of CSUs at import, would inclusion of the hangtag requirement within 15(j) be an effective means to enforce this rule and prevent dangerous CSUs from entering commerce in the first place? Is this something that could be incorporated for stakeholder feedback into this rulemaking or taken up at later date?*

   [The response to this question will be provided by OGC separately]