



May 9, 2023

Ms. Susan Orenga
Executive Director
Portable Generator Manufacturers Association (PGMA)
1300 Sumner Ave.
Cleveland, OH 44115-2851

SUBJ: Recent PGMA Data Requests

Dear Ms. Orenga:

This letter is in response to two recent requests from PGMA. Your April 24, 2023 letter to John Topping, a Mathematical Statistician in the Division of Hazard Analysis in the Directorate for Epidemiology at the U.S. Consumer Product Safety Commission (CPSC), requested information regarding his report *Non-Fire Carbon Monoxide Deaths Associated with the Use of Consumer Products 2019 Annual Estimates*.¹ The second request, an April 26, 2023 letter from PGMA Technical Director Joseph Harding requested a 60-day extension to the comment period for the Safety Standard for Portable Generators supplemental notice of proposed rulemaking (SNPR, available at 88 Fed. Reg. 24,346).² That letter stated that PGMA may submit a FOIA request and implied that the contemplated request would concern 511 fatality scenarios discussed in the SNPR, which housing model or housing models were assigned to that scenario, and if multiple housing models were assigned, what weight was applied to each.

Regarding PGMA's first request, the *Non-Fire Carbon Monoxide Deaths Associated with the Use of Consumer Products 2019 Annual Estimates* report uses death certificates that CPSC obtains from every state and compares them with the complete set of death certificates obtained by the National Center for Health Statistics to estimate the number of non-fire carbon monoxide deaths associated with numerous products under CPSC's jurisdiction. The portion of these death certificates that we are currently able to share outside the agency is available at <https://www.cpsc.gov/Data> in the National Injury Information Clearinghouse. Some content has been withheld from public availability to protect personal privacy and comply with the terms under which these records were obtained. Product code 606 identifies generators and if one further selects the report source of death certificate and ICD External Causes of X47 and Y17 they will see the records used in the computation of the estimates. Death certificates usually do not contain a number of incident-related details (e.g., generator placement) that might

¹ PGMA letter to Mr. John Topping, Directorate for Epidemiology, Directorate for Hazard Analysis, dated April 24, 2023. (Document ID CPSC-2006-0057-0121)

² PGMA letter to Ms. Mills, Secretary of the Commission, dated April 26, 2023. (Document ID CPSC-2006-0057-0120 in www.regulations.gov)

be of interest to CPSC or PGMA in connection with analysis of the CO hazard presented by portable generators. As mentioned in the *2019 Annual Estimates* report, however, additional detail obtained through in-depth investigations conducted by CPSC (and other reports received by CPSC) can be used to complement the information reflected in the death certificates. In any event, it should be noted that the analyses relied upon in the SNPR did not use the estimates from the *2019 Annual Estimates* report, but rather specific incidents delineated in the staff briefing package. I would call your attention to pages OS-111 and Table 5 of Tab A in the SNPR briefing package (page OS-144) which provide this information.

In your April 24 letter, you state that you would appreciate additional data that notes the location where the generator was running when the deaths identified in the *2019 Annual Estimates* occurred. For this kind of information, I recommend the [*Fatal Incidents Associated with Non-Fire Carbon Monoxide Poisoning from Engine-Driven Generators and Other Engine-Driven Tools, 2011–2021*](#) report. The *Fatal Incidents* report is conservative (i.e., provides counts that are likely less than the actual number of deaths) as it relies only on reports in CPSC's possession (versus extrapolating to estimate the additional deaths not reported to CPSC) and it similarly makes use of details from in-depth investigations. The *Fatal Incidents* report was used as the basis for the Safety Standard for Portable Generators SNPR and despite its earlier publication date includes incident data that occurred more recently (i.e., after 2019). Location information can be found on pages 17-18, 25-27, 34 and 35 of the *Fatal Incidents* report. Additionally, generator location information for fatal incidents during the years 2004 through 2021 appears in the SNPR on pages OS112 and OS144.

The April 26 letter from PGMA to CPSC asserts "nowhere is it documented for each of the 511 fatalities studied which housing model or models were assigned to that fatality, and if multiple housing models were assigned what weight was applied to each." This assertion is mistaken. On February 16, 2022, CPSC published the ["Briefing Package on Assessment of Portable Generator Voluntary Standards' Effectiveness in Addressing CO Hazard, and Information on Availability of Compliant Portable Generators"](#)³. This included detailed information in Tab A about exactly how many fatalities were allocated to each of the NIST modelled structures based on the fatal incident data and that partial matches and unknowns were allocated proportionately. These allocations were based on CPSC's examination of the homes based on a mix of non-releasable data (including the address of the incident and confidential police reports) as well as publicly available resources (e.g., real estate listings for ascertaining the layout of the homes). CPSC cannot disclose the addresses or other identifying information for victims obtained under non-disclosure restrictions.

Also in connection with PGMA's April 26 letter, please be aware of CPSC staff's assessment that, using the NIST models, similar differences in fatalities for the G300 standard versus the UL2201 standard exist for every structure type. In the table below,

³ https://www.cpsc.gov/s3fs-public/Briefing-Package-on-Portable-Generator-Voluntary-Standards.pdf?VersionId=hLnAkKQ6bCD_SKin8RE6Iax.BjZsB5x3 (Document ID CPSC-2006-0057-0107 in www.regulations.gov)

the baseline column represents the fatality allocations to structure types based on reports received by CPSC. The columns to the right show what the NIST models would predict to be the number of fatalities for G300 and UL2201 compliant generators, respectively.

Structure	Fatalities in Baseline	Estimated Fatalities with PGMA G300 Compliant Generator	Estimated Fatalities with UL2201 Compliant Generator
AH3mod	7.500	0.505	0.000
AH10	4.500	0.203	0.000
AH21	1.000	0.175	0.000
AH34mod	3.000	0.323	0.000
DH1	9.700	1.741	0.000
DH2	12.700	0.156	0.000
DH2mod	2.500	0.471	0.000
DH3	19.733	2.396	0.000
DH5	9.700	0.261	0.007
DH7	24.333	4.520	0.000
DH8	16.833	2.815	0.000
DH10	4.000	0.578	0.000
DH12	5.600	0.872	0.000
DH19mod	17.700	3.365	0.000
DH21	31.400	1.744	0.000
DH21mod	7.233	1.636	0.000
DH24mod	5.200	0.258	0.000
DH27	2.000	0.164	0.031
DH32	7.333	2.691	0.000
DH33mod	7.100	1.256	0.000
DH34	21.600	1.390	0.000
DH41	6.000	0.213	0.000
DH44	1.000	0.157	0.000
DH45	3.000	0.668	0.000
DH45mod	33.400	6.889	0.000
DH52mod	8.333	2.240	0.000
DH56	7.500	0.307	0.001
DH60	9.200	1.877	0.000
DH60mod	3.500	0.668	0.000
DH61	16.700	1.158	0.000
DH61mod	27.900	3.508	0.000
DH63mod1	24.300	1.745	0.000
DH63mod2	7.000	0.454	0.000
DH64	11.100	2.140	0.000

<u>DH81</u>	<u>5.500</u>	<u>0.559</u>	<u>0.000</u>
<u>GAR1</u>	<u>12.900</u>	<u>3.566</u>	<u>0.000</u>
<u>GAR2</u>	<u>13.700</u>	<u>2.280</u>	<u>0.000</u>
<u>GAR3</u>	<u>19.400</u>	<u>7.659</u>	<u>0.000</u>
<u>MH1</u>	<u>15.500</u>	<u>0.817</u>	<u>0.000</u>
<u>MH1mod</u>	<u>64.500</u>	<u>4.071</u>	<u>0.000</u>
<u>Total</u>	<u>511.099</u>	<u>68.497</u>	<u>0.038</u>

Should you have further questions after reviewing this table, more information regarding the structure taxonomy shown in the leftmost column can be found in the CPSC staff's February 16, 2022 briefing package on the SNPR.

Sincerely,

Stephen J. Hanway
Associate Executive Director
Directorate for Epidemiology
U.S. Consumer Product Safety Commission

cc: Jacqueline Campbell, CPSC Voluntary Standards Coordinator