



April 12, 2021

Board of Coal Mine Safety  
Rachel Carson State Office Building, 16th Floor  
400 Market Street  
Harrisburg, PA 17105

### **American Lung Association Comments in Support of the Rulemaking to Prohibit Electronic Liquid-Vaporizing Devices at Underground Bituminous Coal Mines.**

On behalf of the American Lung Association in Pennsylvania, I am writing to express our support for the proposed rulemaking to prohibit electronic liquid-vaporizing devices at underground bituminous coal mines. Given the dangerous health effects and potential hazards associated with e-cigarettes and other electronic liquid-vaporizing devices, it's crucial that the health, safety and welfare of miners and other individuals is protected by prohibiting these devices in coal mines.

Electronic cigarettes, or e-cigarettes, are tobacco products that include e-pens, e-pipes, e-hookah, e-cigars, JUULs, "vapes" and "vape pens", and are collectively known as ENDS—electronic nicotine delivery systems. While much remains to be determined about the lasting health consequences of e-cigarettes, there's evolving evidence about the health risks of e-cigarettes on the lungs—including irreversible lung damage and lung disease<sup>i</sup>.

The main component of e-cigarettes is the e-liquid contained in cartridges or tanks. To create an e-liquid, nicotine is extracted from tobacco and mixed with a base (usually propylene glycol), and may also include flavorings, colorings, and other chemicals (such as formaldehyde and acrolein, which can cause irreversible lung damage). Not only is the nicotine an addictive chemical, but a study from the University of North Carolina found that even in small doses, inhaling the two primary ingredients found in e-cigarettes—propylene glycol and vegetable glycerin—is likely to expose users to a high level of toxins and that the more ingredients a user is inhaling, the greater the toxicity<sup>ii</sup>.

According to the Centers for Disease Control and Prevention (CDC), other ingredients include ultrafine particles that can be inhaled deep into the lungs, flavoring such as diacetyl - a chemical linked to a serious lung disease - as well as volatile organic compounds, cancer-causing chemicals, and even heavy metals such as nickel, tin, and lead, all of which should not be exposed to miners in underground coal mines<sup>iii</sup>.

However, the health effects for those who use e-cigarettes and those exposed to the e-cigarette aerosol are not the only concern with these harmful devices. E-cigarettes are generally battery-operated and use a heating element to heat the e-liquid from a cartridge. Due to these heating elements such as lithium batteries, defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries<sup>iv</sup>. Such an explosion inside an underground coal mine could prove to be hazardous and a risk to miners and other individuals inside the mines.



As a result of the potential harmful health effects and dangers associated with these electronic liquid-vaporizing devices, the American Lung Association strongly supports the Board of Coal Mine Safety's rulemaking to prohibit electronic liquid-vaporizing devices at underground bituminous coal mines.

Thank you for the opportunity to submit comments.

Sincerely,

A handwritten signature in black ink that reads "Molly Pisciotano". The signature is fluid and cursive, with a large, stylized "P" at the end.

Molly Pisciotano  
Advocacy Director, Pennsylvania

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<sup>i</sup> American Lung Association. (2020). <https://www.lung.org/quit-smoking/e-cigarettes-vaping/lung-health>.

<sup>ii</sup> "

<sup>iii</sup> Centers for Disease Control and Prevention (CDC). (2020). [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html).

<sup>iv</sup> "