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November 26, 2019

ATTORNEY GENERAL OPINION NO. 2019- 9

The Honorable David A. Benson  
State Representative, 48th District  
13901 Hemlock St.  
Overland Park, Kansas 66223

Re: Public Health—Regulation of Embalmers and Funeral Directors; Funeral Establishments—General Provisions—Definitions—Cremation

Synopsis: A proposed process for the disposition of a dead human body that includes cryogenically freezing the body, applying vibration to shatter the frozen body into particles, and freeze-drying the particles does not meet the definition of "cremation" set out in statute and regulations. Cited herein: K.S.A. 65-1760 and regulations adopted thereunder.

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Dear Representative Benson:

As State Representative for the 48<sup>th</sup> District, you request our opinion on whether the disposition of dead human bodies by a proposed process involving cryogenic freezing is permissible under Kansas law, specifically, K.S.A. 65-1760(e) and K.A.R. 63-7-1(k) and (l). This opinion addresses only whether the process described in your request letter meets the requirements of "cremation" as set forth in K.S.A. 65-1760(e) and regulations adopted thereunder; it does not address whether the proposed process described in the request letter would be permissible under other Kansas laws and regulations concerning public health and safety in the handling of dead human bodies.<sup>1</sup> Such determinations fall squarely within the purview of the Kansas State Board of Mortuary Arts.

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<sup>1</sup> See, e.g., K.A.R. 63-3-10 (stating requirements for handling of the bodies of persons who died from infectious or contagious diseases).

Before analyzing whether the disposition of dead human bodies by cryogenic means is "cremation" under Kansas law, we must first have an understanding of the proposed process.<sup>2</sup> The request does not indicate that this method has been used or approved in the United States or elsewhere, and the only information we have concerning the process is the animated YouTube video cited in the request letter.<sup>3</sup> A slide in that video lists six steps that would occur in the proposed process of disposing of a dead human body by cryogenic means. Those steps are:

- (1) "Coffin separation" (removal of the dead human body from the coffin);
- (2) "Cryogenic freezing" (by exposing the body to liquid nitrogen);
- (3) "Vibration" (to reduce the body to particles);
- (4) "Freeze-drying" (to remove water);
- (5) "Metal separation" (and removal of "up to 50 kinds of foreign substance[s]"); and
- (6) "Filling and burial" (of a biodegradable container).

Our analysis begins with the statutory definition of cremation. The Kansas Supreme Court has stated that in interpreting statutes, the primary goal is to ascertain the intent of the Legislature.<sup>4</sup> To do so, we follow the approach of the courts, giving the words in the statute their ordinary, everyday meanings.<sup>5</sup>

The statute defining cremation, K.S.A. 65-1760, states:

"Cremation' means the mechanical and/or other dissolution process that reduces human remains to bone fragments. Cremation includes the

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<sup>2</sup> The term "proposed process" is used because the request letter does not indicate that disposition of dead human bodies by cryogenic means has been performed anywhere in the world, and our research has not revealed any instances of use of the process or the existence of the machinery needed to perform the process. The website of Promessa, the Swedish company that appears to be the only marketer of the proposed process, uses the word "concept" in describing the process. See <http://www.promessa.se/united-states-getting-the-fifth-us-promessa-representative/> (last visited Sept. 16, 2019). See also *Cremation Process*, Cremation Society of North America, <https://www.cremationassociation.org/page/CremationProcess> (last visited Nov. 14, 2019) (stating that, although "[a]dditional processes may be in development," only flame-based cremation and alkaline hydrolysis are in use in the United States and Canada).

<sup>3</sup> <https://www.youtube.com/watch?v=4HD5Gt80H6s&sns=em> (last accessed Sept. 16, 2019) (hereinafter, "the animated video" or "the video").

<sup>4</sup> *State v. Pulliam*, 308 Kan. 1354, 1364 (2018).

<sup>5</sup> *Id.*

processing and usually includes the pulverization of the bone fragments."<sup>6</sup>

Regulations interpreting the statute define "processing" as "the reduction of identifiable bone fragments after the completion of the cremation process to unidentifiable bone fragments by manual or mechanical means"<sup>7</sup> and define "pulverization" as "the reduction of identifiable bone fragments after the completion of the cremation and processing to granulated particles by manual or mechanical means."<sup>8</sup>

K.S.A. 65-1760(e) and its interpreting regulations require that cremation result in bone fragments that are initially identifiable as such and are then made unidentifiable by further processing.<sup>9</sup> Logically, the reduction of human remains, which consist of both flesh and bones, to bone fragments requires the elimination of flesh. We conclude that the separation of flesh from bone by the destruction of the flesh is a necessary element for a process to be a cremation process under Kansas law.<sup>10</sup>

The animated video shows that the proposed process would not destroy or eliminate flesh or produce identifiable bone fragments. Rather, the video touts the idea that the proposed process would convert the *entire* body into "crystallized body particles" with "no change in composition whatsoever."<sup>11</sup> Thus, as described, the proposed process would yield particles of both flesh and bone, in a commingled state. Because the proposed process for the disposition of a dead human body by cryogenic means would not destroy or eliminate flesh to leave bone fragments, we conclude that it does not meet the definition of cremation in K.S.A. 65-1760(e).

This conclusion is bolstered by the legislative history of the statute. In 2010, the Legislature amended K.S.A. 65-1760(e) to broaden the definition of cremation beyond traditional flame-based cremation.<sup>12</sup> It struck the requirement that cremation "reduce[]

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<sup>6</sup> K.S.A. 65-1760(e).

<sup>7</sup> K.A.R. 63-7-1(k).

<sup>8</sup> K.A.R. 63-7-1(l).

<sup>9</sup> K.A.R. 63-7-1(k), (l).

<sup>10</sup> In traditional cremation, the tissue of a dead human body combusts into gases and the bone fragments remain. *The Technical Details*, Cremation Association of North America, <https://www.cremationassociation.org/page/CremationProcess> (last visited Nov. 14, 2019). The other process that is recognized as legal in Kansas is alkaline hydrolysis. This method "dissolv[es] the flesh off the[] bones." Devin Powell, *Dissolve the Dead? Controversy Swirls around Liquid Cremation* (Sept. 7, 2017), <https://www.scientificamerican.com/article/dissolve-the-dead-controversy-swirls-around-liquid-cremation/> (last visited Nov. 14, 2019); see also *Alkaline Hydrolysis*, Cremation Association of North America, <https://www.cremationassociation.org/page/alkalinehydrolysis> (last visited Nov. 14, 2019) (stating that "there is no tissue ... left after the process" and that the resulting bone fragments are dried and pulverized).

<sup>11</sup> According to the video, the proposed process would, though, remove water and minerals from the remains.

<sup>12</sup> L. 2010, Ch. 131, § 8(e). The Legislature removed the requirement that cremation be done by "intense heat and flame" and replaced it with the current language, that cremation is "the mechanical and/or other dissolution process that reduces human remains to bone fragments."

a dead human body to essential elements" and substituted the requirement that cremation "reduce[] human remains to bone fragments."<sup>13</sup> Because the proposed cryogenic disposition would not reduce a body to "bone fragments" but would instead result in commingled "crystallized body particles" of flesh and bone, we conclude that it does not meet the definition of cremation in K.S.A. 65-1760(e).

From the limited information before us—the description of a concept for the disposition of a dead human body that includes removing the body from a coffin, cryogenically freezing the body, applying vibration to shatter the frozen body into particles, and freeze-drying the particles—we conclude that such a proposed process would not meet the requirements of a cremation process as set forth in K.S.A. 65-1760 and regulations adopted thereunder.

Sincerely,

/s/Derek Schmidt

Derek Schmidt  
Kansas Attorney General

/s/AnnLouise Fitzgerald

AnnLouise Fitzgerald  
Assistant Attorney General

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<sup>13</sup> This phrase comes from the model definition published by the Cremation Association of North America. *Cremation Model Law*, Cremation Association of North America (Rev. Dec. 2009). The Legislature was urged to adopt the model definition in its entirety, but the amendment omitted "thermal" dissolution processes. *Minutes*, Senate Comm. on Public Health and Welfare, Feb. 16, 2010, attachments 7, 7-3.