
Call to Order – *Blair Nelsen, FSL, Board Member and Workgroup Chair*

- Welcome and Introductions
- Emergency Egress Instructions

Approval of Minutes – July 14, 2022

Approval of Agenda

Public Comment

The Board will receive public comment on agenda items at this time. The Board will not receive comment on any pending regulation process for which a public comment period has closed or any pending or closed complaint or disciplinary matter.

Charge of Workgroup – *Blair Nelsen*

Workgroup Discussion

- **Review of July 14, 2022 Workgroup Meeting** – *Corie E. Tillman Wolf, JD, Executive Director*
- **Considerations Specific to Septic System Emissions** – *Marcia Degen, PhD, PE, and Ryder Bunce, PE, Virginia Department of Health*
- **Discussion of Study Recommendations** – *Workgroup Members*
 - **Definition of “Alkaline Hydrolysis”**
 - **Final Disposition of Human Remains**
 - **Environmental Emissions and Wastewater Treatment**
 - **Board Statutes and Regulations**

Next Steps – *Blair Nelsen*

Meeting Adjournment

This information is in **DRAFT** form and is subject to change. The official agenda and packet will be approved by the public body at the meeting and will be available to the public pursuant to Virginia Code Section 2.2-3707(F).

The Virginia Board of Funeral Directors and Embalmers convened an Alkaline Hydrolysis Workgroup meeting on Thursday, July 14, 2022, at the Department of Health Professions, Perimeter Center, 9960 Mayland Drive, 2nd Floor, Board Room #2, Henrico, Virginia.

WORKGROUP MEMBERS PRESENT:

Blair H. Nelsen, FSL, Board Member, Workgroup Chair
J. Frank Walton, FSL, Board Member
J. Michael Williams, FSL, Board Member
Ryder Bunce, PE, Virginia Department of Health
Deborah DeBiasi, Virginia Department of Environmental Quality
Marcia Degen, Ph.D., PE, Virginia Department of Health
William Gormley, MD, Ph.D., Virginia Department of Health
Barbara Kemmis, CAE, Cremation Association of North America (CANA)
Mike Martin, Hampton Roads Sanitation District
Mike Nicodemus, FSL, National Funeral Directors' Association (NFDA)
Richard Sikon, FSL, MLA, Virginia Department of Health

DHP STAFF PRESENT FOR ALL OR PART OF THE MEETING:

Sarah Georgen, Licensing and Operations Manager
Kelley Palmatier, Deputy Executive Director
Greer Peacock, Policy Intern
Corie Tillman Wolf, Executive Director

OTHER GUESTS PRESENT:

Angela Bezik, Principle Advantage
Eric Bliley, Association of Independent Funeral Homes of Virginia (IFHV)
Cindy DiFranco, Principle Advantage
Darrin Jones, Jones Funeral Home, Virginia Funeral Directors Association (VFDA)
Bo Keeney, Association of Independent Funeral Homes of Virginia (IFHV)
Ben Traynham, Hancock, Daniel, & Johnson, P.C.
Barry Robinson, Virginia Morticians' Association

**participant indicates attendance to count toward continuing education requirements*

CALL TO ORDER

Mr. Nelsen called the meeting to order at 9:31 a.m. Mr. Nelsen stated that the Alkaline Hydrolysis Workgroup convened to study the alkaline hydrolysis process as directed by Senate Bill 129, resulting from the 2022 General Assembly Session. He stated that the study results would be provided to the respective Chairs of the Senate Committee on Education and Health and the House Committee on Health, Welfare, and Institutions by November 1, 2022.

Mr. Nelsen asked the Workgroup members and Board staff to introduce themselves.

AGENDA

Mr. Nelsen requested proposed changes to the ordering of the agenda. Hearing none, he proceeded with the meeting.

PUBLIC COMMENT

There was no public comment.

EMERGENCY EGRESS

Ms. Tillman Wolf then read the emergency egress instructions.

CHARGE OF THE WORKGROUP

Mr. Nelsen stated that the Workgroup was convened pursuant to SB 129, which directs the Board of Funeral Directors and Embalmers to “convene a Workgroup consisting of relevant stakeholders” to determine:

- (i) regulatory and statutory changes needed to legalize, implement, and regulate the process of alkaline hydrolysis in the Commonwealth;
- (ii) necessary qualifications to enable a person to engage in the practice of alkaline hydrolysis;
- (iii) proper standards for the operation of a facility containing a pressure vessel for alkaline hydrolysis; and
- (iv) proper requirements for licensure as an owner or operator of such a facility.

Mr. Nelsen stated that the Workgroup is further tasked with considering “any necessary environmental precautions and safety measures to ensure proper (a) regulation and implementation of the alkaline hydrolysis process and (b) regulation and inspection of facilities where alkaline hydrolysis is conducted in the Commonwealth.”

Mr. Nelsen requested the Workgroup discuss the alkaline hydrolysis process, to look at the current laws and regulations related to funeral services, and discuss how other states have addressed alkaline hydrolysis in their statutes and regulations.

Mr. Nelsen asked the Workgroup members to think about the following questions for additional discussion toward the end of the meeting:

- How should alkaline hydrolysis be defined?
- How is alkaline hydrolysis similar to or different from cremation, which is already regulated as a means of disposition? How do those similarities or differences factor into the current laws and regulations (and need for amendments/new provisions)?
- What environmental concerns may exist related to alkaline hydrolysis in terms of effluent emissions?

PRESENTATIONS OF INFORMATION:

Mr. Sikon provided a presentation on the Alkaline Hydrolysis process, including the general mechanics and chemical process involved.

Ms. Kemmis provided information on the available training and resources, including the incorporation of alkaline hydrolysis into existing crematory operator training.

Mr. Nicodemus provided information on the resources available through the NFDA.

CURRENT LAWS AND REGULATIONS AND STATE COMPARISONS

Ms. Tillman Wolf provided information on how other states regulate alkaline hydrolysis – whether by definition, inclusion in the cremation process, or separate regulatory structure. She presented information on Virginia's current laws and regulations related to disposition of human remains and funeral services.

CONSIDERATIONS FOR RECOMMENDED REGULATORY/STATUTORY CHANGES

The Workgroup discussed the use of alkaline hydrolysis for the final disposition of human remains, with some focus on the aspects of environmental emissions and wastewater treatment.

The Workgroup recommended that alkaline hydrolysis be included as an accepted means of final disposition of human remains in the Code of Virginia.

The Workgroup recommended defining alkaline hydrolysis as a separate and distinct process within the Code of Virginia while using broad terminology that does not favor specific manufacturers or processes. The Workgroup will further discuss the definition of “alkaline hydrolysis” and related terms such as “hydrolyzed remains” and “alkaline hydrolysis facility” at the next meeting.

The Workgroup recommended creating a regulatory structure for “alkaline hydrolysis” that appropriately reflects and accounts for the differences and similarities in the processes for alkaline hydrolysis and cremation. The Workgroup will further discuss appropriate alkaline hydrolysis containers and language related to “commercially made” alkaline hydrolysis vessels based on other state comparisons.

The Workgroup recommended including licensure and registration requirements for alkaline hydrolysis facilities or operators that include appropriate consultation, authorization, and permits from state and local wastewater treatment authorities to minimize the potential for adverse environmental impact, to ensure appropriate equipment or vessels that discharge effluent into the wastewater system; and to ensure the proper and safe storage and handling of caustic chemicals that may impact water systems if leaked or spilled.

The Workgroup requested additional information from the Virginia Department of Health regarding the permit process related to septic systems. Additionally, the Workgroup requested additional information on how other states register alkaline hydrolysis facilities for discharge materials emitted into septic fields.

NEXT STEPS

Mr. Nelsen stated that the Board would start drafting initial recommendations for consideration by the Workgroup based on the discussion. He stated that the Workgroup would review the specific regulatory requirements and possible draft language for the study document at the next meeting. He asked Workgroup members to continue thinking about the same questions as they relate to the statutory and regulatory amendments that may be needed if the alkaline hydrolysis process were implemented.

NEXT MEETING

The next meeting date is August 12, 2022.

ADJOURNMENT

With all business concluded, the meeting adjourned at 11:19 a.m.

Corie Tillman Wolf, J.D., Executive Director

Date

CHAPTER 191

An Act to direct the Board of Funeral Directors and Embalmers to convene a work group to study how to regulate and implement the process of alkaline hydrolysis in the Commonwealth.

[S 129]

Approved April 7, 2022

Be it enacted by the General Assembly of Virginia:

1. *§ 1. That the Board of Funeral Directors and Embalmers (the Board) shall convene a work group consisting of relevant stakeholders to determine the (i) regulatory and statutory changes needed to legalize, implement, and regulate the process of alkaline hydrolysis in the Commonwealth; (ii) necessary qualifications to enable a person to engage in the practice of alkaline hydrolysis; (iii) proper standards for the operation of a facility containing a pressure vessel for alkaline hydrolysis; and (iv) proper requirements for licensure as an owner or operator of such a facility. In conducting its study, the work group shall provide opportunity for public participation and consider any necessary environmental precautions and safety measures to ensure proper (a) regulation and implementation of the alkaline hydrolysis process and (b) regulation and inspection of facilities where alkaline hydrolysis is conducted in the Commonwealth. The Board shall report the results of such study to the Chairmen of the Senate Committee on Education and Health and the House Committee on Health, Welfare and Institutions on or before November 1, 2022.*

States that Allow/Recognize Alkaline Hydrolysis

I. States that Include process in definition/provisions for cremation; term “alkaline hydrolysis” not specifically used			
State	Statute(s)/Regulation(s)	Definition of Process	Notes
Colorado	Colorado Statutes § 12-54-102	<p>(3) "Cremated remains" or "cremains" means all human remains recovered after cremation, including pulverization, that leaves only bone fragments that have been reduced to unidentifiable dimensions.</p> <p>(4) "Cremation" or "cremate" means the reduction of human remains to essential elements, the processing of the remains, and the placement of the processed remains in a cremated remains container.</p> <p>(4.3) "Cremation chamber" means the enclosed space inside of which human remains are cremated.</p> <p>(4.5) "Cremation container" means a container in which the human remains are transported to the crematory and intended to be placed in the cremation chamber.</p> <p>(4.7) "Cremationist" means a person who cremates or prepares for cremation human remains.</p> <p>(5) "Crematory" means a building, facility, establishment, or structure where human remains are cremated.</p>	Process included in definition of cremation but not specifically named
Florida	Florida Statutes 497.005	<p>(16) “Cinerator” means a facility where dead human bodies are subjected to cremation</p> <p>(21) “Cremated remains” means all the remains of the human body recovered after the completion of the cremation process, including processing or pulverization that leaves only bone fragments reduced to unidentifiable dimensions and may include the residue of any foreign matter, including casket material, bridgework, or eyeglasses that were cremated with the human remains.</p> <p>(22) “Cremation” means any mechanical or thermal process whereby a dead human body is reduced to ashes and bone fragments. Cremation also includes any other mechanical or thermal process whereby human remains are pulverized, burned, re-cremated, or otherwise further reduced in size or quantity.</p> <p>(23) “Cremation chamber” means the enclosed space within which the cremation process takes place. Cremation chambers covered by these procedures shall be used exclusively for the cremation of human remains.</p>	Process included in definition of cremation but not specifically named

		(24) "Cremation container" means the casket or alternative container in which the human remains are transported to and placed in the cremation chamber for a cremation. ...	
Georgia	GA Code 43-18-1	(5) "Cremation" means the reduction of the dead human body to residue by intense heat or any mechanical, chemical, thermal, or other professionally accepted process. Cremation also includes any other mechanical, chemical, thermal, or other professionally accepted process whereby human remains are pulverized, burned, re Cremated, or otherwise further reduced in size or quantity. (6) "Crematory" means any place where cremation is performed, other than a hospital, clinic, laboratory, or other facility authorized by the Department of Community Health for such purposes.	Process included in definition of cremation but not specifically named
Illinois	410 ICLS 18/5	"Cremated remains" means all human remains recovered after the completion of the cremation, which may possibly include the residue of any foreign matter including casket material, bridgework, or eyeglasses, that was cremated with the human remains. "Cremation" means the technical process, using heat and flame, or alkaline hydrolysis that reduces human remains to bone fragments. The reduction takes place through heat and evaporation or through hydrolysis. Cremation shall include the processing, and may include the pulverization, of the bone fragments. "Cremation chamber" means the enclosed space within which the cremation takes place. ... "Cremation room" means the room in which the cremation chamber is located. "Crematory" means the building or portion of a building that houses the cremation room and the holding facility. "Crematory authority" means the legal entity which is licensed by the Comptroller to operate a crematory and to perform cremations.	Process included in definition of cremation
Kansas	Kansas Statutes 65-1760	(d) "Cremated remains" means all human remains recovered after the completion of the cremation of a dead human body, which may possibly include the residue of any foreign matter including casket material, bridgework or eyeglasses, that was cremated with the dead human body. (e) "Cremation" means the mechanical and/or other dissolution process that reduces human remains to bone fragments. Cremation includes the processing and usually includes the pulverization of the bone fragments. (f) "Cremation chamber" means the enclosed space within which the cremation of a dead human body is performed. Such chambers shall be used exclusively for the cremation of human remains.	Process included in definition of cremation but not specifically named

		<p>(g) "Crematory" means a business premises that houses the cremation chamber and holding facility where dead human bodies are cremated. A crematory shall be maintained at a fixed and specific street address.</p> <p>(h) "Crematory operator" means a person who is engaged in, conducting or holding oneself out as engaged in or conducting, the business of cremation.</p> <p>(i) "Crematory operator in charge" means the licensed crematory operator who is responsible to ensure that the crematory's license is current and that the licensed crematory is in compliance with the laws and regulations of this state. Nothing in this definition shall relieve other persons involved with a cremation from complying with state and federal laws and regulations.</p>	
Maine	10-144 CMR 227, Section 1	Cremation: The technical process, using direct flame and heat, or other process, that reduces human remains to bone fragments. The reduction takes place through heat and evaporation, or through other processes, including, but not limited to, chemical dissolution. Cremation includes the processing and usually includes the pulverization of the bone fragments.	Process included in definition of cremation but not specifically named
Missouri	20 CSR 2120-1.040; - 2.071	<p>(6) Cremated remains-the bone fragments which remain after the cremation process is completed.</p> <p>(7) Cremation-a final disposition of dead human remains; the mechanical process which reduces remains to bone fragments through heat, evaporation, and/or an alkaline hydrolysis chemical process.</p> <p>(8) Cremation box-a container into which cremated remains are placed.</p> <p>(9) Cremation chamber-the total functioning mechanical unit for the actual cremation process.</p> <p>(10) Cremation container-the container in which the human remains are delivered to the crematory area for cremation.</p>	Process included in definition of cremation
II. States that use the term "alkaline hydrolysis" in statute/regulation			
Alabama	Code § 34-13-1 (2018)	<p>(2) ALKALINE HYDROLYSIS. The technical process that reduces human remains to bone fragments using heat, water, and chemical agents.</p> <p>(14) CREMATION. The technical process, using heat, flames, or chemical agents, that reduces human remains to bone fragments. The reduction takes place through heat and evaporation. Cremation shall include the processing, and may include the pulverization, of the bone fragments.</p>	Alkaline hydrolysis is defined, but included within provisions for cremation
Oklahoma	§ 59-396.2	14. "Cremation" means the technical process, using heat and flame, or heat and pressure, that reduces human remains to bone fragments. The reduction takes place	Alkaline hydrolysis included in definition of

	Title 235, Chapter 10, 235:10-1-2	<p>through heat and evaporation, or through alkaline hydrolysis. Cremation shall include, but not be limited to, the processing and pulverization of the bone fragments.</p> <p>15. "Crematory" means a structure containing a furnace or alkaline hydrolysis vessel used or intended to be used for the cremation of human remains. The term includes a facility that cremates human remains through alkaline hydrolysis.</p> <hr/> <p>"Cremation" means the technical process, using heat, that reduces dead human remains to bone fragments. The reduction takes place through heat and evaporation. The cremation process shall include, but not be limited to, the processing and pulverization of the bone fragments.</p> <p>"Cremation Chamber" means the enclosed space contained within a machine that has been duly manufactured for the sole purpose of cremating dead human remains within which the cremation is performed.</p> <p>"Cremation Container" means a casket or other container designed to transport a deceased human body and for placement in a cremation chamber during cremation.</p>	"cremation," but not otherwise defined
Connecticut	Code Ch. 385 § 20-207	(3) "Funeral directing" means the business, practice or profession, as commonly practiced, of (A) directing or supervising funerals, or providing funeral services; (B) handling or encasing or providing services for handling and encasing dead human bodies, otherwise than by embalming, for burial or disposal; (C) providing embalming services; (D) providing transportation, interment and disinterment of dead human bodies; (E) maintaining an establishment so located, constructed and equipped as to permit the decent and sanitary handling of dead human bodies, with suitable equipment in such establishment for such handling; (F) conducting an establishment from which funerals may be held; (G) engaging in consultations concerning arrangements for the disposition of human remains, including, but not limited to, arrangements for cremation or alkaline hydrolysis; (H) casketing human remains; (I) making cemetery and cremation arrangements; and (J) preparing funeral service contracts, as defined in section 42-200;	Alkaline hydrolysis included in definition of "funeral directing" but is not otherwise defined
Idaho	IDAPA 24.08.01 (-450, -452)	<p>450. Funeral Establishment and Crematory Establishment.</p> <p>04. Crematory Establishment. All crematory establishments shall be required to provide each of the following:</p> <p>a. Detailed information regarding each retort, specifically documenting that each retort and accompanying equipment is listed by an approved testing agency as listed in the Uniform Fire Code or in the case of alkaline hydrolysis, an appropriate purpose-built vessel with documented validation for sterilization; and ...</p>	Alkaline hydrolysis referenced in sections related to crematory establishments, but is not otherwise defined

		<p>452. MINIMUM STANDARDS.</p> <p>01. Reasonable Sanitation and Safety Required. No license will be issued to operate a funeral establishment or crematory unless it is apparent that the establishment or crematory can and will be operated in a reasonably sanitary and safe manner and that all pertinent federal, state, and local permits have been obtained when operating an alkaline hydrolysis retort.</p>	
Vermont	26 VSA § 1211	<p>§ 1211. Definitions</p> <p>(a) (1) "Crematory establishment" means a business registered with the Office conducted at a specific street address or location devoted to the disposition of dead human bodies by means of cremation, alkaline hydrolysis, or any other type of human reduction acceptable to the Director as established by the Director by rule.</p>	Alkaline hydrolysis referenced in definition of "crematory establishment" but not otherwise defined
Minnesota	Minnesota Statutes 149A.02 et seq.	Alkaline hydrolysis. "Alkaline hydrolysis" means the reduction of a dead human body to essential elements through a water-based dissolution process using alkaline chemicals, heat, agitation, and pressure to accelerate natural decomposition; the processing of the hydrolyzed remains after removal from the alkaline hydrolysis vessel; placement of the processed remains in a hydrolyzed remains container; and release of the hydrolyzed remains to an appropriate party. Alkaline hydrolysis is a form of final disposition.	Minnesota has definition of alkaline hydrolysis and separate regulatory structure and licensure for the process
California	CA Code HSC § 7010.1 Title 16, Division 23, Sections 2310 et seq. of CA Code of Regulations	<p>(a) "Hydrolysis" means the process by which the following two steps are taken:</p> <p>(1) The reduction of the body of a deceased person to its essential organic components and bone fragments by alkaline hydrolysis. "Alkaline hydrolysis" is a process using heat or heat and applied pressure, water, and potassium hydroxide or sodium hydroxide in a hydrolysis chamber.</p> <p>Adds "hydrolysis" and "hydrolysis facility" to regulations as a process separate from cremation; Adds licensure for hydrolysis facility</p>	<p>Regulatory changes became effective June 17, 2021</p> <p>See full copy of regulations</p>
North Carolina	GS § 90-210.136 21 NCAC 34C .01 et seq.	<p>(a) The following definitions shall apply in this section:</p> <p>(1) Alkaline hydrolysis. – The technical process using water, heat, and other chemicals to destroy, dissolve, or reduce human remains to simpler or essential elements.</p> <p>(2) Hydrolysis container. – A container, other than a casket, designed to enclose human remains and made of suitable material to be easily destroyed during hydrolysis and to resist spillage and leakage. A hydrolysis container may be a cremation container or any other container that meets the requirements of this subdivision.</p>	Alkaline hydrolysis is separately defined in Code, but is treated as cremation for purposes of existing regulations

		<p>(3) Hydrolysis licensee. – A person or entity licensed to hydrolyze human remains and perform hydrolysis.</p> <p>(4) Liquid waste. – Any liquid remaining after hydrolysis that does not contain any trace elements of human tissue. ...</p> <p>(c) Except as otherwise provided by this section, a license for the hydrolysis of human remains shall have the same requirements and fees as for the licensing of crematories under this Article. The hydrolysis of human remains shall be conducted in compliance with all requirements for cremation, and the licensee shall pay the same fees for monthly reports for each hydrolysis as crematories under this Article. ...</p>	
Nevada	<p>NRS 451.617</p> <p>NRS 451.607</p>	<p>“Cremation” means the technical process that reduces human remains to bone fragments by using alkaline hydrolysis or incineration.</p> <p>“Alkaline hydrolysis” defined. “Alkaline hydrolysis” means the:</p> <ol style="list-style-type: none"> 1. Reduction of human remains to bone fragments through a water-based process of dissolution using alkaline chemicals and agitation to accelerate natural decomposition; and 2. Processing of the hydrolyzed human remains after their removal from the container in which the process of dissolution occurs. 	<p>Separate definition provided in Code, but process treated as cremation in regulations</p>
Oregon	<p>Oregon Administrative Rules 830-011-0000</p>	<p>(1) “Alkaline hydrolysis” is a final disposition process involving dissolution of human remains by placing the remains in a dissolution chamber containing water and chemical solution including potassium hydroxide or sodium hydroxide, or a combination of both, and introducing heat to break down the remains until bone fragments that may be pulverized and liquid remain.</p> <p>(2) “Alternative Disposition” Alternative disposition is a board-authorized method of final disposition of human remains other than burial, entombment, burial at sea, cremation or removal from the state, and includes dissolution.</p> <p>(3) “Alternative Disposition Facility” An alternative disposition facility is a facility containing equipment designed for the final disposition of human remains through alternative methods authorized by the board including, but not limited to, dissolution.</p> <p>(4) “Alternative Disposition Facility Authority” An Alternative Disposition Facility Authority is any person, partnership or corporation with a Certificate of Authority to operate a dissolution chamber or other alternative disposition equipment as authorized by the Board by rule.</p> <p>(10) “Cremated Remains” and “Alternative Disposition Remains” Cremated remains or alternative disposition remains are the remaining bone fragments after the act of cremation or alternative disposition is completed.</p>	<p>While certain requirements for crematory authorities encompass alkaline hydrolysis, there are certain separate requirements for “alternative disposition facility authorities” using alkaline hydrolysis (see full copy of rules)</p>

	830-030-0000	<p>(11) "Cremated Remains Container" and "Alternative Disposition Remains Container" A cremated remains or alternative disposition remains container is a container in which processed cremated remains can be placed and closed to prevent leakage.</p> <p>(21) "Dissolution" Dissolution includes, but is not limited to, alkaline hydrolysis.</p> <p>(22) "Dissolution Chamber" A dissolution chamber is a purpose-built vessel that is closed and sealed on all sides when human remains are placed inside and the dissolution process takes place.</p> <p>(23) "Dissolution Container" A dissolution container is the container, if any, in which human remains are placed for the purpose of placement in the dissolution chamber.</p> <p>(25) "Final Processing" Final Processing is the processing of bone fragments to an unidentifiable dimension following the cremation or dissolution process.</p> <p>(42) "Processed Cremated or Alternative Disposition Remains" As used in this chapter, processed cremated or alternative disposition remains are the result of pulverization, where the residual from the cremation or alternative disposition, such as dissolution, process is reduced to unidentifiable dimensions.</p> <p>(2) Alternative Disposition Facility Authorities must comply with the requirements in this division (Division 30) for the handling and tracking of human remains prior to, during, and after cremation as if the Alternative Disposition Facility Authority is a Crematory Authority, the alternative disposition remains are cremated remains and the dissolution chamber is a cremation chamber.</p> <p>(3) Alternative Disposition Facility Authorities using alkaline hydrolysis for dissolution must comply with the following requirements:</p> <p>(a) The Alternative Disposition Facility Authority must only employ a purpose-built vessel as a dissolution chamber.</p> <p>(b) Dissolution systems which operate above atmospheric pressure must only employ an American Society of Mechanical Engineers' (ASME) certified pressure vessel as a dissolution chamber.</p> <p>(c) The dissolution system must use parameters of heat, time and solution circulation sufficient to achieve complete dissolution of all tissue remains.</p> <p>(d) The Alternative Disposition Facility Authority must ensure that the discharge liquid that is a byproduct of the dissolution process meets the facility's sewage collection and treatment facility requirements regarding acceptable temperature and pH level.</p>	
Utah	Utah Code 58-9-102	(1) "Alkaline hydrolysis" means a water-based dissolution process using alkaline chemicals, heat, and sometimes agitation or pressure that reduces human remains to a	Alkaline hydrolysis process defined, but also included

	<p>liquid and to dry bone residue and includes the disposal of the liquid and the processing and pulverization of the dry bone residue.</p> <p>(2) "Alkaline hydrolysis chamber" means the enclosed space within which the alkaline hydrolysis process takes place and that is used exclusively for alkaline hydrolysis of human remains.</p> <p>(3) "Alkaline hydrolysis container" means a container:</p> <p>(a) in which human remains are transported to a funeral service establishment and placed in an alkaline hydrolysis chamber for resomation; and</p> <p>(b) that meets substantially all of the following standards:</p> <p>(i) able to be closed in order to provide a complete covering for the human remains;</p> <p>(ii) resistant to leakage or spillage;</p> <p>(iii) rigid enough for handling with ease; and</p> <p>(iv) able to provide protection for the health, safety, and personal integrity of crematory personnel.</p> <p>(4) "Authorizing agent" means a person legally entitled to authorize the cremation or the alkaline hydrolysis process of human remains.</p> <p>(10) "Cremated remains" means all the remains of a cremated body recovered after the completion of the cremation process, including pulverization which leaves only bone fragments reduced to unidentifiable dimensions and may possibly include the residue of foreign matter including casket material, bridgework, or eyeglasses that were cremated with the human remains.</p> <p>(11) "Cremation" means the technical process, using direct flame and heat, or a chemical process, that reduces human remains to bone fragments through heat and evaporation, or a chemical process, and includes the processing and usually the pulverization of the bone fragments.</p> <p>(12) "Cremation chamber" means the enclosed space within which the cremation process takes place and which is used exclusively for the cremation of human remains.</p> <p>(13) "Cremation container" means the container:</p> <p>(a) in which the human remains are transported to the crematory and placed in the cremation chamber for cremation; and</p> <p>(b) that meets substantially all of the following standards:</p> <p>(i) composed of readily combustible or consumable materials suitable for cremation;</p> <p>(ii) able to be closed in order to provide a complete covering for the human remains;</p> <p>(iii) resistant to leakage or spillage;</p> <p>(iv) rigid enough for handling with ease; and</p>	<p>with definition of cremation</p>
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		<p>(v) able to provide protection for the health, safety, and personal integrity of crematory personnel.</p> <p>(14) "Crematory" means the building or portion of a building that houses the cremation chamber and the holding facility.</p> <p>(27) "Processing" means the reduction of identifiable bone fragments after the completion of the cremation or the alkaline hydrolysis process to unidentifiable bone fragments by manual means.</p> <p>(28) "Pulverization" means the reduction of identifiable bone fragments after the completion of the cremation or alkaline hydrolysis and processing to granulated particles by manual or mechanical means.</p> <p>(29) "Resomation" means the alkaline hydrolysis process.</p>	
Washington	WAC 308-47-010	<p>(1) "Alkaline hydrolysis" or "hydrolysis" means the reduction of human remains to bone fragments and essential elements in a licensed hydrolysis facility using heat, pressure, water and base chemical agents.</p> <p>(9) "Crematory authority, alkaline hydrolysis authority, or natural organic reduction authority" means the legal entity and their authorized representatives, licensed to reduce human remains through cremation, alkaline hydrolysis, or natural organic reduction.</p> <p>(10) "Effluent" means the liquid end-product following alkaline hydrolysis.</p> <p>(14) "Hydrolysis facility" means a structure, room, or other space in a building or structure containing one or more hydrolysis vessels, to be used for alkaline hydrolysis.</p> <p>(17) "Processing" is the removal of foreign objects from human remains following cremation, alkaline hydrolysis, or natural organic reduction and may include pulverization.</p> <p>(18) "Pulverization" is the reduction of identifiable bone fragments to unidentifiable dimensions by manual or mechanical means during or following cremation, alkaline hydrolysis, or natural organic reduction.</p> <p>(19) "Reduced human remains" means human remains after the reduction process.</p> <p>(20) "Reduction" means an accelerated conversion of human remains into bone fragments, essential elements, or soil by cremation, alkaline hydrolysis, or natural organic reduction.</p> <p>(21) "Reduction chamber" means the enclosed space in a crematory, alkaline hydrolysis vessel, or natural organic reduction facility in which the reduction process takes place.</p> <p>(22) "Reduction facility" means a crematory, or hydrolysis facility, or natural organic reduction facility that is solely devoted to the reduction of human remains.</p>	See full section related to Cremation/AH/Reduction

