



# Public Health Law

Office for State, Tribal, Local and Territorial Support  
Centers for Disease Control and Prevention

## Radiological Emergency Preparedness and Response: Educational Facilities Preparedness and Legal Study

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### Executive Summary

#### Background

Recent national and international incidents involving the release of radiological material highlighted the need for state and local health departments throughout the United States to develop emergency preparedness plans and procedures for responding to and recovering from radiological threats. To support the effort, the Centers for Disease Control and Prevention (CDC) and the National Association of County and City Health Officials (NACCHO) partnered in 2012 to create the radiation legal preparedness (RLP) project. The initial RLP project examined the legal landscape of state and local jurisdictions to involuntarily decontaminate and restrict the movement of people contaminated or potentially contaminated with radioactive material.<sup>i</sup>

The purpose of the partnership is to strengthen plans to prepare for and respond to a radiological incident by helping to foster and guide conversations among stakeholders about legal issues. CDC and NACCHO identified a need to review the role of radiological planning in schools because educational facilities play a large role in community and emergency planning. Therefore, in 2014, CDC and NACCHO developed the educational facilities study to assess the development and implementation of radiological emergency planning in kindergarten through university-level schools.

#### Educational Facilities Study Research and Methods

The educational facilities study assessed key legal, emergency planning, and partnership considerations and opportunities before a radiological incident occurs to six hours after the initial event. The goal was to determine best practices, gaps, and barriers in educational facility planning for radiological emergencies.

CDC and NACCHO invited four cities that represent the nation's diversity to participate in site visits and tabletop exercises: El Paso, Texas; Salt Lake City, Utah; New Orleans, Louisiana; and Fort Wayne, Indiana.



Participants included school officials, public health professionals, radiation experts, emergency managers, first responders, and other stakeholders. The site visits entailed tours of the emergency operation facilities and discussions with the participant stakeholder groups about radiological and school preparedness.<sup>ii</sup> The tabletop exercises discussed potential legal, planning, and response issues that schools could experience before and during a radiological emergency and are the foundation of the study. Radiological emergencies can range from small-scale incidents (e.g., radiation transportation accidents and radiological dispersal devices or “dirty bombs”), to large-scale events (e.g., a nuclear detonation). The exercises specifically focused on educational facilities’ and responders’ actions after the detonation of an improvised nuclear device, which is one of many types of radiological emergencies. The improvised nuclear device was chosen because a nuclear detonation would be the worst-case scenario for educational facilities to plan for and respond to. Accordingly, it was emphasized among other radiological emergencies in this study in order for educational facilities to prepare for a wide-range of scenarios.

## Key Exercise Discussions

The educational facilities study site visits and tabletop exercises identified the following selected practices and key exercise themes and recommendations for schools when preparing for, responding to, and recovering from emergencies involving the release of radioactive material:

1. The school’s legal duty to create, exercise, and implement emergency plans.
2. The development of radiation specific annexes or addendums to existing emergency plans in school facilities prior to a radiological incident occurring.
3. The creation and strengthening of partnerships among stakeholders within the community, including school staff, students, parents, the local community, public health and healthcare professionals, emergency management officials, radiation experts, and first responders, to support the school’s emergency response.

## Educational Facilities Radiation Emergency Preparedness Study

### Introduction

In response to recent international and national events, jurisdictions throughout the country have been developing plans and procedures to respond to and recover from radiological emergencies. Emergency preparedness efforts for radiological events involve a multi-disciplinary coalition of numerous federal, state, and local agencies and non-governmental entities. Despite the planning performed to date, educational facilities—a key player and partner in the response effort—can be overlooked.

Schools are often the largest daily gathering places of individuals within a community. Throughout the United States, there are more than 60 million students, faculty, and staff housed in public, charter, and private K-12 schools and there are about 21 million students enrolled in universities and colleges.<sup>iii</sup> These figures alone, not including other daily school substitute staff, volunteers, vendors, and visitors, account for more than a fourth of the US population.<sup>iv</sup> School staff, emergency management officials, first responders, radiation experts, and public health officials have legal rights and responsibilities to protect the health and safety of these students and school personnel during a radiological incident. No federal laws mandate schools to develop emergency plans, but as of 2008, 32 states reported having laws or policies that do require plans.<sup>v</sup> An estimated 95 percent of school districts reported that they

have a plan; however, plan protocols and emergency coverage vary greatly.<sup>vi</sup> Approximately more than one-quarter of school districts have never trained with any first responders and more than two-thirds of school districts do not regularly train with community partners about implementing their school district emergency management plans.<sup>vii</sup> Twenty-two percent of school superintendents report having no disaster plan provisions for children with special healthcare needs.<sup>viii</sup> Additionally, in states that do require emergency plans, 67 percent of parents are unaware if their child’s school practices emergency drills frequently, and 42 percent of parents do not know where to meet their child if their school or childcare center is evacuated.<sup>ix</sup>

Understanding state and local emergency planning laws can help school officials to create and implement radiological preparedness elements in school plans before radiological emergencies occur. To address the gaps in radiological planning in school systems, the educational facilities preparedness and legal study had two purposes: 1) to research relevant emergency planning and public health laws within the four selected states to gain a perspective on the legal landscape, and 2) to assess existing relationships between schools and emergency practitioners to determine best practices to create and implement emergency plans.

## The School’s Legal Duty to Create and Implement Emergency Plans

School emergency plans consider a wide range of possible threats and hazards that could affect the school. Incidents involving the release of radiological material pose special considerations for educational facilities, and it is important for schools to understand the planning considerations unique to such events before they occur. Schools can outline public health protective actions within their emergency guidelines. For example, schools can assess which lockdown and shelter-in-place protocols will apply during the event, consider public sheltering guidance, predetermine messaging and communications, and designate the chain of command. School staff, students, parents, local community members, public health and healthcare professionals, emergency management officials, first responders, and other stakeholders all need to be familiar with the school emergency plan.

## In Loco Parentis and the Duty to Protect

During an emergency, schools must protect the health and safety of students within their care.<sup>x</sup> Under the doctrine of *in loco parentis*—“in place of the parents,” the school’s duty to protect its students stems from the concept that the school deprives students of their parents or guardians’ safeguard.<sup>xi</sup> This responsibility requires the school to act as substitute parents or guardians while students are in its custody.<sup>xii</sup> Courts apply the doctrine in both public and private schools.<sup>xiii</sup> Therefore, many jurisdictions require schools to maintain appropriate control and discipline of students while they are in the school’s care.<sup>xiv</sup> Schools also have a legal duty to take reasonable steps to prevent students from foreseeable risks of injury, as well as the duty to assist students if they are injured.<sup>xv</sup>

Although courts have acknowledged that schools cannot guarantee the safety of their students, school institutions, employees, and volunteers might be subject to criminal or tort liability through their actions or omissions.<sup>xvi</sup> It is important for school districts and schools to address radiological risks in school emergency operation plans and policies ahead of time to protect the health and safety of people within the school while also protecting against liability.

## Emergency Planning Statutory Requirements in Schools

It is impossible to predict all emergency situations, but to protect the health and safety of its students, preemptive actions and planning could help mitigate potential response issues within the school. Many states outline the duty to plan through legislation. For example, the Texas Education Code requires that “each school district or public junior college district shall adopt and implement a multi-hazard emergency operations plan for use in the district’s facilities” and that the “plan must address mitigation, preparedness, response and recovery . . . .”<sup>xvii</sup> Complying with designated school emergency policies provides a safer environment during the response.

When approaching the emergency plan, some jurisdictions require a safety committee to oversee a generalized group emergency plan for the school district. Indiana has a school safety commission supported by school safety specialists who are chosen by each school corporation.<sup>xviii</sup> The commission’s plan must protect against outside threats to students’ physical safety, prevent unauthorized access to the school property, and secure the schools against violence and natural disasters.<sup>xix</sup> Other states have provisions to tailor the emergency plan to the specific institution. Texas requires a school safety and security committee to develop and implement emergency plans and ensure the plan reflects the specific school’s needs.<sup>xx</sup>

Many courts extend the school’s duty to protect its students to afterschool activities, including athletic events and on-campus meetings.<sup>xxi</sup> In addition, some courts expand the duty to off-school grounds, such as when a student drives to and from school for a school-sanctioned activity.<sup>xxii</sup> Therefore, a nuclear detonation, for example, might require schools and school employees to be responsible for students and others present in their institution throughout the duration of the incident, including the initial blast, shelter-in-place, and release process, regardless of their physical location.

Further, some states have provisions for nonpublic schools. Louisiana requests “to the extent that sufficient funds are available, each nonpublic school shall provide information regarding their facilities to their local parish office of emergency preparedness, which shall be uploaded to the virtual Louisiana system for inclusion in the system by the Governor’s Office of Homeland Security and Emergency Preparedness.”<sup>xxiii</sup>

## Statutory Duty to Implement and Drill School Plans

School districts and schools may also have a legal duty to implement their emergency plans. Each of the four site visit locations has unique legal provisions to ensure the school practices the emergency plan. For example, Utah school districts and schools must coordinate with local law enforcement and other public safety representatives in appropriate drills for school safety emergencies.<sup>xxiv</sup> In Louisiana, each school must conduct a safety drill to rehearse the plan within the first 30 days of the school year.<sup>xxv</sup> The Texas school system implements a security audit of their plans and requires each school district or public junior college district to conduct a safety and security audit of the district’s facilities every three years.<sup>xxvi</sup> Indiana requires at least one fire drill and one manmade occurrence disaster drill once a year.<sup>xxvii</sup>

Generating school long-term shelter-in-place strategies in advance and designating policies for dealing with difficult decisions (e.g., an influx of contaminated people to the school) might help protect

students' and staff members' health and avoid difficult legal predicaments. Utah mandates that "plans shall contain measures which assure that school children receive reasonably adequate educational service and supervision during school hours during an emergency and for education services in an extended emergency situation."<sup>xxviii</sup> A facility that fails to create, update, or implement emergency response plans could expose itself to potential legal liability. Keeping teachers, school staff, students, and relatives informed of emergency protocols could help diminish a school's risk of legal liability. For example, in Louisiana all school employees must receive training about the plan and procedures.<sup>xxix</sup>

## **Strategies and Options for Increasing Educational Facilities' Preparedness for Radiation Emergencies**

In light of the legal duty to plan for emergencies, the following are key recommendations and challenges from the educational facilities study to create and enhance radiological preparedness in educational facilities.

### **Special Considerations When Creating Emergency Plans for Radiological Releases Lack of Radiation Emergency Preparedness and General Knowledge**

Despite considerable focus on school preparedness planning, gaps exist in specifically planning for radiological incidents in schools. A majority of the schools that participated in this study did not include radiation as a threat or hazard in their emergency plans, but did include a general hazardous materials section. In addition, there was a noted lack of general radiation knowledge. When creating radiation emergency plans, existing emergency plans can and should be leveraged to determine the response protocol. It is also important for schools to be prepared to educate staff, students, and parents about concepts related to radiation, like contamination, exposure, time/distance/shielding, and shelter-in-place protocols.

During a radiological emergency, parents must know and trust that their children will be safe and cared for at the school until the danger has passed or outside help arrives. Therefore, educating the school employees, students, parents, and the broader public is crucial. To ensure the community's confidence, schools could conduct staff, parent, and stakeholder training and exercises about radiological materials' release into the environment.

### **Unique Planning Concerns for Long-Term Shelter Radiation Emergencies**

In the first six hours following a radiation release, emergency response agencies' resources and personnel will be taxed, making it difficult to respond to every request for aid. A nuclear detonation may leave critical infrastructure and communication capabilities limited or non-functional, leaving state and local agencies isolated and independent. Consequently, schools and school systems might not be able to rely on immediate first-responder support, leaving school officials to manage the detonation response themselves within their schools. If the radiological emergency is a nuclear detonation, the school's protection of students' and staff members' health during the radioactive fallout stage is paramount. If a school is located in the fallout zone, it might be necessary to remain in the school for up to 72 hours. During this critical shelter-in-place time, many issues could arise that pre-planning might mitigate. For example, students or staff with disabilities or who require medical treatment might not have access to their medication—without additional dosages, this could be life-threatening.

Each school might have unique issues to address to protect special populations from harmful radioactive agents while sheltering-in-place. For example, many of the schools participating in the study noted issues if the school operates a daycare on the premises or if the school allows for students to leave campus for lunch or work release programs. Accounting for the school's unique demographics and students and school personnel's special needs might help mitigate potential issues. Schools that plan for and develop provisions in plans for people with access and functional needs, people with disabilities, and people with language barriers during a long-term shelter period could diminish emergency response issues and legal implications.

Schools might also need to access vital personal identifiable information and records to care for a student or staff member during that time. The school nursing office generally keeps records of students' prescription medications and first aid supplies. These records will be useful to schools with students who need medication while sheltering-in-place. Additional facts about staff should be noted during radiological emergency planning, including which staff members are currently on or off the clock and overtime and wage issues.

### **Schools' Use as a Public Shelter from Radioactive Fallout**

The site visits identified potential issues with lockdown policies and use as a public shelter in emergencies. Issues could arise if people unrelated to the school try to shelter-in-place at a school. Generally, if a visitor arrives on school property, the visitor must sign in and follow certain verification protocols to enter the school, thus ensuring the visitor does not pose a threat to any students or personnel. If school officials allow unknown people on school premises under the emergency conditions, they will not be able to obtain background checks or account for the potential risks the visitor poses to the school. In addition, if visitors are permitted inside, school officials might need to make critical decisions about their health and safety, such as where to house the visitor on school property, what limited resources would they be provided (e.g., medical supplies, food, and water), and how to regulate their access, movement, and interaction with students.

Schools might need to address issues related to isolation, quarantine, and decontamination of visitors on school premises. Permitting these visitors access to the school could lead to additional radiological exposure and contamination to students and staff, putting their health at risk. Refusing to allow these visitors to shelter in the school could lead to severe illness or death to those people left outside. An additional ethical issue might arise if people arriving at the school are parents, siblings, friends, etc. of those students sheltering in the school. Having an action plan already in place can help school officials protect students and staff within the school and members of the public seeking shelter.

## **Creating and Developing Partnerships for Radiological Emergencies**

### **Community Partners**

School emergency preparedness requires a dynamic, continuous process involving school staff, students, parents, members the local community, public health and healthcare professionals, emergency management officials, first responders, and other stakeholders. The possibility of a radiological or nuclear incident emphasizes the need for educational facilities and emergency response partners to develop cross-sector emergency preparedness policies and procedures before an incident occurs. Collaborating with community partners to create and implement a school emergency plan will help schools prepare for a range of threats and hazards.

Schools are a key component of community preparedness, and community members can offer a great deal to schools, including supporting radiation risk reduction efforts by participating in school drills, volunteering during response and recovery, and providing resources and supplies. Recurring community emergency response meetings and shared trainings can create and foster relationships with community partners and help educational facilities better prepare to respond to radiological emergencies. For example, in Texas, the El Paso Independent School District has an Emergency Text Alerting System that broadcasts immediate, real-time text messages to parents and the community during emergencies. If a nuclear detonation damages the school's ability to provide a safe shelter from radioactive material, secondary shelters are critical to protect public health. Schools in Salt Lake City, Utah, have memorandums of understanding with local businesses and religious institutions near schools to use their facility as a potential shelter site if necessary.

Partnering with healthcare organizations and healthcare coalitions, Community Emergency Response Teams (CERT), Medical Reserve Corp Units, poison control centers, telephonic information lines such as United Way's 2-1-1, local libraries, community-based organizations serving people with disabilities, and organizations like the Salvation Army and Red Cross, among others, might provide essential emergency response information and subsequently help quicken response and recovery time for people seeking aid in educational facilities. Developing these partnerships can help schools leverage others' skills and resources during a radiological incident.

The media could also be a valuable community partner to educational facilities, especially as a source of communication to worried relatives and friends of students and staff located at the facility. In other health emergencies, media stations have worked with the community to provide information during the response. For example, the local public broadcast station in Fort Wayne, Indiana, showed a broadcast on all local television stations about public health information and dispensary locations to respond to H1N1. Further, to reach all members of the public, the station partnered with the League for the Blind and the Reading Rainbow Service and had the program translated so peoples could call in and listen. Schools can partner with local stations to share school status and relocation information if there is a radiation emergency.

## **First Responders and Emergency Management**

Study participants emphasized the need to build strong relationships and improve lines of communication among public health officials, emergency management professionals, and school staff. School safety commissions or committees allow schools to create and test current emergency response plans and safety response strategies. The Allen County, Indiana, School Safety Commission regularly convenes public and private school district representatives, local health department staff, local emergency management professionals, and first responders to discuss school safety. The commission discusses issues, disseminates best practices, coordinates response efforts, provides training, and conducts exercises around school preparedness. In addition, the commission has a paging system that allows for the dissemination of real-time information to all members. Through this commission, school staff, public health and emergency management officials, first responders, and other stakeholders maintain a united, strong emergency preparedness partnership in emergency planning and response. Similarly, in Louisiana, a school crisis management and response plan must be prepared and assessed annually by each public school principal jointly with local law enforcement, fire, public safety, and emergency preparedness officials.<sup>xxx</sup>



Schools may also wish to partner with local emergency agencies when creating and preparing for emergencies. For example, in Salt Lake City, Utah, the local fire department met with schools to create emergency backpacks in classrooms that will provide resources in the event of an emergency. The fire department gave schools a recommended list of items to include. Further, local business and community members supported the cause by donating some of the items for the classroom backpack.

Further, schools could benefit from having a representative or contact connected to the Emergency Operations Center, possibly through a Multi-Agency Coordination Center, as well as a representative connected to the Joint Information Center, a centrally coordinated source of public information during an event. In the Emergency Operations Centers in New Orleans, Louisiana, the Geographic Information Systems server is located on a cloud system, so vital information could still be operational, even if there is severe damage from an electromagnetic pulse. It is important to ensure consistency and coordination among the agencies and that the same information is communicated to all appropriate stakeholders. Unfamiliarity with radiation also leads to the need for overall public messaging and communications. Schools might wish to foster relationships with emergency response agencies and work closely with partners to ensure consistent and timely information is communicated to the public.

### Local Colleges and Universities

Universities and colleges can also contribute meaningfully to radiological preparedness planning and response alongside public health and emergency management agencies. Along with protecting their own students from dangerous exposure and contamination, universities can provide valuable resources to school systems in the community, including technical radiation expertise, partnership for training activities regarding radiation, secondary shelter locations, and workforce surge capacity. For example, the University of Texas, El Paso, has radiation experts available to provide education and aid to the local community.

### Federal and Local Resources

Schools can also benefit from developing an annual staff training plan to fill in any gaps and skills required in the response. There are many federal and local resources available, including: Incident Command System courses, CERT trainings, and first aid education. For example, schools might have staff members complete disaster training courses, including those offered free online by the Federal Emergency Management Agency. In addition, a school with employees who are first aid and CERT certified provides valuable skills and expertise when responding to a radiological incident. Utah requires the local education agency (school district) to “provide annual training on employee’s roles, responsibilities and priorities in the emergency response plan.”<sup>xxxi</sup>

Also, federal and local government agencies can provide real-time radiological response and recovery aid. In partnership with CDC, the local health department in El Paso, Texas, syndicate emergency response messaging to give the community up-to-date emergency messaging. Schools might also wish to incorporate emergency syndicated messages to reach parents quickly.

### Summary

The educational facilities study site visits and tabletop exercises identified recommended practices and key challenges for schools when preparing for, responding to, and recovering from emergencies involving the release of radioactive material.



First, in preparing for a potential radiological incident, school districts, individual schools, and school employees might want to analyze their jurisdiction's laws about legal liabilities and protections when preparing for and responding to radiological emergencies. Schools' knowledge and understanding of their legal authorities might help protect students and staff members' health while also reducing liability. School staff, first responders, emergency management officials, public health and healthcare professionals, and government agency officials maintain legal rights and responsibilities as they protect the community's health during a radiological incident. By determining the legal authorities and protections supporting the response and recovery efforts in advance, schools can better customize their emergency plans. Further, legal issues can be both facilitators (e.g., memoranda of understandings) and barriers (e.g., liability concerns) to partnerships and engagement.

Second, creating radiation-specific annexes or addendums to existing emergency plans in schools might prepare educational facilities for the unique issues involved in a radiological event, such as sheltering-in-place for a prolonged period. Schools might wish to address what resources they have available and what skillsets current employees have, as well as which skillsets might be beneficial to develop through training, to respond to the radiological emergency properly. Advance understanding of the demographics of the student body and school employees and identifying what special needs might need addressing during a shelter-in-place period will better help protect the health of all people on the school's premise.

In conclusion, schools might wish to focus on developing community partnerships prior to a radiological emergency to create a vital support network for the response. Community organizations such as emergency management agencies, healthcare entities, religious institutions, health departments, and the community's emergency operations center, as well as neighboring educational facilities and districts, can all offer unique emergency response contributions, possibly bridging challenges and gaps that could occur during the response.

### **Acknowledgments and Disclaimers**

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This document was developed by Gabriella Klaes, JD, Oak Ridge Institute for Science and Education fellow with the Public Health Law Program within the Centers for Disease Control and Prevention's Office for State, Tribal, Local and Territorial Support, in coordination with Jennifer Buzzell, MS, Radiation Studies Branch within the Centers for Disease Control and Prevention's National Center for Environmental Health. This work was supported by the National Association of County and City Health Officials, specifically by Andrew Roszak, JD, and Lisa Brown, MPH.

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- <sup>i</sup> CENTERS FOR DISEASE CONTROL AND PREVENTION, [PUBLIC HEALTH PREPAREDNESS: EXAMINATION OF LEGAL LANGUAGE AUTHORIZING RESPONSES TO INCIDENTS INVOLVING CONTAMINATION WITH RADIOACTIVE MATERIAL](#) (2014).
- <sup>ii</sup> Appendix A.
- <sup>iii</sup> NATIONAL CENTER FOR EDUCATIONAL STATISTICS, [SELECTED STATISTICS FROM THE COMMON CORE OF DATA: SCHOOL YEAR 2011–2012](#) (2014).
- <sup>iv</sup> *Id.*
- <sup>v</sup> Council on School Health, American Academy of Pediatrics, [Disaster Planning for Schools](#), 122 PEDIATRICS 4, 895–901 (2008).
- <sup>vi</sup> US GOVERNMENT ACCOUNTABILITY OFFICE, [MOST SCHOOL DISTRICTS HAVE DEVELOPED EMERGENCY MANAGEMENT PLANS, BUT WOULD BENEFIT FROM ADDITIONAL FEDERAL GUIDANCE](#) (2007).
- <sup>vii</sup> *Id.*
- <sup>viii</sup> James Graham, Steve Shirm, Rebecca Liggin, Mary Aitken, Rhonda Dick, [Mass-Casualty Events at Schools: A National Preparedness Survey](#), 117 PEDIATRICS 1, e8-e15 (2006).
- <sup>ix</sup> [SAVE THE CHILDREN. DISASTER REPORT CARD](#) (2014).
- <sup>x</sup> *Marriage of Snow v. England*, 862 N.E.2d 664, 666 (Ind. 2007) (quoting Black’s Law Dictionary 803 (8th ed. 2004)).
- <sup>xi</sup> Allen A. Korpela, Tort liability of public schools and institutions of higher learning for injuries resulting from lack or insufficiency of supervision, 38 A.L.R.3d 830 (1971).
- <sup>xii</sup> *Griffin v. Simpson*, 948 N.E.2d at 358 (Ind. Ct. App. 2011).
- <sup>xiii</sup> *Id.* 948 N.E.2d at 359 (Ind. Ct. App. 2011) (citing *Stratton v. State*, 791 N.E.2d 220, 224 (Ind. Ct. App. 2003)).
- <sup>xiv</sup> *Linke v. Nw. Sch. Corp.*, 763 N.E.2d 972, 979 (Ind. 2002).
- <sup>xv</sup> *Hopkins v. Spring Indep. Sch. Dist.*, 736 S.W.2d 617 (Tex. 1987) (noting duty to provide reasonable assistance to injured student). For a comprehensive overview of a school’s general duty of reasonable supervision and collection of case law, see *Korpela*, 38 A.L.R.3d 830.
- <sup>xvi</sup> *Korpela*, 38 A.L.R.3d 830.
- <sup>xvii</sup> TEX. EDUC. CODE ANN. § 37.108 (2009).
- <sup>xviii</sup> IND. CODE ANN. § 5-2-10.1-9 (2013).
- <sup>xix</sup> *Id.* § 20-26-18.2-2 (2013).
- <sup>xx</sup> TEX. EDUC. CODE § 37.109 (2009).
- <sup>xxi</sup> *Korpela*, 38 A.L.R.3d 830.
- <sup>xxii</sup> *Id.*
- <sup>xxiii</sup> LA. REV. STAT. ANN. § 121 (2014).
- <sup>xxiv</sup> UTAH ADMIN. CODE r. 277-400 (2014).
- <sup>xxv</sup> LA. ADMIN. CODE tit. 28, pt. LXXIX, § 121 (2015).
- <sup>xxvi</sup> TEX. EDUC. CODE ANN. § 37.108 (2009).
- <sup>xxvii</sup> IND. CODE ANN. § 20-34-3-20 (2007).
- <sup>xxviii</sup> UTAH ADMIN. CODE r. 277-400 (2014).
- <sup>xxix</sup> LA. REV. STAT. ANN. § 121 (2014).
- <sup>xxx</sup> *Id.* § 416.16 (2013).
- <sup>xxxi</sup> UTAH ADMIN. CODE r. 277-400 (2014).

## Appendix A. How This Guide Was Developed

This guidance document, Radiological Emergency Preparedness and Response: Educational Facilities and Legal Study, was developed using a mixed-methods approach consisting of a comprehensive review of current legal language and four site visits at schools nationwide.

### A.1. Legal Review

CDC researched and evaluated the relevant legal considerations for educational facilities following a nuclear detonation using WestlawNext. The project assessed the laws in the following jurisdictions: Indiana, Louisiana, Texas, and Utah. The project is informed by two categories of law: statutes and regulations.

### A.2. Site Visit

In 2014, CDC and NACCHO conducted four, two-day site visits at schools in El Paso, Texas, Salt Lake City, Utah, New Orleans, Louisiana, and Fort Wayne, Indiana. Prior to the site visits, telephone interviews were conducted with all participating schools to identify key questions and priority areas specific to the site. Building upon the information obtained during the preliminary telephone interviews, a two-day site visit, consisting of in-depth, in-person interviews and a tabletop exercise, was conducted. Site visits provided foundational knowledge concerning how educational facilities may approach a radiation incident and identified the key challenges and unanswered questions within the community's current plans. Following the site visit, all participants completed an evaluation. Approximately, 233 key stakeholders, including 18 different school districts, participated in the four site visits.

#### A.2.1. Telephone Interviews

In preparation for the site visits and to create a basis for discussion, telephone interviews were conducted with all participating schools. Key questions and priority areas for the telephone interviews were developed through legal research and consultation with radiation experts. These telephone interviews helped gauge the educational facility's current practices and preparedness levels. The qualitative data from the telephone interviews were used to develop detailed site profiles.

#### A.2.2. In-Depth, In-Person Interviews

Prior to the tabletop exercise, CDC and NACCHO conducted separate in-depth, in-person interviews with each participating stakeholder group. These interviews provided an opportunity for key stakeholders to share their intended approach to a radiation incident and further discuss legal issues or topics.

#### A.2.3. Tabletop Exercise

Key stakeholders (e.g., first responders, local and state emergency management officials, healthcare and mental health professionals, local and state public health professionals, state radiation control program officials, attorneys, Federal Bureau of Investigation officers, and public school, charter school, private school, university, and college staff members) convened to participate in radiation tabletop exercises. The scenario focused on legal issues schools might experience after a radiological emergency specifically involving an improvised nuclear device. The tabletop exercise allowed participants to consider and work collaboratively through the legal and planning issues involved in responding to a fictional radiation incident.

#### A.2.4. Evaluations

Following the site visits, all participants completed an evaluation to determine the site visit's value, learn what impact attending the site visit had on their planning and response efforts, determine what types of additional resources and tools need to be developed, and identify remaining gaps and challenges.