8.0 Interviews

8.1 Summary of Railroad Interviews

As part of this Study, interviews were held with eight railroads that operate in Iowa. Participants included four Class I railroads, which operate the majority of the rail mileage in Iowa; one Class II (or regional) railroad that handles significant volumes of ethanol; and two Class III (or short line) railroads that operate branch lines in Iowa and serve customers that load ethanol transported in railroad tank cars. Interviews were limited to railroads that transport crude oil and ethanol in unit-train volumes only. In total, the networks of the railroads interviewed taken in the aggregate account for approximately 95 percent of railroad route miles in Iowa.

8.1.1 Preventative Measures

As discussed in Sections 4.0, 5.0 and Appendix A, railroad transportation of crude oil and ethanol is subject to numerous government regulations, standards, and operating protocols. Information learned in the interviews indicates that each railroad has developed derailment prevention and response programs that go beyond Federal Railroad Administration regulations [as set forth in the Code of Federal Regulations (CFR)]. However, each one of the individual railroad programs is unique.

The large Class I railroads perform regular assessments of their networks that include identification of routes carrying crude oil, ethanol, and other hazardous materials. These assessments have been the catalyst for investments in asset protection devices such as a Hot Box Detector (HBD) and a Wheel Impact Load Detector (WILD) on routes with significant volumes of hazardous materials traffic. Aiding in derailment prevention, these devices monitor train movements and help to detect mechanical defects on locomotives and railcars prior to an incident occurring. Railroad personnel are notified when a potential defect is detected, providing the train crew time to remediate possible defects.

The four Class II and Class III railroads interviewed indicated they had made investments in their track infrastructure to support the safe operation of ethanol transportation. Those investments included replacing jointed rail with continuous welded rail or heavier jointed rail, replacing worn crossties, installing radio-controlled turnouts that can be operated by train crews, replacing bridges to handle the heaviest industry-standard loaded car weights, and eliminating speed restrictions. One Class I railroad and one Class III railroad indicated that they each operate unit trains of hazardous materials at speeds below the federally required limit and below what the track condition would safely be able to accommodate.

Federal regulations govern railroad operating, maintenance, and rolling stock practices. In addition, railroads design and execute internal prevention, preparedness, and response programs. The interviews queried each railroad about its practices for the safe transportation of crude oil and ethanol, as applicable. All railroads stated they have practices that go above and beyond federal regulations. Two railroads provided detailed descriptions of their derailment prevention programs.

8.1.2 Coordination with State and Local Agencies

The railroads interviewed are in communication with state, county, and local fire departments, emergency response agencies, and other entities. Seven railroads interviewed have held on-site training activities and safety presentations for local fire departments, first responders, and other local emergency management groups located along its networks. Four railroads arranged mock training exercises to familiarize local agencies in procedures and equipment used to respond to a railroad hazardous material spill; two railroads donated the tank car used in the spill exercise to a local college to be used for hazmat training. Three railroads interviewed have also sponsored local first responders to attend Safety and Emergency Response Training Center (SERTC) programs at the Transportation Technology Center, Inc. (TTCI) in Pueblo, Colorado. All of the Class I railroads and one Class II railroad provide information to the Association of American Railroads (AAR) for its "AskRail", a mobile-phone application which uses a crossing database to provide railroad emergency contact information to first response agencies. Seven of the railroads interviewed indicated that the success of their local training efforts has been mixed; response could be stronger in big cities, with full-time fire and emergency departments, provided money is available to pay for the overtime salaries of the employees being trained. Participation in railroad-sponsored training can be low in rural locations where fire and emergency services are provided by volunteers who may not be available to take off from work to attend training sessions.

8.1.3 Emergency Response Plans

The four Class I railroads interviewed have hazmat departments with support staff containing hazardous materials managers, hazmat special agents, and trained hazmat responders who are available to respond to an incident. In addition, each Class I railroad and one Class III has emergency response contractors that can be summoned to a location where a hazardous material spill or incident has occurred. The railroads have stringent training programs for contractors and conduct audits, which the contractors must pass. All of the Class I railroads and one Class III railroad indicated that they have equipment such as fire trailers and or foam staged across their networks that can be accessed if an incident requires; one Class I and two Class III railroads said they work with local response groups that can quickly dispatch equipment to the scene of an incident. All of the railroads stated they had an informal mutual-aid agreement with one or more of their neighboring Iowa railroads. Two of the railroads have a formal mutual aid agreement that covers response equipment only. One railroad also noted that their mutual aid is open to anyone asking for assistance, such as their neighboring railroads, industrial customers, and the public. The railroads interviewed said that they prefer to handle post-hazmat incident cleanup themselves.

8.1.4 Railroad Concerns

When the railroads were asked what their concerns were about transporting hazardous materials and what a state entity might do to be proactive, the following common themes emerged:

- Funding should be made available to local fire departments and emergency responders for hazardous material training and for the purchase of hazmat response equipment such as foam and pumps

- The level of knowledge when responding to incidents varies among local responders
- Producers/Shippers are not equally responsive when it comes to inspecting or maintaining tank cars, and few inspection or operating regulations exist to ensure the safe loading and unloading of rail equipment at shipper facilities, or the safe maintenance of privately owned railroad cars
- Grade crossing safety, and the lack of rail safety awareness among motorists, is an ongoing source of concern
- Producers/Shippers should be invited to state-sponsored hazardous material symposiums
- Funding should be made available to regional railroads and short lines handling hazardous materials to purchase asset protection devices such as detectors, or safety devices such as switch point indicators on non-signaled track
- Railroads are not sanctioned fire departments, so traditional mutual aid agreements have posed challenges.

8.2 Producers/Shippers Interviews

The Study Team interviewed two producers/shippers of ethanol, focusing on each ethanol producers' involvement in ethanol tank car receiving/loading, methods, ethanol transportation trends, training/qualification of plant employees, and emergency response. See Section 2.2 for more information about the producer/shipper interview process.

Producer/shipper training was stated as being corporate-based with a combination of hazardous materials and railroad training, with the railroads providing specific training material. Additionally, USDOT hazardous materials training must be renewed every three years. Some joint training is conducted with the railroads and local fire departments. Both producers/shippers participate in TRANSCAER, and donate resources to local first responders.

Derailment prevention strategies, within the facilities, consist of track and railcars inspections and by operating trains at slow speeds. Substandard track or tank cars are either repaired or bad ordered before being utilized in loading or release. Typically, repairs that cannot be performed by staff are contracted out. Operations staff, utilizing checklists, conducts inspections of tank cars prior to loading and release to the rail carrier. Management does often audit operations staff on the quality of tank car inspections.

8.3 Agency Interviews

8.3.1 Federal Railroad Administration

FRA (Washington, D.C.)

As part of the Study, the Study team sought input from the FRA regarding crude oil and ethanol rail transportation in Iowa. The FRA noted that Iowa was the first state to reach out to it during the development of a study that analyzed the rail transportation of these two commodities. Throughout the interview, the FRA cited its various programs to assist railroads in assessing

their infrastructure and to identify potential risks and vulnerabilities. Additionally, the FRA also spoke about its involvement in security and routing audits and continued involvement in reviewing railroads' oil-spill response plans.

The FRA stated it has recently been focusing more on producers/shippers and auditing their procedures at loading racks at shipping and production facilities. FRA stated that its regulations for loading, unloading, and securing tank cars have at times been confusing to producers/shippers. At times, this confusion may make it difficult for producers/shippers to comply with regulations and for the FRA to enforce its regulations. Due to this awareness, the FRA is seeking to develop additional regulations within these areas, while tightening up existing regulations during 2016-2017.

When asked about specific areas the FRA felt Iowa should investigate, the FRA asked if the Study would identify the types and spacing requirements of rail equipment asset-protection devices (defect detectors) on the Iowa railroad network. In addition, the FRA felt it would be beneficial to define fouled ballast, as this kind of track defect has the potential to harm track surface over time and potentially increase the risk of derailments. (During the interviews with Iowa's railroads, no trends for defect detector types and their spacing, nor fouled ballast thresholds were identified.) Standards or recommended practices for detector spacing by type or risk, and for elimination or management of fouled ballast, could be developed through Iowa's Rail Advisory Committee (RAC), or through consultation with the FRA's Rail Safety Advisory Committee (RSAC). The Association of American Railroads (AAR), as an industry-level entity, could also assist in establishing guidelines, standards, or recommended practices, as well.

Additionally, the FRA stated its interest in improved mapping and logging of emergency response resources, while also determining the level and frequency of information that first responders need from railroads to be more effective in terms of emergency response. The FRA stated that it would assist Iowa in analyses of derailment data and their causes, and comparing Iowa data to national averages to learn about contributing factors to those rates in Iowa.

FRA Region 6 – Kansas City, Missouri

The territory of FRA Region 6, based out of Kansas City, Missouri, is Iowa, Colorado, Kansas, Missouri, Nebraska, southeast Wyoming, and southern Illinois. Its areas of interest include grade crossing and trespasser safety and accident prevention, rail equipment and facility inspections, and inspections in the areas of hazardous materials transportation, track, mechanical systems, and operating practices. Since this entity has jurisdiction in Iowa, the Study Team arranged a meeting with FRA Region 6 to seek its input for the Study.

As the local governing body for freight and passenger rail, representatives of FRA Region 6 noted that it places special emphasis on crude-by-rail routes for track inspections. An on-going evaluation continually prioritizes these routes; inspections typically occur more frequently on line segments on which defects were noted in past inspections. Strengthening the safe transportation of crude oil and ethanol by rail in Iowa, Region 6 stated that it conducts National Safety Plan audits on all Class Is handling hazardous materials to check compliance with initial inspection requirements, compliant transportation paperwork, and so on. The National Inspection Plan gives Region 6 the ability to identify risk factors and allocate time to railroads based on risk. Region 6 stated it does not have the resources to make inspections or visits to every short line in Iowa annually. Due to the large territory over which it has jurisdiction, it relies heavily on

Iowa's two state rail track inspectors for inspection and response support. Iowa DOT's track inspection program is described later in this report.

The FRA stated it supports eliminating or mitigating risks; additional safety inspectors are needed to cover hazmat facilities, estimating that it inspects up to 20 percent of the ethanol and small co-op facilities in Iowa annually. FRA said it is also engaged in safety audits, investigating complaints from the public, and assuring rules compliance. It also noted that there is a need to address inspection of the short line railroads on a more regular basis. In 2016, FRA said it would continue its focus on tank car shops and producer/shipper loading practices and facilities.

8.3.2 PHMSA

The Study Team sought input from PHMSA, to gain insight into crude oil and ethanol by rail operations, in Iowa, and areas that may potentially require additional consideration in the Study. PHMSA noted that Iowa was the first state to reach out to PHMSA regarding any kind of state-funded study about crude oil and ethanol transportation by rail. PHMSA mentioned that it has influence on assignment of training grants to U.S. states for use in training and commodity flow studies. Grant amounts are based on relative population, and Iowa funnels its share through the State of Iowa's Homeland Security Emergency Management Department (HSEMD), who then disburses funding down to the county level.

PHMSA recommended that Iowa continue to utilize grant money to train its first responders. Ultimately, one of the goals of this study is to identify higher-risk areas and ensure those areas are receiving the right tools, with respect to emergency preparedness and response. PHMSA also mentioned that they would be releasing a new edition of the "Emergency Response Guidebook (ERG)," in 2016. The ERG helps first responders and emergency management personnel to appropriately assessing the hazards they are presented during response.

8.3.3 Iowa DOT Track Inspectors

The State of Iowa currently has two rail track inspectors, sponsored by Iowa DOT. These track inspectors perform inspections independently of FRA Region 6 track inspectors and all private railroads. In addition, this group communicates with FRA Region 6 on joint-interests and other priorities, on an as-needed basis. The Iowa DOT track inspectors are also required to complete inspections on all rail projects funded by Iowa's Railroad Revolving Loan and Grant (RRLG) program. The DOT track inspectors also examine complaint calls regarding current railroad issues within the state.

At the core of the track inspectors' duties is the annual inspection of all main tracks in Iowa's general rail system. The track inspectors prioritize inspections based on history of derailments and other incidents, past history of defects, existing tonnage, passenger route status, and hazmat route status. A goal for the inspectors is to inspect crude-by-rail routes bi-annually. An increase to crude oil and ethanol traffic has changed Iowa DOT's past rail inspection activities. Currently, rail inspection activities are prioritized through an organizational risk-framework, focusing on higher-risk areas.

The Iowa DOT track inspectors noted that Iowa railroads are investing in capital programs, especially in areas that are seeing increases in crude oil traffic. The track inspectors noted Iowa railroads' effort regarding capital program work, and reinforced the continued need for derailment prevention programs and track maintenance.

8.4 Other Interviews

The emergency management agencies and first responder interviews are further discussed within Section 11.0 of the Study.