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Oregon Office of Emergency Management

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SECTION I: AFTER ACTION REVIEW PLANNING

Purpose

At the request of Governor Kate Brown, the Oregon Office of Emergency Management (OEM) was tasked with coordinating the creation of an After Action Review (AAR) report involving *primary state response agencies* (listed on page 6) to evaluate the efficacy of the state's unified response to the incident.

The report's expressed purpose is to evaluate state agency coordination and response to the Mosier Rail Incident with an emphasis on identifying successes and opportunities for improvement. It is NOT designed to be a comprehensive overview of all tactical aspects of the interagency response. Other tactical after-action reports are better equipped to provide that level of evaluation. The Wasco County After-Action Report has been included as an attachment to this report. Union Pacific conducted an after-action review; however, that report has not been made available to state agencies.

Core Planning Team

The following state agencies made up the core membership of the AAR planning team:

- Department of Environmental Quality (DEQ)
- Department of Transportation (ODOT)
- Office of Emergency Management (OEM)
- Office of State Fire Marshal (OSFM)

Objectives

The following objectives were developed to assess the quality of state agency and response associated with this event:

- 1. To identify key operational issues and understand the framework associated with state agency response, coordination, and incident management for the Mosier Rail Incident.
- 2. To identify key operational successes and opportunities for improvement associated with State agency response to the Mosier Rail Incident.
- 3. To produce an integrated AAR report that identifies the conditions, establishes the process, and communicates interagency operational issues and recommended solutions.

Processes

The AAR process was divided into the following **key actions** conducted jointly between all primary state agency response organizations and coordinated through OEM:

- Development of AAR core planning team involving primary state agencies.
- Development of approved Concept and Objectives for guiding the AAR process.
- Development and distribution of a *Primary State Agency Response Survey* document to collect key incident response and management data from State response agencies.



- Presentation of state agency AAR hot wash involving all primary and support state agencies involved in the incident.
- Development of AAR report for review and distribution.

State Agency Participants

The following state agencies were directly involved in AAR discussion and data collection for this report:

- Department of Environmental Quality (DEQ)
- Department of Transportation (ODOT)
 - Highway Division
 - o Rail and Public Transit Division
- Office of Emergency Management (OEM)
- Office of State Fire Marshal (OSFM)
- Oregon Health Authority (OHA)
- Oregon Parks and Recreation Department (OPRD)
- Oregon State Police (OSP)

SECTION II: INCIDENT OVERVIEW

INCIDENT DESIGNATION:	Mosier Rail Incident
LOCATION OF INCIDENT:	Mosier, Wasco County, Oregon
INCIDENT DESCRIPTION:	Derailment of unit train carrying 94 tank cars of Bakken crude oil resulting in discharge and ignition of a hazardous petroleum product. The incident involved temporary evacuations, active fire suppression, ground and water contamination, damage to wastewater treatment facilities, and highway traffic detouring.
INCIDENT PERIOD:	June 3, 2016
PRIMARY STATE RESPONSE AGENCIES:	Emergency Support Function (ESF) 1 Transportation - Oregon Department of Transportation, Highway (ODOT) Oregon Department of Transportation, Rail Division (ODOT-Rail) ESF 10 Hazardous Materials Oregon Office of the State Fire Marshal (OSFM) Oregon Department of Environmental Quality (DEQ)
SUPPORTING STATE AGENCIES:	Oregon Department of Fish and Wildlife (ODFW) Oregon Department of Forestry (ODF) Oregon Health Authority (OHA) Oregon Department of Parks (OPR) Oregon State Police (OSP)
AAR COORDINATING AGENCY:	Oregon Military Department (OMD), Office of Emergency Management (OEM)

Initial Event

On Friday June 3, 2016, a Union Pacific Rail Road (UPRR) unit train consisting of 94 rail tank cars containing Bakken crude oil derailed in the town of Mosier, Oregon. A total of 16 tank cars derailed, resulting in a release of product with subsequent fire. The fire involved one car and spread to an additional two cars. The fire also spread to nearby vegetation causing a small wildland fire. The incident required the combined efforts of local, tribal, state, federal, and private sector response resources under a Unified Command to bring under control and effectively manage.

Train Background Information

The tank cars were classified as general purpose specification DOT-111, and built to the Association of American Railroad (AAR) CPC-1232 standard. The tank cars were equipped with full-height head shields and metal jackets fiberglass insulation.



Each rail tank car carried 28,000 gallons of Bakken crude oil with a gross cargo of nearly three million gallons. Although 16 derailed tank cars represented approximately 448,000 gallons of oil, the incident resulted only in a loss of approximately 47,000 gallons of product (13,000 gallons to the Waste Water Treatment Unit; 18,000 gallons to soil; and 16,000 gallons burned).

Notification

The initial notification of the derailment was received by 9-1-1 at 12:14 p.m., with local fire agencies, and local and state law enforcement being dispatched at 12:15 p.m. In addition, the Environmental Protection Agency (EPA) and U.S. Forest Service (USFS) were also notified at that time. The Oregon Emergency Response System (OERS) received the initial notification from UPRR at 12:18 p.m.¹

Initial state agency notifications via OERS were as follows:

•	Oregon Department of Forestry (ODF)	12:23 p.m.
•	Office of State Fire Marshal (OSFM)	12:41 p.m.
•	Oregon Health Authority (OHA)	12:41 p.m.
•	Department of Environmental Quality (DEQ)	12:41 p.m.
•	Department of Transportation-Rail (ODOT-Rail)	12:41 p.m.
•	Oregon State Police (OSP)	12:51 p.m.
•	Office of Emergency Management (OEM)	12:58 p.m.

Impacts

The derailment also caused secondary damage to the Mosier wastewater treatment facility as a result of crude oil contamination, effectively shutting down sewage processing capabilities for the community. A work around was required to provide local sanitation for a period of two weeks following the derailment.

Initial Emergency Response Operations

Initial local government incident response came from the Mosier Fire Department, local and state law enforcement, and mutual aid from both Oregon and Washington states' fire services. Additional support came from the USFS and the Oregon Department of Forestry, which arrived almost immediately after the initial derailment. Additional fire mutual aid resources and a State Hazardous Materials Team were requested immediately and dispatched to the scene without delay. Initial response actions involved evacuation of at-risk populations in the Mosier community, establishment of an initial incident command structure, traffic control, active fire suppression, and assessment of the hazardous materials risk to public safety and health.

As the local and mutual aid fire agencies worked to contain and extinguish tank car and wildland fires, as a precaution I-84 was closed by OSP personnel to prevent vehicular traffic in both

¹ While researching incident information for this AAR, several minor time discrepancies were noted within a selection of source documents. This may be attributed to non-aligned timekeeping methods among organizations.



directions, including to the town of Mosier. ODOT worked with local and state law enforcement to establish an appropriate detour around the incident site to maintain reasonable traffic flow.

Following initial notifications from OERS, primary state agencies mobilized and began to dispatch key response, technical support, and investigative staff to the scene in support of initial operations. State agency response times varied based upon the distance to the scene.

Early on in the response, a decision was made to evacuate a ½ mile radius surrounding the incident. By 4:02 p.m., an order was extended to a one square mile area to include a residential neighborhood consisting of mobile homes. Nearby state park sites and campgrounds were closed and evacuated because of proximity to the incident. Oregon State Park staff worked to coordinate evacuations with other state agencies and local public safety entities while identifying how parks could be used to support the incident response, if needed.

During the incipient phase of the fire operation, there were simultaneous operations taking place to prevent and contain the oil release and provide protection for endangered waterways. This included heavily booming adjacent dry creek beds, drainages, and the Columbia River.

By 2:30 a.m. on Saturday, June 4, all fire impacting rail cars and nearby vegetation had been extinguished. At this point, the operation moved to the next phase which included active health monitoring, continued public and community information and outreach, re-entry of evacuated residents, and other incident stabilization functions. State agencies were involved in Unified Command, post-fire suppression, in addition to recovery and mitigation activities.

Incident Management Operations

The Incident Command System (ICS) was activated by the local first responder agencies and grew throughout the remainder of Friday as additional response resources and supporting organizations arrived. Key public safety agencies were included in a core Unified Command (UC) structure for the purpose of suppressing the fire, containing hazardous materials spills, managing evacuations, protecting the environment, and providing incident coordination.

The Unified Command structure consisted of the following entities:

- Confederated Tribes of the Yakama Indian Reservation
- Mosier Fire Department
- Oregon Department of Environmental Quality (DEQ)
- Union Pacific Railroad (UPRR)
- U.S. Environmental Protection Agency (EPA)
- Washington Department of Ecology

A series of state agency incident coordination calls were initiated by the Environmental Protection Agency (EPA) at 2:30 p.m. on Friday. The calls were used to brief executive state leadership on the status of the incident including identified threats to public health and safety,



progress of fire suppression activities, road closures, environmental impacts, resource needs, local emergency management activities, and operational objectives established by the on-scene incident command team.

Call Participants: (Participants may have not been involved in each call, but were emailed summaries)

State Agencies

- Oregon Department of Environmental Quality
- Washington Department of Ecology
- Office of State Fire Marshal
- Oregon Health Authority
- Office of Emergency Management

Federal

- Environmental Protection Agency
- US Coast Guard
- National Pollution Fund Center
- Department of Interior
- National Oceanic and Atmospheric Administration

- US Army Corps of Engineers
- US Forest Service
- National Marine Fisheries Service
- US Geologic Service

Tribal

- Yakama Nation
- Confederated Tribes of the Umatilla
- Confederated Tribes of the Warm Springs

Other

- Columbia Gorge Commission
- Columbia River Inter-Tribal Fish Commission

Post-Response Operations – Recovery Operations Phase

Following the suppression of fires, restoration of vehicular traffic, and the return of evacuees into Mosier, state agencies continued to conduct post-response support and began the process of hazardous materials cleanup. Per the NWAC Plan, DEQ has the role of "Lead State Agency" for the cleanup of oil and any other hazardous materials at the scene.

During the recovery phase of the incident, DEQ, in concert with the EPA and existing Unified Command structure, coordinated the implementation of the following environmental remediation and site recovery efforts:

- Recovery of oil from the 16 damaged tank cars.
- Cleaning and restoration of the waste water treatment system.
- Installation of two extraction and four monitoring wells.
- Coordinated the excavation, testing and disposal of 2,960 cubic yards of contaminated soils for the impact site.
- Coordinated air monitoring for community and site workers.
- Public and community outreach.
- Ensured the safe return of citizens evacuated from the Mosier community.

SECTION III: STATE AGENCY INCIDENT RESPONSIBILITIES General

The following identifies both the statutory responsibility of primary state agencies relating to a rail hazardous materials incident, as well as the primary functions and activities each organization performed during the Mosier Rail Incident. The information is not intended to be all inclusive, nor specifically detailed. Instead, it is representative of pertinent authorities and major incident actions for primary state agencies involved in the response.

Department of Environmental Quality (DEQ)

Statutory Responsibility

DEQ is the lead state agency for cleanup of oil and hazardous materials releases within Oregon. [ORS 466.610 & 466.620]

Mosier Response Operations

As the lead state agency for the cleanup of oil and hazardous materials spills, DEQ personnel functioned as technical advisor; State On Scene Coordinator; Liaison; Environmental Unit Leader; Environmental Unit staff; Joint Information Center (JIC) staff; Documentation Unit Leader; and Planning Section staff.

Department of Transportation (ODOT) – Rail & Public Transit Division Statutory Responsibility

ODOT has statutory responsibility to regulate railroads within Oregon, and collaborates with the Federal Railroad Administration (FRA) in the enforcement of applicable federal rail safety regulations. Key tasks include preventing rail accidents and conducting investigations into probable cause. [ORS 184.615(3)]

Mosier Response Operations

The ODOT Rail & Public Transit Division served in a technical advisory capacity and operational liaison during the incident. Following the termination of emergency operations, ODOT Rail initiated an investigation of the derailment to identify its probable cause. For this incident, the Federal Railroad Administration will determine the official cause of this accident. That report was released 6/23/2016.

Department of Transportation (ODOT) – Highway Division

Statutory Responsibility

The ODOT Highway Division possesses the authority to close state highways during emergencies. [ORS 184.615(3)]

Mosier Response Operations

ODOT Region 4, District 9 and Region 1, District 2C personnel managed the closure of state highways, like I-84, during the incident. It also provided associated support to the unified command and local officials relating to highway management within the Mosier area.



Office of State Fire Marshal (OSFM)

Statutory Responsibility

The Office of State Fire Marshal, a bureau of the Oregon State Police, is responsible for implementation of a statewide hazardous materials emergency response system providing organizational structure and operating guidelines for the expeditious mobilization and direction of state fire service forces; deployment and management of agency Incident Management Teams (IMT); and development and maintenance of a plan for the coordinated response to oil or hazardous material spills or releases that occur during rail transport. [ORS 453.374]

Mosier Response Operations

The OSFM activated its Agency Operations Center (AOC) and mobilized the appropriate Regional HazMat Team and agency representatives to the scene. In addition, OSFM mobilized fire mutual aid support to the incident under the State Conflagration Act.

Oregon State Police (OSP)

Statutory Responsibility

The Oregon State Police are charged with the enforcement of all criminal laws and all laws applicable to highways and the operation of vehicles on highways. Each member of the OSP is authorized and empowered to prevent crime, pursue and apprehend offenders, and obtain legal evidence necessary to ensure the conviction of the offenders in the courts, institute criminal proceedings, execute any lawful warrant or order of arrest issued against any person or persons for any violation of the law, make arrests without warrant for violations of law in the manner provided in ORS 133.310 (Authority of peace officer to arrest without warrant), give first aid to the injured. Each member of the OSP has the same general powers and authority as those conferred by law upon sheriffs, police officers, constables, and peace officers. A member of the OSP may be appointed as a deputy medical examiner. Members of the OSP are subject to the call of the Governor and are empowered to cooperate with any other instrumentality or authority of this state, or any political subdivision, in detecting crime, apprehending criminals, and preserving law and order throughout this state, but the OSP may not be used as a posse except when ordered by the Governor. [ORS 181.050]

Mosier Response Operations

OSP personnel initiated the closure of I-84 and adjacent surface streets during the incipient phase of the incident to prevent vehicular traffic in both directions. They provided escorts to critical responding emergency resources to the incident scene. They coordinated with Unified Command in regard to site security, traffic control and roadblocks, and assisted with evacuation logistics. OSP officers assisted the Wasco County Sherriff's Office by covering calls for service when sheriff personnel were committed to the incident. They provided additional personnel from Salem, Portland, Bend and Pendleton for site security. They also sent OSP Fish and Wildlife to provide boat patrol on the Columbia River near the incident. In addition, OSP dispatched its Mobile Response Team as a precaution to deal with potential civil unrest.



State/Interagency Plans Used During the Incident

The following primary emergency contingency plans were used as part of the incident:

- Department of Transportation Emergency Response Plan Volumes 1 & 2
- Department of Environmental Quality Northwest Area Contingency Plan and Geographic Response Plans
- Department of Environmental Quality and Office of State Fire Marshal Emergency Support Function #10 (Hazardous Materials)
- Office of State Fire Marshal 2016 Oregon Fire Service Mobilization Plan

SECTION IV: POST INCIDENT ASSESSMENT

External After-Action Assessments

Immediately following the incident, several after-action debriefs and assessment meetings were conducted for the purpose of collecting and assessing general and specific operational data. (Attachments A through H) Many of the comments and observations identified during these external assessments were used in the development of this AAR report.

Primary State Agency Response Survey

In order to establish a standardized method for the collection of key assessment data associated with state agency response, OEM developed a survey tool that included a selection of specific operational questions. The survey document was provided to all the primary and supporting State agencies directly involved in the Mosier response.

State Agency After-Action Hot Wash

On July 28, 2016, a formal AAR hot wash was conducted by OEM to review the assessment information collected to date, and to review gaps and capabilities that were identified within the survey. The hot wash was attended by representatives of the primary and supporting state agencies involved in the incident response. The hot wash process focused on two primary lines of inquiry: 1) what worked well and was deemed successful; and 2) what opportunities for improvement were identified that could be included within an improvement plan.

SECTION V: AFTER-ACTION FINDINGS and Recommendations

Guidance

The following section includes major findings associated with state agency responses and incident management operations. <u>The first section includes high level *highlights* of areas of success and areas for improvement.</u>

The second section provides more detail based upon the following:

- 1. returns of the initial AAR survey,
- 2. subsequent hot wash, and,
- reviews of available documentation provided by agency representatives and involved organizations.

These findings are sub-divided into *functional areas* for distinction and tracking. The findings do not address external agency operations except for when they were part of the overarching response and directly affected state agency actions and outcomes.

The second section also identifies contributing factors that affected state agency performance. It contains information concerning prevailing conditions which resulted in positive achievement of operational objectives and speculation on contrary conditions that would have proven problematic. Finally, it contains a conclusion segment that speaks to the overall efficacy of the state agency response.

It is important to note these findings, although based upon objective source material, are constructed in a subjective manner reflecting personal reflections, narrative, and findings identified in the AAR survey, hot wash, and supporting post-incident analysis. The key was to identify findings that were relevant, actionable, scoped for State agency involvement, and appropriate to the After-Action Review process.

Improvement recommendations were developed as a result of both survey responses and comments arising during the AAR hot wash. Although not all-inclusive, the recommendations serve to highlight general focused areas of improvement to guide state agencies in enhancing internal and interagency rail incident responses involving bulk petroleum products, or other hazardous materials.

Highlights - Areas of Successes

Life Safety and Health Response

- There were no reported injuries or fatalities.
- > State agency mobilization and response to the incident was expedient.
- Fire suppression efforts were efficient, effective, and well supported.
- ➤ Effective incident action planning, as related to the Northwest Area Contingency Plan (NWACP), was initiated early in the event and carried forward throughout the response and recovery phases.



- ➤ Oregon State Police initiated the closure of Interstate 84 in addition to supporting evacuation efforts, providing incident security, emergency escorts for responders and the Governor and Governor's staff, and covered calls for service to the Wasco County Sherriff's office while deputies were assigned to the incident.
- Environmental protective measures, including effective boom deployment air and water monitoring, product recovery, and other mitigation efforts were rapidly implemented.
- ➤ Public health and safety issues were assessed and appropriate protective measures implemented. Health information was disseminated to the community via Oregon Health Authority (OHA).
- Oregon State Parks acted quickly to evacuate and secure nearby state-managed camping facilities during incident response.
- ➤ Effective product recovery operations, including off-loading and site collection were initiated early and conducted effectively with DEQ oversight.

Communications

The majority of incident notifications conducted by the Oregon Emergency Response System (OERS) were timely, accurate, and effective.

Organization

- Interagency coordination was generally effective and inclusive.
- Local, tribal, state, and federal agencies and external partners established an effective Unified Command structure, using the Incident Command System (ICS).
- > Unified Command was effectively transitioned from the local level to the incoming private sector Incident Management Team (IMT).
- ➤ The Environmental Protection Agency R-10 (Regional Response Team) conducted periodic coordination calls to ensure that Oregon and Washington state leadership was informed on incident progress and issues.
- Site monitoring and remediation efforts continue to the present day.
- Previous planning, training, and exercise within local, tribal, state and federal agencies and the private sector resulted in effective and efficient response and support to local emergency management efforts.
- ➤ The Department of Environmental Quality's (DEQ) regional staff worked to assist Mosier community in addressing short-term water supply and waste water treatment issues.
- ➤ Effective implementation of procedures and guidelines contained within the Northwest Area Contingency Plan (NWACP).

Resources

➤ The ordering of fire mutual aid resources was well coordinated and efficient.



Highlights – Areas for Improvement

Communications

- A reliance on social media for the public information communications dissemination resulted in limited pathways for incident notification and announcements.
- ➤ Enhanced coordination of situational calls among primary and supporting state agencies and used personnel during the incident, including briefings provided to off-site senior state leadership, would expand and expedite overall coordination.
- ➤ The Joint Information System (JIS) was activated but lacked coordination with liaison and sufficient staff support. Confusion and integration conflicts arose between Unified Command and public information officers at the off-site Joint Information Center issuing incident information releases.

Organization

- > State agency executives and senior officials need a practiced process to ensure the timely and accurate flow of information with incident command or state incident liaisons.
- > State agencies need a better understanding of how they individually operate within the NWACP. They also need to better understand Geographical Response (GR) Plans, State Emergency Operations Plan (EOP), and Emergency Support Functions (ESF).

Resources

- ➤ State agencies needed a better understanding of OSFM All-Hazard State Incident Management Teams (IMTs) request process, capabilities, and function. Early request for the OSFM IMT could have reduced operational capabilities for the Unified Command organization used.
- Greater coordination required between incident commanders and ODOT relating to highway closure management.
- Although site safety was established by local first responders for their individual emergency operation needs, state agencies must have a better understanding of roles and responsibilities when establishing site/incident safety.

Agency Policy and Protocol

This topic is designed to evaluate how existing state agency policies and protocol affected response and incident management operations. Were the existing state agency policies appropriate to the response, ineffective, burdensome, or conflicting?

Major Strengths – Areas to Sustain	AREAS FOR IMPROVEMENT
and protocols were effectively	ODOT Rail needs to address staff availability to respond to media requests.
implemented and integrated during the incident.	 Insufficient office personnel available to assist upper agency management with requests for records and information.

IMPROVEMENT RECOMMENDATIONS



It is recommended that each state agency identified involved in the primary response of a rail/hazardous materials incident review operational staffing requirements, both from the perspective of conducting multiple operations as well as in providing field relief. Additional consideration should be given to identifying non-response staff that can be readily placed into positions of logistical support, information management, public information coordination, incident documentation, and leadership oversight within Incident Command.

Recommended Issue Improvement Ownership

State agencies that identified specific staffing gaps affecting operational effectiveness during incident response/support activities should address the recommendation for enhancing personnel capacities including the development of internal mechanisms for implementing appropriate augmentation strategies for future events.

Incident Management Organization

This category covers how effective and robust the incident management organization was at the scene, especially as it pertains to the involvement and participation of key state response agencies.

MAJOR STRENGTHS - AREAS TO SUSTAIN

Effective implementation of Incident Command System (ICS) organizational structures and the formation of a Unified Command (UC).

- From operational and technical perspectives, state agency personnel possessed a high level of technical proficiency associated with the performance of essential tasks at all levels.
- Within the Unified Command structure, situational intelligence was effectively collected, analyzed, and distributed to most response partners.

AREAS FOR IMPROVEMENT

- ODOT Highway needed to be included in the Unified Command because of impacts to the state highway system from the incident, including road closures.
- Command needs to embrace the inclusion of ODOT in the Unified Command structure for incidents that impact the state transportation system. This should be undertaken as early as possible to mitigate the potential of secondary responses being required to assist the impacted traveling public involving health and comfort related issues caused by extended road closures and traffic delays.
- The early request for and deployment of a State Incident Management Team (IMT) would have assisted the Incident Command organization in coordinating key elements of the interagency response.
- Better understanding of the OSFM IMT request process and capabilities from local, in addition to other state agencies.



- State agency personnel need additional training and exercises in ICS principles and implementing plans. This includes better understanding of Unified Command along with specific knowledge of roles/responsibilities.
- Some state agencies did not have adequate access to situational intelligence in order to operate within a Common Operating Picture (COP) (this isn't mentioned before) framework. Additional training on ICS and an increased understanding of Unified Command is necessary. Intelligence could have been obtained by state agencies by providing liaison officers or agency representatives earlier during the incipient phases of the incident.

IMPROVEMENT RECOMMENDATIONS

Understanding the purpose, function, and structure of the Incident Command System—particularly the establishment of a Unified Command structure during a major incident is essential for effective interagency coordination and operational efficacy. State agencies should partake in periodic supplemental and/or refresher trainings and orientation sessions associated with ICS and the Unified Command structure and process and integrate ICS into drills and exercises. This is especially critical when multiple levels of government and interagency response operations are required. ICS training should extend to agency personnel having a direct incident response or emergency management function.

Consideration should be given to the development of a state-level complex incident assessment and support structure to ensure appropriate state level resources are made available to assist impacted jurisdictions and to advocate for state interests during such incidents.

Recommended Issue Improvement Ownership

Any state agency with a primary or supporting response or emergency management role pertaining to all-hazard conditions should:

- Ensure that staff and supervising management for emergency response have completed formal training on Incident Command System levels 100, 300, 400, IS 700 and IS 800:
- Ensure agency staff assigned to command staff roles (e.g. liaison or PIO) have completed formal ICS training for the position assignment;



- Ensure that staff and supervising management participate in an ESF-10 tabletop exercise each biennium for purpose of understanding roles and responsibilities and improve interagency coordination and interoperability of response resources;
- Maintain a list of qualified personnel and subject matter expertise that can be drawn on for response support for Type I or II incidents.

Interagency Coordination

This category addresses how responding and supporting state agencies coordinated action planning, joint operations, resource deployment, information sharing, public protection, and scene control functions.

MAJOR STRENGTHS - AREAS TO SUSTAIN

On-scene incident response and recovery operations between local, tribal, state, federal, and private sector organizations was very well coordinated throughout all stages of the incident.

AREAS FOR IMPROVEMENT

- Need for early OERS Council coordination call with periodic briefing calls, at specified periods with on scene personnel.
- State agency incident OERS coordination calls could have been initiated earlier in the incident. Such efforts should be coordinated through the Oregon Office of Emergency Management or through a request from a state response agency.

IMPROVEMENT RECOMMENDATIONS

Establish situational triggers that stipulate when senior state leadership should be contacted and briefed. Identify incident parameters that generate action on the part of state agency responders and the Office of Emergency Management to initiate timely notifications, and begin the process of scheduled and formatted briefings to senior state management and elected leadership.

Identify situational conditions that involve such factors as incident complexity; scope and scale of impact to public health and safety, interruption of critical infrastructure functioning, and the environment; public, political and social sensitivities; expanded media interest; cross boundary collaboration requirements; extended operational containment projections; significant incident complexity; and other parameters that indicate the need for immediate senior leadership notification and information sharing.

Development of triggers and associated guidance and procedures would require a collaborative effort on the part of primary state agency response agencies along with coordination and oversight from the Governor's office.



Recommended Issue Improvement Ownership

State agencies that have primary response, support and coordination roles and functions under statute and in accordance with state emergency management plans.

Operational Communications

This category relates to communications conducted at the scene and focused on response and incident management operations, either among responders, or with off-site state agency offices providing leadership and guidance.

Major Strengths – Areas to Sustain	AREAS FOR IMPROVEMENT		
Initial incident notification to primary state agencies was rapid, effective, and well-coordinated.	Cell phone coverage was limited because of the location and adversely impacted that mode of communications for some state agencies.		
	 Integrated radio communications were limited as the response organization did not avail itself of available ODOT interoperability capabilities. 		
	As part of the OSFM IMT, the OSFM Communications Unit could have provided complete, self-sufficient radio communications for all aspects of the incident to maintain safety and accountability. The Communications Unit comes with radio caches, repeaters, satellite Internet, and trained radio technicians.		

IMPROVEMENT RECOMMENDATIONS

State agencies should evaluate communications needs in support of field response activities, especially in consideration of remote incident operations. When available, state agencies should look for enhancing interoperability, as well as increasing optional communication capabilities to reduce potential gaps in existing radio, cell phone and satellite systems.

Moreover, primary state response agencies should consider immediate activation of mutual aid mobile incident communication resources, and to employ field communication coordination capabilities available through the Office of State Fire Marshal Incident Management Teams.



Recommended Issue Improvement Ownership

Those state agencies that identified operational communications gaps, issues or deficiencies would best be served by addressing the recommendations for enhancing or preparing for interoperability and greater connectivity during field response operations.

Public Information Communications

This category relates to how effective state agency public information communications activities were in disseminating critical incident advisories or directions during the response phase. Were messages timely, accurate, appropriate, properly disseminated, and effectively integrated into the overall response process?

MAJOR STRENGTHS – AREAS TO SUSTAIN	AREAS FOR IMPROVEMENT
State agencies participated in community outreach efforts, in collaboration with affected local and tribal jurisdictions to provide timely situational updates to impacted population.	 Translation of primary health awareness information into non-English languages was slow.
OHA provided substantial health information to affected areas using multiple social media networks, and distribution of information materials.	 Initial heavy reliance on social media may have reduced the effectiveness of public safety information as all available pathways were not used effectively.
OHA facilitated information coordination calls with local management agencies, hospitals and service providers.	 Liaison positions within the UC were not adequately staffed during the response phase leading to inadequate communication between incident command and Oregon elected officials, and agency leaders.

IMPROVEMENT RECOMMENDATIONS

Consideration should be given to strengthening the state's ability to organize, staff and operate a Joint Information Center (JIC) in support of response and public safety activities in support of significant interagency response operations involving rail incidents. It is recommended that the coordination of state agency Joint Information System (JIS) activities should be centralized within the state agency having primary lead for ESF-14 (Public Information) during emergencies.

Additionally, all primary state response agencies should be trained in JIS concepts and JIC operations, with activities unified to avoid duplication, conflicts, communication errors or confusion. The existing Oregon Public Affairs Team (OPAT) would serve as foundational to an expanded State PIO effort.



Recommended Issue Improvement Ownership

• The Office of Emergency Management (OEM) should coordinate the establishment of a collaborative agency public information support capability for major rail/hazardous materials incidents involving multi-agency participation. Other state agencies providing direct PIO support would include the Department of Administrative Services (DAS), Department of Human Services (DHS), Oregon Health Authority (OHA), Office of State Fire Marshal (OSFM), and Department of Transportation (ODOT).

Response Plans, Procedures and Resources

This area of concern involves how well existing state agency plans, procedures and guiding processes were used, and the level of effectiveness in achieving identified incident objectives.

MAJOR STRENGTHS - AREAS TO SUSTAIN

Response operations were effectively conducted in accordance with the guidelines established through the Northwest Area Contingency Plan.

- State agencies used effective, safe, efficient processes to protect, mitigate and manage associated components of the incident during both the response and recovery phases.
- Fire/Haz-Mat response resources were appropriate for the incident severity and scope of operations.
- Existing mutual aid systems were successfully used to provide specialized response resources and to sustain local operations.

AREAS FOR IMPROVEMENT

- While a traffic management plan for the I-84 corridor was in place as a resource for addressing issues of traffic volumes, detour routes, personnel requirements, and coordination with the Washington State Department of Transportation (WSDOT), this incident and extended highway closure exceeded all aspects of the plan, resulting in several issues for traffic management in Oregon and Washington.
- ODOT has established a task force with specific agencies, including OSP and WSDOT, to re-evaluate the current plan and enhance it to include additional options for managing these extraordinary situations.
- ODOT, as lead state agency for ESF-1 (transportation), with responsibility for safe rail operations, should be included in the decision-making process to reopen all traffic following a major derailment incident involving large quantities of flammable liquids. This can be best accomplished by recognizing DOT as a primary agency within the Unified Command structure.
- Rapid deployment of state resources should include communications team and liaison functions, including IT support.
- The impacts of the closure of Interstate 84, for such an extended time, were not taken into full account by the Unified



Command. Delays of up to eight hours can cause significant issues for motorists stuck in stopped traffic which could have easily resulted in secondary responses being required to care for and assist impacted travelers.

 DEQ has limited depth in trained spill response personnel resulting in gaps in its staffing during incident operations.
 This resulted in a minimal response posture for the remainder of the state during the Mosier response.

IMPROVEMENT RECOMMENDATIONS

Existing traffic management plans should be evaluated and revised, as needed, to ensure adequacy and scalability for atypical, long-duration, complex incidents. Furthermore, incident managers must remain cognizant of available resources and secondary and tertiary planning and resource needs as an incident becomes more complex. Ensuring appropriate agency perspectives are represented in critical command decisions should be incorporated into ICS training and reinforced during drills and exercises. Establishing policy groups may mitigate or remedy conflicts arising from inadequate integration of stakeholders into critical command decisions.

Consideration should also be given to the level of resources provided to state agencies with critical emergency or disaster preparedness, response, recovery, and mitigation roles across all hazards, and those resources should align with expectations to protect life, property, and the environment.

Recommended Issue Improvement Ownership

State agencies that have primary response, support, planning and coordination roles and functions under statute and in accordance with emergency management plans.

Associative Contributing Factors

As the state agency response was not conducted in a vacuum, it is important to note that operations required an integrated approach involving multiple local, tribal, state and federal government agencies, and participating private sector entities (Union Pacific Railroad). Each of these agencies and organizations conducted specific operations, or provided support to the response and management efforts, or provided assistance to members of the public who were impacted by the accident.

It is also appropriate to recognize that some of the decisions made and actions conducted by other government and private sector organizations during the response was outside of the state agency landscape or influence, and may have contributed either to the success or impediment of incident control functions. This later consideration is especially important in the jurisdictional actions undertaken by Mosier and Wasco County in regards to population protection and jurisdictional emergency management actions, none of which appeared to complicate or impede State agency operations.

On April 20, 2016, a multi-agency tabletop exercise (TTE) was conducted at The Dalles utilizing a scenario that closely resembled the actual Mosier incident. Numerous local, tribal, state (WA and OR), and federal government agencies were involved. The lessons learned from this exercise were used to a good extent during Mosier as many of the conditions encountered during the April TTE existed less than two months later at Mosier. The effectiveness and value of consistent and realistic interagency preparedness exercises were demonstrated by virtue of the operational successes seen at the Mosier incident.

Supplemental Considerations

In the process of conducting the AAR, several factors were present that resulted in positive incident response and control operations. The following represents those conditions that, had they been different during critical periods of the incident response, could have adversely affected operations or impact levels to a more substantive level than what was experienced. These factors are included only to highlight that the margin between a successful response and one that becomes more problematic is indeed narrow.

Weather

Moderate weather conditions played a big role in containment operations at the scene. There was virtually no wind to affect fire propagation at the scene; prevailing temperatures were moderate; precipitation was not a factor; and other climactic factors did not negatively affect the response outcome. Had there been extensive wind conditions, heavy precipitation, extreme temperatures, or lightning during the incident, control might very well have been adversely impacted, both from a suppression aspect as well as control of released product into the surrounding environment.

Tank Types and Number

Of the 16 tank cars involved in the initial derailment, only three were involved in fire thereby limiting the scope and extent of suppression activity required. These tank cars were classified



as general purpose specification DOT-111, and modified to the Association of American Railroad (AAR) CPC-1232 standard. The tank cars were equipped with full-height head shields. Had older, less durable cars been involved in the derailment, it is quite possible substantially more oil might have been released, contributing to a more substantive fire suppression requirement, potentially greater life safety issues to exposed populations, and a requirement for even greater firefighting and public safety response resources.

Location of Incident

In spite of the adverse impact on the community of Mosier, the incident location could have been substantially worse in terms of accessibility, population at risk, exposure to vulnerable waterways, distance from resources, communications reliability, greater impact to critical infrastructure, and increased response times. The general area of the Mosier incident is rural, with limited urbanization and a relatively low population base.

Timing

The incident occurred during day time hours, at the conclusion of a business week, when residents were at work and children in schools. A nighttime derailment would have complicated evacuations, possibly delayed warning notifications, slowed state agency technical support, and hindered fire suppression operations at the scene. The same complications may have existed if the incident occurred during a weekend or holiday period.

Incident Conflicts

The Mosier Rail Incident occurred during a period when local, tribal, state, federal, and private sector resources were readily available and not already committed to another incident response. Had agencies and organizations been otherwise committed to one or more other high priority incidents, the response to Mosier would have likely been delayed and operations constricted as resources would need to be pulled in from more distant locations.

SECTION VII: REFERENCE SOURCES

Contributing Participants

The following State agency representatives participated in the AAR process and directly contributed to the development of this report:

•	Kirk Barham	-	OPRD	•	Christopher Kuenzi	-	ODOT
•	Jamie Bash	-	OHA		Rail		
•	Patrick Cimmiyotti	-	ODOT	•	Bill Martin	-	OEM
•	Kelly Jo Craigmiles	-	OEM	•	Lucinda Moore	-	ODOT
•	Greg Ek-Collins	-	ODOT		Highway		
	Highway			•	Paula Negele	-	OEM
•	Bruce Gilles	-	DEQ	•	Mariana Ruiz-Temple	-	OSFM
•	Travis Hampton	-	OSP	•	Akiko Saito	-	OHA
•	Chad Hawkins	-	OSFM	•	Daniel Stoelb	-	OEM
•	Michael Heffner	-	OSFM	•	Michael Zollitsch	-	DEQ
•	John Johnson	-	ODOT				
	Rail						

Supplemental Reference Documents

The following supplemental references and sources were used in the review of external incident information for this AAR report:

- Mosier Train Derailment June 2016 After Action Report & Corrective Action Plan Wasco County
- Preliminary Factual Findings Report Federal Railroad Administration June 23, 2016

Attachment A AAR Concept & Objectives Plan

(Source: OEM)

GENERAL GUIDANCE

Purpose

This document serves to establish the process and identify key objectives for the development and presentation of an interagency After Action Review (AAR) report, in association with primary state agency response to the 2016 Mosier Rail Incident.

OBJECTIVES

- 1. To identify key operational issues and understand the framework associated with state agency response, coordination and incident management for the Mosier Rail Incident.
- 2. To identify key operational successes and opportunities for improvement associated with state agency response to the Mosier Rail Incident.
- 3. To produce an integrated AAR report that identifies the conditions, establishes the process, and communicates interagency operational issues and recommended solutions.

PRIMARY PARTICIPANTS

- Office of the State Fire Marshal (OSFM)
- Oregon Department of Environmental Quality (ODEQ)
- Oregon Department of Transportation (ODOT) Rail and Highways
- Oregon Military Department/Office of Emergency Management (OEM)

BACKGROUND

Incident being reviewed is for the 2016 Mosier rail incident that occurred in Wasco County. Incident background information available through selected sources, including timeline of notifications, key response actions and issues affecting operations.

AAR PROCESS

In order to conduct an effective after action review process the following pathway will be utilized:

Action Steps

- ➤ OEM to identify primary state agency participants in the response. Contact and obtain buy in on process and outcome.
- ➤ OEM to conduct initial Concept and Objectives (C&O) meeting with key agency representatives to set parameters, expectations, lines of inquiry, and format.
 - OEM facilitates initial meeting to establish guiding parameters.
- ➤ OEM to develop and disseminate state agency survey that poses specific agreed upon questions to be completed and returned to OEM for correlation.
 - OEM distributes surveys which are completed by state agencies. State agencies circulate among staff to obtain responses. State agencies return completed survey to OEM.
- ➤ OEM facilitates in-person after action hot wash to obtain additional information for inclusion within draft AAR report document.
- ➤ OEM to format draft AAR report document from data provided by primary state agencies and available post-incident reference materials.
 - OEM correlates and formats all data into draft document which is disseminated to primary state agencies for review and comment.
- ➤ OEM to distribute draft AAR report to primary agencies for review and comment. Make corrections and finalize AAR.
 - OEM makes necessary adjustment to draft AAR report document following state agency review.
- OEM to distribute and socialize final AAR report product.

Proposed AAR Process Timeline

The proposed timeline for AAR milestones:

19 July - Initial Concept & Objectives meeting at OEM

22 July
 Disseminate AAR survey to primary state agencies

28 July
 Conduct formal hot wash to further mine data

5 August
 Disseminate draft AAR document to primary state agencies

19 August - Disseminate final AAR product to all interested parties

Proposed AAR Document Format

OEM will develop and appropriate format for the final AAR report document based upon input collected to include identified successes, opportunities for improvement, recommendations, and summary narrative.

AAR Product Audience

- Primary state agencies (DEQ, OSFM, ODOT [Rail & Highway], OEM)
- ➢ Governor's Office
- Other state agencies
- Involved local and tribal governments
- Involved federal agencies
- Involved non-governmental organizations
- Other interested parties
- Media

ASSESSMENT QUESTIONS

The following questions will be used to identify individual and collective response successes and opportunities for improvement involving the primary state agency response organizations involved in the Mosier Rail Incident.

- 1. When was your Agency notified of the incident?
- 2. What role does your Agency have in this type of incident according to state statute?
- 3. What role did your Agency play in association with the Mosier Rail Incident?
- 4. What primary and supporting functions did your Agency perform?
- 5. What aspects of your specific Agency's response functioned effectively?
- 6. What aspects of the overall multi-agency response functioned well and effectively?
- 7. What aspects of your specific Agency's response present identified opportunities for improvement?
- 8. What aspects of the overall multi-agency response to this incident present identified opportunities for improvement?
- 9. What unexpected events, actions, impacts, or consequences were experienced or observed by your Agency during the response?
- 10. How many Agency personnel were directly involved in this response: In the field and offsite?
- 11. Did the Agency have sufficient and appropriate staffing and resources for this response?
- 12. From the Agency's perspective, what specific factors could have impacted positively or negatively impacted the response?
- 13. How could partner state agencies have provided additional or more effective assistance to your operations and efforts?
- 14. What are the top three take-away concerns for your Agency as a result of your response to the incident?
- 15. Overall, based upon existing plans, capabilities and previous operational experiences, did the response meet incident management expectations?

Assessment Considerations

- 1. What is your agency's statutory/regulatory role in responding to or managing rail incidents involving hazardous materials?
- 2. What was your agency's role/responsibility during the Mosier Rail Incident?
- 3. From a state agency perspective, what aspects of the response went well and according to existing plans/protocol? Conversely, what gaps were identified that present opportunities for improvement within the agency and among external partners?

Communications

How did operational and person-to-person communications function during the agency's response operations? Consider the following:

- Systems and processes
- Internal and external communications
- Initial incident and agency notification

Coordination

How effective were agency coordination efforts during response operations?

- Was coordination effective within the agency?
- Did the established incident management structure work effectively?
- Were the right agency staff committed to the incident?
- How effective were Agency liaison efforts conducted?

Information & Intelligence

Did the agency have access to timely and accurate situational intelligence relating to the incident that would support effective response operations? Consider:

- Common Operating Picture
- Threat and hazard information.

Organization

How effective were state agency organizational structures in managing response operations for this incident? Consider the following:

- Did the organization function as planned during the incident response?
- Did the organizational structure/culture pose artificial obstacles?
- Was a unified command structure employed and was it successful?

Plans & Protocol

How effective were existing operational plans and procedures during the agency's response efforts?

- How effective were existing agency response plans?
- How effective were joint response plans?

Policy

How effective were state agency policies in initiating and managing an effective response to this incident?

- Were conflicts experienced between official policy and operational needs?
- Did Agency policies conflict with external partners?

Processes

How effective were state agency response processes and mechanisms applied?

- Were their conflicts between established processes and operational need?
- Was it necessary to adjust, modify or negotiate modifications to process?

Public Affairs

How effective were state agency public affairs/public information operations during this incident?

Resources

Did the agency have the appropriate response and support resources available during the incident? Were resources utilized in an effective manner? Consider the following:

- Equipment
- Facilities
- Transportation

Training & Knowledge

Did agency personnel possess the appropriate level of functional knowledge to perform their respective duties during the incident? Consider the following:

- Personnel training and knowledge levels in relation to task.
- Balance of knowledge, including technical phraseology that might have inhibited effective communication and coordinated action.

Incident Complexities and Contributing Factors

The AAR process is generally designed to identify issues and factors that affect actions during a specific point in time, focused on operational effectiveness. Incidents are also defined by other factors, some that are not easily identified using standard information collection or feedback lines of inquiry. As part of this AAR, primary and supporting state agencies will also be asked to provide information of a supplemental nature, with an emphasis on subjective perspective and speculation regarding conditions and circumstances that did, or may have had an impact on the response.

Attachment-B Primary State Agency Response Survey

(Source: OEM)

General Guidance

This survey has been designed to elicit evaluation data from State of Oregon agencies that had a primary role in the 2016 Mosier Rail Incident response, incident management, or active support.

- This survey is designed to be completed on an individual basis, but may also represent a group effort within a specific agency.
- Stay focused on the Mosier Rail Incident event when providing data.
- Answer from the perspective of your agency and the State response overall.
- Be as complete as possible in your responses. If something isn't applicable, enter N/A.
- If something was not asked that you believe should be covered, include any pertinent information in Section IV of this survey.
- This survey is non-attributional. Your identity will not be included in any release of this data.
- Survey results will be reviewed during a future hot wash and then used to develop the final After Action Review report.

Part I – Participant Identification

Please complete each of the identification questions provided below. Your information will only be used to identify who participated in the survey, or for contact purposes should questions arise in the process.

INDIVIDUAL COMPLE	TING SURVEY:			
PHONE CONTACT:		EMAIL:		
AGENCY REPRESENTED:				
POSITION IN AGENCY:				
ROLE DURING MOSIER INCIDENT:				
WORK LOCATION DURING INCIDENT:				

Part II - Specific Questions

Instruction: Please provide specific narrative to each of the questions below that are applicable to this incident and you/your agency's role or actions. Consider both successes as well as gaps that were identified in each of the applicable questions. Expand the response box as appropriate to provide adequate space for your narrative.

1	How was your agency notified of the incident and who was the initial point of contact?
2	What role does your Agency have in this type of incident according to state statute?
3	What specific operational/management roles did your Agency play in association with the Mosier Rail Incident?
4	What primary and supporting functions did your Agency perform?
5	What aspects of your specific Agency's response functioned effectively?
6	What aspects of the overall multi-agency response functioned well and effectively?

7	What aspects of your Agency's response present identified opportunities for improvement?
8	What aspects of the overall multi-agency response to this incident present identified opportunities for improvement?
9	What unexpected events, actions, impacts, or consequences were experienced or observed by your Agency during the response?
10	How many Agency personnel were directly involved in this response: In the field and offsite?
11	Did the Agency have sufficient and appropriate staffing and resources for this response?
12	From the Agency's perspective, what specific factors could have – positively or negatively – impacted the response?
13	How could partner state agencies have provided additional or more effective assistance to your operations and efforts?

14	What are the top three take-away concerns for your Agency as a result of your response to the incident?
15	Overall, based upon existing plans, capabilities and previous operational experiences, did the response meet incident management expectations?
_	
Par	t III – Incident Complexities and Contributing Factors
<u>did,</u> incid	ruction: Please enter any observed or considered incident complexities or contributing factors that or <u>could</u> have adversely impacted response operations and the successful management of this lent. Consider the question from the position of both actual as well as speculative in regards to final ome of the incident.
Par	t IV – Supplemental Comments
reco	ruction: Please enter any additional comments, observations, conclusions, clarifications, or mmendations that are appropriate to this incident from your perspective. Expand the box as needed clude all narrative.

Attachment-C Mosier State Agency AAR Hot Wash Agenda

(Source: OEM)

AGENDA

Thursday – July 28, 2016 – 1:00 to 4:00 PM Office of Emergency Management

- Welcome Introductions Housekeeping
- Hot Wash Agenda Focus Process
- Overview of After Action Review Process
 - AAR Background
 - Planning
 - Expectations
- Mosier Rail Incident Response Overview
 - Basic Incident Facts
 - Role of Primary and Supporting State Agencies
- Questions and Discussion
 - 0 1 15
 - All involved primary and support agencies
- Supplemental Open Discussion
 - Response Successes
 - Opportunities for Improvement
 - General Observations
- Recommendations
- Next Steps
 - Draft Report Tentative August 5
 - Development of Final Report
- Final Comments Thank You Adjournment

Attachment-D Oregon Emergency Response System (OERS) Mosier Rail Incident Report

(Source: OERS)

OEM

Oregon Emergency Response System (OERS)

Mailing Address: PO Box 14360 Salem, OR 97309-6074

Nationwide: 800-452-0311 E-mail: oers.staff@state.or.us

Local: 503-378-6377 Fax: (503) 588-1378

OERS Incident Number: **2016-1305** Incident Type: **CBT**

 Received:
 06/03/2016
 at | 1518 | Taken | By:
 Raymond, Jim

Incident Case Numbers	Organization
NRC#1149628	NRC

Location:	UPRR line near 1st Ave	Coordination Time:
City:	Mosier	15
County:	Wasco	15

Contact Type:	Paged:	Answered:	Contact Name	Organization:	Phone
Caller			Ashley	UPRR	888-877-7267
Comments			•	•	
Pager	1241	1243	Jason Cain	SFM	
Comments					
Pager	1241	1303	Chris Kuenzi	ODOT	
Comments					
Pager	1241	1255	Kimberlee Van Patten	DEQ	
Comments					
Pager	1241	1243	Chris Hansen	ОНА	
Comments					
Notification	1251		Kim	OSP	
Comments	Case N	Case Number SP16174088			
Notification	1256		Justin Huffman	LEM	
Comments	Wasco	CO LEM			
Notification	1258		Mark Tennyson	OEM	
Comments					
Notification	1321		Leslie	PCC	
Comments					
Notification	1320		WASHINGTON ST EOC	Other	
Comments	Forwarded the NRC report as well				
Email	1331		ODOT-RAIL	ODOT	
Comments					
Email	1331		CBT	DEQ	
Comments	_				
Email	1331		OHA DO	ОНА	
Comments					

Incident Description:

UPRR reported a major train derailment out side of Mosier OR. The derailment consists of several cars loaded with petroleum products. There is a reported fire with thick black smoke. Several of the petroleum cars into Rock River Creek. Several EMS agencies are en-route but I do not have any information for an on scene contact. The locomotive involved in this is #UP5544 Received an NRC report that narrowed the location to rail road MM 68.5 near 1504 Rock Creek Road. It further indicated that there was an unknown element released from the train. 06/04/16 0600 hrs - UPRR repors an oil sheen on the Columbia River inside and outside the booms. Release amount is unknown, but the fire has been extinguished. rsk 1529

- UPRR Katie: Have confirmation that I-84 is closed for 18 miles. An evacuation has been set up for 1/2 mile around the incident. This is an estimation, Estimated 11 cars derailed, 6 into the rock creek, 4 on fire and actively releasing. The EPA has stated that no one will attempt to extinguish the fire it will have to burn out on it's own and there is no estimated time for re-opening the major interstate. - MLR 18:56: Curtis 971-563-6664 with American Red Cross called in to advise they have opened a shelter at Dry Hollow Elementary School in The Dalles. - MLR 06042016 1538hrs//Daniel Kearns (City Attorney Pho/503.997.6032) called in to report incident, from City of Mosier. City Manager is on scene; Kathy Fitzpatrick Pho/541.400.0124. *Mr. Kearns did not know it had already been reported to OERS. //crb 06062016 1200hrs: Wasco Train Derailment - with fire As of 06/06/2016 Total train cars 96 unit cars Mosier Population 489 Total Population Friday 06/03 there were 16 Union Pacific unit cars derailed and 4 of those caught fire. There were 29,000 gallons of Bakken Crude Oil per car. Evacuations were issued for a 1/4 mile radius totaling over 100 evacuees. A Red Cross shelter was established on Friday in Mosier, but was closed on Saturday. The Wastewater Treatment Plant was damaged and is offline. An ETA for restoral of services is not known at this time. There are Vactor Trucks on site in 24/7 operation to collect and transport the waste to Hood River until Plant is back online. There is a precautionary 'boil water' notification for drinking water. 4 Tribes are aware and monitoring the situation and the lead is from the Yakima Tribe in Washington (per Sheriff McGill of Wasco County). There are no known impacts to fish and wild life but it is being monitored. Continual air quality is being monitored. EPA and DEQ are developing a plan for contaminated soil. There was no visible sheen on the Columbia River on either Sunday or Monday morning. Union Pacific has set up a client services trailer.//GDuvall 1019hrs 06/13/16 Justin Huffman Pho/541.506.2790 advised that the EOC is now closed and they are closing this incident//crb

Material:	Petroleum Products
Unit Of Measure:	UNK
Quantity Released:	Unknown
Release Source:	RR
Potential for further spillage:	
Site secured for safety:	
Threat to public waterways:	
Threat to public safety:	
Threat to property:	
Containment steps taken:	

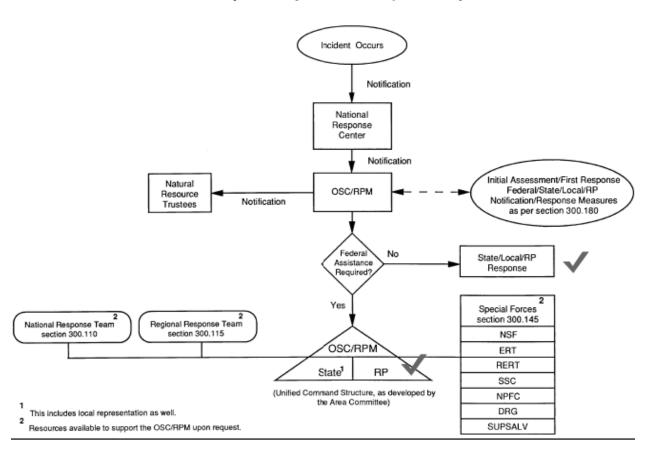
Attachment-E Transfer of Command Schematic – Mosier Incident

(Source: DEQ)

At the 2016 Mosier Rail Incident, when the transfer of command occurred during transition from the crisis management phase to the consequence management phase of the incident, Oregon DEQ and USEPA followed the unified command model in the National Contingency Plan and included the Responsible Party. There are a variety of reasons to include the RP in unified command including the RP's extensive knowledge of their own operations and the products they transport as well as the vast financial, operational and technical expert resources they have available to contribute to the overall success of the response.

Figure 1a

National Response System Concepts: Response



CFR Title 40 Chapter 1 Subchapter J Part 300.105

It is difficult to imagine the overall outcome of a large oil spill without the participation of the RP. Other examples of oil spills where the RP participated include Deepwater Horizon (BP) even though there was a National Incident Commander assigned, the Refugio Oil Spill in California (Plains All American Pipeline) and Enbridge Pipeline spill in Michigan. Even the New Carissa benefited from having vast resources brought to the incident by Green Atlas Shipping, including experts in maritime salvage.

Attachment-F UPRR Unit Train Derailment Response AAR (DEQ)

(Source: DEQ)

DEQ - UPRR UNIT TRAIN DERAILMENT RESPONSE AFTER ACTION SUMMARY

Incident Details

Incident Name/Title

UPRR Unit Train Derailment - Mosier, Oregon

Incident Dates and Location

June 3, 2016 in Mosier, OR (OERS Notification received at 12:41 local time)

Response Organizations

- 1. State of Oregon: DEQ, SFM, ODOT, State Police, OHA, ODFW
- 2. State of Washington: Ecology, WDFW
- 3. Federal: EPA, USCG; ACOE, USFS, DOI, USFW, FEMA, NOAA
- 4. Tribal: Umatilla, Warm Springs, Nez Perce, and Yakama tribes; CRITFC
- **5. Local:** Mosier Fire Dept.; Hazmat 3

Incident

On June 3, 2016, a unit train comprised of 96 rail tank cars carrying Bakken crude oil derailed in the town of Mosier, Oregon. Mosier is located along the Columbia River approximately 70 miles east of Portland. Each rail tank car is carrying approximately 28,000 gallons of Bakken crude oil. A total of 16 rail tank cars derailed; several of the rail tank cars caught on fire resulting in a secondary fire to a forested area between the tracks and the community. An evacuation radius was put in place for ½ mile from the incident site resulting in the evacuation of approximately 100 Mosier residents. The unit train's gross cargo of oil totaled nearly 3 million gallons, with approximately 448,000 gallons of oil within the 16 derailed cars.

Incident Response

Notifications and Personnel Deployment

Internal notifications went according to protocol. Initial coordination meeting was completed by ECC headquarters team at 1430 with DEQ, Washington Dept. of Ecology, and EPA. By that time, notifications to tribes, SHPO and downstream users were completed. DEQ had difficulties reaching UPRR for details on incident. ODOT had mobilized a PIO and SFM had also deployed resources to Mosier for support. Mike Renz; DEQ SOSC stationed in Bend was recalled from leave and was in route to the incident scene. Remote JIC established with members of the organizations with EPA in lead in Hood River.

ECC team was preparing to deploy 2 positions to the response on Saturday morning under assumption fire suppression actions would continue throughout the night consistent with prior incidents across the country. Contributing to this decision was the closure of I-84 that would result in significant delays in personnel reaching Mosier.

Second coordination call conducted at 1700 and included representatives from USACOE, EPA, Ecology, SFM, OEM and ODOT. Firefighting operations were being set up at that time. Evacuations had been conducted and incident command was under local fire jurisdiction and in lead on communications. EPA and Ecology were sending air monitoring equipment and OHA needed information to communicate risk message to public.

Transition from Crisis (Fire) Phase to Environmental Response

Fire suppression for the burning cars was completed by 0200 on Saturday morning. Cooling operations for the burning cars continued through the morning, and UPRR began removing remaining cars from the tracks and staging them for subsequent product removal. Once the cars were removed, UPRR removed the damaged track section, underlying ballast, and contaminated soil beneath the track footprint. Contaminated soil was stockpiled near the tracks and new tracks installed in preparation for reopening.

DEQ personnel coordination call was completed at 0800 on Saturday morning. Don Pettit (Environmental Unit) and Kimberlee Van Patten (Documentation Unit) from HQ were deployed following this meeting and arrived at the site by mid morning. Tracy England was also deployed to support the environmental unit and the DEQ Incident Commander, Mike Renz. We did not mobilize a PIO for the JIC or a person to manage the liaison role for DEQ. Efforts to support these functions remotely proved to be ineffective and created communication gaps with media and elected officials in Oregon.

The incident command structure formed throughout the day on Saturday. UPRR deployed an Incident Management Team comprised of 10 personnel that arrived Saturday morning. WA Ecology deployed a similar level of resources including an incident commander, JIC, liaison, and environmental unit personnel and equipment for monitoring air and water. DEQ's incident response resources onsite included incident commander, two environmental unit staff, and a documentation unit coordinator.

On Sunday, DEQ sent a liaison and JIC representatives to support the elected officials briefing scheduled for that afternoon and a community meeting in the evening. A number of plans had yet to be completed at that time, including a liaison plan for external coordination and communication with elected officials. A WA Ecology representative served as the liaison officer for the IC through the first VIP meeting, and was transitioned to DEQ prior to the public meeting. A cohesive communication process for both Oregon and Washington elected officials was not completed until after the second VIP tour conducted on Monday, 6/6.

Oil transfer operations for the intact cars were initiated Monday and completed by approximately 1700 on Tuesday 6/7. The cars were cleaned to make them ready for transport and subsequently moved. A transition plan from the emergency phase to environmental cleanup operations was completed on 6/7.

Response Issues

Key Discussion Points:

Issue 1: Initial Mobilization & Fire Phase Operations, Unified Command ICS

- DEQ delayed deployment of significant resources on the day of the incident anticipating the fire phase would continue for at least 24 hours consistent with other fire incidents involving railcars containing flammable liquids. This primarily affected external coordination with elected officials during the first 48 hours.
- DEQ lacks sufficient resources to stand up an incident command of the magnitude needed for this type of incident. The Northwest Area Contingency Plan contemplates a bi state response on the Columbia River regardless of whose shore it is on. Ecology is well staffed and responded in their usual way with resources we do not have. This resulted in WA Ecology appearing to lead the response rather than DEQ. For DEQ to take a primary agency role for this scale of an incident, DEQ would need at least 6 additional positions to backup the IC roles covered for this incident.
- DEQ anticipated State Fire Marshal taking a more active role in the initial IC structure and maintaining JIC/liaison role until transition of the IC from fire to environmental response.
- Some of DEQ's personnel had no prior ICS experience in an active response of this size and complexity. In addition, personnel took on IC roles that they had limited training through drills and exercises. This lack of experience and training hampered the effectiveness of JIC and liaison functions. Additional resources would have been beneficial to the environmental unit but did not significantly impact the response progress.
- DEQ, UPRR, and EPA had participated in the Governor's crude by rail roundtable facilitated discussion on February 5, 2015, and the Regional Response Team Spill of National Significance table top exercise in September 2015 that also included Ecology. Those round table exercises did not involve forming of an incident specific unified command that exercised decision making capabilities that arise during a unit train derailment with a fire and oil release. Prior DEQ, EPA and UPRR experience working with each other on smaller rail incidents was helpful in bridging consensus building on issues involving significant impacts to a community requiring evacuations, water supply interruptions and damage to the wastewater treatment plant.

Issue 2: Tribal Participation –

• As lead agency in the response, EPA worked with the four treaty tribes (Umatilla, Warm Springs, Yakama, and Nez Perce) on designating one tribe to represent their collective interests on the UC. The tribes agreed that the Yakama Tribe would represent tribal interests on the UC. Tribal participation in the UC went fairly smoothly until EPA transitioned out of UC when we completed the emergency response phase and initiated cleanup operations. DEQ experienced significant difficulties working with one of the Yakama's ICs during environmental cleanup operations that required DEQ to seek EPA assistance with resolution. DEQ typically coordinates with Oregon tribes during spill incidents and has not coordinated directly with Washington tribes before (DEQ coordinates with Ecology on spill incidents occurring in counties adjacent to the Columbia River).

Issue 3: JIC/Liaison Functionality -

- The Joint Information Center (JIC) and Liaison initially formed remotely and the JIC/Liaison had inadequate resources to effectively push out a UC unified message for the response and ensure a consistent message was broadcast during the response to both media and elected officials.
- Communication between the JIC and Liaison section was dysfunctional for the first several days
 into the incident. The sections should have been co-located in the same room or area to ensure
 consistent communication.
- There was a significant communication breakdown that originated with the DEQ Headquarters' Emergency Response manager. His electronic contact list file for elected officials was last updated in 2011 and he was uncomfortable using that information before verifying its accuracy. He failed to check with the Eastern Region Emergency Response Manager who had up to date region specific contact information and was prepared to take on VIP communication duties. This led to delays in sending updates to elected officials and/or their staff.
- The VIP invitees for the tour on Monday June 6th became too large to manage effectively. We initially were informed that approximately 15-20 would attend; actual attendance was in the range of 50. This compromised the communications on the overpass bridge and resulted in a tour that took over 2 hours to complete and diverted the Federal and State Incident Commander's time from the response operations. In subsequent tours, attendees were by invitation only and limited to only those invited.
- Holding the informational briefing in the IC work area was not ideal and could interfere with response activities.
- EPA did not provide a person to fill the liaison officer role typical of a lead role for EPA or USCG. For spills within their jurisdiction, USCG would typically fill this role and state agencies would provide a support role.

Recommendations for DEQ Corrective Actions

Issue area for future attention:

- DEQ will need more ICS trained response personnel for future response efforts of similar scale. If this incident had resulted in significant releases into the Columbia River, or had unfavorable operating conditions (such as wind) or had happened along another watershed elsewhere in the State, DEQ would not be able to maintain a functioning response team for more than 2 operational cycles.
- DEQ may be able to use our response contractor or a professional incident management team to help fill some response positions within the IC. However, with our limited reserve funds in HSRAF, we would not be able to sustain this financially for long. Ideally, we should have a reserve fund like the ones administered by the National Pollution Fund Center, and the states of Washington and California. While DEQ does recover costs it incurs in a response, that typically involves several months of lag time for costs to be rolled up to an invoice being issued and payment received from a responsible party. Having a financial person tracking costs as they are incurred could improve the timeliness of our cost recovery invoicing process.
- All personnel that might be involved in a response should be trained in ICS and participate in table tops, exercises, and drills, with a worse case drill as well at least on an annual basis. Personnel could include after-hours staff or other staff with past emergency response duties, all PIOs and regional solution team members, and program managers assigned to spill program management for DEQ. This duty should be considered by upper management as essential and communicated to managers that participants get "extra credit" for their annual review, etc. This may be looked on by some managers as a negative when evaluating job performance. Positions that we should be prepared to staff include:
 - Deputy Incident Commander
 - PIO for JIC regional communications specialist
 - o Liaison Officer Regional Solutions Team for incident area
 - Situation Unit Leader One of two daytime spill response duty officers
 - o Environmental Unit AHDO/CU technical staff
- Future initial deployments of a DEQ IC for a unit train derailment should include a deputy or support position to assist with coordination with ECC in HQ and regional DA/Manager, and local responders.

Other recommendations:

- DEQ needs to develop a quicker response stance with regard to initial personnel deployment. For any future oil or chemical train incidents, we should quickly deploy a full contingent, including PIO and liaison as interests will be very high in the early stages of the response.
- DEQ needs to work with the SFM to better understand the role of state hazmat teams, their incident management teams, and the role SFM executed in this response
- The DEQ environmental unit leader needs to notify the unified command when RP contractors working in the environmental unit are not sharing plans and data with other unit staff.
- DEQ needs to work with the Area Committee and RRT to develop best recommended practices for tribal representation in UC when there is more than one tribe interested, and when out of state tribes have treaty rights in the area. Consider Tribal Liaison assistance or deploy Tribal Liaison
- DEQ previously had a URL for a web page template for spill incidents that could be populated with response information and brought online without a lot of IT/webmaster support. This template disappeared during the web page updates undertaken in the past couple of years. This template could have been helpful to get incident specific updates to external stakeholders.
- DEQ should deploy IT staff for initial set-up phase to ensure connectivity and functionality of communications and computer equipment.

Attachment-G 2016 Mosier Train Derailment After Action Report (Source: OSFM)



Oregon Office of State Fire Marshal



Acknowledgements

Jim Walker, Oregon State Fire Marshal, Agency Rep
Mariana Ruiz-Temple, Chief Deputy State Fire Marshal, Agency Rep
Michael Heffner, Assistant Chief Deputy, Agency Operations Center Manager
Chad Hawkins, Hazmat Rail Coordinator, Liaison
Mike Traeger, Regional Hazmat Team 3, Hazmat Liaison

Incident Overview

On June 3, 2016 at 12:14pm, a 911 call was placed to Wasco County 911 Communications Center reporting a train had derailed and "oil cars were on fire" in the town of Mosier. Upon the arrival of the initial responding agencies, it was determined that this was a 96 car unit train loaded with Bakken Crude Oil of which16 tank cars had derailed and three were heavily involved with fire.

Evacuations for specified areas of Mosier were coordinated with Oregon State Police along with multiple local law enforcement agencies in a very efficient and effective manner. Along with evacuations, I-84 and adjacent surface streets were closed due to safety concerns. The objective for fire resources was to maintain a safe distance from the tank cars while applying copious amounts of water to cool both the fully involved tank cars and the adjacent exposed tank cars. The Conflagration Act was declared at 9:32pm on June 3rd to assist with water supply. There was minimal extension into the wildland which firefighters quickly extinguished once it was determined safe to do so. When the fire intensity was reduced, AR-AFFF foam was applied to extinguish it around 2:20am on June 4, 2016.

Over the next several days, the crude oil was offloaded from the damaged tank cars to semi-trucks. The loaded semi-trucks then transported the Crude Oil to the Union Pacific yard in the Dalles where it was staged until it could be re-loaded into rail cars.

The Oregon Office of State Fire Marshal (OSFM) activated the Agency Operations Center upon notification of the incident and coordinated the notifications, deployment and tracking of resources accordingly. OSFM mobilized the Regional Hazardous Materials Emergency Response Team 03 Gresham/Multnomah, two strike teams comprised of five water tenders each, along with an Agency Representative in addition to a Liaison to the incident scene.



OSFM-Mobilized Resources	
Incident Management Team	2
Hazmat Team	20
Task Force Personnel	23
Total Personnel Responding	45

Name
Mosier Incident
Start Date of Response
06/03/16
End Date of Response
06/10/16
Fire Defense District
Wasco County
Size/Area Involved
16 tank cars derailed,
2 hoovely involved with tire
3 heavily involved with fire Cause
Cause
Cause Under investigation
Cause Under investigation Residences Threatened
Cause Under investigation Residences Threatened 75

Water Tenders	10
Hazmat Heavy Rescue	1
Light Rescue	1
Command	6
Support	0
Total Apparatus	16

Mobilized Agencies

Office of State Fire Marshal

Tualatin Valley Fire and Rescue

Clackamas County Fire District #1

Canby Fire District #62

Sandy Fire District #72

Molalla Fire District #73

Estacada Rural Fire District #69

Hillsboro Fire Department

Washington County Fire District #2

Cornelius Fire Department

Gresham Fire and Emergency Services/Multnomah County Sheriff's Office-OSFM Regional Hazardous Materials Emergency Response Team 03

Total Agencies Responding: 11



Key Findings

Positive areas included:

- Safe and effective Fire and Hazmat operations along with timely and well coordinated evacuations.
- Rapid activation of the Agency Operations Center and deployment of necessary resources during the initial phase of the incident, in addition to when the Conflagration Act was invoked.
- Deployment of OSFM Agency Representative and Liaison in the initial phase of the incident was key in the coordination and communication with State, Local, and Federal agencies.
- Foam trailers that have been obligated to OSFM were an integral component in firefighting efforts.
- Participated in PIO coordination calls with executive staff in cooperation with the Regional Response Team and the Northwest Area Committee members to maintain consistent communication and provide accurate information.

Observations:

- Clear definition and understanding of roles, responsibilities and communication between Federal, State, and Local agencies was a reoccurring issue.
- Requesting All-Hazards IMT in the initial phases of the incident could have better provided support and incident command framework to the local fire department.
- Clear transition from Emergency Response to Recovery/ Mitigation could have been improved.
- Identifying a sustainable/capable municipal water supply to support fire operations of this type.
- Staging resources away from the incident to prevent access issues.
- Appropriate representatives from each agency are at scene for the duration of the incident.
- Better unified messaging throughout the incident.





MOSIER TRAIN DERAILMENT JUNE 2016

AFTER ACTION REPORT & CORRECTIVE ACTION PLAN

PREPARED BY: WASCO COUNTY SHERIFF'S OFFICE/WASCO COUNTY EMERGENCY MANAGEMENT

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EXECUTIVE SUMMARY

The Mosier Train Derailment Hotwash was conducted on Friday, July 22nd at the lecture hall in building #2 at Columbia Gorge Community College. This event was developed, conducted and evaluated by Wasco County Sheriff's Office and Wasco County Emergency Management. During the planning of this event, the following objectives/goals were identified to be met:

- Define potential gaps
- Create solutions to gaps
- Identify positive outcomes

An evaluation of the objectives/goals was conducted and a review and critique of the event occurred at several levels. Additionally, all Players were provided the opportunity to complete a written participant "Incident Hotwash survey". Finally, notes compiled from the event were used to compile this AAR/CAP.

Key strengths identified during this event:

- Evacuation of Mosier students
- Evacuation of Mosier Manor
- Law Enforcement communications
- MCLEA Activated and quick response

During the event various gaps were identified, including:

 Relevant players not included at the IC table (ODOT, Planning dept., etc.)

- External Communications
- Internal Communications
- Incident Command/Unified Command Structure (No Sections Chiefs, Staging Manager, Logistics, etc.)
- Safety Officer not designated in the first operational period
- Scene safety and exclusion zone not enforced

In response to these gaps, *corrective actions* have been proposed to improve future incident responses, including:

- External Communications Develop a communications plan (Twitter, Facebook, Web pages, Media, PIO, etc.)
- Internal Communications Utilize VTAC and look at the possibility of having a communications vehicle/Mountain Wave.
- Incident Command/Unified Command Develop a resource manual and check list (Who is trained for PIO, logistics, planning, safety officer, etc.)

EVENT OVERVIEW

Event Name:	Mosier Train Derailment Hotwash		
Event Date:	7/22/2016		
Event Location:	CGCC		
Type of Event:	Debrief		
Hotwash Objectives/Goals:	 Define potential gaps Create solutions to gaps Identify positive outcomes 		

HOTWASH OVERVIEW:

Purpose:	 This event was specifically developed to identify gaps and strengths of the Mosier Train Derailment. The intent of the event was to specifically target discussions around the gaps and strengths of the operation to better respond to a future emergency event. 	
Key Strengths:	 Evacuation of Mosier students Evacuation of Mosier Manor Law Enforcement communications MCLEA – Activated and quick response 	
Identified Gaps:	 Relevant players not included at the IC table (ODOT, Planning dept., etc.) External Communications Internal Communications Incident Command/Unified Command Stucture (No Sections Chiefs, Staging Manager, Logistics, etc.) Safety Officer not designated (first operational period) Scene safety and exclusion zone not enforced 	

CONCLUSIONS

Event participants identified several areas for improvement. Major recommendations:

- Communications
- Unified Command
- Training 1. TTX and field exercise
 - 2. Identifying and the training of personnel for PIO & JIC
 - 3. ICS courses

Wasco County Sheriff's Office and Wasco County Emergency Management will use the results of this event to further refine plans, procedures and training. Additional trainings and exercises should be conducted to test the improvements instituted as a result of this event, as well as to further foster an environment of communication, networking and education.

APPENDIX

APPENDIX A

CAP

Issue	Corrective	Department	Assigned	Completion
	Action			Date
No plan in place	-Determine what needs to be a part			
for train	of the plan. (Communications,			
derailments	Command Structure, Resource List,			
	etc.)			
Internal	-VTAC			
Communications	-Communications			
	Vehicle/Mountain Wave			
External	-PIO training			
Communications	-Develop PIO list for IC			
	-JIC training			
Incident	-ICS Courses			
Command	-Resource Manual			
Structure	-TTX & Field Exercise			
Unified	-ICS Courses			
Command	-Resource Manual			
Structure	-TTX & Field Exercise			
Safety Officer	Training (TTX & Field Exercise)			
Scene Safety	Training (TTX & Field Exercise)			