NOTIFICATION

Bakken Crude Oil Shipment forwarded from Virginia Emergency Operations Center (VEOC)

DATE: 26 FEB 2015

DISTRIBUTION LIST

- ☑ LOCAL EM COORDINATOR
- ☑ LOCAL HAZMAT COORDINATOR
- ☑ LOCAL PSAP
- ☑ VDEM HAZMAT and LSS
- ☑ VERC AGENCIES
- ☑ SECRETARY PS/HS and SEC. TRANSPORTATION

Questions, contact the VEOC at 804-674-2400 or veoc@vdem.virginia.gov

COMMONWEALTH of VIRGINIA

Department of Emergency Management

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February 26, 2015

M E M O R A N D U M

To: Local Government Emergency Management Coordinators
Local Government HAZMAT Coordinators
Local Government Public Safety Answering Points (PSAP)
VDEM Technological Hazards Division
VDEM Local Support Services Division
Virginia Emergency Response Council Agencies
Secretariat of Public Safety and Homeland Security
Governor's Office

From: Jeffrey D. Stern, Ph.D.

Subject: Updated Bakken Crude Oil Shipment Notification

On February 23, the Virginia Department of Emergency Management (VDEM) received notification from CSX regarding the rerouting of trains carrying Bakken crude oil due to the recent train derailment in Mount Carbon, West Virginia. The notification indicated that CSX plans to ship between four (4) and six (6) trains per week through this alternate route until further notice.

On May 7, 2014, the U.S. Department of Transportation (USDOT) issued an emergency order requiring railroads operating trains containing more than 1,000,000 gallons of Bakken crude oil to notify state emergency response commissions. Notification must include the estimated volume of crude oil being transported, frequency of anticipated train traffic, and the route through which the crude oil will be transported. In Virginia, the VERC serves as our state emergency response commission, and VDEM serves as the chair of VERC. The USDOT emergency order can be viewed at: http://www.dot.gov/briefing-room/emergency-order.

VDEM has identified the following communities along this current shipping route that have a need to know about these shipments; we are sending this notification to local emergency managers, hazmat coordinators, and 9-1-1 public safety answering points; please distribute to local fire services, EMS, and law enforcement as needed:

DETOUR ROUTE

- Bedford
- Campbell
- Charlotte
- Dinwiddie
- Franklin
- Giles
- Halifax
- Lunenburg
- Montgomery
- Nottoway
- Petersburg
- Prince Edward
- Pulaski
- Radford
- Roanoke County
- Roanoke City
- Salem
- Tazewell
- Pittsylvania
- Colonial Heights
- Chesterfield
- City of Richmond.

NORMAL ROUTE

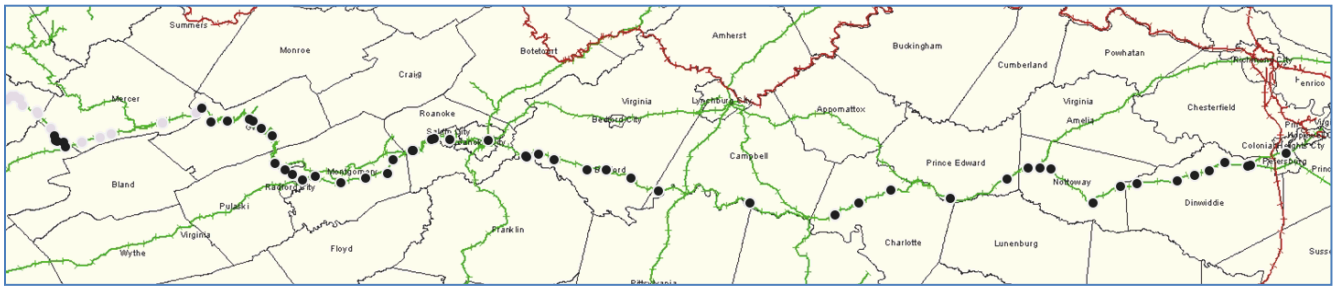
- Albemarle County
- Alleghany County
- Amherst County
- Appomattox County
- Bedford County
- Botetourt County
- Buckingham County
- Campbell County
- Charles City County
- Chesterfield County
- Town of Clifton Forge
- City of Covington
- Cumberland County
- Fluvanna County
- Goochland County
- Henrico County
- James City County
- City of Lynchburg
- Nelson County
- New Kent County
- City of Newport News
- Powhatan County
- City of Richmond
- Rockbridge County
- City of Williamsburg
- York County

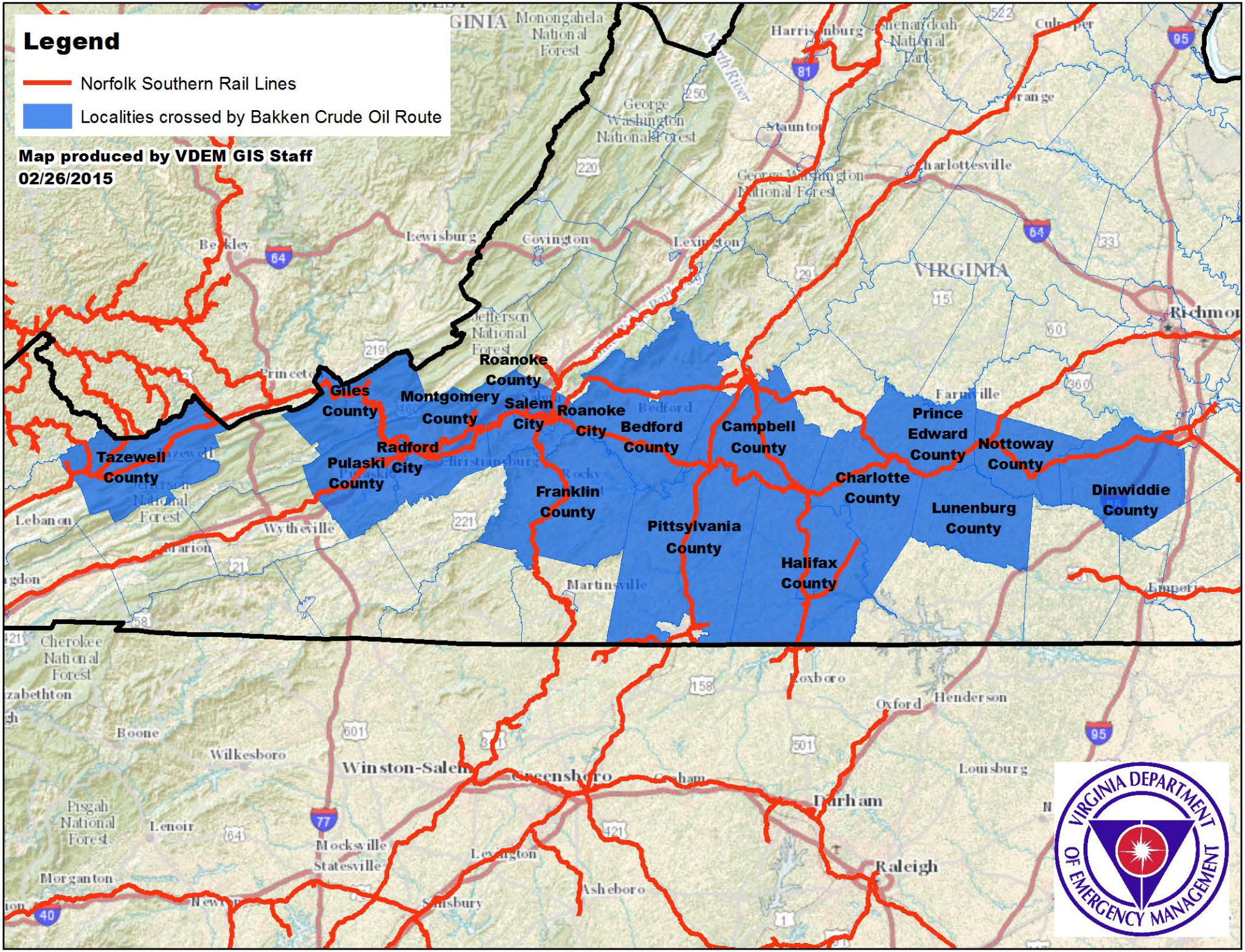
VDEM looks forward to working with you to reduce the risk posed by the routine transport of hazardous materials in the Commonwealth. Our Technological Hazards Division and Local Support Services Division staffs are available for additional questions and to discuss training opportunities.

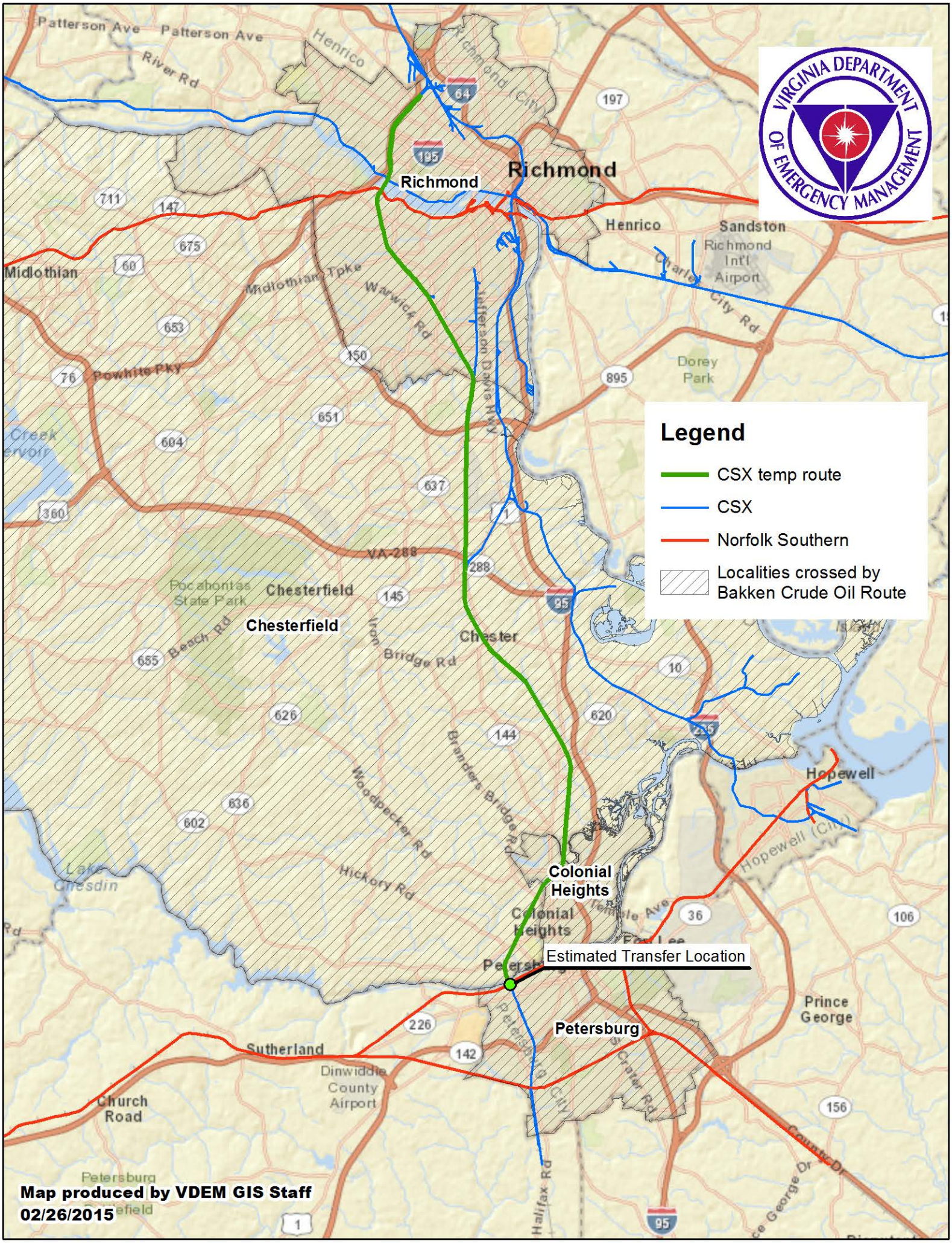
No response procedures are changing at this time, and our VDEM Watch Center at the VEOC remains our 24/7 point of contact at VEOC@vdem.virginia.gov or 804-674-2400 for emergency incidents.

/s/ JDS

Temporary Bakken crude oil detour as provided to VDEM by Norfolk Southern on February 17, 2015.




Legend
Norfolk Southern Rail Lines
Localities crossed by Bakken Crude Oil Route
Map produced by VDEM GIS Staff
02/26/2015
Tazewell County
Giles County
Montgomery County
Radford City
Pulaski County
Roanoke County
Salem City
Roanoke City
Bedford County
Franklin County
Pittsylvania County
Campbell County
Halifax County
Charlotte County
Prince Edward County
Nottoway County
Lunenburg County
Dinwiddie County
VIRGINIA
Monongahela National Forest
George Washington National Forest
Jefferson National Forest
Cherokee National Forest
Pisgah National Forest
Harrisonburg
Shenandoah National Park
Staunton
Charlottesville
Lexington
Covington
Lewisburg
Beckley
Princeton
Christiansburg
Wytheville
Lebanon
Marion
Martinsville
Farmville
Richmond
Roxboro
Oxford
Henderson
Louisburg
Durham
Raleigh
Winston-Salem
Greensboro
Wilkesboro
Boone
Lenoir
Mocksville
Statesville
Lexington
Asheboro
Salisbury
Morganton
Newton
Elizabethton
Culpeper
Orange
Bedford
Rocky Mount
Emporia
VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT


Legend
CSX temp route
CSX
Norfolk Southern
Localities crossed by Bakken Crude Oil Route
Richmond
Colonial Heights
Estimated Transfer Location
Petersburg
Chesterfield
Chesterfield
Chester
Hopewell
Prince George
Sutherland
Church Road
Midlothian
Henrico
Sandston
Richmond Int'l Airport
Dorey Park
Pocahontas State Park
Dinwiddie County Airport
Lake Chesdin
Map produced by VDEM GIS Staff
02/26/2015

Frequently Asked Questions on DOT's May 7, 2014, Emergency Order (EO) Regarding Notification to Communities of Bakken Crude Oil Shipments

1. How can railroads identify Bakken crude oil when they are the carrier, not the offeror of the product?

   DOT recognizes that distinguishing shipments of Bakken crude oil from other crude oil, without the offeror positively identifying it, is a difficult task. Therefore, for purposes of this EO, crude oil tendered to railroads for transportation from any facility directly located within the Williston Basin (North Dakota, South Dakota, Montana in the United States or Saskatchewan or Manitoba in Canada) is Bakken crude oil for the purposes of this EO. However, to ensure the most accurate compliance with the EO going forward, railroads and offerors should work together to develop a means for identifying Bakken crude oil prior to transport, such as a Standard Transportation Commodity Code number, that identifies the crude oil by its geographic source.

2. As railroad schedules can vary for many reasons, when reporting on Bakken crude oil traffic through communities, what is the required level of specificity for traffic data?

   The aim of this reporting requirement is to give first responders an understanding of the volume and frequency with which Bakken crude oil is transported through their communities so that they can prepare their response plans accordingly. With this in mind, when reporting the traffic data required by the EO, railroads should look at their aggregate traffic of Bakken crude oil through the jurisdiction for the prior year, and after considering any reasonably anticipated changes in that traffic, provide a reasonable estimate of the weekly traffic along the affected routes. This estimate can be provided in a range to account for normal variations in traffic. If a railroad's Bakken crude oil traffic changes materially (≥ 25%) from the aggregate estimate provided, railroads must provide updated traffic information to the SERCs as soon as possible.

3. Who will have access to the data submitted to a SERC pursuant to this EO?

   This data is intended for those persons with a need-to-know; that is, first responders at the State and local level, as well other appropriate emergency response planners. DOT expects the SERCs to treat this data as confidential, providing it only to those with a need-to-know, and with the understanding that recipients of the data will continue to treat it as confidential. Accordingly, railroads may require reasonable confidentiality agreements prior to providing this information. Historically, railroads and States have routinely entered into confidentiality agreements prior to railroads providing States with information on commodities transported in trains within their jurisdictions, as this information has traditionally been viewed as confidential from business and security perspectives. DOT believes that following precedent and sharing the data required by this EO under confidentiality agreements is appropriate.

4. May railroads share the data with Fusion Centers or other State agencies responsible for emergency response planning instead of SERCs?

   DOT understands that States have varying methods and agencies responsible for emergency response planning and preparedness within their jurisdictions. For example, Fusion Centers are established on a State and regional basis, with one of their purposes being to share emergency response information. Railroads currently routinely share data on their shipments with Fusion Centers. Given that railroads and Fusion Centers have already established protocols for sharing information under existing confidentiality agreements, in some situations, there might be advantages to States and railroads in utilizing Fusion Centers instead of SERCs for the sharing of information required by this EO. DOT also notes that there is an existing mechanism for Tribal Nations to interact with the Fusion Centers through the State, Local, Tribal and Territorial Government Coordinating Council. Similarly, DOT recognizes that individual States may have an agency other than the SERC or Fusion Center that is more directly involved in emergency response planning and preparedness than either the SERC or Fusion Center. Accordingly, if a State agrees that it would be advantageous for the information required by this EO to be shared with a Fusion Center or other State agency involved with emergency response planning and/or preparedness, as opposed to the SERC, a railroad may share the required information with that agency instead of the SERC.

5. Must separate outreach be done with Tribal Emergency Response Commissions (TERCs)?

   No. DOT will be reaching out to Tribal leaders to let them know that their TERCs can coordinate with the appropriate SERC(s) for access to data supplied under this EO. Railroads must therefore ensure that SERCs (or relevant Fusion Centers, if States so choose) are also supplied with information for traffic through tribal lands.

PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid

GENERAL INFORMATION

Petroleum crude oil is a flammable, variably light to dark colored liquid hydrocarbon with properties between gasoline and kerosene. It is used as a raw material for making fuels and various chemicals. Barely soluble in water and slightly lighter, petroleum crude oil will form a floating surface slick. Flammability of this product can vary widely having a flash point range from -45 to 392ºF. The liquid may evaporate easily even at low temperatures. The vapors of the more volatile, and therefore more flammable crude oil, are heavier than air, may accumulate and persist in low areas, and may travel some distance to a source of ignition and flash back. Similarly, accumulations of vapor in confined spaces such as buildings or sewers may explode if ignited and there is some potential that containers of liquid may rupture violently if exposed to fire or excessive heat for sufficient time duration. Typical crude oil weigh approximately 6.3-8.3 pounds per gallon.

Petroleum crude oil will not react with water or other common materials and is stable in normal transportation. It is incompatible with strong oxidizers, and may attack some forms of plastics, rubber, and coatings. Toxicity by potential routes of exposure is generally considered low to moderate. The more volatile mixtures may be present in air in high concentrations creating an inhalation hazard. There is also the possibility that the crude oil may contain some fraction of toxic benzene or hydrogen sulfide (see separate guides). Products of combustion may include toxic constituents.

CHEMICAL/PHYSICAL DATA

Solubility in Water: Practically insoluble, below 0.1%
Solubility in Other Chemicals: Soluble in various hydrocarbon liquids.
Specific Gravity (Liquid): Varies, 0.75 - 0.99
Vapor Density: 3.4 (approximately)
Boiling Point: Varies, 1000+ºF (538+ºC).
Melting Point: Unavailable
Freezing Point: Unavailable
Molecular Weight: Complex mixture, approximately 99
Heat of Combustion: 10,290 - 10,460 cal/g (Petroleum distillates)
Evaporation Rate (butyl acetate=1): 10 (approximately)
Vapor Pressure: Varies widely with composition, 40 mmHg for petroleum distillates.
Flash Point: Varies widely -45 to 392ºF (-43 to 200ºC)
Autoignition Temperature: 450 - 500ºF (232 - 260ºC)
Burning Rate: 4 mm/minute
Flammable Limits: 0.4% (LEL) - 15% (UEL)
Stability: Stable
Polymerization Potential: Will not occur.
Corrosiveness: Relatively noncorrosive but may attack some forms of plastics, rubber, and coatings.
Reactivity with Water: No reaction
Reactivity and Incompatibility: Reacts with strong oxidizing materials. Avoid chlorine, fluorine.

IDENTIFICATION

Shipping Name(s): Petroleum crude oil (USDOT & IMO).
Synonyms and Tradenames: Crude oil ; Mineral oil; Rock oil; Coal oil; Petroleum.
CAS Registry No.: 8002-05-9
Chemical Formula: C_6-C_{13} hydrocarbon mixture. Crude oil is a naturally occurring complex mixture of hydrocarbons whose exact composition and physical properties can vary widely depending upon its source.
Constituent Components (% each): Complex mixture of petroleum hydrocarbons; may contain 0-10% benzene.
UN/NA Designation: UN1267
IMO Designation: 3.1, 3.2 or 3.3, Flammable liquids
NFPA 704 Hazard Rating: 2(Health): 3(Flammability): 0(Reactivity)
Physical Form as Shipped: Liquid
Physical Form as Released: Liquid
Color of the Shipped Material: Dark yellow to brown or greenish-black, oily liquid.
Odor Characteristics: Like gasoline and kerosene
Reportable Quantity: See appendix I.
Common Uses: Raw material for making fuels and various chemicals.

ADDITIONAL INFORMATION AND ASSISTANCE: FOR 24-HOUR TECHNICAL SUPPORT FOR ACCIDENTS INVOLVING SPILLS, LEAKS, FIRES OR EXPOSURES TO CHEMICALS, CONTACT CHEMTREC AT (800) 424-9300 OR (703) 527-3887 (COLLECT).

PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid

or

or

POTENTIAL HAZARDS

GENERAL HAZARDS

Threshold Odor Concentration: Varies

Unusual Hazards: Properties uncertain. Vapors of some crude oil may be heavier than air and may travel to a source of ignition. Some may include significant amounts of benzene (see separate guide).

Short Term Exposure Limit (STEL): Unavailable

Time Weighted Average (TLV-TWA): 86 ppm (350 mg/m^3) (Petroleum distillates).

Ceiling (C) Limit: 444 ppm (1800 mg/m^3) (Petroleum distillates).

IDLH: 1100 ppm or 10% LEL (Petroleum distillates).

Conditions to Avoid: Heat, fire, or sparks; contact with incompatible materials; runoff to sewers or water bodies; inhalation, ingestion, or direct physical contact.

HEALTH HAZARDS

Public Health Hazards: Major hazard is from inhalation of high vapor concentrations in air. Ingestion and direct contact are also to be avoided. (Note: Any benzene in the product increases both acute and chronic health risks.)

Hazards of Skin or Eye Contact: Repeated or prolonged contact with liquid petroleum crude oil may cause drying, cracking, and inflammation of the skin due to the defatting action of the product. Contact with the eyes may result in irritation and possibly temporary corneal injury.

Hazards of Inhalation: Vapors of petroleum crude oil may be irritating to the eyes and the upper respiratory tract. High concentrations in air may result in narcosis and central nervous system depression with symptoms including inebriation, headache, nausea, dizziness, drowsiness, unconsciousness, convulsions, and possibly death. Some symptoms may be evident after 1 hour at 4000-7000 ppm in air. Acute overexposure may also result in persistent anorexia and nervousness on occasion.

Hazards of Ingestion: Ingestion may cause a burning sensation, vomiting, diarrhea, drowsiness, and symptoms listed above. Aspiration into the lungs during vomiting may result in pulmonary edema with possibly severe consequences.

FIRE HAZARDS

Lower Flammable Limit: 0.4%

Upper Flammable Limit: 15%

Behavior in Fire: Flammable liquid. Liquid will burn but may be difficult to ignite depending on constituents. Flammable liquids may generate large quantities of flammable vapor upon release. Vapors of flammable liquids are heavier than air, may accumulate and persist in low areas, and may travel to a source of ignition and flash back. There is some potential that containers may rupture violently in fire.

Hazardous Decomposition Products: Not well-defined, may include toxic constituents such as carbon monoxide, carbon dioxide, oxides of sulfur and reactive hydrocarbons.

EXPLOSION HAZARDS

Explosive Potential: Explosion may result if vapors are ignited in a confined area. There is some potential that containers may rupture violently in fire. Product is sensitive to static discharge and is an extreme fire hazard. Vapors can burn with explosive violence.

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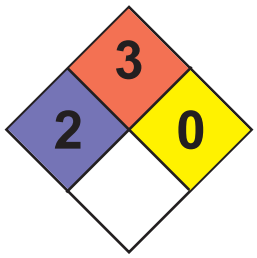
PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid



PERSONAL PROTECTIVE CLOTHING AND EQUIPEMENT

Protective Clothing Required: Equipment should prevent repeated or prolonged skin contact and any reasonable probability of eye contact with the spilled product. This may include rubber boots, gloves, face shields, splash-proof safety goggles, and other impervious and resistant clothing. Compatible materials may include neoprene, nitrile rubber, chlorinated polyethylene, polyurethane, polyvinyl alcohol, Viton®, and nitrile-butadiene rubber.

Respiratory Protection: For unknown concentrations, fire fighting, or high concentrations, a self-contained breathing apparatus (SCBA) with full facepiece. For lesser concentrations, an air purifying respirator (APR) with organic vapor cartridge with a full facepiece within the use limitations of these devices.

FIRST AID

Nonspecific Symptoms: Irritation of the eyes, skin, or respiratory tract; other symptoms of exposure.

First Aid for Inhalation: Remove victim to fresh air and keep warm and at rest. If breathing becomes difficult or if breathing has stopped, administer artificial respiration. Get medical attention immediately. (Caution: Administration of mouth-to-mouth resuscitation may expose the first aid provider to chemical within the victim's lungs or vomit.)

First Aid for Skin Contact: In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart in order to rinse entire surface of eye and lids with water. Provide supportive care and seek immediate medical assistance by a physician from the nearest medical treatment facility.

First Aid for Eye Contact: Remove all contaminated clothing. Wash affected body areas with large amounts of water. Decontaminate the patient thoroughly before transporting to a medical treatment facility to prevent the potential for secondary contamination.

First Aid for Ingestion: Do not induce vomiting. Keep victim warm and at rest. Get medical attention immediately.

Note to Physician: Hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

FIRE RESPONSE

Extinguishing Agents: Carbon dioxide, dry chemical, foam, or water spray. Water may be ineffective and there is some possibility that foam or water may cause some frothing.

Extinguishing Techniques: Stay upwind. Wear breathing apparatus and appropriate protective clothing. Move container from fire area if no risk. Do not extinguish burning cargo unless flow can be stopped safely. Be alert to container rupture potential. Stay away from ends of tank involved in fire but realize that shrapnel may travel in any direction. Use water from side and from safe distance to keep fire exposed containers cool. For massive fire in cargo area, use unmanned hose holder or monitor nozzles. Withdraw immediately in case of rising sound from venting safety device or discoloration of tank. Note: Crude oil fires may produce a highly dangerous phenomenom known as a BOILOVER, whereby light hydrocarbons burn off at the surface of the fire and heavy superheated hydrocarbons sink to the bottom and come in contact with water bottoms. The super heated product converts the water to steam and forces burning crude oil out of the tank. Burning crude oil which has accumulated in tanks or diked areas are susceptible to boilovers. Seek expert advice on how to fight a crude oil fire.

SPILL RESPONSES

General Information: Proceed with caution. Restrict access to area. Keep unprotected personnel upwind of spill area. Eliminate ignition sources. Prevent liquid from entering sewers and confined spaces. Protect sewers and waterways from contaminated runoff. Notify proper authorities, downstream sewer and water treatment operations, and other downstream users of potentially contaminated water. Note that intake of petroleum crude oil may result in rupture or explosion of boilers or industrial process equipment. Use intrinsically safe equipment where necessary. Choose equipment, where possible, that is not corroded or otherwise damaged by the spilled product. Take the specific flammability hazard and possible volatility of the spilled product into account while planning the response.

PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid

AIR RELEASE

TECHNIQUE

MONITOR THE SITUATION . . . The product may not produce large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until the spilled product is removed by product and container specialists.

CONSEQUENCE

Hazardous levels of product in air may be found in the local spill area and immediately downwind.

MITIGATION

Remove the spilled product as soon as possible. Restrict access to the local spill area and areas immediately downwind by unprotected personnel.

TECHNIQUE

WATER FOG OR SPRAY . . . Water fog or spray applied to petroleum crude oil vapors or fumes may accelerate their dispersal in the atmosphere. (Note: There is some possibility that water may cause frothing.)

CONSEQUENCE

Increases in spill surface area and atmospheric conditions may increase the rate of vapor generation. In enclosed areas, runoff may add to spill volume and overfill impoundments. Water runoff may contain a small amount (if any) of petroleum crude oil from contact with airborne vapors or fumes.

MITIGATION

Contain contaminated water and remove or treat as soon as possible to prevent spread of contamination. Be alert to conditions such as fire hose runoff or rainwater that may add to spill volume and overfill impoundments.

TECHNIQUE

FOAM . . . Firefighting foam applied to the surface of liquid pools may slow the release of petroleum crude oil vapors into the atmosphere. (Note: There is some possibility that foam may cause frothing.)

CONSEQUENCE

The effects of the foam may be short term. As the foam breaks down, release of vapors will increase. Products of foam breakdown will add to the volume of spilled material.

MITIGATION

Continue foam applications until spilled product is removed. Contain foam runoff and treat as hazardous waste.

LAND SPILL

TECHNIQUE

CONFINEMENT DIKES . . . Petroleum crude oil may be confined by building dikes using soil, sand or other materials.

CONSEQUENCE

Confined petroleum crude oil may percolate into soil or seep through dike material. This may result in loss of confined product and spread of contamination.

MITIGATION

Remove or neutralize contained product as soon as possible to prevent spread of contamination. Be alert to conditions such as fire hose runoff or rainwater that may overfill impoundments. Where possible, line collection area with compatible impervious materials.

TECHNIQUE

EXCAVATION . . . Spills of material may be confined by building trenches or ditches.

CONSEQUENCE

Material may leach into soil. Deep excavations may increase the potential for groundwater contamination if some areas. This may result in loss of confined product and spread of contamination.

MITIGATION

Remove material from contaminated area as quickly as possible to prevent possible contamination beyond the spill area. Water sprays may be used to reduce vapors, except in enclosed areas where runoff may accumulate and overflow impoundments. Be alert to condition such as increasing spill volume with runoff or rain water which may overfill diked areas. If possible, confinement areas should be lined with suitable, impervious material to prevent penetration into soil.

PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid

TECHNIQUE

PUMPING/VACUUM SUCTION . . . Spilled material confined in diked areas may be recovered using compatible hoses, pumps and vacuum trucks. All product transfer equipment should be properly bonded and grounded.

CONSEQUENCE

Equipment that is not compatible with the spilled product may become damaged and present a safety hazard for response personnel. Mechanical equipment will become contaminated with removed product.

MITIGATION

Use equipment constructed of materials compatible with the spilled product. Decontaminate equipment.

TECHNIQUE

ABSORPTION . . . Spreading of spilled product may be controlled by absorbing liquid with sand, earth, clay, fly ash, cement powder, peat moss, saw dust, straw, commercial sorbents, or other compatible substances.

CONSEQUENCE

Once used, sorbent materials pose the same hazards as the spilled product. Their use adds to the overall volume of contaminated material.

MITIGATION

Deplete accumulated liquid pools with pumps or vacuum trucks if possible before applying sorbents. Remove contaminated sorbents to safe storage by mechanical means.

TECHNIQUE

MECHANICAL REMOVAL . . . Soil contaminated with spilled material may be removed by shovels, as well as a variety of heavy equipment such as backhoes and loaders.

CONSEQUENCE

Mechanical equipment used in clean-up operations may become contaminated and present a safety and/or health hazard to response personnel. Any flammable vapors present in the area may be ignited by motorized removal equipment.

MITIGATION

Use equipment constructed of materials compatible with the spilled product. Decontaminate equipment. Continually monitor for presence of flammable vapors.

WATER SPILL

TECHNIQUE

STOP USE . . . Notify downstream industrial, municipal and public users to stop water intake or to monitor water for contamination.

CONSEQUENCE

Alternative water supplies may be needed to be established. Consult environmental specialists for assistance, as needed.

MITIGATION

Provide alternative water supplies as needed until water supply is declared safe.

TECHNIQUE

FLOATING BOOMS/BARRIERS . . . Oil spill confinement booms of compatible material may be deployed. Alternatively, mesh or nets may be strung across stream and anchored every 6-8 feet. Straw or peat placed on upstream side of mesh should absorb and retard spreading of spilled product.

CONSEQUENCE

Leakage may occur under or through barrier if high waves or current present or if not properly deployed. Incompatible materials may be damaged by spilled product. Booms, barrier materials, and deployment equipment may be contaminated. Fire hazards pose risk to response personnel and equipment.

MITIGATION

Proceed with caution. Stage barriers in series where necessary. Recover spilled product as soon as possible. Decontaminate equipment after use. Dispose of waste materials in proper and safe manner. Use compatible equipment. Eliminate ignition sources.

PETROLEUM CRUDE OIL

Class 3 (Flammable Liquid) or Combustible Liquid

TECHNIQUE

WATER UNDER-FLOW DAMS . . . Streams may be provided with an under-flow dam. This is a dam made of compacted earth, clay, or other material with open tubes or pipes passing through under water. Upstream ends of pipes or tubes should be well below the layer of floating contaminant. Downstream ends should be at a higher elevation but still below the floating layer. Valves may be installed on downstream ends to control water flow.

CONSEQUENCE

Earthen dams may become saturated with water and seep through or collapse. An insufficient number of under-flow tubes or pipes or additional water may cause overflow.

MITIGATION

Use sufficient number and capacity of tubes or pipes. Be alert for conditions that may lead to overflow, saturation or dam collapse. Remove spilled product as soon as possible.

TECHNIQUE

DIVERSION . . . Where other means are unavailable, floating slicks may be temporarily herded, diverted, or controlled using water hose streams, small boat propeller wash or chemical surface tension modifiers known as spill herders.

CONSEQUENCE

Hose streams and propeller washes have limited applicability and effectiveness. The latter may cause undesired mixing of spilled product and water due to extreme agitation. Chemical spill herders should not be used until approval is obtained from authorized environmental officials.

MITIGATION

Use other means if available.

TECHNIQUE

SURFACE SKIMMING . . . Oil spill skimming devices may be deployed to recover floating petroleum crude oil.

CONSEQUENCE

Incompatible equipment may be damaged. Equipment may be contaminated and pose hazard to future users. Fire hazard may pose risk to response personnel and equipment.

MITIGATION

Decontaminate equipment after use. Use compatible equipment. Store recovered product in safe and secure location. Eliminate ignition sources.

TECHNIQUE

ABSORPTION . . . Straw, hay, peat, or commercial sorbent materials compatible with petroleum crude oil may be used to absorb spilled product from the water surface, preferably after the spill has been confined.

CONSEQUENCE

Once used, sorbent materials pose the same hazards as the spilled product. Their use adds to the overall volume of contaminated material. Deployment and recovery can be difficult. Fire hazards pose risk to response personnel and equipment.

MITIGATION

Deplete accumulated liquid pools with pumps or vacuum trucks if possible before applying sorbents. Decontaminate equipment after use. Store and dispose of waste materials in proper and safe manner. Use compatible equipment. Eliminate ignition sources.

2012 EMERGENCY RESPONSE GUIDEBOOK

A Guidebook for First Responders During the Initial Phase of a Dangerous Goods/ Hazardous Materials Transportation Incident

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

Transport Canada
Transports Canada

Secretariat of Transport and Communications

ID No.	Guide No.	Name of Material
1223	**128**	Kerosene
1224	**127**	Ketones, liquid, n.o.s.
1228	**131**	Mercaptan mixture, liquid, flammable, poisonous, n.o.s.
1228	**131**	Mercaptan mixture, liquid, flammable, toxic, n.o.s.
1228	**131**	Mercaptans, liquid, flammable, poisonous, n.o.s.
1228	**131**	Mercaptans, liquid, flammable, toxic, n.o.s.
1229	**129**	Mesityl oxide
1230	**131**	Methanol
1230	**131**	Methyl alcohol
1231	**129**	Methyl acetate
1233	**130**	Methylamyl acetate
1234	**127**	Methylal
1235	**132**	Methylamine, aqueous solution
1237	**129**	Methyl butyrate
1238	**155**	Methyl chloroformate
1239	**131**	Methyl chloromethyl ether
1242	**139**	Methyldichlorosilane
1243	**129**	Methyl formate
1244	**131**	Methylhydrazine
1245	**127**	Methyl isobutyl ketone
1246	**127P**	Methyl isopropenyl ketone, stabilized
1247	**129P**	Methyl methacrylate monomer, stabilized
1248	**129**	Methyl propionate
1249	**127**	Methyl propyl ketone
1250	**155**	Methyltrichlorosilane
1251	**131P**	Methyl vinyl ketone, stabilized
1259	**131**	Nickel carbonyl
1261	**129**	Nitromethane

ID No.	Guide No.	Name of Material
1262	**128**	Isooctane
1262	**128**	Octanes
1263	**128**	Paint (flammable)
1263	**128**	Paint related material (flammable)
1264	**129**	Paraldehyde
1265	**128**	Isopentane
1265	**128**	n-Pentane
1265	**128**	Pentanes
1266	**127**	Perfumery products, with flammable solvents
1267	**128**	Petroleum crude oil
1268	**128**	Petroleum distillates, n.o.s.
1268	**128**	Petroleum products, n.o.s.
1270	**128**	Oil, petroleum
1270	**128**	Petroleum oil
1272	**129**	Pine oil
1274	**129**	n-Propanol
1274	**129**	normal Propyl alcohol
1274	**129**	Propyl alcohol, normal
1275	**129**	Propionaldehyde
1276	**129**	n-Propyl acetate
1277	**132**	Monopropylamine
1277	**132**	Propylamine
1278	**129**	1-Chloropropane
1278	**129**	Propyl chloride
1279	**130**	1,2-Dichloropropane
1279	**130**	Dichloropropane
1279	**130**	Propylene dichloride
1280	**127P**	Propylene oxide
1281	**129**	Propyl formates
1282	**129**	Pyridine
1286	**127**	Rosin oil

Name of Material	Guide No.	ID No.
Perfluoro(ethyl vinyl ether)	**115**	3154
Perfluoromethyl vinyl ether	**115**	3153
Perfluoro(methyl vinyl ether)	**115**	3153
Perfumery products, with flammable solvents	**127**	1266
Permanganates, inorganic, aqueous solution, n.o.s.	**140**	3214
Permanganates, inorganic, n.o.s.	**140**	1482
Peroxides, inorganic, n.o.s.	**140**	1483
Persulfates, inorganic, aqueous solution, n.o.s.	**140**	3216
Persulfates, inorganic, n.o.s.	**140**	3215
Persulphates, inorganic, aqueous solution, n.o.s.	**140**	3216
Persulphates, inorganic, n.o.s.	**140**	3215
Pesticide, liquid, flammable, poisonous, n.o.s.	**131**	3021
Pesticide, liquid, flammable, toxic, n.o.s.	**131**	3021
Pesticide, liquid, poisonous, flammable, n.o.s.	**131**	2903
Pesticide, liquid, poisonous, n.o.s.	**151**	2902
Pesticide, liquid, toxic, flammable, n.o.s.	**131**	2903
Pesticide, liquid, toxic, n.o.s.	**151**	2902
Pesticide, solid, poisonous	**151**	2588
Pesticide, solid, poisonous, n.o.s.	**151**	2588
Pesticide, solid, toxic, n.o.s.	**151**	2588
PETN mixture, desensitized, solid, n.o.s., with more than 10% but not more than 20% PETN	**113**	3344
Petrol	**128**	1203
Petrol and ethanol mixture, with more than 10% ethanol	**127**	3475
Petroleum crude oil	**128**	1267

Name of Material	Guide No.	ID No.
Petroleum distillates, n.o.s.	**128**	1268
Petroleum gases, liquefied	**115**	1075
Petroleum oil	**128**	1270
Petroleum products, n.o.s.	**128**	1268
Petroleum sour crude oil, flammable, toxic	**131**	3494
Phenacyl bromide	**153**	2645
Phenetidines	**153**	2311
Phenol, molten	**153**	2312
Phenol, solid	**153**	1671
Phenol solution	**153**	2821
Phenolates, liquid	**154**	2904
Phenolates, solid	**154**	2905
Phenolsulfonic acid, liquid	**153**	1803
Phenolsulphonic acid, liquid	**153**	1803
Phenoxyacetic acid derivative pesticide, liquid, flammable, poisonous	**131**	3346
Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic	**131**	3346
Phenoxyacetic acid derivative pesticide, liquid, poisonous	**153**	3348
Phenoxyacetic acid derivative pesticide, liquid, poisonous, flammable	**131**	3347
Phenoxyacetic acid derivative pesticide, liquid, toxic	**153**	3348
Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable	**131**	3347
Phenoxyacetic acid derivative pesticide, solid, poisonous	**153**	3345
Phenoxyacetic acid derivative pesticide, solid, toxic	**153**	3345
Phenylacetonitrile, liquid	**152**	2470
Phenylacetyl chloride	**156**	2577
Phenylcarbylamine chloride	**151**	1672

Flammable Liquids (Non-Polar/Water-Immiscible)

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- **HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.**
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.
- For UN3166, if Lithium ion batteries are involved, also consult GUIDE 147.
- **If molten aluminum is involved, refer to GUIDE 169.**

HEALTH

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

PUBLIC SAFETY

- **CALL EMERGENCY RESPONSE Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

CAUTION: For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.

Small Fire

- Dry chemical, CO_2, water spray or regular foam.

Large Fire

- Water spray, fog or regular foam.
- **Do not use straight streams**.
- Move containers from fire area if you can do it without risk.

Fire involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

Large Spill

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

FIRST AID

- Move victim to fresh air.
- Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

UNITED STATES DEPARTMENT OF TRANSPORTATION

	)	
Petroleum Crude Oil Railroad Carriers	)	
	)	Docket No. DOT-OST-2014-0067

EMERGENCY RESTRICTION/PROHIBITION ORDER

This notice constitutes an Emergency Restriction/Prohibition Order (Order) by the United States Department of Transportation (DOT; Department) pursuant to 49 U.S.C. 5121(d). This Order is issued to all railroad carriers that transport in a single train in commerce within the United States, 1,000,000 gallons or more of UN 1267, Petroleum crude oil, Class 3,[1] sourced from the Bakken shale formation in the Williston Basin (Bakken crude oil). By this Order, DOT is requiring that each railroad carrier provide the State Emergency Response Commission (SERC) for each state in which it operates trains transporting 1,000,000 gallons or more of Bakken crude oil, notification regarding the expected movement of such trains through the counties in the state. The notification shall identify each county, or a particular state or commonwealth's equivalent jurisdiction (e.g., Louisiana parishes, Alaska boroughs, Virginia independent cities) (county), in the state through which the trains will operate.

Upon information derived from recent railroad accidents and subsequent DOT investigations, the Secretary of Transportation (Secretary) has found that an unsafe condition or an unsafe practice is causing or otherwise constitutes an imminent hazard to the safe transportation of hazardous materials. Specifically, a pattern of releases and fires involving petroleum crude oil

[1] As described by 49 CFR 172.101.

shipments originating from the Bakken and being transported by rail constitute an imminent hazard under 49 U.S.C. 5121(d).

EFFECTIVE IMMEDIATELY ANY RAILROAD CARRIER IDENTIFIED BY THIS ORDER:

Shall, within 30 days of the date of this Order, provide certain information in writing to the SERC in each state in which the railroad carrier operates trains transporting 1,000,000 gallons or more of Bakken crude oil. The contact information for each SERC is located on the U.S. Environmental Protection Agency's (EPA) website related to the Emergency Planning and Community Right-to-Know Act of 1986 (ECPRA).[2] If notification is not made to a SERC within 30 days of the date of this Order, a railroad is prohibited from operating any train transporting 1,000,000 gallons or more of Bakken crude oil in that state until such notification is provided. The notification must provide information regarding the estimated volumes and frequencies of train traffic implicated. Specifically, the notification must: (a) provide a reasonable estimate of the number of trains implicated by this Order that are expected to travel, per week, through each county within the state; (b) identify and describe the petroleum crude oil expected to be transported in accordance with 49 CFR part 172, subpart C; (c) provide all applicable emergency response information required by 49 CFR part 172, subpart G; and, (d) identify the routes over which the material will be transported. This notification also must identify at least one point of contact at the railroad (including name, title, phone number and address) responsible for serving as the point of contact for SERCs and relevant emergency responders related to the railroad's transportation of Bakken crude oil. To ensure that the information provided to a SERC remains reliable, railroad carriers shall update notifications prior to making any material changes in the estimated volumes or frequencies of trains traveling through a county. Railroad carriers must assist the SERCs as

[2] http://www2.epa.gov/epcra/state-emergency-response-commissions-contacts.

necessary to aid in the dissemination of the information to the appropriate emergency responders in affected counties. Copies of railroad notifications to SERCs must be made available to the DOT's Federal Railroad Administration (FRA) upon request. This Order does not preclude railroad carriers from taking any additional steps to communicate with state and local emergency responders regarding the transportation of hazardous materials or any other commodities within a state or local jurisdiction.

This Order applies to all railroad carriers who transport 1,000,000 gallons or more of Bakken crude oil in a single train in commerce within the United States, and its officers, directors, employees, subcontractors, and agents. This Order is effective immediately and remains in effect unless withdrawn in writing by the Secretary, or until it otherwise expires by operation of regulation and/or law.

I. Authority

The Secretary of Transportation has the authority to regulate the transportation of petroleum crude oil in commerce. 49 U.S.C. 5103(b). The Secretary of Transportation has designated petroleum crude oil, UN 1267, 3, Packing Group I, II, or III, as a hazardous material subject to the requirements of DOT's Hazardous Materials Regulation (HMR) (49 CFR parts 171 to 180). 49 U.S.C. 5121(d); 49 U.S.C. 5103(a). Commerce is as defined by 49 U.S.C. 5102(1) and 49 CFR 171.8, and "transportation" or "transport" are as defined by 49 U.S.C. 5102(13) and 49 CFR 171.8. A "railroad" is as defined by 49 CFR 171.8. Accordingly, railroads that transport petroleum crude oil in commerce by rail are subject to the authority and jurisdiction of the Secretary, including the authority to impose emergency restrictions, prohibitions, recalls, or out-of-service orders, without notice or an opportunity for hearing, to the extent necessary to abate the imminent hazard. 49 U.S.C. 5121(d).

II. Background/Basis for Order

An imminent hazard, as defined by 49 U.S.C. 5102(5), constitutes the existence of a condition relating to hazardous materials that presents a substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment may occur before the reasonably foreseeable completion date of a formal proceeding begun to lessen the risk that death, illness, injury or endangerment.

The number and type of petroleum crude oil railroad accidents described below that have occurred during the last year is startling, and the quantity of petroleum crude oil spilled as a result of those accidents is voluminous in comparison to past precedents. Due to the volume of crude oil currently being shipped by railroads, the demonstrated recent propensity for rail accidents involving trains transporting crude oil to occur, and the subsequent releases of large quantities of crude oil into the environment and the imminent hazard those releases present, this Order requires that railroads take the action described above to assist emergency responders in mitigating the effects of accidents involving petroleum crude oil trains. Releases of petroleum crude oil, subsequent fires, and environmental damage resulting from such releases represent an imminent hazard as defined by 49 U.S.C. 5102(5), presenting a substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment may occur.

A. Recent Crude Oil Incidents

The United States has experienced a rapid growth in the quantity of petroleum crude oil being shipped by rail in recent years. The growth has largely been sparked by developments in North Dakota, where the Bakken formation in the Williston Basin has become a major source of crude oil in the United States. Much of the Bakken crude oil is shipped via rail to refineries located

near the U.S. Gulf Coast or to pipeline connections, most notably to connections located in Oklahoma.[3]

Shipping hazardous materials is inherently dangerous. Transporting petroleum crude oil can be problematic if the crude oil is released into the environment because of its flammability. This risk of ignition is compounded in the context of rail transportation because petroleum crude oil is commonly shipped in unit trains that may consist of over 100 loaded tank cars. With the rising demand for rail carriage of petroleum crude oil[4] throughout the United States, the risk of rail incidents increases along with the increase in the volume of crude oil shipped. There have been several significant derailments in the U.S. and Canada over the last ten months causing deaths and property and environmental damage that involved petroleum crude oil shipments. These accidents have demonstrated the need for emergency action to address unsafe conditions or practices in the shipment of petroleum crude oil by rail.

Most recently, on April 30, 2014, an eastbound CSX Transportation, Inc. (CSX) unit train consisting of 105 tank cars loaded with petroleum crude oil derailed in Lynchburg, Virginia. Seventeen of the train's cars derailed, and one of the tank cars was breached. A petroleum crude oil fire ensued, and emergency responders evacuated approximately 350 individuals from the immediate area. Three of the derailed tank cars containing petroleum crude oil came to rest in the adjacent James River, spilling up to 30,000 gallons of petroleum crude oil into the river. The National Transportation Safety Board (NTSB) and DOT are both investigating this accident.

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[3] See Association of American Railroads' (AAR) December 2013 paper "Moving Crude Oil by Rail", available online at: https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf.

[4] In 2011 there were 65,751 originations of tank car loads of crude oil. In 2012, there were 233,811 originations. *Id.*

On December 30, 2013, 13 cars in a westbound BNSF Railway (BNSF) grain train derailed near Casselton, North Dakota,[5] fouling an adjacent main track. At the same time, an eastbound BNSF petroleum crude oil unit train with 106 cars was operating on that adjacent main track. The petroleum crude oil unit train reduced its speed but collided with the derailed car that was fouling the main track, resulting in the derailment of the lead locomotives and the first 21 cars of the petroleum crude oil unit train. Eighteen of the 21 derailed tank cars ruptured, and an estimated 400,000 gallons of petroleum crude oil was released. The ruptured tank cars ignited, causing a significant fire. Approximately 1,400 people were evacuated. Damages from the derailment have been estimated at $8 million.

On November 8, 2013, a 90-car petroleum crude oil train operated by Alabama & Gulf Coast Railway derailed in a rural area near Aliceville, Alabama. The petroleum crude oil shipment originated in North Dakota, and was bound for Walnut Hill, Florida, to be transported by a regional pipeline to a refinery in Saraland, Alabama. Twenty-six cars derailed, resulting in eleven cars impinged by a crude oil pool fire. An undetermined amount of petroleum crude oil escaped from derailed cars and found its way into wetlands area nearby the derailment site. Clean up costs are estimated at $3.9 million.

On July 6, 2013, a catastrophic railroad accident involving a U.S. railroad company occurred in Lac-Mégantic, Quebec, Canada, when an unattended freight train transporting petroleum crude oil rolled down a descending grade and subsequently derailed.[6] The subsequent fires, along with other effects of the accident, resulted in the confirmed deaths of 47 individuals. In addition, the

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[5] This derailment currently is being investigated by the National Transportation Safety Board (NTSB), and information regarding this incident can be found at the NTSB website. See http://www.ntsb.gov/doclib/reports/2014/Casselton_ND_Preliminary.pdf.

[6] This derailment currently is being investigated by the Transportation Safety Board of Canada and information regarding this incident can be found at the TSB website. See http://www.bst-tsb.gc.ca/eng/enquetes-investigations/rail/2013/R13D0054/R13D0054.asp.

derailment caused extensive damage to the town center, a release of hazardous materials that will require substantial clean-up costs, and the evacuation of approximately 2,000 people from the surrounding area.

B. DOT Actions and Investigations

In the wake of these and other events, PHMSA and FRA have taken a number of steps to increase the safety of petroleum crude oil shipments by rail. Following the Lac-Mégantic derailment, FRA issued Emergency Order No. 28 (EO 28), which established certain securement requirements for unattended trains and rail equipment, including petroleum crude oil unit trains. EO 28 remains in effect until further notice by FRA. In addition, on August 7, 2013, PHMSA and FRA issued Safety Advisory 2013-06, which made a number of safety-related recommendations to railroads and hazardous materials offerors operating in the United States, including the recommendation that offerors evaluate their processes to ensure that hazardous materials are properly classed and described in accordance with the HMR, and the recommendation that offerors and carriers conduct reviews of their safety and security plans. On August 27-28, 2013, FRA and PHMSA held a public meeting with industry stakeholders to solicit input on a comprehensive review of safety regulations contained in 49 CFR part 174 applicable to the safe transportation of hazardous materials by rail. PHMSA and FRA have initiated a rulemaking (RIN 2137-AF07) to address comments received as a result of the public meeting.

On August 29, 2013, FRA convened an emergency session of the Railroad Safety Advisory Committee (RSAC). RSAC is a group composed of railroad industry, labor, and governmental representatives who develop recommendations on new regulatory standards and other rail safety programs. During the emergency meeting, RSAC established three collaborative working groups to formulate new rulemaking recommendations regarding hazardous materials transportation by rail,

appropriate train crew sizes, and train securement procedures. Each of these working groups has met on a regular basis and has now finished with its work. DOT has initiated rulemaking proceedings as appropriate to codify in Federal regulation certain of the items discussed by the working groups.

On September 6, 2013, PHMSA issued an Advanced Notice of Proposed Rulemaking (ANPRM (HM-251); 78 FR 54849) to solicit comments on petitions for rulemaking and NTSB recommendations related to rail hazmat safety, including regulations for DOT specification tank cars most commonly used to move crude oil by rail. The comment period closed on December 5, 2013, and PHMSA received nearly 150 substantive comments representing over 150,000 stakeholders. PHMSA, in cooperation with FRA, has developed a comprehensive Notice of Proposed Rulemaking (NPRM). The NPRM is titled: PHMSA-2012-0082 (HM-251; RIN 2137-AE91): Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains. The NPRM is under review by the Office of Management and Budget pursuant to Executive Order 12866. (See http://www.reginfo.gov/public).

PHMSA and FRA issued a supplementary safety advisory, Safety Advisory 2013-07, on November 20, 2013, to emphasize the importance of proper characterization, classification, and selection of a packing group for Class 3 materials (flammable liquids, including petroleum crude oil), and to reinforce the need to follow the Federal hazardous materials regulations for safety and security planning. On January 2, 2014, PHMSA issued a Safety Alert, which warned of crude oil variability and emphasized that unprocessed crude oil may affect the integrity of packaging or present additional hazards related to corrosivity, sulfur content, and dissolved gas content. Further, noting that mined natural resources, such as crude oil, may have widely variable chemical

compositions and properties, the Safety Alert noted that crude oil being transported from the Bakken region of North Dakota may be more flammable than traditional heavy crude oil.

On January 16, 2014, the Secretary met with members of the rail and the petroleum industries in a Call to Action to address the risks associated with the transportation of crude oil by rail. As a result, on February 21, 2014, the Secretary of Transportation sent a letter to the President and Chief Executive Officer at the AAR requesting that he and his members subscribe to voluntary actions to improve the safe transportation of crude oil by rail. These include: speed restrictions, braking signal propagation systems, routing analyses, additional track and rail integrity inspections, more frequent mechanical inspections, development of an emergency response inventory, funding for emergency responder training, and continued communication with communities about the hazards of crude oil being transported by rail. To date, all Class I railroads have subscribed to the voluntary actions and several more have expressed their intent to sign.

On February 25, 2014, DOT issued an Emergency Order requiring all shippers to test product from the Bakken to ensure the proper classification of crude oil in accordance with the HMR before it is transported by rail, while also prohibiting the transportation of crude oil in the lowest-strength packing group. That Emergency Order was issued, in part, out of concerns over proper classification and packaging of petroleum crude oil that are under investigation as part of DOT's Operation Classification, also known as the "Bakken Blitz." On March 6, 2014, DOT issued an amended emergency order replacing the February 25 Emergency Order.[7] The Amended Emergency Order is still in effect.

Notwithstanding the above DOT actions, in light of continued risks associated with petroleum crude oil shipments by rail, the further actions described in this Order are necessary to

[7] The Amended Emergency Order addressed shipments already in transportation at the time of the emergency order's issuance. http://www.dot.gov/sites/dot.gov/files/docs/Amended%20Emergency%20Order%20030614.pdf.

eliminate unsafe conditions and practices that create an imminent hazard to public health and safety and the environment.

C. Railroad-Provided Emergency Responder Information to State Emergency Response Commissions

Due to the volume of crude oil being shipped by railroads, the demonstrated recent propensity for rail accidents involving trains transporting crude oil to occur, and the subsequent releases of large quantities of crude oil into the environment and the imminent hazard those releases present, the Order is requiring that each railroad carrier notify the SERC for each state in which it operates regarding the expected movement of trains transporting 1,000,000 gallons or more of Bakken crude oil through each county in that state.

As prior accidents demonstrate, prompt and effective emergency response to any hazardous materials release is critical. The HMR require offerors of hazardous materials to provide appropriate emergency response information applicable to the specific hazard or hazards of the material being offered for transportation and the HMR require that this information be maintained and immediately available to any person who, as a representative of a Federal, state or local government agency, responds to an incident. See 49 CFR 172. 200-.205 and 172.600-606. See also 49 CFR 130.11 (pertaining to oil in particular).

Given the unique hazardous characteristics of Bakken crude oil and the risks presented by large quantities of this commodity being transported in single trains, additional communication between railroads and emergency responders is necessary to ensure that the emergency responders are prepared to respond to an incident involving a train carrying a large quantity of petroleum crude oil. Currently, state and local emergency responders may not know if, or how many, such trains transporting large quantities of Bakken crude oil are moving through their jurisdiction until after an incident with a train has been reported. Because state and local emergency responders are

typically the first to arrive on any accident scene, before any railroad response personnel or any Federal official, it is essential that these individuals be as well-informed as possible as to the presence of trains carrying large quantities of Bakken crude oil within their jurisdictions. Accordingly, to help state and local emergency responders best be able to protect life, property, and the environment in the event of a derailment, this Order requires that a railroad carrier transporting 1,000,000 gallons or more of Bakken crude oil notify, in writing, the SERC in each state in which it operates these trains of the expected movement of the trains through each county in that state.

DOT has determined that, for purposes of this Order, the 1,000,000 gallon threshold is appropriate to trigger the written notification requirement. Considering the typical 30,000-gallon capacity railroad tank car used for the transport of petroleum crude oil, a 1,000,000-gallon threshold for a unit train would require a comprehensive response plan being required for unit trains composed of approximately 35 cars of petroleum crude oil.[8] This is a reasonable threshold when considering that the aforementioned incidents all involved trains consisting of more than 70 railroad tank cars carrying petroleum crude oil, or well above the Order's threshold of 1,000,000 gallons or more of petroleum crude oil being transported in a single train. In setting this threshold quantity of 1,000,000 gallons, DOT has also relied on a Federal Water Pollution Control Act mandate for regulations requiring a comprehensive spill response plan to be prepared by an owner or operator of an onshore facility.[9] For purposes of addressing an imminent hazard, that threshold amount of petroleum crude oil also ensures DOT is assisting local emergency responders to be prepared for the

[8] This approximation assumes that the tank cars would not be entirely filled to capacity.

[9] See 40 CFR 112.20. The Federal Water Pollution Control Act, as amended by the Oil Pollution Act of 1990, directs the President, at section 311(j)(1)(C) (33 U.S.C. 1321(j)(1)(C)) and section 311(j)(5) (33 U.S.C. 1321(j)(5)), respectively, to issue regulations "establishing procedures, methods, and equipment and other requirements for equipment to prevent discharges of oil and hazardous substances from vessels and from onshore facilities and offshore facilities, and to contain such discharges."

type of accidents that have been occurring regularly, and represent the greatest risks to public safety and the environment with regard to the transportation of Bakken crude oil. Further, this threshold amount of Bakken crude oil ensures that DOT is not unnecessarily imposing safety-related burdens on lesser risks that have not, to date, proven to represent the same safety and environmental concerns.

DOT has determined that SERCs are the most appropriate point of contact to convey written notifications regarding the transportation of trains transporting large quantities of Bakken crude oil. Each state has a designated SERC in accordance with the requirements of the ECPRA, which was created to help local entities plan for emergencies involving hazardous substances.[10] Generally, SERCs are responsible for supervising and coordinating with the local emergency planning committees (LEPC) in states, and are best situated to convey information regarding hazardous materials shipments to LEPC's and state and local emergency response agencies. This Order requires that railroad carriers, to the extent reasonably practicable, assist SERCs as necessary in responding to any requests for information from local emergency response agencies regarding the volume and frequency of train traffic implicated by this Order within that agency's jurisdiction.

Written notification containing the required information to states in which trains affected by this Order operate must be made within 30 days of the effective date of this Order. If initial notification is not made to a SERC within 30 days of the date of this Order, a railroad is prohibited from operating any train transporting 1,000,000 gallons or more of Bakken crude oil through that state until such notification is provided. This notification must reflect the expected volume and frequency of train traffic implicated in each county in a particular state, with updated notifications required to be made when there is a material change in the volume of those trains. DOT is aware that the nature of freight railroad operations does not make it possible in many instances to

[10] http://www2.epa.gov/epcra.

estimate the exact number of trains implicated by this Order that will travel over a particular route in a specified time period. Thus, this Order requires that railroads make a reasonable estimate as to the number of implicated trains expected to travel through a county per week, and to update the notification whenever a significant increase or decrease in that estimated number occurs. For purposes of complying with the requirements of this Order, DOT considers any increase or decrease of twenty-five percent or more in the number of implicated trains per week to be a material change. In making these notifications to SERCs, railroads must identify that Bakken crude oil is the commodity involved, and convey the applicable petroleum crude oil emergency response information that is required by 49 CFR part 172, subpart G in the notice. The railroad's notice to the SERCs must identify the routes over which the material will be transported through each affected county in a state. The above requirements will enable SERCs, and accordingly, state and local emergency responders, to have a reasonable expectation of the petroleum crude oil train traffic, and prepare accordingly for the possibility of an accident involving a train transporting a large quantity of Bakken crude oil.

In addition, railroads must also identify at least one point of contact (including name, title, phone number and address) at the railroad responsible for serving as the railroad's point of contact for state and local emergency response agencies on issues related to the transportation of Bakken crude oil through their jurisdictions. This point of contact must be communicated in the notice to the SERCs so that a jurisdiction may contact the railroad to obtain information regarding the transportation of large quantities of Bakken crude oil via rail. Copies of the written notification to SERCs must be made available upon request to FRA. FRA will audit railroad compliance with this Order by reviewing the notices that railroads provide to SERCs to ensure the accuracy of those notices, and also to ensure that state and local emergency responders are able to communicate with

the railroad contact identified in the written notification when necessary.

Nothing in this Order precludes railroad carriers from taking any additional steps to communicate with state and local emergency responders regarding the transportation of hazardous commodities within a state or local jurisdiction. If a railroad carrier has existing methods of communications with first responders along affected routes, DOT encourages railroads carrier to also continue to utilize those existing methods of communication.

To further enhance emergency response efforts, DOT is also recommending that railroads continue to commit resources to develop specialized crude oil by rail training and tuition assistance program for local first responders. Through the Transportation Community Awareness and Emergency Response (TRANSCAER®) program[11] and other initiatives, the railroad and hazardous materials shipping industries collaborate and cooperate with communities through which hazardous materials are transported. For example, in accordance with Association of American Railroads (AAR) Circular OT-55-N, railroads are to assist in implementing TRANSCAER's outreach program to improve community awareness, emergency planning and incident response for the transportation of hazardous materials. The same industry standard provides for the disclosure of certain commodity flow data upon request to local emergency response agencies and planning groups.

In response to the Secretary's recent "Call to Action," the rail and shipping industries have renewed their commitment to the TRANSCAER® program and have agreed to conduct additional outreach and training to local emergency responders in jurisdictions through which crude oil is

[11] www.transcaer.com

transported in large quantities.[12] At the same time, industry has committed to providing additional funding for emergency response resources for local emergency responders, and to continued communication with communities about the hazards of crude oil being transported by rail. DOT views these efforts as supporting the emergency response capability planning requirement.

D. Remedial Action

Within 30 days of this Order, to abate this imminent hazard, each affected railroad carrier shall, within 30 days of the date of this Order, notify the SERC in each state in which the railroad carrier operates trains transporting 1,000,000 gallons or more of Bakken crude oil. The contact information for each SERC is on the U.S. EPA's website related to the ECPRA as discussed above. If notification is not made to a SERC within 30 days of the date of this Order, a railroad is prohibited from operating any train transporting 1,000,000 gallons or more of Bakken crude oil in that State until such notification is provided. This notification must provide information regarding the estimated volumes and frequencies of train traffic implicated. Specifically, this notification must: (a) provide a reasonable estimate of the number of trains implicated by this Order that are expected to travel, per week, through each county within the state; (b) identify and describe the petroleum crude oil being transported in accordance with 49 CFR part 172, subpart C; (c) provide all applicable emergency response information required by 49 CFR part 172, subpart G; and, (d) identify the route over which the material will be transported. This notification also must identify at least one point of contact at the railroad (including name, title, phone number and address) responsible for serving as the point of contact for SERCs and local emergency responders related to the railroad's transportation of Bakken crude oil. To ensure that the information provided to a SERC remains reliable, railroad carriers shall update notifications

[12] See February 21, 2014 letter from Secretary Anthony Foxx to President and Chief Executive Officer of the Association of American Railroads Ed Hamberger. http://www.dot.gov/briefing-room/letter-association-american-railroads

prior to making any material changes – defined as any increase or decrease of twenty-five percent or more – in the estimated number of trains per week transporting 1,000,000 gallons or more of Bakken crude oil through local communities. Railroad carriers must assist the SERCs as necessary in disseminating the information to local emergency responders in affected counties. Copies of railroad notifications to SERCs must be made available to the FRA upon request.

E. Rescission of Order

This Order remains in effect until the Secretary determines that an imminent hazard no longer exits or a change in applicable statute or Federal regulation occurs that supersedes the requirements of the Order, in which case the Secretary will issue a Rescission Order.

F. Failure to Comply

Any railroad carrier or person failing to comply with this Emergency Order is subject to civil penalties of up to $175,000 for each violation or for each day it is found to be in violation (49 U.S.C. 5123). A person willfully or recklessly violating this Emergency Order is also subject to criminal prosecution, which may result in fines under title 18, imprisonment of up to ten years, or both (49 U.S.C. 5124).

G. Right to Review

Pursuant to 49 U.S.C. 5121(d)(3) and in accordance with section 554 of the Administrative Procedure Act (APA), 5 U.S.C. 500 *et seq*, a review of this action may be filed. Any petition seeking relief must be filed within 20 calendar days of the date of this order (49 U.S.C. § 5121 (d)(3)), and addressed to: Office of the General Counsel, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., Washington, DC 20590. Please include the docket number of this Emergency Order in your petition, and state the material facts at issue which you believe disputes the existence of an imminent hazard and must include all evidence and exhibits to be considered.

The petition must also state the relief sought. Within 30 days from the date the petition for review is filed, the Secretary must approve or deny the relief in writing; or find that the imminent hazard continues to exist, and extend the original Emergency Order. In response to a petition for review, the Secretary may grant the requested relief in whole or in part; or may order other relief as justice may require (including the immediate assignment of the case to the Office of Hearings for a formal hearing on the record.

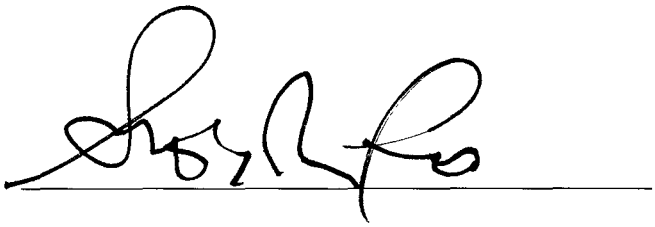
III. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that DOT consider the impact of paperwork and other information collection burdens imposed on the public. DOT has determined that this Emergency Order imposes new information collection requirements. FRA will be publishing a Paperwork Reduction Act notice for comment, following publication of this order.

IV. Emergency Contact Officials

If you have any questions concerning this Emergency Order, you should contact the U.S. Department of Transportation at (202) 493-6245.

Dated: May 7, 2014



Anthony R. Foxx
Secretary of Transportation