

Operator Response Procedures

Dispensing a Regulated Substance

As an operator of a gasoline dispensing facility you are the first line of response to emergencies involving hazardous, flammable and combustible liquids. As a Class C Operator you must be familiar with emergency procedures in order to protect yourself, the public and the environment and to know how to respond to emergencies involving gasoline and other dispensed fuels.

It is important to understand why gasoline and other fuels present concerns. While these fuels have toxic properties, are highly flammable, and can negatively impact the environment, the risks can be prevented or greatly minimized with proper management and quick response to accidents.

TOXIC

Gasoline is a manufactured mixture that does not exist naturally in the environment. It is produced by the process of refining crude oil. Gasoline contains hundreds of individual chemicals, including benzene, toluene and xylene which are toxic and can be harmful to humans. You may be able to avoid breathing in vapors because you can smell benzene in gasoline, but it can also soak through your skin and you can't feel it. Don't let gasoline come in contact with your skin and avoid breathing gasoline vapors as much as possible.

FLAMMABLE

Gasoline is also a flammable liquid, which means it will ignite easily in the presence of an ignition source. It takes only a heat source or a spark to ignite gasoline. A release of gasoline can create severe fire hazards near traffic, in buildings, or in sewers. Further, gasoline in a confined space that is ignited can result in an explosion. As such, it cannot be emphasized enough the importance of observing and enforcing your no-smoking policies around fueling facilities. Gasoline in a sanitary sewer can also present explosion threats and disable a wastewater treatment plant's ability to treat sewage.

ENVIRONMENTAL IMPACTS

Gasoline and its vapors are not only harmful to humans, but also to the atmosphere, the soil, and the groundwater. When gasoline is exposed to air (for example, when product is transferred either to a storage tank or a vehicle), it releases hydrocarbons that react with other compounds in the air and forms ground-level ozone. Ground-level ozone is a "greenhouse gas" that contributes to disruptions in our global climate.

Gasoline and other fuels can kill aquatic life and wildlife if it reaches surface water through run off or a storm sewer. Gasoline spills and releases can percolate to groundwater. Iowans rely on groundwater for nearly 80 percent of our drinking water. Needless to say, one wouldn't want to drink groundwater contaminated with gasoline. Only one gallon of fuel leaking each week from a poorly maintained spill bucket can result in up to 195 tons of contaminated soil in a year. That is why we have regulations for petroleum dispensing facilities: to protect you, the public and the environment.

OPERATORS MUST BE PREPARED TO RESPOND

Gasoline dispensing facilities are built to prevent spills, leaks and fires, but sound planning and construction can't always account for those situations or accidents caused by customers. How many times have you seen a customer not attend to the filling process? A customer may get back into the vehicle or walk into the store while the vehicle is being filled with fuel. It seems thoughtless to us, but it happens all the time. If the latch open device fails to close, gasoline pours onto the surface creating a hazardous situation, and you must know how to respond.

In general, a hazardous emergency situation is when a spill or release of a hazardous liquid, such as gasoline and other fuels, places the safety and health of the environment and/or public in danger. Is a spill of gasoline—sufficient enough in quantity to create a stream of product running down the pavement to the storm sewer—a hazardous emergency situation? What if you smelled petroleum vapors inside the building where you are working? Is that a hazardous emergency situation? You shouldn't have to think about how to answer those questions. Remember, if you even think about calling the fire department or HazMat team, it is an emergency.

Responding to Small Petroleum Spills

You can handle some spills, for example a small spill of gasoline or diesel that occurred when a customer overfilled a vehicle and there exists no immediate threat to the public or to the environment. However, if the spill ignites, that is a hazardous emergency situation. Know what to do when responding to a small petroleum spill:

- 1) Stop the spill. Disengage the stuck nozzle or shut off the dispenser. You must know the location of the emergency shut-off switch that shuts down the power to the pumps and dispensers. You may have to use this to stop the spill. Have a bucket available to catch spills or drips until they can be stopped. If a customer complains of a slow flow problem, shutdown the pump for that product line and call the petroleum service provider.
- 2) Contain and recover the spill. Spread material such as kitty litter, sand, sawdust, wood chips, peat, synthetic sorbent pads and booms, or dirt from the roadside to absorb and stop the flow of the petroleum on pavement. Keep this sorbent material readily available for such situations. Remember, the petroleum-soaked material is still flammable.
- 3) Collect the petroleum-soaked material. Do not touch the material with bare hands—wear rubber gloves. Use brooms to sweep up the material and put it into buckets, garbage cans or barrels or on top of plastic sheeting. Store the sorbent for proper treatment and disposal. Call the DNR Field Office in your region to find out if “thin-spreading” or “land-applying” the sorbent material is appropriate. If not you will have to call a hazardous waste company to collect, treat or dispose of the material.
- 4) Do not flush the contaminated area with water. Washing down a spill can quickly move petroleum from a roadway to a storm sewer, stream or lake.
- 5) Do not use dispersants. Detergents or dispersants can dissolve petroleum, but only for a short while and then it will reform. Sometimes after using dispersants, vapors actually increase and create a more toxic environment.
- 6) Report the spill. Remember: if gasoline or other fuels reach a stream, a sanitary sewer or storm sewer or vapors are detected inside a building or a fire occurs—a hazardous emergency condition is present, and matters are beyond your control. Call the emergency numbers.

Equipment List for Petroleum Small Spill Kit

Item	Quantity
Shovel, non-sparking	1
Gloves, rubber	3
Pail, 5-gallon	1
Drum, 30 gallon	1
Label for Drum	1
Goggles, splash proof	2
Absorbent material (kitty litter, peat)	1 - 16lb. bag of peat
Absorbent socks	3 - 2"x10"
Absorbent pads	25
Broom and dust pan	1

Emergency Shut-off Switch

Internal Emergency Shut Off Switch: In the event of a fuel spill or other emergency, a Class C Operator may need to swiftly shut down power at all the pumps and dispensers in order to stop the escape of fuel. The emergency shut off switch is located at the internal point of sale where it is readily accessible to the Class C Operator. Make sure you know the location of the emergency shut-off switch.

External Emergency Shut Off Switch: In the event of a fuel spill or other emergency at the dispensing area, the patrons must have access to an emergency shut off switch or E-Stop per International Fire Code. An approved, clearly identifiable and readily accessible emergency disconnect switch must be located within 100 feet of, but not less than 20 feet from fuel dispensers. This emergency disconnect or E-Stop button shuts off the pumps, all dispensing devices and all associated power, control and signal circuits (see 2203.2 International Fire Code). Make sure you know the location of the emergency shut-off switch.

Procedures for Overfill Prevention During Delivery of Fuel

What to do Before Filling Your USTs

- Make sure the fill ports of your tanks have current and permanent tank tags and the contents are clearly identified/labeled according to APA 1637. Identify the capacity of each tank at the fill port so it is clearly visible to the transport driver, and there is no confusion as to which tank the product is delivered
- Post clear signs that alert delivery persons to the overfill devices and alarms in use at your facility. Does the delivery driver know how to respond to an audible alarm? To an auto shutoff?
- All tank top access must be tight. If an overfill occurs, any loose fittings, connections or caps on top of the tank could release product and make the overfill device ineffective
- Make and record accurate readings for product and water in the tank before fuel delivery
- Order only the quantity of fuel that will fit into 90% of the tank. Your overfill device will engage at 90 or 95 percent, but don't let the tank get that full so that the overfill device engages. Play it safe and order less than 90 percent

REMEMBER, the formula for determining the maximum amount of gasoline to order is:

(Tank capacity in gallons x 90%) – Product currently in tank = Maximum amount of fuel to order.

Example: (10,000 gal x 0.9) – 2,000 gal = 7,000 gal maximum amount to order

- Ensure fuel delivery personnel know the type of overfill device present at the tank and what actions to perform if it activates
- Review and understand the spill response procedures
- Verify that your spill bucket on the tank is empty, clean, and will contain spills
- When the transport driver arrives, verify the amount of fuel ordered and that there is adequate room in the tank
- If your UST system is a large gasoline dispensing facility (GDF), that is, having an annual throughput of over 100,000 gallons of gasoline you must have a Stage 1 Vapor Recovery System installed. Make sure the transport driver connects the vapor return line from the tank to the vapor port

What to do During Fuel Delivery

- Keep fill ports locked until the fuel delivery person requests access
- Either a Class A/B or C operator should observe the transfer of fuel to the USTs. Note: there should be no obstructions in the drop tube or vapor return valves
- Have an accurate tank capacity chart available for the fuel delivery person
- Make sure the area is secure and safe
- The fuel delivery person makes all hook-ups. The person responsible for monitoring the delivery must remain attentive and observe the entire fuel delivery, be prepared to stop the flow of fuel from the truck to the UST at any time, and respond to any unusual condition, leak, or spill which may occur during delivery
- The transport driver must attend to the transfer and is required to stay within 25 feet of the fill port/tank so as to readily respond to an overfill/spill. Most tankers carry around 8000 gallons of flammable/combustible fuels. To walk into the store or sit in one's cab while fuel is transferred to the tank is neglecting one's serious responsibilities. If this happens, ask the transport driver to attend to the fuel transfer. Then notify the owner of the situation
- Have response supplies readily available for use in case a spill or overfill occurs (see spill kit items above)
- Provide safety barriers around the fueling zone
- Make sure there is adequate lighting around the fueling zone
- Be aware of indications of an overfill

What to do After Fuel Delivery

- Following complete delivery, the fuel delivery person is responsible for disconnecting all hook-ups
- Report any problems to the transport company¹
- Return spill response kit and safety barriers to proper storage locations
- Make and record accurate readings for product and water in the tank after fuel delivery
- Verify the amount of fuel received
- Make sure fill ports are properly secured
- Ensure the spill bucket is free of product and clean up any small spills

Written Emergency Response Procedures

Develop a personalized sheet of emergency contacts and phone numbers for each site. This should be posted and readily available to all who oversee dispensing of fuel at that location. See Chapter 1 for an example of what can be used for emergency contacts and phone numbers. Below are some other items you may want to include.

- The phone number(s) to reach the fire and police departments
- The names and phone numbers of company personnel (Class A and B Operators) who should be notified in an emergency
- The phone number of the DNR Spill Reporting
- The location and proper use of spill cleanup kit
- Any site specific emergency procedures
- Location of Class A/B Fire Extinguishers
- How to Respond to a Small Spill of Petroleum
- Procedures for **overfill prevention** during the delivery of regulated substances
 - Type of overfill prevention equipment
 - How to respond to an overfill
- ATG Alarms: what they mean and how to respond

¹ For a more thorough treatment of safe fuel deliveries, see “Receiving Fuel Safely”, Brian Pottebaum, March 20, 2014, <http://www.pmmic.com/>

Contact Information

It is our desire to assist you in your compliance effort. If you have questions that are not addressed in this manual or would like additional information regarding underground storage tank systems, please contact us directly at:

Iowa DNR Underground Storage Tank Section Wallace State Office Bldg. 502 East 9 th Street Des Moines, IA 50319-0034 Tel: 515.725.8200 Fax: 515.725.8202	Tom Collins Environmental Specialist Senior 515.725.8322 Tom.Collins@dnr.iowa.gov	Paul Nelson Environmental Specialist Senior 515.725.8324 Paul.Nelson@dnr.iowa.gov
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DNR Spill Reporting:
(24 hour phone) 515.725.8694 effective July 2015
or fax 515.281.7229

UST Section Website: www.iowadnr.gov/ust

Use the Release Report Form to fax within 24 hours or 6 hours if an emergency condition exists:

<http://www.iowadnr.gov/land/ust/ustrelease.html>

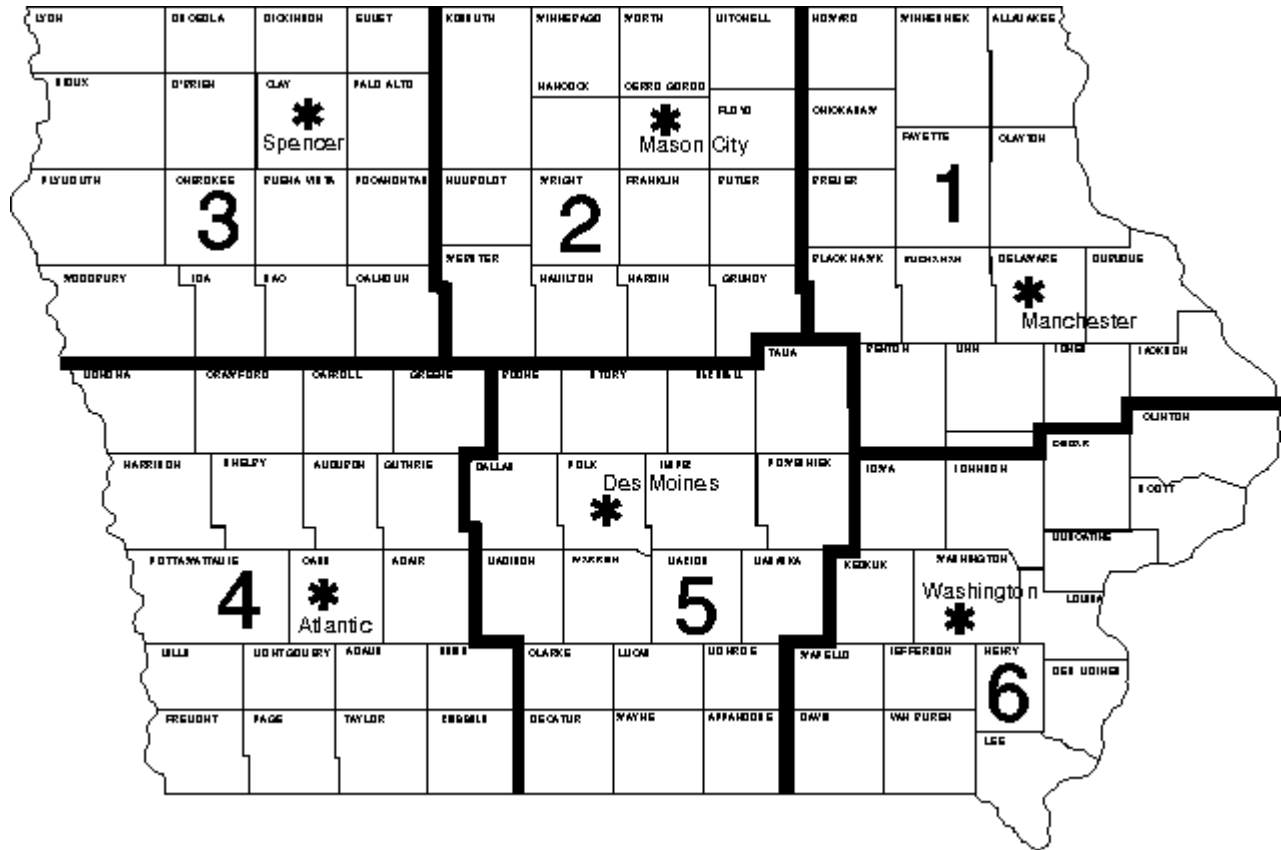
Emergency Contacts & Phone Numbers (Fill this out with site specific information)

Emergency*	911
Fire Department	
Police	
Class B Operator	
Manager	
Assistant Manager	
Petroleum Service Provider	

***WHEN TO CALL 9-1-1**

- Call 9-1-1 when life and/or property are in immediate danger
- When you see smoke or a fire
- When rescue or emergency medical assistance is needed

DNR Field Offices and Addresses



Field Office 1

909 W Main St Ste 4
 Manchester, IA 52057
 Phone: 563-927-2640
 Fax: 563-927-2075

Field Office 2

2300 15th St SW
 Mason City, IA 50401
 Phone: 641-424-4073
 Fax: 641-424-9342

Field Office 3

1900 N Grand Ave
 Gateway North Mall Ste E17
 Spencer, IA 51301
 Phone: 712-262-4177
 Fax: 712-262-2901

Field Office 4

1401 Sunnyside Ln
 Atlantic, IA 50022
 Phone: 712-243-1934
 Fax: 712-243-6251

Field Office 5

7900 Hickman Rd, Ste 200
 Windsor Heights, IA 50324
 Phone: 515-725-0268
 Fax: 515-725-0218

Field Office 6

1023 W Madison
 Washington, IA 52353
 Phone: 319-653-2135
 Fax: 319-653-2856