

## Diesel and Gasoline Spills

Pollution of the land, air, or waters of the state is unlawful. This fact sheet is intended to provide a general guidance for the mitigation of truck or tank car spills of gasoline or diesel.

Spills of gasoline and diesel can lead to significant contamination issues if not handled quickly and properly. Our goal is to mitigate releases within 72 hours of an incident. Spills should be reported to DEQ's hotline at 1-800-522-0206. If reportable quantities (RQs) are exceeded other agencies will need to be notified.

Spills as the result of collisions on any publicly maintained roadway must be remediated by a remediation contractor licensed by the Environmental Complaints and Local Services Division (ECLS) of DEQ. The immediate objective is to recover free liquids and prevent them from contaminating surface water or ground water. Appropriate action (i.e., booms, dikes, etc.) must be taken to keep free liquids from reaching surface water. Once free liquids are addressed excavation of contaminated soil will be necessary. Contaminated soil needs to be removed because contaminants can leach to ground water or spread to surface water if there is rain.

If contaminated soil extends down into ground water or ground water contamination is otherwise suspected, ECLS representatives will contact the Land Protection Division (LPD) Voluntary Cleanup Section for assistance. If public water supplies are threatened or surface water is impacted, the DEQ's Water Quality Division will be notified.

For removal of contaminated soil the standard practice is to excavate visible contamination, screen the excavation site for hot spots with a photo ionization device such as a HNU, then take confirmation samples to show that the contaminated soil has been removed.

### Confirmation Sampling:

Confirmation sampling consists of taking a minimum of five grab samples, one from each side wall and one from the bottom of the excavation for each 400 square feet of excavation area. On larger excavations, confirmation sampling would consist of one grab sample every 20 linear feet around the perimeter sidewalls and one from the bottom of the excavation for each 400 square feet of excavation area. For releases to ditches, grab samples should be taken every 20 feet and analyzed separately. Additional samples may be required for further delineation where deemed necessary.



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Samples for gasoline spills shall be analyzed for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and Total Petroleum Hydrocarbons (TPH). Acceptable cleanup levels for soil are:

<b>Benzene</b>	<b>0.052 mg/Kg</b>
<b>Toluene</b>	<b>13.8 mg/Kg</b>
<b>Ethylbenzene</b>	<b>15.6 mg/Kg</b>
<b>Total Xylenes</b>	<b>198 mg/Kg</b>
<b>TPH</b>	<b>50 mg/Kg</b>

Samples from diesel spills shall be analyzed for Benzene and TPH. Acceptable cleanup levels for soil are the same as for gasoline. If higher levels of TPH are left in place, DEQ may require that additional parameters be evaluated.

The following is further information on soil excavation and handling, acceptable analytical methods, disposal requirements and preparation of a final report.

## Soil Excavation:

Contaminated soil should be temporarily containerized or stockpiled on plastic sheeting (minimum 10 mil) and covered and bermed to prevent run-on and run-off. Under certain conditions the LPD can approve removal to a permitted landfill for short term storage (no longer than 15 days) until the material can be properly sampled and characterized. If an open pit has to be backfilled due to extenuating circumstances, the floor of the excavation should be covered with plastic sheeting or some other suitable method to clearly define the sidewalls and bottom of the pit in the event test results show the need for further excavation.

## Analytical Methods:

- Benzene and BTEX analysis: use EPA Method 8021B or use Oklahoma Method 8020/8015 (Modified) which also analyzes for Gasoline Range Organic (GRO) Compounds. (If sample taken by DEQ – use coring tool and transfer one 5-gram core of undisturbed soil into the supplied vial and seal with cap. Repeat two more times for a total of 3 vials. A pre-filled “Trip Blank” will need to accompany the samples which are all preserved on ice and deliver to the state environmental lab within 48 hours of collection).
- TCEQ Method 1005 for TPH analysis. (If sample taken by DEQ – use coring tool and transfer two 5-gram cores of undisturbed soil into the supplied vial and seal with cap. Repeat two more times for a total of 3 vials. Preserve samples on ice and deliver to the state environmental lab within 48 hours of collection).
- Recovered liquids or heavily contaminated soils might exhibit a characteristic which would cause them to be classified as hazardous waste (ignitability or TCLP benzene). It is important to properly characterize the waste prior to disposal. The responder should contact the destination landfill to determine analytical requirements: A list of landfills authorized to accept non-hazardous industrial waste may be downloaded from <https://tinyurl.com/y7mdt5sy>

## Disposal Requirements:

If contaminated materials are non-hazardous (do not fail TCLP for Benzene or characteristic of ignitability) and are sent to a landfill with synthetic liner and leachate collection system, no additional testing other than confirmation sampling at the excavation site is required. If not using that option, one grab sample should be taken for every 20 cubic yards of material. Up to 10 of

these grab samples may be composited together for analysis to characterize up to 200 cubic yards of contaminated soil. All samples should be taken from areas of greatest visual contamination.

Petroleum contaminated soil with TPH concentration less than 1000 mg/kg can be disposed at any permitted solid waste municipal landfill. Waste of this nature does not have to go to a landfill permitted to accept non-hazardous industrial waste. Petroleum contaminated soil with TPH concentration greater than 1000 mg/kg must be disposed in a landfill permitted to accept non-hazardous industrial waste and the landfill must be equipped with a composite liner and leachate collection system. If disposing of quantities of greater than 10 cubic yards/month of TPH contaminated soil greater than 1000 mg/kg the generator or contractor representing the generator must complete, sign, and submit to the DEQ a nonhazardous industrial solid waste certification form.

The form is available listed under Additional Resources at <https://tinyurl.com/yc4e25yb> or upon request from the LPD Solid Waste Compliance Unit at 405-702-5100.

## Final Report

The responsible party should submit a final report to the DEQ ECLS Division documenting material spilled and actions taken. The report should also include analytical data to demonstrate that cleanup levels were achieved.

## Spills of Materials Other Than Diesel or Gasoline

Spills other than diesel or gasoline need to be addressed on a case-by-case basis. If reportable quantities (RQs) are exceeded contact the National Response Center at 1-800-424-8802. Other reporting requirements may be necessary, but the DEQ hotline at 1-800-522-0206 can usually give assistance on reporting requirements.

## Spill Guidance Procedural Check List

- ☐ Contact information on carrier? ☐ Name ☐ Phone Number ☐ Address
- ☐ Contact information on emergency response contractor? ☐ Name ☐ Phone Number ☐ Address.
- ☐ Contact information on insurance company? ☐ Name ☐ Phone Number ☐ Address
- ☐ Have liquids been contained and recovered? (If not, do so).
- ☐ What was spilled? Gasoline \_\_\_\_\_ Diesel \_\_\_\_\_
- ☐ How much was spilled? Gallons \_\_\_\_\_
- ☐ Has contamination reached surface water? (If so boom and vac and contact WQD).
- ☐ Have appropriate spill notifications been made?
  - DEQ Hotline 1-800-522-0206
  - National Response Center 1-800-424-8802 (if there is a sheen or threat of a sheen on navigable waterways)
- ☐ Is there surface water nearby? \_\_\_\_\_ How close? \_\_\_\_\_
- ☐ Are there public water supply wells nearby? \_\_\_\_\_  
Or water supply lines? \_\_\_\_\_ (If so, contact city and WQD).
- ☐ If water supply lines are nearby, what are they made of? \_\_\_\_\_
- ☐ Is the spill in a wellhead protection area? \_\_\_\_\_
- ☐ Are there private wells nearby? \_\_\_\_\_ (If so, assess use of wells).
- ☐ Are any utilities affected? \_\_\_\_\_ Has product gotten into sewer lines? \_\_\_\_\_  
(If so, check for explosion hazards).
- ☐ Has visibly contaminated soil been excavated? \_\_\_\_\_  
(Field screen with PID if possible)
- ☐ Was ground water encountered during excavation? \_\_\_\_\_
- ☐ Does contamination extend down to groundwater or is groundwater contamination otherwise suspected? \_\_\_\_\_  
(If so, contact LPD VCP Section).
- ☐ Has contaminated soil been properly stockpiled or disposed? \_\_\_\_\_
- ☐ Has there been appropriate confirmation sampling? \_\_\_\_\_ (5 discrete samples; each sidewall and one floor for each 20' by 20' excavation, and every 20' along ditches or spill flow paths. See Confirmation Sampling on Page 1 for larger areas).
- ☐ Were samples analyzed by correct methods? \_\_\_\_\_
- ☐ Do confirmation samples meet cleanup levels? \_\_\_\_\_  
(If not, dig more or contact LPD VCP section).

Draw site map, note relevant features, stockpile locations, etc.