Landowner's Survey:

What's the Risk to Your Water from Petroleum Based Fuels?

Utah Farmstead Assessment for Ground Water and Surface Water Protection

Survey 4 **Revised March 2012**

INSIDE:

Fuel storage tanks can pose serious threats to public health and the environment.

A small leak of just one drop per second can result in 400 gallons of fuel released into groundwater in a single year. Just a few quarts of gasoline leaked near a well may be enough to severely pollute a farmstead's drinking water. At low concentrations, fuel in water may not be detectable by taste or smell, but may be contaminated enough to harm human health. In addition to these health threats, fumes from leaking fuel create a threat of explosion and fire.

The Environmental Protection Agency (EPA) estimates one out of every four underground storage tanks in the United States is leaking. If an underground storage tank is more than 20 years old the potential for leaking is dramatically increased. Newer tanks and piping can also leak, especially if they are not installed properly.

This survey focuses on the storage and handling of gasoline, kerosene, and liquid heating fuels. It does not apply to liquid propane gas, because those leaks vaporize quickly and do not threaten groundwater.

HOW TO USE THIS SURVEY

This survey asks a series of questions dealing with common risks from fuel products to water quality. The survey is divided into different sections to help you identify the specific practices or conditions on your farmstead or acreage that should be addressed to reduce risk of water contamination.

The results of this survey are intended to provide general information and recommendations regarding farmstead practices and potential risks to water quality. Keep this survey as your private record and use it as a guide for taking action to reduce these risks.

WATER QUALITY
UTAH STATE UNIVERSITY EXTENSION
Water is Life : Quality Matters

UtahStateUniversity
COOPERATIVE EXTENSION

See Glossary in Fact Sheet #4 for clarification of terms in this survey.

SURVEY INSTRUCTIONS

For each question circle the answer that best describes your situation. At the end of each section add together the numbers that correspond to each answer. When you have completed the survey, add together the section totals for the total risk assessment score.

Fuel Product Handling

1. On what type of surface do you fuel your vehicles and equipment?

concrete or asphalt pad (1)
clay soil or gravel (2)
sandy soil (3)

2. How often is someone present during equipment fueling to prevent overfilling?

always (1)
most of time (2)
start filling, leave and return after set time (3)

3. Which of these overfill protection devices are connected to your fuel tank?

automatic shut-off (1)
overfill alarm (2)
no protective device (3)

4. Are there indications of fuel spills at the pump or distribution point?

no indications (1)
fuel smell, spill or drip spot on ground (2)
visible fuel leaking from nozzle (3)

5. Have you ever had a large fuel spill or leak you did not clean up?

No (1)
Yes (3)

Fuel Handling Total_____

Storage Tank Design and Installation

6. Is your fuel storage tank located:
   100 feet or more from a water well or surface water?
   Yes (1)
   No (3)
   downslope from a well or surface water?
   Yes (1)
   No (3)

7. Describe the soil drainage at your fuel storage area.
   well drained (1)
   moderately well drained (2)
   poorly drained (3)

8. How was your fuel tank installed?
   by a certified tank contractor (1)
   according to manufacturer's recommendations (2)
   with no special precautions (3)

9. Does your fuel tank have a secondary containment structure to capture spills or leaks?
   Yes (1)
   No (3)

10. What material is your fuel storage tank made of?
   synthetic (fiberglass, etc.) (1)
   steel with cathodic protection from corrosion (1)
   painted or coated steel (2)
   bare steel (3)

11. What material is used for the piping in your fuel storage system?
   synthetic (fiberglass, etc.) (1)
   cathodically protected (1)
   galvanized/coated (2)
   bare steel, unprotected (3)

12. Do pipes drain back into the tank after the pump is turned off?
   Yes (1)
   No (3)

Storage Tank Design & Installation Total _____

Storage Tank Maintenance and Security

13. How often do you conduct an inventory of fuel tank volume between tank refills?
   at least once a month (1)
   occasionally (2)
   never (3)

14. How often do you perform a test of fuel tank tightness?
   once a year (1)
   more than a year between tests (2)
   never (3)

15. Are there any unused or abandoned fuel storage tanks on your property that have not been properly emptied and closed?
   No (1)
   Yes (3)

16. Is your fuel pump/tank lockable to prevent accidental opening and vandalism?
   Yes (1)
   No (3)

Storage Tank Maintenance & Security Total _____

Other Management

Circle Yes or No.

Is a "no smoking" rule enforced at your fuel handling and storage facility? Yes No

Are fuel pumps or tanks labeled as to the type of fuel dispensed? Yes No

Are you prepared for an emergency in case of a fuel spill or leak? Yes No

Total number of Yes answers: _____

Total number of No answers: _____

If you had more Yes answers than No, the section total is 1; otherwise the total is 2.

Other Management Total _____

RISK RATING

Add the following totals:	Low	Moderate	High
Fuel Handling section total _____ x 4 = _____	20	40	60
Storage Tank Design & Installation section total _____ x 3 = _____	24	48	72
Storage Tank Maintenance & Security section total _____ x 5 = _____	20	40	60
Other Management section total _____ x 4 = _____	4		8
SURVEY 4 TOTAL SCORE _____			

INTERPRETING YOUR RISK RATING

Locate your total risk score on the spectrum above to get a general idea of the risk fuel is posing to water sources on your farmstead or acreage.

Next, compare your risk scores for each section with the ratings (Low, Moderate, and High) for the individual sections to determine the practices where your risk is moderate to high.

For these sections go back to the survey and look at the questions for which you marked a high scoring choice. These are the areas you should address first to reduce risk of water contamination.

Follow Up

Refer to fact sheet # 4 - How to Protect Your Water from Petroleum Fuels for contacts and information about storing and handling fuel. Contact your Utah State University county Extension office, or the Extension web page http://www.extension.usu.edu for more information.