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TO: Division of Water Supply Engineering Staff

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SUBJECT: Water - Design - Standby Generators/Fuel Tanks

Standby generator facilities utilizing liquid fuel tanks in close proximity to groundwater sources do not appear to be properly addressed in our *Waterworks Regulations* at this time. 12 VAC 5-590-840A2c states "The horizontal distance from the well to any petroleum or chemical storage tank or pipeline or similar source of contamination shall be at least 50 feet...." It is probable that standby power generator/liquid fuel tanks to power well pumps were not the intent of this requirement; however, reasonable protection of the source is considered necessary and prudent. We should encourage owners to provide standby power and limit requirements that would discourage such.

The primary concern is the need to protect a groundwater source from a substantial spill from a leaking fuel tank, fuel line, or the fuel tank filling operation. Generators being proposed to power well pumps typically have fuel tanks in the 60-120 gallon range.

It should be our strong recommendation to maintain a separation distance of 50 feet. The following guidance should be followed when the well and fuel storage separation-distance is less than 50 feet:

1. Recommend propane or natural gas generators.
2. Recommend a maximum practical distance from generator/liquid fuel tank to groundwater sources and placement of the generator/liquid fuel tank downslope of the groundwater source when possible.
3. Recommend minimum fuel line distances from tank to generator and fuel fill point to tank.
4. Recommend separately housed generator/tank facility.
5. Require for liquid fuel generators/tanks:
  - a. above ground installation.
  - b. a double wall tank with an inner wall leak detection alarm or a single wall tank with a concrete (or other acceptable material) full capacity containment curb/wall.
  - c. fuel line must also be above ground or provide casing.
  - d. a paved and curbed parking pad at fuel fill location.

A design exception request is necessary for generator/ liquid fuel tank facilities located less than 50 feet from a groundwater source.