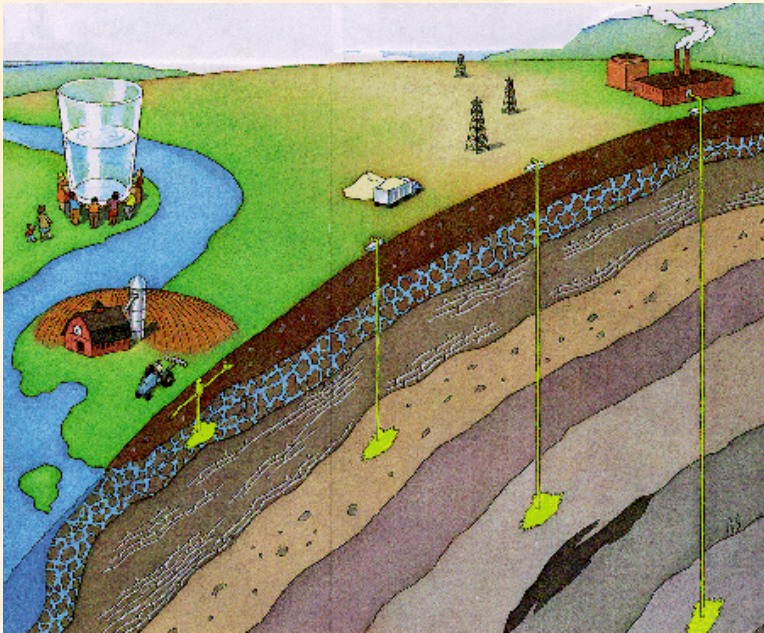


The Underground Injection Control (UIC) Program



*Presentation for the
Radionuclide Webcast*

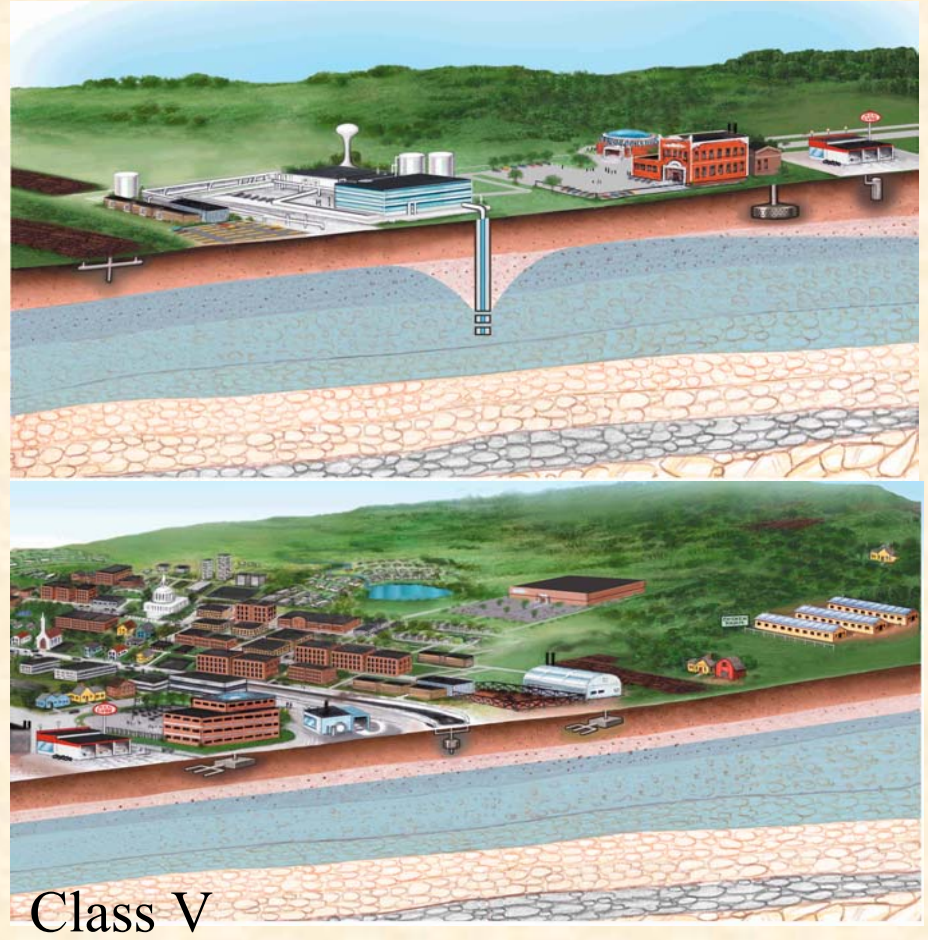
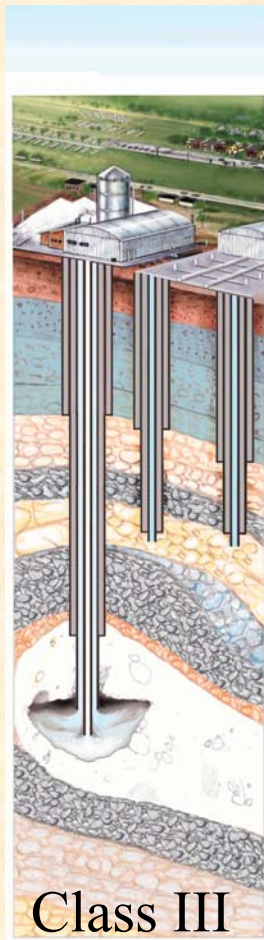
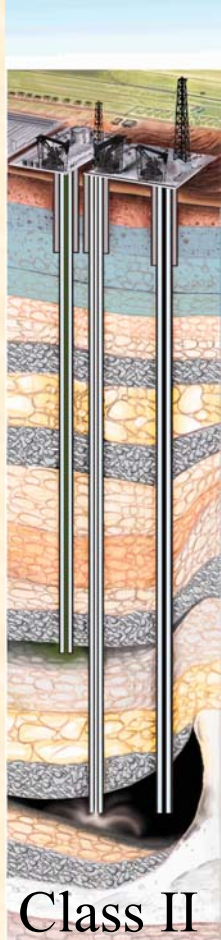
August 4, 2004

2-4 pm

UIC Program Background

- SDWA requires EPA to develop minimum federal regulations for state and tribal Underground Injection Control (UIC) Programs to protect underground sources of drinking water
- 33 states have applied for primary enforcement authority (Primacy); EPA directly implements the program in 17 states
- The UIC program's mission is to protect underground sources of drinking water from contamination by regulating the construction and operation of injection wells
- Primacy States may be more stringent than the minimum federal regulations

Five Classes of Wells



Waste Characteristics

- Systems need to determine if their waste is considered radioactive, hazardous, or non-hazardous before pursuing underground injection as a means for disposal
- Under the UIC regulations, “radioactive” refers to any waste containing radioactive concentrations that exceed those listed in 10 CFR 20, Appendix B, Table 2, Column 2
- These concentrations are:
 - 60 pCi/L for radium-226,
 - 60 pCi/L for radium-228, and
 - 300 pCi/L for uranium

Single Family Septic Systems

- The UIC Program does not regulate single-family residential waste disposal systems such as single-family septic systems.
- However, EPA has the authority to “*take action*” on a residential waste disposal system if the system has the potential to introduce a contaminant into an underground source of drinking water whose presence “*may cause an imminent and substantial endangerment*” to public health (Section 1431 SDWA).

Well Type	Injection Well Description	Considerations
Class I	Wells that inject wastes underneath the lowermost formation containing an <i>underground source of drinking water</i> (USDW).	<ul style="list-style-type: none"> •Stringent protective requirements •Very few Class I facilities can accept offsite waste •Disposal of slurries and solids allowed in limited circumstances •Can be expensive to construct
Class II	Wells used to inject fluids associated with oil and natural gas recovery and storage of liquid hydrocarbons	<ul style="list-style-type: none"> •Treatment residuals that are non-hazardous and non-radioactive may be disposed of into a Class II well if they are associated with oil and gas related production or the enhanced recovery of oil or natural gas.
Class III	Wells associated with solution mining (e.g., extraction of uranium, copper, and salts)	<i>Not an option</i>
Class IV	Wells used to inject hazardous or radioactive waste into or above USDWs. These wells are banned.	<i>Not an option</i>
Class V	Class V - Any injection well that is not contained in Classes I to IV	<ul style="list-style-type: none"> • Not an option for hazardous or radioactive waste disposal • Prohibited if its use will endanger a USDW per CFR 144.12 (cause an exceedance of any primary drinking water standard or otherwise adversely affect public health)

For More Information...

- USEPA Program Website:
<http://www.epa.gov/safewater/>
- Primacy State and Regional UIC Contacts:
<http://www.epa.gov/safewater/uic/states.html>
- Safe Drinking Water Hotline: 1-800-426-4791
- USEPA HQ UIC Contact:
 - Suzanne Kelly (Kelly.suzanne@epa.gov)
 - 202-564-3887