BMP: Gelling Agents

DESCRIPTION:
Gelling agents are materials that interact with liquids either physically or chemically (i.e., thickening or polymerization). Some of the typical gelling agents are polyelectrolytes, polyacrylamide, butylstyrene copolymers, polyacrylonitrile, polyethylene oxide, and a gelling agent referred to as the universal gelling agent which is a combination of these synthetics.

APPLICATION:
Gelling agents are useful for facilities with significant amounts of liquid materials stored onsite.

INSTALLATION/APPLICATION CRITERIA:
- The use of gels simply involves the addition of the gel to the area of the spill, mixing well, and allowing the mass to congeal.
- Personnel need to know the properties of the spilled material so that they can choose the correct gel.
- To prevent the movement of spilled materials, gelling agents must be applied immediately after the spill.
- Ultimately, the congealed mass will need to be cleaned up by manual or mechanical methods and disposed of properly.

MAINTENANCE:
No information available.

LIMITATIONS:
- May require knowledge of the spilled materials to select correct gelling agents.
- May be difficult to clean up
- May create disposal problems and increase disposal costs by creating a solid waste and potentially a hazardous waste.
- Gels cannot be used to clean up spills on surface water unless authorized by the U.S. Coast Guard or EPA Regional Response Team.

TARGETED POLLUTANTS
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS
- Capital Costs
- O&M Costs
- Maintenance
- Training