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KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT

PROCEDURE FOR THE CLEAN-UP OF A SURFACE BRINE SPILL AT SALT SOLUTION MINING FACILITIES

Procedure #: UICIII-1

Narrative:

Brine spills or accidental brine releases to the ground surface can result in contamination of the soil, surface water and the groundwater if cleanup actions are not taken promptly. Brine will destroy vegetation resulting in a loss of ground cover and subjecting the soil to erosion. This increases the sediment load in surface waters resulting in a degradation of water quality. Brine which directly gains access to surface water will render the water unfit for most uses and can result in the death of aquatic life. Brine which soaks into the ground or dries on the ground surface results in a build up of salt in the soil. Leaching of this salt by water from precipitation events percolating through the soil and the unsaturated zone can result in contamination of the groundwater.

Procedure:

1. Immediately report spill or accidental release to KDHE. The attached KDHE "Spill Packet" document lists KDHE contacts for reporting spills. The spill or accidental release can also be reported to the KDHE Topeka Central Office Underground Injection Control Program staff at 785.296.5560. KDHE Regulation 28-48-2 requires brine spills or accidental brine releases to be reported to KDHE.

2. Construct a recovery trench, dike, or other containment structure to contain flow of lost fluid.

3. Immediately begin recovery of all lost fluid.

4. Check depth of brine penetration in the soil.

5. With fresh water, flush to affected area from the up gradient side of spill site to the containment area. The flushing fluid must be recovered and handled in a manner approved by KDHE. This may include using hew fluid in the solution mining operation, placing the fluid into a KDHE approved brine storage pond or disposal into a Class I disposal well permitted by KDHE.

6. Should the area dry out before the flushing process can be completed, the area should be tilled to the depth of brine penetration to loosen the soil and then flushed.

7. Continue flushing until flush waster shows a chloride level at or below 500 ppm chloride.