*Commercially available products that promote bioremediation / treatment of crude oil spills such as BioSorb®, Oil Hawg™, Sphag Sorb®, Ken Gro Biosorb, or similar products may also be utilized. In all cases follow manufacturers suggested practices for use and application.

Clean up of spills or escapes of saltwater that are excepted from notification requirements:

Physical Removal

Fluids: Remove all free saltwater / brine and contain in a brine tank or dispose of in a permitted Class II injection system.

Solids: Remove all salt impacted soil to one of the following locations:

- 1. A landfill authorized by KDHE
- 2. Remove for use in maintenance of onsite lease roads in accordance with KCC dilution requirements with fresh / clean soil
- 3. Remove for use in maintenance of onsite dikes or berms used as containment at tank battery sites in accordance with KCC dilution requirements with fresh / clean soil

Dilution

<u>Flushing:</u> Flush saltwater / brine impacted soil in place at site of spill or escape with fresh water. The amount of fresh water used in dilution should be at least 10 times the amount of saltwater / brine spilled.

Recover flush water and remove to brine tank or dispose of in a permitted Class II injection system.

Additions: Add and mix fresh / clean soil into saltwater / brine impacted soil. Minimum admixture should be adequate to establish and/or promote re-vegetation. If saltwater / brine impacted soils are removed for maintenance of onsite lease roads, dikes or berms then additions should be adequate to minimize any washing of salts during rain events

Treatment

Treat the saltwater / brine impacted area with ³/₄ pound gypsum per 1 square yard. Till gypsum into the saltwater / brine impacted soil to a depth of 6 inches or more. *Commercially available products for the treatment of saltwater / brine spills such as Reef Chem SF-40, Vari Chem SP-7008, LCA-II, ET-1 Soil Rejuvenator, or similar products may also be utilized. In all cases follow manufacturers suggested practices for use and application.

*(Inclusion of commercial product names in this guidance document does not represent an endorsement of the product by the Kansas Corporation Commission)

For additional information on regulations, forms, and contacts visit the KCC website at:

http://kcc.ks.gov/

KCC CONSERVATION DIVISION

Clean up Guidelines for: Spills and Escapes Exempted From Notification Requirements *[For exemptions to

notification see K.A.R. 82-3-603(b)(3)]



District 1 – Dodge City 620-682-7933

District 2 – Wichita 316-337-7400

District 3 – Chanute 620-902-6450

District 4 – Hays 785-261-6250

Exceptions from notification for certain spills and escapes

Spills or escapes at exploration and production sites are required to be reported to the Kansas Corporation Commission. However, <u>certain</u> spills and escapes that are specifically outlined in K.A.R. 82-3-603(b)(3) are exempted from notification requirements.

The notification requirement for spills and escapes in paragraph (b)(2) of K.A.R. 82-3-603 shall not apply to very minor amounts of saltwater, oil, or refuse, that unavoidably or unintentionally leak or drip from pumps, machinery, pipes, valves, fittings, or well rods or tubing during the conduct of normal prudent operations and that are not confined in dikes or pits or within the vicinity of the well. However, this exception shall not apply to ongoing, continual, or repeated leaks or drips, or to leaks or drips that are the result of intentional spillage or abnormal operations, including unrepaired or improperly maintained pumps, machinery, pipes, valves, and fittings.

While operators are not required to report certain spills and escapes which consist of **very minor amounts of saltwater, oil, or refuse** to the KCC, operators are required to clean up these very minor spills or escapes as prescribed in K.A.R. 82-3-603 (e)(2). That regulation states that: "The operator shall clean up all leaks, drips, and escapes that are excepted from notification under this

regulation in accordance with cleanup techniques recognized as appropriate and acceptable by the commission. The cleanup techniques deemed appropriate and acceptable to the commission shall be physical removal, dilution, treatment, and hioremediation."

This regulation further describes the time frame by which the clean up must occur: "This cleanup shall be accomplished upon completion of the routine operation or condition that caused the leak, drip, or escape or within 24 hours of discovery or knowledge of the leak, drip, or escape, whichever occurs sooner."

Clean up Techniques:

The commission recognizes four general clean up techniques that are appropriate and acceptable.

They are:

- 1. Physical removal,
- 2. Dilution,
- 3. Treatment,
- 4. Bioremediation

Operators should utilize one or more of these techniques to clean up small spills or escapes that are excepted from notice requirements.

Clean up of spills or escapes of crude oil that are excepted from notification requirements:

Physical Removal

<u>Fluids:</u> Pick up all free crude oil and contain in onsite tankage, remove to off

site storage, remove to reclamation facilities, or dispose of in permitted Class II injection well.

<u>Solids:</u> Remove all oil impacted soil to one of the following locations.

- 1. A landfill authorized by KDHE
- 2. Remove for use in maintenance of onsite lease roads in accordance with KCC dilution requirements with fresh / clean soil
- 3. Remove for use in maintenance of onsite dikes or berms used as containment at tank battery sites in accordance with KCC dilution requirements with fresh / clean soil

Dilution

Additions: Add and till fresh / clean soil into crude oil impacted soil until a minimum 50 / 50 mixture is obtained. If crude oil impacted soils are removed for maintenance of onsite lease roads, dikes, or berms insure that crude oil impacted soil is adequately bound with fresh soil as to minimize any washing of crude oil during rain events.

Bioremediation

Promote natural insitu bioremediation by tilling fertilizer into the crude oil impacted soil. A fertilizer with Ammonia - Nitrogen - Phosphorous ratio of 13-13-13 is recommended. Apply fertilizer at a rate of ½ pound per square yard.