

Utah Division of Oil, Gas and Mining Guidance Document

January 2020

Prepared By:

Ammon McDonald
Environmental Scientist

Cleanup Level Summary Document (re: Utah Oil & Gas Conservation General Rules R649-3 Drilling and Operating Practices R649-9 Waste Management and Disposal)

This document is intended to establish minimum cleanup values for oil and gas exploration and production (E&P) related sites. Utah Administrative Code R649-3 and R649-9 should be used in conjunction with this guidance.

FOR FURTHER INFORMATION CONTACT:

Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801
Telephone: (801)538-5340

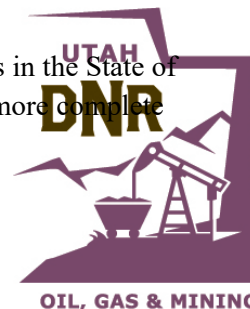
Our Mission

The Utah Oil and Gas Program within the Division of Oil, Gas and Mining:

- Promote the exploration, development and conservation of oil and gas resources*
- Foster a fair economic return to the general public for those resources*
- Maintain sound, regulatory oversight to ensure environmentally acceptable activities*

Scope and Applicability

This document depicts minimum cleanup levels for surface abandonment of E&P materials in the State of Utah. Sensitive sites may be required to meet more stringent abandonment levels. For a more complete discussion of required cleanup levels, refer to the Cleanup Level Guidance Document.



Cleanup Level Summary

Recommended abandonment levels:

SALINITY:

- Electrical Conductivity: $EC \leq 4$ mmho/cm
- Exchangeable Sodium Percentage: $ESP \leq 15\%$
- Sodium Adsorption Ratio: $SAR \leq 12$

HYDROCARBON CONTENT:

- 1% or 10,000 ppm TPH

TPH will be characterized using the following TRPH fractions:

- $TRPH = GRO + DRO + ORO$
- $GRO_{max} = 1,000$ ppm
- $DRO_{max} = 2,000$ ppm

TPH of 0.01 ppm to 9,999 ppm is required for sensitive sites. Cleanup level will be dependent upon the BTEXN levels in waste; consult with the Division for guidance.

- Benzene ≤ 0.9 ppm
- Toluene ≤ 25 ppm
- Ethylbenzene ≤ 23 ppm
- Xylene ≤ 142 ppm
- Naphthalene ≤ 51 ppm

METALS:

If Toxicity Characteristic Leaching Procedure (TCLP) testing is determined to be required, the following limits for heavy metals will be used.

- As ≤ 5 ppm
- Ba ≤ 100 ppm
- Cd ≤ 1 ppm
- Se ≤ 1 ppm
- Cr ≤ 5 ppm
- Pb ≤ 5 ppm
- Hg ≤ 0.2 ppm
- Ag ≤ 5 ppm