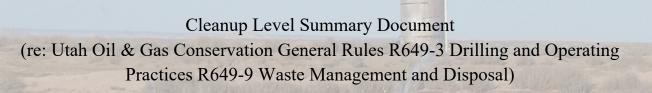
Utah Division of Oil, Gas and Mining Guidance Document

January 2020



Prepared By:

<u>Ammon McDonald</u> Environmental Scientist



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.

<u>Cleanup Level Summary</u>

Recommended abandonment levels:

SALINITY:

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

HYDROCARBON CONTENT:

• 1% or 10,000 ppm TPH

TPH will be characterized using the following TRPH fractions:

- TRPH = GRO + DRO + ORO
- GROmax = 1,000 ppm
- DROmax = 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
- **METALS:**

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

- $As \le 5 ppm$
- Ba ≤ 100 ppm
- $Cd \le 1 ppm$
- Se \leq 1 ppm

- Xylene $\leq 142 \text{ ppm}$
- Naphthalene ≤ 51 ppm

- $Cr \le 5 ppm$
- $Pb \le 5 ppm$
- Hg \leq 0.2 ppm
- $Ag \le 5 ppm$