CCR Rule – Siting Criteria
§257.64 Unstable Areas

Huntington Power Plant – CCR Landfill

Prepared by:

Water & Environmental TECHNOLOGIES

Prepared for:

PACIFICORP

Huntington Power Plant

September 4, 2018

PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify, as a Professional Engineer in the State of Utah, that the information in this document was assembled under my direct supervisory control. This report is not intended or represented to be suitable for reuse by PacifiCorp or others without specific verification or adaptation by the Engineer.

I hereby certify as a Professional Engineer in the State of Utah that this report has been prepared in accordance with and meets the requirements of 40 Code of Federal Regulations §257.64. Huntington Power Plant CCR Landfill meets location criteria for Unstable Areas.

Steve Anderson, P.E.	September 4, 2018
	Date

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1.0 INTRODUCTION

PacifiCorp's Huntington Power Plant is located on Highway #31 in Emery County, approximately nine miles west of Huntington, Utah.

CCR Rule §257.64 indicates the existing landfill must not be located within unstable areas. An unstable are is defined as a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity, including structural components, of some or all of the CCR unit that are responsible for preventing releases from such unit. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

2.0 EXISTING CONDITIONS

The Huntington Power Plant facility is located on Highway #31 in Emery County, approximately nine miles west of Huntington, Utah. The Huntington Power Plant is a two-unit coal-fired electrical generation plant owned by PacifiCorp. Fly ash, bottom ash, and flue-gas desulfurization (FGD) waste are disposed of in the CCR Landfill. The CCR Landfill is a valley fill type landfill located in the high desert of central Utah.

The Huntington Power Plant is located in the northwestern portion of the Colorado Plateau physiographic province and within the Mancos Shale Lowlands (Stokes, 1986). The Mancos Shale Lowlands are characterized by sloping, gravel-covered pediments, rugged badlands and narrow, flat-bottomed alluvial valleys.

3.0 UNSTABLE AREAS EVALUATION

The Huntington CCR Landfill was evaluated using existing geologic and soil data and site visits. The CCR Landfill is located on the Masuk Member of Mancos Shale elevated above the Huntington Creek valley, which is incised into the Wasatch Plateau, draining east into the Castle Valley.

The Mancos Shale was deposited in offshore and open-marine environments of the Cretaceous Interior Seaway. It is 3450 to 4150 feet thick where exposed in the southern part of the Piceance and Uinta Basins (Fisher and others, 1960) and geophysical logs indicate it is approximately 5400 feet thick in the central part of the Uinta Basin (Hettinger and Kirschbaum, 2002). The upper portion of the Mancos grades into and interfingers with the Mesaverde Group and the shale tongues typically have sharp basal contacts and gradational upper contacts.

Lithologic logs from onsite monitoring wells completed in the shale (Kmm) note a light gray to dark gray or gray-black shale in various stages of weathering from very weathered to consolidated and un-weathered or competent shale.

The Huntington alluvial valley (Qal) aquifer is typically composed of gravel to boulder sized material mixed with varying amounts of sand, silt and clay. It was deposited by Huntington Creek on an erosional contact with the Mancos Shale. In this environment, the alluvium is generally

valley. These sediments are reworked by meandering stream channels and exhibit a fining upward depositional sequence. Alluvial well descriptions describe a tan, orange-brown, and red mixture of fine to medium grained sand and sandstone boulders.

Based on existing geologic data and site visits, the landfill base materials are not susceptible to excessive deformation or mass movement and provide adequate stability for the pond foundation. No karst or other unstable features are present at this site.

4.0 CONCLUSIONS

The Huntington CCR Landfill meets the requirements of §257.64 – Unstable Areas, for an existing CCR surface impoundment.

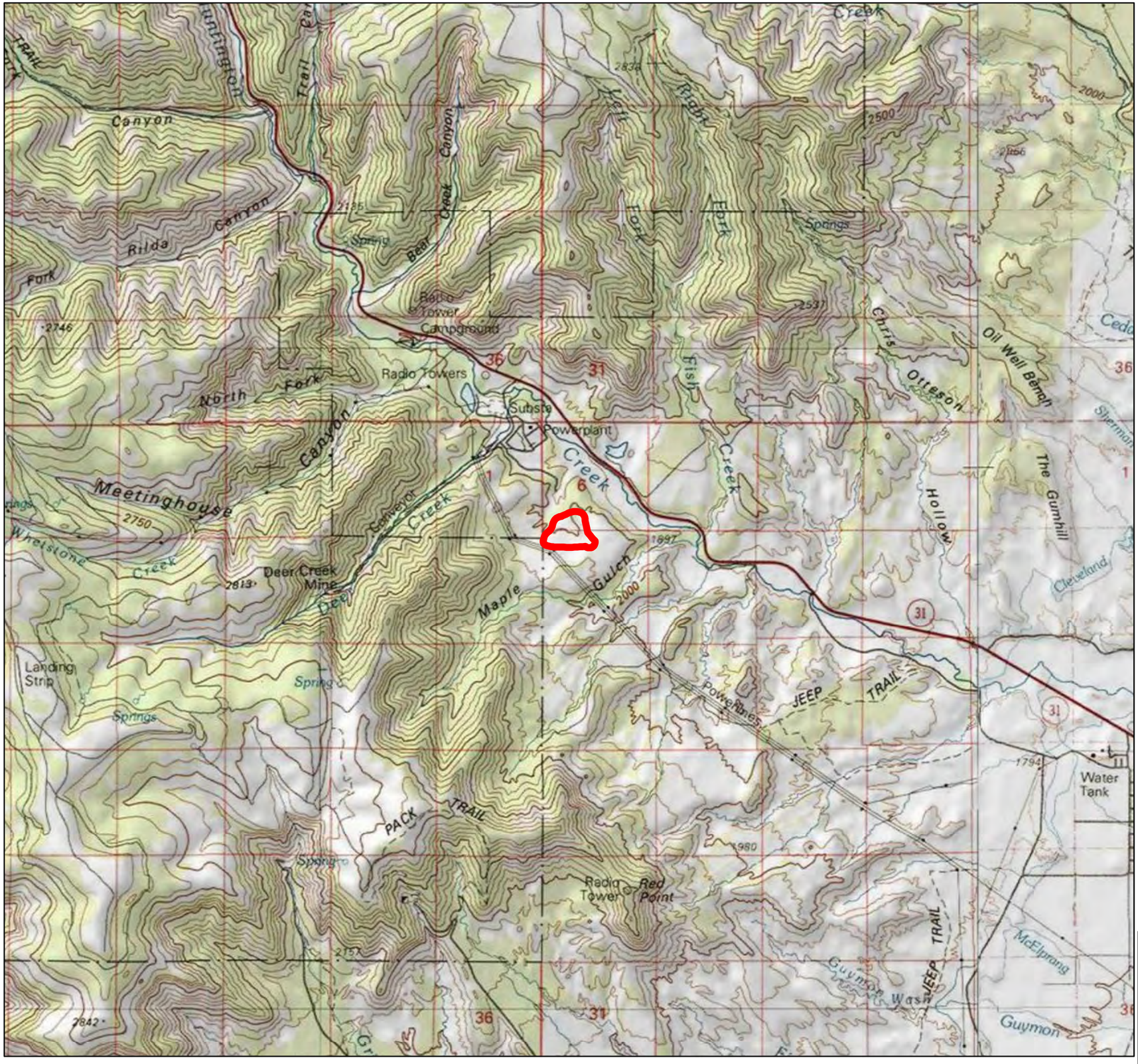
SOURCES

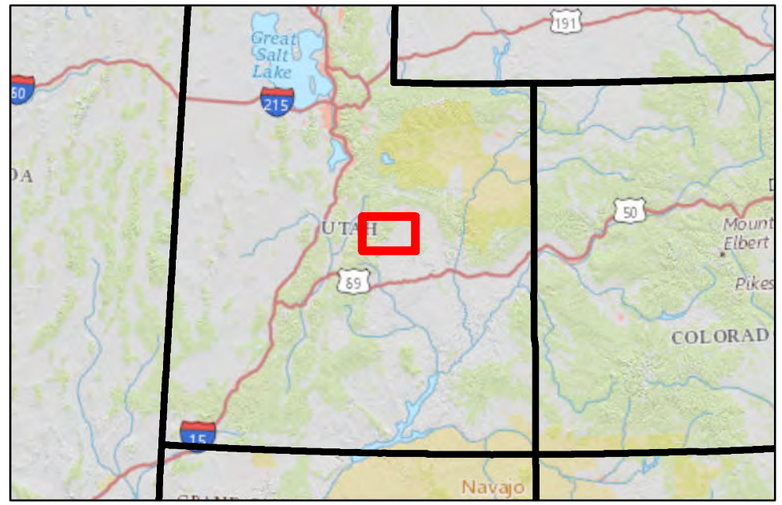
USEPA, 2015. 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. April 17, 2015. 201 pp.

REVISIONS

Revision Number	Date	Revision Made (description)	By Whom
0	9/4/2018	Initial Issue	WET

FIGURES





Legend

CCR UNIT

Feet

0 2,500 5,000 10,000

N W E S

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HUNTINGTON POWER PLANT

CCR Landfill

Job#: PERCM90

Date: 8/15/2018

FIGURE 1

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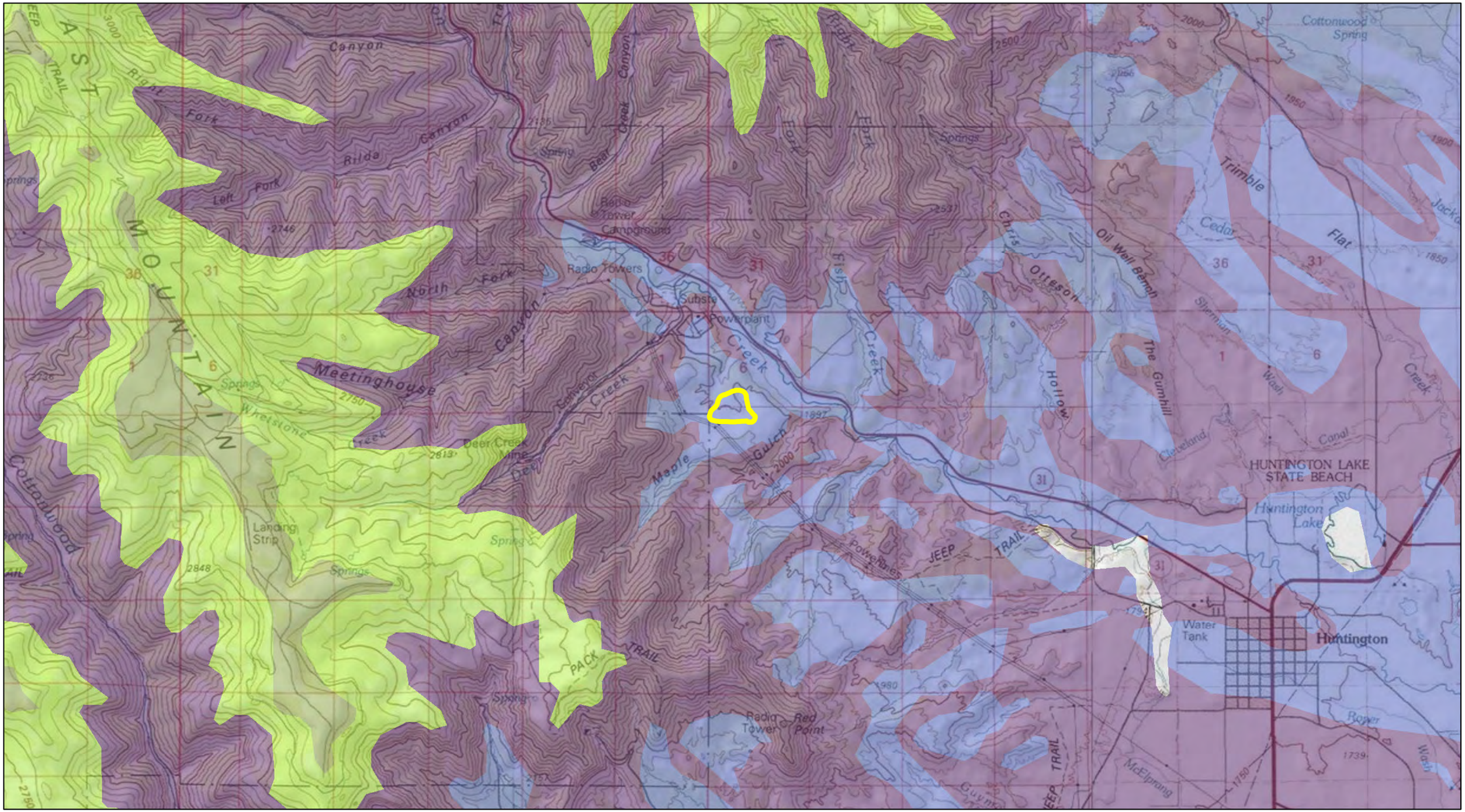

Legend

- CCR UNIT
- Fault
- alluvium
- fine-grained mixed clastic
- limestone
- shale
- water

N
W E
S

Feet
0 2,500 5,000 10,000 15,000

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HUNTINGTON POWER PLANT

CCR Landfill
Geologic Map

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FIGURE 2

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