

CCR Rule – Siting Criteria
§257.64 Unstable Areas

Hunter Power Plant – CCR Landfill

Prepared by:



Prepared for:



Hunter 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. Hunter 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 Hunter Power Plant is located 2.5 miles southwest of Castle Dale, Utah. The physical location is Township 19 South, Range 8 East in Emery County.

CCR Rule §257.64 indicates the existing CCR landfill must not be located within unstable areas. An unstable area 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 Hunter Power Plant is located 2.5 miles southwest of Castle Dale, Utah. The physical location is Township 19 South, Range 8 East in Emery County. The plant is a three-unit coal-fired electrical generation facility owned by PacifiCorp. Fly ash, bottom ash, and flue-gas desulfurization (FGD) waste are disposed of in the CCR Landfill. As a result, it is considered a coal combustion residual unit. The CCR Landfill occupies approximately 230 acres southeast of the power plant. Elements of the existing CCR Landfill include the existing access road, the perimeter ditch, and the zero-discharge stormwater retention basin (104 AF capacity). The CCR landfill will be closed upon closure of the Hunter Plant. The design documents include a total landfill capacity of 44.5 MCY.

3.0 UNSTABLE AREAS EVALUATION

The Hunter CCR Landfill was evaluated for unstable areas using existing data and site visits. The landfill 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. The CCR Landfill is located on the Bluegate Member of Mancos Shale.

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 monitoring onsite wells, completed in the shale (Kmbg) 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.

Geotechnical data is provided in design documents attached to the Operating Permit Application [2]. Based on existing data and observations made during site visits, the base materials for the landfill are not susceptible to excessive deformation or mass movement and provide adequate stability for the landfill foundation. No karst or other unstable features are present at this site.

4.0 CONCLUSIONS

The Hunter CCR Landfill meets the requirements of §257.64 – Unstable Areas, for an existing CCR landfill.

SOURCES

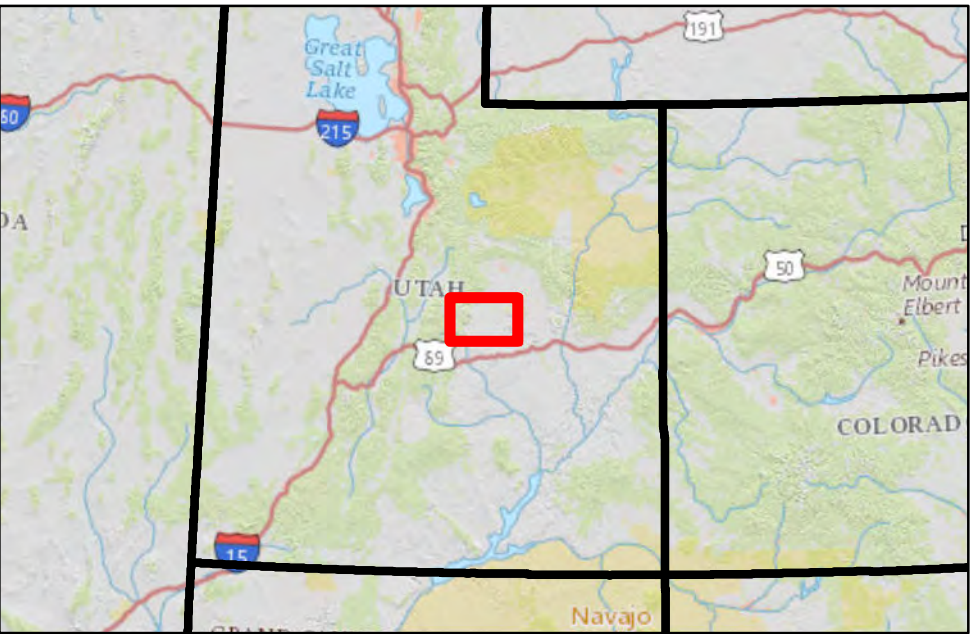
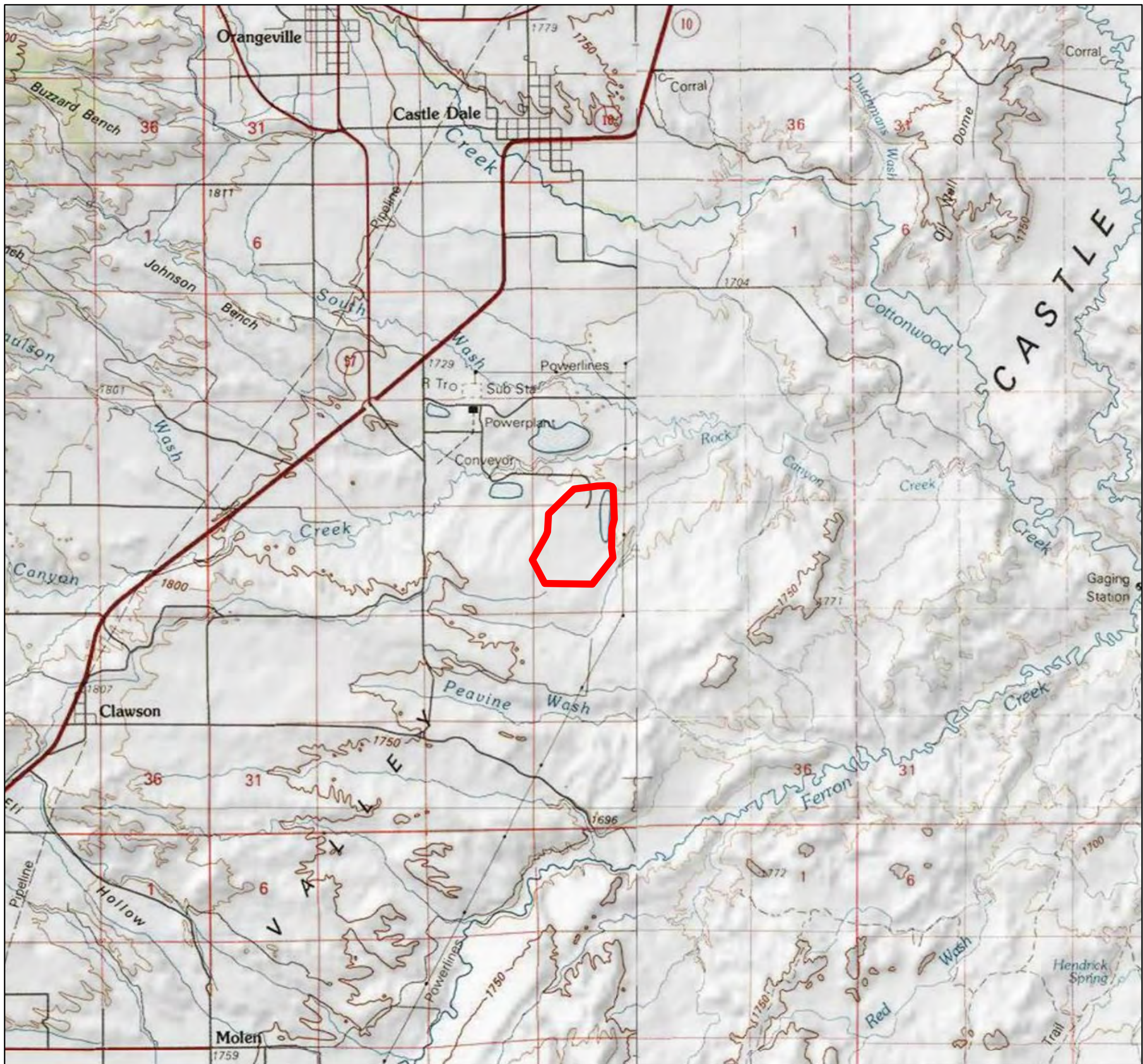
[1] USEPA, 2015. 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. April 17, 2015. 201 pp.

[2] PacifiCorp (2016). Hunter Power Plant Industrial Landfill Operating Permit Application Narrative. 2016.

REVISIONS

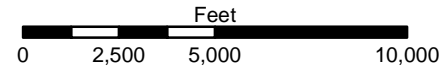
| Revision Number | Date | Revision Made (description) | By Whom |
|-----------------|----------|-----------------------------|---------|
| 0 | 9/4/2018 | Initial Issue | WET |
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FIGURES



Legend

 CCR UNIT



HUNTER POWER PLANT

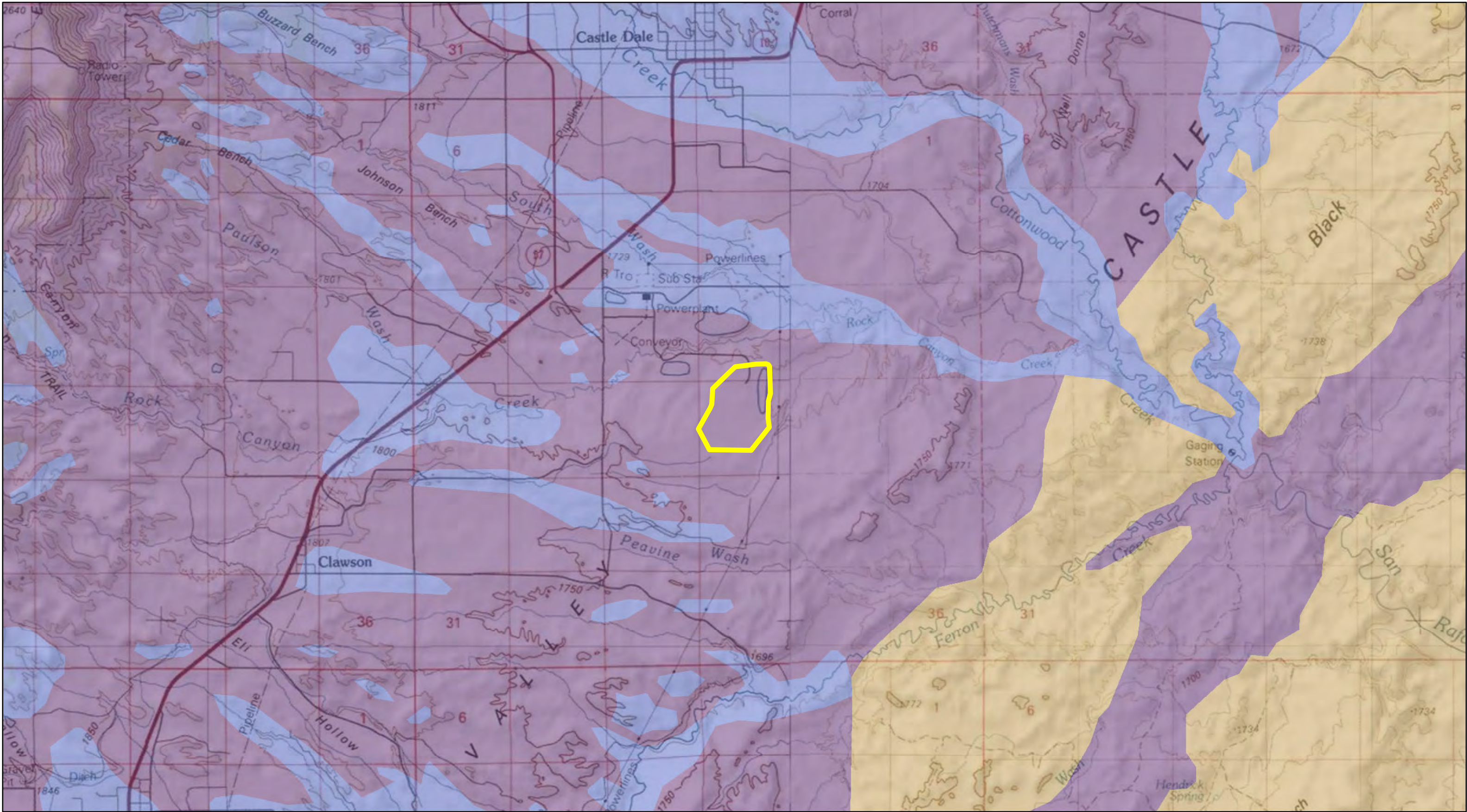
CCR Landfill

Job#: PERCM90

Date: 8/15/2018


FIGURE 1

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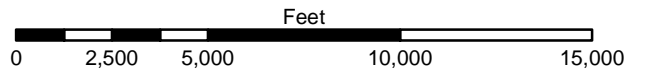




Legend

- CCR UNIT
- Fault
- alluvium
- sandstone
- shale



Feet



| | |
|--|--------------------------------------|
|   | HUNTER POWER PLANT |
| | <i>CCR Landfill Geologic Map</i> |
| Job#: PERCM90 | FIGURE 2 |
| Date: 8/15/2018 | |
| Path: M:\PERC_CCR\PERCM90\geologicmap.mxd, Author: jeprowse | |