

Statement of Basis
Brennan Bottoms Disposal Facility Landfill, Uintah County, Utah
Exploration and Production (E & P) Waste Landfill Application

Reviewed and evaluated by Doug Taylor, P.G.

The following Statement of Basis includes the permit writer's comments on the Permit Application and its compliance with applicable rules.

Part I General Information

Brennan Bottoms Disposal Facility (BBDF) has completed all sections of Part I. Part I Form
I have reviewed this and found it to be complete – Doug Taylor

Part II Application Checklist

I. Facility General Information

Ia. General Information

Completed Part I General information (see above) Part I Form

I have reviewed this and found it to be complete – Doug Taylor

General description of the facility (R315-310-3(1)(b)) Sec. Ia, p. 1

I have reviewed this and found it to be complete – Doug Taylor

Legal description of property (R315-310-3(1)(c)) Sec. Ia, p. 1

I have reviewed this and found it to be complete – Doug Taylor

Proof of ownership, lease agreement, or other mechanism (R315-310-3(1)(c)) Appendix A

I have reviewed this and found it to be complete – Doug Taylor

A demonstration that the E & P landfill is or is not a commercial facility Appendix A
(Utah Code Annotated 19-6-102(3) for definition of Commercial)

The BBDF facility is operated for a profit. The wastes that are taken at the BBDF facility are excluded from being a solid waste in the definition of solid waste found in Utah Code Annotated 19-6-102(19). The Solid and Hazardous Waste Act lists wastes that are excluded from being a solid waste and requires that when wastes on this list are taken by a facility that is operated for a profit that the facility is a commercial facility. Exploration and production wastes are not on this list. Therefore, a facility taking these wastes, by definition, is not a commercial facility.

I have reviewed this and found it to be complete – Doug Taylor

Waste type and anticipated daily volume (R315-310-3(1)(d)) Sec. Ia, p. 2

BBDF plans to receive 20 cubic yards daily.

I have reviewed this and found it to be complete – Doug Taylor

Intended schedule of construction (R315-302-2(2)(a))

Sec If, p. 6

BBDF landfill (Pond 4) is completed except for dewatering which will take place before waste is placed in it.

I have reviewed this and found it to be complete – Doug Taylor

Ib. General Information - New or Laterally Expanding E & P Landfills

Documentation that the facility has meet the historical survey requirement of R315-302-1(2)(f) (R315-304-4(1)(a) or R315-304-4(2)(a)(iv))

Sec. Ib, p. 2

The historical survey provided to DOGM when the disposal ponds were permitted and constructed. BBDF was asked to provide that to the DSHW in a letter dated December 29, 2014.

I have reviewed this and found it to be complete – Doug Taylor

Name and address of all property owners within 1000 feet of the facility boundary (R315-310-3(2)(i))

Sec. Ib, p. 2

I have reviewed this and found it to be complete – Doug Taylor

Documentation that a notice of intent to apply for a permit has been sent to all property owners listed above (R315-310-3(2)(ii))

Appendix B

I have reviewed this and found it to be complete – Doug Taylor

Name of the local government with jurisdiction over the facility site (R315-310-3(2)(iii))

Sec. Ib, p. 2

I have reviewed this and found it to be complete – Doug Taylor

Ic. Location Standards for New E&P Landfills

Geology

Sec. Ib, p. 2 & 3

Geologic maps showing significant geologic features, faults, and unstable areas

Sec. Ib, p. 2 & 3

The facility lies in an undisturbed area in the east central portion of the Uintah Basin where there are no significant geologic features, such as faults, etc., in the vicinity.

I have reviewed this and found it to be complete – Doug Taylor

Maps showing site soils

Figure 1, p. 3

I have reviewed this and found it to be complete – Doug Taylor

Surface water	Sec. Ic, p. 4
Magnitude of 24 hour 25 year and 100 year storm events	Sec. Ic, p. 4
I have reviewed this and found it to be complete – Doug Taylor	
Average annual rainfall	Sec. Ic, p. 4
I have reviewed this and found it to be complete – Doug Taylor	
Maximum elevation of flood waters proximate to the facility	Sec. Ic, p. 4 Exhibit 1
I have reviewed this and found it to be complete – Doug Taylor	
Maximum elevation of flood water from 100 year flood for waters proximate to the facility	Sec. Ic, p. 4 Exhibit 1
I have reviewed this and found it to be complete – Doug Taylor	
Floodplains as specified in R315-302-1(2)(c)(ii)	Sec. Ic, p. 4 Exhibit 1
I have reviewed this and found it to be complete – Doug Taylor	
Wetlands as specified in R35-302-1(2)(d)	Sec. Ic, p. 4
I have reviewed this and found it to be complete – Doug Taylor	
The landfill is located so that the lowest level of waste is at least ten feet above the historical high level of ground water or the lowest liner is at least five above the historical high level of ground water	Bore hole data, Appendix C; Drawing sheets, Appendix D
This item was not readily apparent in the application, so BBDF was asked to provide this information to the DSHW in its letter of December 29, 2014. The Well File for Newfield Oil Company Well Federal 14-19-6-21 was researched for water depth. This well is located approximately 1500' due east of the landfill cell. This producing oil well encountered fresh water at 130', well below the bottom floor of the landfill cell.	
I have reviewed this and found it to be complete – Doug Taylor	
Land use compatibility	
Maps showing the existing land use, topography, residences, parks, monuments, recreation areas or wilderness areas within 1000 feet of the site boundary	Exhibits 2 and 3
I have reviewed this and found it to be complete – Doug Taylor	

Certifications that no ecologically or scientifically significant areas or endangered species are present in site area

Sec. Ic, p. 4

BBDF provided this information to DOGM in their disposal Ponds application and was asked to provide this information to the DSHW in its letter of December 29, 2014.

This certification was provided in the February 13, 2015 submittal.

I have reviewed this and found it to be complete – Doug Taylor

***Id.* Geohydrological Assessment - All E & P Landfills (R315-310-4(2)(b))**

Local and regional geology and hydrology including faults, unstable slopes and subsidence areas on site (R315-310-4(2)(b)(i))

Sec. Ic, p. 2 & 3
Figure 1

I have reviewed this and found it to be complete – Doug Taylor

Evaluation of bedrock and soil types and properties including permeability rates (R315-310-4(2)(b)(ii))

Appendix C,
Figure 1

I have reviewed this and found it to be complete – Doug Taylor

Depth to ground water (R315-310-4(2)(b)(iii))

Borehole Data
Appendix C,
Drawing sheets
Appendix D

This information was missing from the application. BBDF was asked to provide this information to the DSHW in its letter of December 29, 2014.

I have reviewed this and found it to be complete – Doug Taylor

Direction and flow rate of ground water (R315-310-4(2)(b)(iv))

Borehole Data
Appendix C,
Drawing sheets
Appendix D

This information was missing from the application. BBDF was asked to provide this information to the DSHW.

I have reviewed this and found it to be complete – Doug Taylor

Quantity, location, and construction of any private or public wells on-site or within 2,000 feet of the facility boundary (R315-310-4(2)(b)(v))

Sec. Id, p. 5

I have reviewed this and found it to be complete – Doug Taylor

Identification and description of all surface water on-site and within one mile of the facility boundary (R315-310-4(2)(b)(vi))

Sec. Id, p. 5

I have reviewed this and found it to be complete – Doug Taylor

Background ground water and surface water quality assessment and, for an existing facility, identification of impacts upon the ground water and surface water from leachate discharges (R315-310-4(2)(b)(viii))

NA

I have reviewed this and found it to be complete – Doug Taylor

Ground Water Monitoring system design (R315-303-3(7)(b) and R315-308) or a demonstration meeting the requirements of R315-308-1(3)

Sec. Id, p. 5,
Appendix C

I have read BBDF rationale and understand it.

I have reviewed this and found it to be complete – Doug Taylor

Statistical method to be used (R315-308-2(8))

Sec. Id, p. 5
Appendix C

I have reviewed this and found it to be complete – Doug Taylor

***Ie.* Engineering Report - Plans, Specifications, and Calculations - All E & P Landfills**

Documentation that the facility will meet all of the performance standards of R315-303-2

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Engineering reports required to meet the standards of *Ib, Ic, and Id* above standards of R315-303-2

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Cell design to include liner design meeting the requirements of R315-303-3(3)(a), (b), or (c), cover design meeting R315-303-3(4)(a) or (c), fill methods, elevation of final cover including plans and drawings signed and sealed by a professional engineer registered in the State of Utah (R315-303-3(3))

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Leachate collection system design and calculations showing system meets the requirements of R315-303-3(2)

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Run-On and run-off diversion designs (R315-303-3(1)(c), (d) and (e))

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Leachate collection, treatment, and disposal and documentation to show that any treatment system is being or has been reviewed by the Division of Water Quality (R315-310-4(2)(c)(v) and R315-310-3(1)(i))

Sec. Id, p. 5
App. C and D

This requirement does not apply to this landfill – Doug Taylor

Ground water monitoring plan that meets the requirements of Rule R315-308 including well locations, design, and construction (R315-310-4(2)(b)(x) and R315-310-4(2)(c)(vi))

Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Slope stability analysis for static and under the anticipated seismic event for the facility (R315-310-4(2)(b)(i) and R315-302-1(2)(b)(ii)) Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Design and location of run-on and run-off control systems (R315-310-4(2)(c)(viii)) Sec. Id, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

If. Plan of Operations for All E & P Landfills (R315-310-3(1)(e) and R315-302-2(2))

Description of on-site waste handling procedures and an example of the form that will be used to record the weights or volumes of waste received (R315-302-2(2)(b) And R315-310-3(1)(f)) Sec. If, p. 5
App. C and D

I have reviewed this and found it to be complete – Doug Taylor

Schedule for conducting inspections and monitoring, and examples of the forms that will be used to record the results of the inspections and monitoring (R315-302-2(2)(c), R315-302-2(5)(a), and R315-310-3(1)(g)) Sec. If, p. 5 & 6

I have reviewed this and found it to be complete – Doug Taylor

Contingency plans in the event of a fire or explosion (R315-302-2(2)(d)) Sec. If, p. 6

I have reviewed this and found it to be complete – Doug Taylor

Plan to control fugitive dust generated from roads, construction, general operations, and covering the waste (R315-302-2(2)(g)) Sec. If, p. 6

I have reviewed this and found it to be complete – Doug Taylor

Plan for litter control and collection (R315-302-2(2)(h))
A plan for alternative waste handling (R315-302-2(2)(l)) Sec. If, p. 6

Procedures for excluding the receipt of non-E & P Waste (R315-302-2(2)(j)) Sec. If, p. 6

I have reviewed this and found it to be complete – Doug Taylor

A plan for alternative waste handling (R315-302-2(2)(l)) Sec. If, p. 6

I have reviewed this and found it to be complete – Doug Taylor

A general training plan for site operations (R315-302-2(2)(o)) Sec. If, p. 6

I have reviewed this and found it to be complete – Doug Taylor

Any other site specific information pertaining to the plan of operation required by the Director (R315-302-2(2)(p)) NA

II. Facility Technical Information

IIa. Maps for All E & P Landfills

Topographic map drawn to the required scale with contours showing the boundaries of the landfill unit, ground water monitoring well locations (if required), and the borrow and fill areas (R315-310-4(2)(a)(i)) Exhibit 2

I have reviewed this and found it to be complete – Doug Taylor

Most recent U.S. Geological Survey topographic map, 7-1/2 minute series, showing the waste facility boundary; the property boundary; surface drainage channels; any existing utilities and structures within one-fourth mile of the site; and the direction of the prevailing winds (R315-310-4(2)(a)(ii)) Exhibit 3

I have reviewed this and found it to be complete – Doug Taylor

IIb. Closure Requirements for All E & P Landfills

Closure plan (R315-310-3(1)(h)) Sec. IIb, p. 7

I have reviewed this and found it to be complete – Doug Taylor

Closure schedule (R315-310-4(2)(d)(i)) Sec. IIb, p. 7

I have reviewed this and found it to be complete – Doug Taylor

Design of final cover (R315-310-4(2)(c)(iii)) Sec. IIb, p. 7

I have reviewed this and found it to be complete – Doug Taylor

Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii)) Sec. IIb, p. 7

I have reviewed this and found it to be complete – Doug Taylor

Final inspection by regulatory agencies (R315-310-4(2)(d)(iii)) Sec. IIb, p. 7

I have reviewed this and found it to be complete – Doug Taylor

IIc. Post-Closure Care Requirements for All E & P Landfills

Post-closure care plan (R315-310-3(1)(h)) Sec. IIc, p. 8

I have reviewed this and found it to be complete – Doug Taylor

Changes to record of title, land use, and zoning restrictions (R315-310-4(2)(e)(v)) Sec. IIc, p. 8

I have reviewed this and found it to be complete – Doug Taylor

Maintenance activities to maintain cover and run-on/run-off control systems (R315-310-4(2)(e)(iii)) Sec. IIc, p. 8

I have reviewed this and found it to be complete – Doug Taylor

List the name, address, and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(vi))

Sec. IIc, p. 8

I have reviewed this and found it to be complete – Doug Taylor

III. Financial Assurance Requirements for All E & P Landfills

Identification of closure costs including cost calculations (R315-310-4(2)(d)(iv))

Sec. IId, p. 7 and 8, Appendix F

I have reviewed this and found it to be complete – Doug Taylor

Identification of post-closure care costs including cost calculations (R315-310-4(2)(e)(iv))

Sec. IId, p. 7 and 8, Appendix F

This information was determined to be a bit lean. BBDF was asked to provide a detailed, itemized spread sheet of costs in the DSHW letter of December 29, 2014.

New calculations were provided in the February 13, 2015 submittal.

I have reviewed this and found it to be complete – Doug Taylor

Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date that the mechanism will become effective (R315-309-1(1) and R315-310-3(1)(j))

Sec. IId, p. 7 and 8, Appendix F

This information was determined to be too meager. BBDF was asked to provide a detailed, itemized spread sheet of costs in the DSHW letter of December 29, 2014.

New calculations were provided in the February 13, 2015 submittal. The mechanism will be surety bond.

On March 11, 2015, Zions Bank provided an Irrevocable Standby Letter of Credit for BBDF. This has been determined to be adequate.

I have reviewed this and found it to be complete – Doug Taylor