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**BEFORE THE EXECUTIVE DIRECTOR  
UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY**

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In the matter of:

Permit Modification for Modification of  
Groundwater Monitoring Well System  
Promontory Point Class I Landfill, Box  
Elder County, Permit No. 0202R1

**ALJ'S STATEMENT OF MATERIAL  
FACTS, CONCLUSIONS OF LAW AND  
RECOMMENDED ORDER ON THE  
MERITS**

February 12, 2021

Lucy B. Jenkins  
Administrative Law Judge

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This matter is before me pursuant to an appointment by the Executive Director of the Utah Department of Environmental Quality (the "Executive Director") dated November 14, 2019. The appointment charges me to conduct a permit review adjudicative proceeding in this matter based on the administrative record and not as a trial de novo, in accordance with Utah Code Ann. § 19-1-301.5 and Utah Admin. Code R305-7. The administrative law judge must "conduct a review of the director's order or determination, based on the record" and submit a proposed dispositive action to the Executive Director. Utah Code Ann. § 19-1-301.5(13)(b)-(c).

This matter concerns the Promontory Point Class I Landfill owned by Promontory Point Resources, LLC ("PPR") and located on the southern tip of the Promontory Point peninsula, Great Salt Lake ("Promontory Point Landfill"). On October 25, 2017, PPR filed a request with the Director of the Utah Division of the Waste Management and Radiation Control (the "Director")

for modification of its landfill permit for the Promontory Point Landfill to relocate and install three downgradient monitoring wells. On July 10, 2019, the Director issued a permit modification to PPR approving monitoring wells MW-6, MW-7 and MW-8 (the downgradient wells) and MW-9 (the upgradient monitoring well) (collectively, the “Monitoring Well System”) for the Promontory Point Landfill (the “Permit Modification”). On August 6, 2019, Friends of Great Salt Lake (“Friends”) filed a Petition for Review to appeal the Permit Modification. Friends seeks a remand of the Permit Modification to require the Director to comply with and properly apply the statute and rules to ensure protection of local groundwater and to preserve the Great Salt Lake from contamination.

A hearing on the merits was held on November 10, 2020. At the hearing, Friends was represented by its counsel, Rob Duboc; the Director was represented by its counsel, Raymond Wixom; and PPR was represented by its counsel, Bradley Cahoon. Upon consideration of the pleadings, administrative record, and the arguments of counsel, and pursuant to Utah Code Ann. § 19-1-301.5 (13), the ALJ submits the following Statement of Material Facts, Conclusions of Law and Recommended Order to the Executive Director.

## **STATEMENT OF MATERIAL FACTS**

### **Procedural Background**

1. On October 25, 2017, PPR filed a request with the Director for modification of PPR’s landfill permit for the Promontory Point Class I Landfill (“Permit Modification Request”) covering the three downgradient wells and the upgradient well next to PPR’s relocated and

constructed landfill cell. Doc. 77. (*See* Index of Administrative Record, for descriptions of the documents in the administrative record).a

2. On July 10, 2019, the Director issued the Statement of Basis and Permit Modification. Doc. 146.
3. On August 6, 2019, Friends filed a Petition to Intervene.
4. On August 8, 2019, Friends filed its Petition for Review.
5. On December 2, 2019, the Administrative Law Judge (“ALJ”) issued an Order on the Petition to Intervene, provisionally granting intervention to Friends.
6. On February 12, 2020, the Director filed the administrative record (referred to herein as “record” or “administrative record”).
7. On March 10, 2020, PPR filed its Motion to Dismiss Friends’ first claim and a Motion for Summary Judgment of Friends’ remaining claims.
8. On March 12, 2020, the Division filed the Director’s Motion to Dismiss and Motion for Declaratory Order on Applicable Law.
9. On April 13, 2020, Friends’ responded to the Director and PPR’s dispositive motions. In its responses, Friends stated that its Petition did not constitute a collateral attack on the underlying landfill permits and agreed to dismiss its fourth claim that the Director failed to provide the public with the required opportunity to comment on the Loughlin Study.
10. On May 13, 2020, both the Director and PPR filed replies to Friends’ responses.
11. Oral arguments on the dispositive motions took place on June 4, 2020.

12. On July 20, 2020, the ALJ issued a declaratory order declaring that the Utah Solid and Hazardous Waste Act and corresponding rules (Utah Admin. Code R315-301-1, *et seq.*) are the only statutes and rules applicable to this action.

13. On July 20, 2020, the ALJ issued a recommended order that dismissed Friends' claims with and without prejudice. First, the recommended order dismissed with prejudice Friends' claims: (i) challenging the location of the landfill as inappropriate; (ii) challenging past Director permit approvals pre-dating the permit modification at issue in this action, and (iii) contending that the Director violated the law by not reopening public comment. Second, the recommended order dismissed without prejudice Friends' claim, to the extent it exists in its petition, that PPR violated the law by installing the Monitoring Well System without prior Director approval.

14. On August 10, 2020, the ALJ submitted to the Executive Director a (Recommended) Stipulated Order of Dismissal, signed by the ALJ and the parties, dismissing the following claims:

a. Friends' claims (i) challenging the location of the landfill as inappropriate; (ii) challenging past Director permit approvals pre-dating the permit modification at issue in this action; (iii) that the Director violated the law by not reopening public comment on the Loughlin Hydrogeologic Study, were dismissed with prejudice; and

b. Friends' claim, to the extent it exists in its petition for review, that PPR violated the law by installing the Monitoring Well System without Director approval, was dismissed without prejudice.

15. On September 8, 2020, Friends filed its Opening Brief. On September 24, 2020, the Director and PPR filed their response briefs. On October 9, 2020, Friends filed its replies to the Director and PPR. On October 16, 2020, the Director and PPR filed their surreplies. Oral arguments on the merits were held on November 10, 2020.

#### Location

16. The Promontory Point landfill is located on the west side of the southern tip of the Promontory Point peninsula, Great Salt Lake, Box Elder County, Utah. Doc. 146, pp. 9361, 9376. *See Exhibit A.*

17. The topography of the landfill and surrounding area is relatively flat. Doc. 93, p. 5944.

#### Permitting Chronology

18. An application for the Promontory Point Landfill was first submitted on December 31, 2002. Doc. 001, p. 0001.

19. The Promontory Point Landfill was first permitted in March 2004. Doc. 023, p. 1400. The permit was renewed in September 2011. Doc 056, p. 2112.

20. Promontory Point Resources, LLC (PPR) became the owner of the Promontory Point Landfill on, or about, July 7, 2015. Doc. 061, p. 2185. PPR became the permittee under the Promontory Landfill Facility Permit on August 29, 2016. Doc. 068, p. 3529.

21. In 2016, PPR submitted a proposed permit modification to change the location and design of what is now Cell 1A. Docs. 062, 063, 064. The Director approved that modification on March 15, 2017. Doc. 75.

22. Because downgradient monitoring wells MW-1 through MW-3 did not meet the requirements of Utah Administrative Code R315-308-2(2) for Cell 1A, PPR submitted a letter request on October 25, 2017 to modify the Groundwater Monitoring System to replace the monitoring wells to locations within 500 feet of Cell 1A. Doc. 077. A Google Earth map showing the relocated Cell 1A and the three new downgradient monitoring wells was attached to the letter request.

23. PPR constructed Cell 1A between June 29 and December 15, 2017. Doc. 87, p. 4913.

24. PPR completed installation of its production Well, about 1.8 miles northeast of Cell 1A, on September 1, 2017. Doc. 093, p. 5926.

25. The Director issued a draft permit on the Permit Modification Request on December 12, 2017, Doc. 78.

26. The Director held a public comment period on the Permit Modification Request from January 13, 2018 through February 14, 2018. Doc. 079.

27. Friends and other environmental groups, industry, and state and federal government agencies submitted comments raising concerns about the groundwater monitoring system and its inadequacy in preventing landfill contamination from reaching the Great Salt Lake through the fractured subsurface contamination pathways present at the landfill. Docs. 80, 81, 82, 83 and 92, pp. 5839-5844.

28. Friends submitted comments dated February 14, 2018 to the Division of Waste Management and Radiation Control (the “Division”). Document 92, pp. 5839-5858.

29. PPR installed four new monitoring wells (three downgradient wells (MW-6 through MW-8) and one upgradient well (MW-9)) between October 7 and October 15, 2018. Doc. 093, p. 5906. *See Exhibits B and C for the well location.*

30. On December 18, 2018, the Director invited PPR to submit reply comments to the public comments made during the public comment period. Doc. 092, p. 5827.

31. On December 20, 2018, PPR submitted the *Hydrogeologic Study of Promontory Point Resources LLC Phase I Landfill Cell for Class I Landfill Permit Modification dated December 2018*, prepared by Loughlin Water Associates (the “Loughlin Study”) to the Division. Doc 093, p. 5900.

32. PPR submitted its reply to the public comments on January 15, 2019. Doc. 095, see, *e.g.*, p. 6191.

33. On April 5, 2019, the Director asked PPR several questions about the Loughlin Study, made comments, and requested additional information. Doc. 100, p. 6524.

34. On April 24, 2019, PPR responded to the Director’s April 5, 2019 questions, comments, and requests. Doc. 101.

35. On May 14, 2019, Allan Moore, Solid Waste Program Manager, on behalf of the Director, wrote additional comments to PPR on the Loughlin Study. Doc. 102, p. 6632.

36. On May 29, 2019, the Director invited those members of the public who had made comments during the public comment period to submit surreply comments to PPR’s reply comments. *See Docs. 104–117.*

37. Friends submitted its sur-reply comments to PPR’s reply comments on June 19, 2019. Doc. 121. In its sur-reply, Friends submitted a review of the Loughlin Study conducted by Dr. Robert Baskin. Doc. 121, pp. 8168-76; *see also Docs. 130 and 131.* Dr. Baskin raised concerns about the sufficiency of the Loughlin Study and the monitoring wells, faulting, fractured bedrock, and groundwater flow, velocity and discharge, Friends’ sur-reply also references a letter dated March 3, 2018 from Dr. Gregory T. Carling to Western Resource Advocates, which raised concerns about the landfill site and groundwater monitoring plan. Doc. 128, pp. 8130-33.

38. The Director approved PPR’s Permit Modification Request on July 10, 2019. Doc. 146, p. 9359.

39. Friends filed its Petition for Review of the Director’s approval on August 6, 2019.

Geotechnical, Geologic and Hydrogeological Studies

40. Applied Geotechnical Engineering Consultants, Inc. (“AGEC”) issued a *Geotechnical and Geologic Study* on July 21, 2003 in support of the landfill’s first Class I permit



(the “AGEC Study”). The AGEC Study reported on the results from 36 test pits and five monitoring wells (MW-1 through MW-5) and stated that “[d]ue to the age of the bedrock, the bedrock is highly faulted, fractured and deformed.” Docs. 008, p. 0485; 076, pp. 4261, 4276.

41. AGEC excavated 36 test pits in December 2002 and reported finding bedrock in 15 of its test pits. Docs. 005, p. 0374, 008, pp. 0488, 0492, 0519–0523; 010, p. 0822; 076, pp. 4264, 4267, 4350–4354.

42. Test Pits TP-A-1, TP-A-4, and TP-21 appear to be in the vicinity of what is now Cell 1A. Docs. 008, p. 0399; 076, p. 3780; 093, p. 5935. AGEC reported reaching bedrock at about 5 feet deep in TP-A-1. AGEC did not reach bedrock in TP-A-4 by the pit’s maximum depth of about 18 feet. AGEC reported bedrock at about 5 feet in TP-21. Doc. 008, pp. 0519, 0522.

43. In 2003, AGEC installed five groundwater monitoring wells, MW-1 through MW-5. Doc. 010, p. 0822. AGEC reported sand and gravel in Monitor Well MW-1, and bedrock below 43 feet below ground surface to about 61 ½ feet, the maximum depth of MW-1. However, AGEC also said it did not discover bedrock in Monitoring Well MW-1. Doc. 008, pp. 0398, 0492, 0511–0518; 076, pp. 4287–4299. AGEC found sand, gravel, and clay in Monitor Well MW-5, and bedrock below approximately 41 feet below ground surface to the maximum depth of MW-5, approximately 243 feet. AGEC found sand, gravel, and clay in Monitor Wells MW-2 through MW-4, with no bedrock reported in those wells. Docs. 008, pp. 0488, 0512–0518; 076, pp. 4264, 4268.

44. In 2015, PPR retained Tetra Tech to conduct an additional study of the geology of the site. Tetra Tech reported the study results in a *Geotechnical Data Summary and Preliminary Geological Map* dated October 6, 2015 (the “Tetra Tech Study”). Tetra Tech excavated 10 test pits, PT-01 through PT-10. It also had GeoVision conduct six seismic refraction survey lines, SL-1 through SL-6. Doc. 076, pp. 4324, 4325. Tetra Tech reported encountering quartzite in the bottom of PT-04 and PT-05, both of which are north of Cell 1A. *Id.*, pp. 4330, 4340, 4342. Plate A-1 of the Tetra Tech Study provides an illustration of how the various geologic formations relate to each other at the landfill site. *Id.*, p. 4340. Cross-Section A-A’ on Plate A-1 shows that the landfill site contains an uneven top layer of alluvial fill above three layers of bedrock: the Geertsen Canyon, Browns Hole, and Mutual formations, in that order. *Id.* The Tetra Tech Study describes the Geertsen Canyon bedrock formation as “highly- to intensely-fractured/jointed and is cut by a series of northwest-trending high-angle faults,” *id.*, p. 4329, the Browns Hole bedrock formation as “highly- to intensely-fractured/jointed,” *id.*, p.4330, and the Mutual bedrock formation as “highly- to intensely-fractured/jointed.” *Id.*; *see also* p. 4331.

45. As part of the Tetra Tech Study, Tetra Tech contracted with GeoVision, the company that performed the seismic refraction survey at the site. Doc. 76, pp. 4371-98. GeoVision reported finding “weathered bedrock” beneath all six seismic refraction lines at a range of depths, with some as close as 7’ below the surface. *Id.*, pp. 4378-81. Each refraction line was 705’ in length. *Id.*, p. 4373. One line, SL-4, intercepted bedrock at a depth of 45’ on one end of the line and 130’ on the other. *Id.*, p. 4380.

46. Tetra Tech submitted a *Geotechnical Engineering Report* to PPR (the “Tetra Tech Report”) on September 30, 2016 of a field and laboratory investigation done in July 2016. Tetra Tech performed seven exploratory borings and excavated 13 additional test pits. Doc. 076, pp. 4429, 4432, 4433, 4473. The Tetra Tech Report depicts boring B-100 as containing “intensely fractured” bedrock beginning at 8’ below the surface, *id.*, p. 4480, B-101 and B-101P as containing bedrock at approximately 17’ below the surface, *id.*, p. 4481-82, and B-102 as having at least 25 feet of “intensely fractured, highly weathered” bedrock beginning at 17’ below the surface. *Id.*, pp. 4483-84.

47. In 2017 and 2018, Loughlin completed a production well to supply water for landfill operations, installed four new monitoring wells into the uppermost aquifer below the relocated landfill cell, and conducted groundwater level monitoring and contouring, hydraulic testing, and groundwater testing on the production well and all of nine monitoring wells. Doc. 93, pp. 5901, 5905.

48. On December 20, 2018, PPR submitted the Loughlin Study to the Division. Doc. 093, p. 5900. The Loughlin Study was submitted in support of the construction of one upgradient monitoring well (MW-9) and three downgradient monitoring wells (MW-6 through MW-8) that were constructed by PPR from October 7-15, 2018. Doc. 93, p. 5905.

49. The Loughlin Study included a review of the AGEC Study, the Tetra Tech Study, and the Tetra Tech Report.

50. As part of its study, Loughlin performed groundwater level monitoring, contouring, and well hydraulic testing and provided hydrogeologic analysis of subsurface water activity. Doc. 93, pp. 5906, 5913, 5918-19, 5932. AGEC and Tetra Tech did not perform groundwater level monitoring, contouring, or well hydraulic testing and provided no hydrogeologic analysis of subsurface water activity. (*Id.*, pp. 4261-4322, 4324-4426, 4428-4531.)

51. Loughlin took approximately 461 feet of core samples from its well coreholes. (*Id.*, pp. 5957-58, 5964-76.) Core samples allow for direct observation of subsurface geology. AGEC took no core samples. Doc. 76, pp. 4261-4322. Tetra Tech sampled only 2.5 feet of what it believed was “bedrock”, less than 1 percent of Loughlin’s sampled geology, and none of the Tetra Tech samples were from near the landfill (the landfill was relocated after Tetra Tech sampled) (*Id.*, pp. 4428, 4473.) Tetra Tech did not drill deeper than 31.5 feet. (*Id.*, pp. 4478-91.)

52. AGEC used a California split barrel sampler using a 140-pound hammer. Doc. 101, p. 6526. Tetra Tech used a small CME-55 truck-mounted hollow stem auger and SPT and California sampler. (*Id.*) Loughlin concluded that the AGEC and Tetra Tech drill rigs could not drill through bedrock. (*Id.*) Tetra Tech and AGEC encountered boulders in the fanglomerate formation, which resulted in auger refusal. (*Id.*) Tetra Tech also used a small backhoe. Doc. 76, p. 4415.

53. Loughlin used sonic methods to extract continuous relatively undisturbed core drill samples from greater depths than AGEC and Tetra Tech (except that AGEC drilled MW-5 to 243

feet with air-rotary into quartzite, but took no core samples). Docs. 101, pp. 6526, 6538-6539; 93, pp. 5905, 5957-58.

54. Loughlin determined that all of the new monitoring well borings intercepted the same unfractured sedimentary fanglomerate formation, not “highly- to intensely-fractured/jointed quartzite” bedrock. Docs. 93, pp. 5909, 5986-6006; 101, pp. 6526-6527, 6531.

55. Because the fanglomerate formation contains abundant clasts, cobbles and boulders of quartzite, Loughlin determined Tetra Tech and AGECE encountered boulders in the fanglomerate formation, which resulted in auger refusal. Doc. 101, p. 6526.

56. Loughlin determined that the GeoVision seismic refraction survey included in Tetra Tech’s report confirmed that in the area of the landfill, AGECE did not reach bedrock. Doc. 93, 5909.

57. Loughlin performed a three-day constant-rate 21-gallon per minute pumping test of the production well and slug tested the nine (9) monitoring wells. (*Id.*) The pilot hole for the onsite PPR production well identified bedrock at a depth of approximately 168 feet. Doc. 101, p. 6527.

58. Loughlin determined that the three-day production well pumping test had no effect on water levels in shallow wells MW-5 (quartzite bedrock well) and MW-1, and no drawdown was noted during the monitoring. Docs. 95, pp. 6243-45; 101, p. 6553.

59. From an analysis of the data derived from the hydraulic testing, Loughlin made the following findings and conclusions concerning the production well and bedrock aquifer:

- regarding the production well: “Despite being screened over a 585-foot interval, the well has (1) a yield of 21 gpm with 309 feet of drawdown after 72 hours; (2) a specific capacity of 0.07 gallons per minute per foot and (3) a hydraulic conductivity of 0.03 feet per day.” (*Id.*, p. 6532.) “These results indicate that: (1) the quartzite bedrock penetrated by the PPR Production Well is relatively unfractured, and that the fractures that are present have been filled by gypsum and clay, (2) this formation is of extremely low permeability, and (3) the gradient from the bedrock is upward because the aquifer is under confined conditions.” (*Id.*);
- ground water is in a deep confined aquifer at a depth of greater than 730 feet (*Id.*, p. 6527);
- subsurface bedrock has very low permeability (0.03 to 4 ft/day). Doc. 93, p. 5919, 5922 and particle velocity (0.01 to 9 ft/day) (*Id.*, pp. 5920, 5922);
- hydraulic conductivity of the bedrock (0.03 to 4 ft/day) (*Id.*, p. 5919, 5922) is very low compared to the hydraulic conductivity of the fanglomerate (1 to 7 ft/day) (this is listed as semi-consolidated deposits around MW-6 through MW-9) (*Id.*);
- fracturing in bedrock does not provide increased hydraulic conductivity or conduits for groundwater movement in the production well because the fractures are filled (*Id.*, p. 5919); Doc. 101, p. 6532; and
- The water level earth tide response observed in Well MW-5 further demonstrates the relatively low porosity and permeability of the bedrock. Doc. 93, p. 5919.

60. From its analysis of the core samples and hydraulic testing on all ten wells,

Loughlin made the following findings and conclusions regarding the fanglomerate formation under the landfill:

- the formation under the landfill is an unfractured fanglomerate formation. Doc. 101, p. 6531;
- the top of bedrock beneath the landfill is at a depth of greater than 149 feet. Doc. 93, p. 5908;

- monitoring wells MW-1 and MW-5 were not affected by the pumping of the production well. Doc. 101, p. 6553;
- The fanglomerate formation has low permeability with hydraulic conductivity that ranges from 1 to 7 feet per day and low particle velocities in the fanglomerate aquifer that range from 3 to 20 feet per year. Docs. 93, pp. 5919-20, 5932; 101, p. 6535;
- the upper aquifer beneath the landfill is impeded by a groundwater mound that forms from seepage from the brine canal and restricts groundwater flow to the south from upland areas to the Great Salt Lake. Doc. 93, pp. 5914, 5920.

61. The Loughlin Study concluded that the Monitoring well System satisfies the requirements of Utah Administrative Code R315-308-2. Doc. 93, pp. 5905, 5907; there is no hydraulic connection between the uppermost aquifer and potential lower aquifers beneath the landfill. Docs. 95, pp. 6247-49; 101, p. 6527; and hydraulic testing of all wells showed low permeability in the fanglomerate formation below the landfill and lower permeability in the confined bedrock aquifer Doc. 93, pp. 5918-22.

### **EXHIBITS**

For reference, the following Exhibits are attached:

**Exhibit A** – Figure 1, Regional Location Map of the Phase I Landfill Cell, Loughlin Study. Doc. 93, p. 5934.

**Exhibit B** – Figure 2, Topographic Map, Promontory Point Landfill and Well Locations, Loughlin Study. Doc. 93, p. 5935.

**Exhibit C** – Figure A-3, Location of Monitoring Wells MW-6, MW-7, MW-8 and MW-9, Loughlin Study. Doc. 93, p. 5984.

## **ISSUES BEFORE THE ALJ**

Friends' presents three arguments in its Opening Brief:

1. It was clearly erroneous for the Director to violate the law by approving the permit modification without the information the division stated it needed to determine the efficacy of PPR's groundwater monitoring system and without an adequate explanation for his decision to waive that requirement.

2. It was clearly erroneous for the Director to approve the permit modification without requiring PPR to properly characterize the hydrogeology beneath the landfill site – information that is necessary for the director to determine whether PPR's groundwater monitoring system is sufficiently protective – in the face of record evidence that highly-fractured, largely uncemented bedrock is hydraulically connected to the shallow aquifer.

3. Because the record evidence shows that highly- to intensely-fractured bedrock is present beneath the landfill site, and because contamination from the landfill could reach Great Salt Lake in a matter of days and remain undetected for weeks or months, it was clearly erroneous for the director not to require a more aggressive sampling schedule.

Friends seeks a remand of the Director's Permit Modification to require the Director to comply with and properly apply the statute and rules to ensure protection of local groundwater and the Great Salt Lake from contamination.

## **STANDARD OF REVIEW**

Utah Code § 19-1-301.5 sets forth the following standards for review:



On review of a proposed dispositive action, the executive director shall uphold all factual, technical, and scientific agency determinations that are not clearly erroneous based on the petitioner’s marshaling of the evidence.” Utah Code § 19-1-301.5(14)(b)<sup>1</sup>.

During judicial review of a dispositive action, the appellate court shall:

(i) Review all agency determinations in accordance with Subsection 63G-4-403(4), recognizing that the agency has been granted substantial discretion to interpret its governing statutes and rules; and

(ii) Uphold all factual, technical, and scientific agency determinations that are not clearly erroneous based upon the petitioner’s marshaling of the evidence.

Utah Code Ann. § 19-1-301.5(16)(c) (emphasis added).

Utah Administrative Code Rule R305-7-214 explains these standards of review as follows:

(2) The standard of review for the Director’s factual, technical, and scientific determinations specified in Section 19-1-301.5(14)(b) and (15)(c)(ii)<sup>2</sup> is explained as follows:

(a) The petitioner has the burden of proof;

(b) Marshaling the evidence is a natural extension of the petitioner’s burden of proof;

(c) For each factual, technical, and scientific determination challenged by petitioner, the petitioner is required to marshal and acknowledge the evidence in the record that supports the Director’s

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<sup>1</sup> While subsection (13)(b) expressly applies directly to the Executive Director’s review, the standard of review that the ALJ is to apply to the record is not expressly stated in the Utah Code. Under a fair reading of the statute, it is clear that the ALJ is to apply the same standard as the Executive Director is required to apply. This conclusion is based on a reading of the permit review adjudicative proceeding statute as a whole. In the first instance, the ALJ’s express duty and authority is to undertake a permit review adjudicatory proceeding and not a trial *de novo* on the merits, resulting in a recommended ruling for the Executive Director. In other words, the role of the ALJ is to “stand in the shoes” of the Executive Director and provide him with a recommended ruling on the merits. Thus, the ALJ is to apply the same standard of review to the administrative record as the Executive Director is required to apply. Utah Code Ann. § 19-1-301.5.

<sup>2</sup> The reference should be Utah Code Ann. § 19-1-301.5(16)(c)(i).

determination. Such determination shall be overturned as clearly erroneous only if the petitioner has proven, after marshaling, that the Director's determination is not supported. See Subsections 19-1-301.5(6)(d)(v)(G) and (H) and 19-1-301.5(14); and

(d) If the petitioner fails to marshal, there is a presumption that the Director's factual, technical, and scientific determination is not clearly erroneous."

(3) The standard for review for non-factual determinations provided in Section 19-1-301.5(15)(c)(i) recognizes that the Director has been granted substantial discretion to interpret the division's governing statutes and rules.

**A. The Standard of Review for the Director's Factual Determinations in This Special Adjudicative Proceeding is the Clearly Erroneous Standard and the Substantial Evidence Standard of Subsection 63G-4-403(4)(g) Does Not Apply to This Proceeding.**

Friends asserts that the standard of review that the ALJ should apply to the Director's determinations of fact is whether they are supported by substantial evidence, citing to Utah Code § 63G-4-403(4), which incorporates the substantial evidence standard for agency determinations of fact:

(4) The appellate court shall grant relief only if, on the basis of the agency's record, it determines that a person seeking judicial review has been substantially prejudiced by any of the following:

...(g) the agency action is based upon a determination of fact, made or implied by the agency that is not supported by substantial evidence when viewed in light of the whole record before the court; ... (emphasis added.)

Utah Code Ann. § 63G-4-403(4).

The ALJ concludes that the standard of review for the Director's factual determinations in this special adjudicative proceeding is the clearly erroneous standard, as prescribed in Utah Code

§ 19-1-301.5(14)(b) and that the substantial evidence standard of Subsection 63G-4-403(4)(g) does not apply to special adjudicative proceedings under Utah Code § 19-1-301.5. The rationale for this conclusion is as follows.

In reviewing the ALJ's recommended order, the Executive Director gives deference to the Director's factual decisions. *See* Utah Code Ann. § 19-1-301.5(14)(b); *see also id.*, § 19-1-301.5(16)(c)(i). The appellate court in turn gives deference to the Executive Director's factual determinations in his review of the Director's Administrative Record. *See Id.* § 19-1-301.5(16)(c)(ii).

Prior to 2015, the standard of review the Executive Director was to apply to the Director's factual, technical and scientific determinations was whether those determinations were "supported by substantial evidence taken from the record as a whole." (Emphasis added). *Id.* Ann. § 19-1-301.5(13)(b) (2014). An appellate court was to "uphold all factual, technical, and scientific agency determinations that are supported by substantial evidence viewed in light of the record as a whole." *Id.* Ann. § 19-1-301.5(14)(c)(ii) (emphasis added).

In 2015, the Legislature amended Section 19-1-301.5. Subsection (13)(b) became Subsection (14)(b) and was changed to read, "[o]n review of a proposed dispositive action, the executive director shall uphold all factual, technical, and scientific agency determinations that are not clearly erroneous based on the petitioner's marshaling of the evidence." Utah Code Ann. § 19-1-301.5 (14)(b); Laws 2015 §2 (emphasis added). Subsection (14)(c)(ii) became Subsection (16)(c)(ii) and was changed to instruct the appellate court to "uphold all factual, technical and

scientific agency [Executive Director] determinations that are not clearly erroneous based on the petitioner's marshaling of the evidence." *Id.* (emphasis added.). Subsections (14)(b) and 16(c)(ii) read the same today as after the 2015 amendment.

Subsection 19-1-301.5(3) states that except as expressly provided in Section 19-1-301.5, the provisions of Title 63G, Chapter 4, the Utah Administrative Procedures Act (the "UAPA") do not apply to special adjudicative proceedings under Section 19-1-301.5. Subsection (14)(b) directs the Executive Director, in special adjudicative proceedings, to uphold the Director's factual determinations that are not clearly erroneous. Since Section 19-1-301.5 does not expressly provide that the UAPA applies to special adjudicative proceedings, I conclude that only the clearly erroneous standard applies to the agency's factual determinations in this special adjudicative proceeding.

Subsection 16(c) directs the appellate court to uphold all factual agency determination that are not clearly erroneous and to review agency determinations in accordance with Subsection 63G-4-403(4) of the UAPA, recognizing that the agency has been granted substantial discretion to interpret its governing statutes and rule. Subsection 63G-4-403(4) sets out an exclusive list of eight circumstances under which the appellate court is authorized to grant relief to a petitioner. One of those circumstances, Subsection (4)(g), is when an agency action is based on a determination of fact that is not supported by substantial evidence. However, subsection 16(c) only applies to appellate proceedings, not special adjudicative proceedings.

A finding of fact is clearly erroneous if it is “not adequately supported by the record, resolving all disputes in the evidence in a light more favorable to the trial court’s determination.” *Save Our Sch. v. Bd. of Educ. of Salt Lake City*, 2005 UT 55, ¶ 9, 122 P.3d 611. A finding is clearly erroneous if that “finding is without adequate evidentiary support or was induced by an erroneous view of the law.” *R.B. v. L.B.*, 2014 UT App 270, ¶ 26, 339 P.3d 137 (citing *Hale v. Big H. Constr., Inc.*, 2012 UT App 283, ¶ 9, 288 P.3d 1046).

**B. The Standard of Review for Non-Factual Determinations Recognizes That the Director Has Been Granted Substantial Discretion to Interpret the Division’s Governing Statutes and Rules.**

With respect to questions of law, the administrative law judge should grant “substantial discretion” to the agency in its interpretation of its governing statutes and rules. *See* Utah Code Ann. § 19-1-301.5(16)(c)(i); Utah Admin. Code R305-7-214(3). In this case, the governing statutes and rules include the Solid and Hazardous Waste Act and the implementing regulations. The Director’s legal interpretation of these statutes and rules may be overturned only if Petitioner shows that such interpretation is a “clearly erroneous interpretation or application of the law.” *See, e.g., Sierra Club v. Bd. of Oil, Gas, & Mining*, 2012 UT 73, ¶ 10, 289 P.3d 558 (citing *Assoc. Gen. Contractors v. Bd. of Oil, Gas & Mining*, 2001 UT 112, ¶ 18, 38 P.3d 291 (an agency’s “interpretation of the operative provisions of the statutory law it is empowered to administer” must be given deference); *see also Utah Physicians for a Healthy Env’t v. Utah Dept. of Env’tl. Quality*, 2016 UT 49, ¶ 12, 391 P. 3d 148(recognizing the agency’s substantial discretion standard of review).

## CONCLUSIONS OF LAW

### **I. FRIENDS FAILED TO PRESERVE ITS ARGUMENT THAT THE FANGLOMERATE IS THE GEERTSEN CANYON FORMATION.**

Friends raises the following claim in its Opening Brief, (referred to as “the Geertsen Claim”):

- (1) the Geertsen Canyon Quartzite bedrock formation is the same as what PPR has described as the fanglomerate layer;
- (2) directly below the fanglomerate/Geertsen Canyon Quartzite bedrock formation containing the shallow aquifer at the landfill site lies the highly-fractured, largely uncemented Browns Hole Formation;
- (3) there must be a hydraulic connection between the Browns Hole Formation and the fanglomerate/Geertsen Canyon Quartzite bedrock formation containing the shallow aquifer directly above it;
- (4) because of the hydraulic connection between the two formations, the Browns Hole Formation must be considered to be part of the uppermost aquifer and the Director must require PPR to monitor that formation as well as, possibly, the Mutual Formation that lies directly below the Browns Hole Formation; and
- (5) because PPR’s current monitoring wells do not monitor the Browns Hole Formation, the Director should have found that PPR’s monitoring system is deficient.

*Opening Brief*, pp. 27-29.

The Director states that Friends failed to preserve the Geertsen Claim and that it should be dismissed with prejudice. The Director argues that Friends did not raise the Geertsen Claim in its Petition for Review and that matters not addressed in the petition for review may not be raised in the opening brief. The Director also argues that Friends failed to satisfy its burden of demonstrating that an issue it raised in its Petition for Review was preserved in accordance with

Utah Code § 19-1-301.5(4) by showing that it raised the issue during public comment with citation to specific supporting information. *See* Utah Code Ann. § 19-1-301.5(11)(a).

Utah Code Section 19-1-301.5(4) provides that that where a public comment period is available a person challenging an order in a special adjudicative proceeding must have raised that issue or argument during the public comment period:

If a public comment period was provided during the permit application process or the financial assurance determination process, a person who challenges an order or determination may only raise an issue or argument during the special adjudicative proceeding that:

- (a) The person raised during the public comment period; and
- (b) Was supported with information or documentation that is cited with reasonable specificity and sufficiently enables the director to fully consider the substance and significance of the issue.

Furthermore, Utah Code § 19-1-301.5(6)(d)(D) and Utah Administrative Code R305-7-203(3) require a permit for review to include an explanation of how each argument was preserved.

Utah Code Section 19-1-301.5(6)(e) provides:

A person may not raise an issue or argument in a petition for review unless the issue or argument:

- (i) was preserved in accordance with Subsection (4); or
- (ii) was not reasonably ascertainable before or during the public comment period.

Utah Code Section 19-1-301.5(6)(f) provides:

To demonstrate that an issue or argument was preserved in accordance with Subsection (4), a petitioner shall include the following in the petitioner's petition for review:

(i) a citation to where the petitioner raised the issue or argument during the public comment period; and

(ii) for each document upon which the petitioner relies in support of an issue or argument, a description that:

(A) states why the document is part of the administrative record; and

(B) demonstrates that the petitioner cited the document reasonable specificity in accordance with Subsection (4)(b).

Finally, Utah Administrative Code R305-7-213(1)(f) states that matters not addressed in the petition for review may not be raised in the opening brief.

**A. Friends is Justified in Asserting that the Geertsen Claim Could Not Have Been Reasonably Ascertainable to Friends Until After the Public Comment Period.**

The Director argues that Friends did not satisfy the requirements of Utah Code Section 19-1-301.5(6)(f) which requires a citation in the petition for review to where the petitioner raised the issue or argument during the public comment period and a description of supporting documents in the administrative record.

Friends replies that the prohibition against raising an issue in this proceeding that was not raised during the public comment period does not apply to issues that were “not reasonably ascertainable before or during the public comment period” and that the public comment period is only the period of January 13, 2018 through February 14, 2018. Friends’ Reply to the Director’s Response to Friends’ Opening Brief, pp. 3-7. Specifically, Friends’ reply is based on the following:



1. The public comment period ran from January 13, 2018 through February 14, 2018 (“Public Comment Period”). Document 94.

2. The information available to the public during the Public Comment Period was a letter dated October 25, 2017 from PPR to the Director requesting a permit modification.

Document 77.

3. On February 14, 2018, Friends submitted comments on PPR’s Permit Modification Request. Document 92, pp. 5839-5844.

4. On December 20, 2018, PPR submitted the Loughlin Study<sup>3</sup> to the Division.

Document 93.

5. On January 17, 2019, PPR responded to Friends’ comments. Document 95.

6. On May 29, 2019, the Director invited Friends, through its co-commentor Sierra Club, (and other persons who submitted public comments), to submit sur-reply comments on PPR’s reply. Document 115, pp. 7769-70.

7. On June 19, 2019, Friends submitted its sur-reply to the Director. Documents 121-133.

The Director replies that he extended the opportunity for additional public comment to those members of the public who had made comments during the initial comment period by inviting them to submit surreply comment on PPR’s reply comments. The Director argues that

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<sup>3</sup> Loughlin Water Associates, LLC, *Hydrogeologic Study of Promontory Point Resources LLC Phase I Landfill Cell for Class I Landfill Permit Modification* (December 2018). Doc. 093.

the public comment period includes the surreply comments and that because Friends did not raise the Geertsen Claim in its sur-reply comments, it has not preserved this issue.

Friends' surreply states that "Friends reserves the right to raise issues connected with the Study in any future challenge to the permitting action, since it was not available when Friends submitted its original comments." The statute does not allow for a general reservation of claims for a future permitting challenge. *See* Utah Code Ann. § 19-1-301.5(6)(e). However, Friends' sur-reply was submitted after the public comment period of January 13, 2018 through February 14, 2018 ("Public Comment Period"), which Friends asserts is the pertinent public comment period. The following supports Friends' position:

1. The Utah Waste Management Regulations provide that a draft permit, permit renewal or major modification of a permit is subject to a thirty (30) day public comment period. Utah Admin. Code R315-311-2.

2. The Division published its Notice of Public Comment on January 12, 2018 in several newspapers, which stated: "The public comment period to receive comments on this request will commence on January 13, 2018 and end on February 14, 2018." Doc. 94.

3. Utah Administrative Code R305-7-202, Notice and Comment and Exhaustion of Remedies, states that: "[i]n preparing a comment response document, the Director may request that the permit applicant provide information in response to comments received during the public comment period." Utah Admin. Code R305-7-202(4). The regulation does not state that the

public comment period includes the period during which the applicant responds to comments or any surreplies.

4. Utah Administrative Code R305-7-209, Administrative Record, states that the administrative record shall include the notice and record of each public comment period. The Administrative Record does not include a notice of public comment for any public comment period other than the Notice of Public Comment published on January 12, 2018. Doc. 94.

5. The Division's Statement of Basis for PPR's major permit modification issued on July 10, 2019 says that: "[t]his Statement of Basis includes the Director's response to the public comments received during the public comment period held between January 13 and February 14, 2018 and in addition, the reply comments received from Promontory on January 15, 2019 and the sur-reply comments received from public commenters submitted by June 20, 2019 at the request of the Director." Doc. 146, p. 1.

Although the Director has substantial discretion to interpret its statutes and regulations, it is not justified in an interpretation that is inconsistent with a plain reading of the statutes and regulations and statements in the Statement of Basis for the PPR permit modification. The Utah Waste Management Regulations set forth the procedures for public comment. The Division followed these procedures for the Public Comment Period, but did not follow them for requesting sur-replies.

Based on the interpretation of the public comment period as the period between January 13 and February 14, 2018, Friends is justified in asserting that the Geertsen Claim could not have

been reasonably ascertainable to Friends until after the Public Comment Period. *See* Utah Code Ann. Section 19-1-301.5(6)(e)(ii).

**B. Friends Failed to Raise the Geertsen Claim in its Petition For Review.**

Notwithstanding that Friends is justified in asserting that the Geertsen Claim could not have been reasonably ascertainable to Friends until after the Public Comment Period, Friends failed to raise the Geertsen Claim in its Petition For Review. In order to preserve the Geertsen Claim, Friends had to first raise it in its Petition For Review and cannot first raise the issue in its Opening Brief. *See* Admin. Code R305-7-213(1)(f). Therefore, the ALJ recommends to the Executive Director that Friends' Geertsen Claim is dismissed, with prejudice.

**C. The ALJ Does Not Address the Director's Judicial Notice Request.**

In order to address the possibility that the Executive Director does not dismiss Friends' Geertsen Claim, the Director requests that the ALJ take judicial notice of that the United States Geological Survey has stated that the major lithologic constituent of Geertsen Canyon Quartzite in Box Elder County in Box Elder County (where the Promontory Landfill is located) is arenite, a strongly cemented sedimentary quartzite. Director's Brief in Response to Friends' Opening Brief, pp. 13-15. Because the ALJ recommends dismissal of Friends' Geertsen Claim, the ALJ does not address the Director's judicial notice request.

## **II. THE DIRECTOR DID NOT ERR IN DETERMINING THAT THE MONITORING WELL SYSTEM COMPLIES WITH THE RULE AND THAT PPR WAS NOT REQUIRED TO CONDUCT MODELING**

Friends claims that the Director clearly erred, and violated the law, because he ignored his staff's recommendations to require PPR to conduct modeling to demonstrate the efficacy of the proposed groundwater monitoring system and without an adequate explanation for his decision to waive that requirement. Opening Brief, pp. 3-7.

The Director is in charge of the Division of Waste Management and Radiation Control and the Division staff works for, advises and reports to the Director. Utah Code §§ 19-1-105, 19-6-107(3)(b). The Director, not his staff, is granted "substantial discretion to interpret [the] governing statutes and rules" he is charged to enforce. Utah Code Ann. § 19-1-301.5(16)(c); Utah Admin. Code R305-7-214(3).

The rule pertinent to PPR's Permit Modification Request is the Ground Water Monitoring Requirements Rule, Utah Admin. Code R315-308-2. Subsection (2) contains the requirements for upgradient and downgradient wells:

(2) The ground water monitoring system must consist of at least one background or upgradient well and two downgradient wells, installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer and all hydraulically connected aquifers below the facility, cell, or unit. The downgradient wells shall be designated as the point of compliance and must be installed at the closest practicable distance hydraulically down gradient from the unit boundary not to exceed 150 meters (500 feet) and must also be on the property of the owner or operator:

(a) the upgradient well must represent the quality of background water that has not been affected by leakage from the active area; and

(b) the downgradient wells must represent the quality of ground water passing the point of compliance. Additional wells may be required by the Director in complicated hydrogeological settings or to define the extent of contamination detected.

The Director has the substantial discretion to interpret this regulation, to decide what information is required to satisfy the regulation and to make the decision that the requirements of the Rule have been satisfied. The record supports the Director's decision that PPR's Permit Modification Request satisfied the Rule requirements and that modeling was not required, as follows:

Following receipt of the Loughlin Study, the Director submitted comments and questions to PPR on the proposed groundwater monitoring wells and modeling and PPR, via Loughlin, responded:

a. By letter dated April 5, 2019, the Director asked PPR to demonstrate that three downgradient wells would adequately detect a release at least 95% of the time. Doc. 100, p. 6524, Comment 19.

b. By letter dated April 24, 2019, Loughlin responded to the Director's Comment 19, that the spacing of three downgradient wells is adequate based on the low groundwater velocity in the fanlomerate aquifer beneath the landfill cell, that the Rule does not require modeling or a 95 percent detection rate and that the three wells satisfy the requirements of EPA groundwater monitoring criteria set forth in EPA rules and technical enforcement guidance. Doc. 101, pp. 6535-36, Comment 19.

c. By letter dated May 14, 2019, the Director commented further, acknowledging that the Rule does not require groundwater modeling but that modeling could help ensure appropriate well spacing and the number of downgradient wells needed to detect potential releases. Doc. 102, p. 6632, Comment 19.

d. By letter dated May 22, 2019, Loughlin responded to the Director's Comment 19, with the following concerns: (i) there are no rules governing a modeling approach; (ii) modeling would require a number of assumptions with no regulatory basis; (iii) there is not enough data to calibrate the modeling; and (iv) running the model under different scenarios would be extremely burdensome. Loughlin also documented compliance with the ground water monitoring well Rule. Doc. 103, pp. 6636-37-38.

After receipt of public comments, PPR's reply comments and Friends' sur-reply comments and after the above comment and response exchange with PPR on the Loughlin Study, the Director issued the Permit Modification, including a Statement of Basis, on July 10, 2019.

The Statement of Basis documents the basis and rationale for the Director's determination that the proposed groundwater monitoring wells satisfy the Rule, including a response to Friends' claim that the Director should have required PPR to conduct modeling:

Public Comment #7

*Commenters were concerned that the number of monitoring wells is insufficient to meet the requirements of the rules. One commenter suggested an equation for determining the appropriate number of downgradient monitoring wells.*

Division Response

R315-308-2 of the Utah Administrative Code requires a minimum of one upgradient, and two downgradient monitoring wells. PPR installed one monitoring well upgradient and

three monitoring wells at the downgradient boundary of the landfill. The Director believes these wells are sufficient to show background water conditions and to detect releases from the landfill. The Director has found no basis to use the equation provided by the commenter as a standard for determining the number of monitoring wells. Although the Division did suggest development of a groundwater model to determine the number of downgradient wells, it was concluded that some input parameters were ill-defined, so that a specific inference from a groundwater model would be too subjective to be useful in making a decision.

The number of monitoring wells in the approved modification satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, p. 9366.

In addition, as discussed in Section III below, the Director relied on information other than modeling as the basis for his determination that monitoring wells satisfy the requirements of Utah Administrative Code R315-30-28.

Friends claims that the Director violated Utah Code Ann. Section 19-6-108(9) by approving the permit modification without requiring evidence that the management of solid waste will not pose a substantial present or potential hazard to human health or the environment. The Director satisfied this directive by determining that the Groundwater Monitoring System satisfied the groundwater monitoring requirements in Utah Administrative Code R315-308-2 and thus the Director complied with the law.

The Director has considerable authority and discretion to interpret Utah Administrative Code R315-308-2 and has special expertise in overseeing permitting of solid waste landfills. The Director documented the basis for, and the record supports, his determination that the Monitoring Well System complies with Utah Administrative Code R315-308-2 and that PPR was not required to conduct modeling. Friends has failed to carry its burden to overcome the Director's



determination. Specifically, Friends has the burden to identify support that modeling is required and that the Director's decision to not require modeling was a clear error. Friends asserts that the Director erred because the Director ignored the Division staff's comments to PPR requesting modeling, but the Director has substantial discretion to interpret the regulations and is not required to follow the staff comments. The ALJ finds that the Director did not err in determining that the Monitoring Well System complies with Utah Administrative Code R315-308-2 and that PPR was not required to conduct modeling and .

### **III. THE DIRECTOR DID NOT ERR IN ISSUING THE PERMIT MODIFICATION.**

Friends argues that it was clearly erroneous for the Director to approve the Permit Modification without requiring PPR to properly characterize the hydrogeology beneath the landfill site – information that is necessary for the Director to determine whether PPR's groundwater monitoring system is sufficiently protective - in face of record evidence that highly fractured, largely uncemented bedrock is hydraulically connected to the shallow aquifer. The essence of Friends' appeal is that the Director erred in approving the three downgradient groundwater monitoring wells because the Director did not require PPR to properly characterize the hydrogeology beneath the landfill. Utah Administrative Code R315-308-2(2) (the "Ground Water Monitoring System Rule") requires:

(2) The ground water monitoring system must consist of at least one background or upgradient well and two downgradient wells, installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer and all hydraulically connected aquifers below the facility, cell, or unit. The downgradient wells shall be designated as the point of compliance and must be installed at the closest practicable distance hydraulically down gradient from the

unit boundary not to exceed 150 meters (500 feet) and must also be on the property of the owner or operator:

(a) the upgradient well must represent the quality of background water that has not been affected by leakage from the active area; and

(b) the downgradient wells must represent the quality of ground water passing the point of compliance. Additional wells may be required by the Director in complicated hydrogeological settings or to define the extent of contamination detected.

Utah Admin. Code R315-308-2(2).

Friends' argument is broken down into the following subsections.

**A. The Director Did Not Err in Determining That the Bedrock Beneath the Landfill is Cemented and There is no Hydraulic Connection Between the Shallow Aquifer and Bedrock.**

Friends asserts that record evidence shows that due to the presence of fractured bedrock directly beneath the shallow aquifer at the landfill site, there is a direct hydraulic connection between the shallow aquifer and the fractured bedrock formations below it. Opening Brief at pp. 18-29.

The Statement of Basis sets forth the Director's determination that there is no hydraulic connection between the uppermost aquifer and potential lower aquifers:

In accordance with Utah Admin. Code R315-311-1, the Director has duly considered all comments, reply comments, and sur-reply comments, including those dealing with the possibility that there is a hydraulic connection between the uppermost aquifer and potential lower aquifers. He is satisfied that the evidence supports his conclusion that there is not such a hydraulic connection. He recognizes the importance of the Great Salt Lake ecosystem and the resources the Lake provides. He understands the concerns of commenters who believe there is, or could be, a hydraulic connection between water in the uppermost aquifer or a lower aquifer and the Lake. He is not persuaded that the evidence of such a possible connection is strong enough to warrant either denying PPR's requested modification or, at this time, requiring additional

study. Should circumstances change or new information arise, he believes he has the authority to require PPR to provide additional information and, if appropriate, change its groundwater monitoring program. Doc. 146, p. 9362.

Also, the Statement of Basis summarizes the public comments, PPR's replies to public comments, and sur-reply comments, with a Division response following each comment or reply. Each of the following comments/replies and Division responses in the Statement of Basis document the basis for the Director's decision that the bedrock is cemented and that there is no hydraulic connection between the shallow aquifer and bedrock:

Public Comment #2

*Commenters stated that the placement of groundwater monitoring wells must be at appropriate locations and depths to yield samples from the uppermost aquifer and all hydraulically connected aquifers below the facility, cell, or unit (Utah Code Ann. R315-308-2(2)). There is no analysis or evidence to establish that these additional requirements of Utah Admin. Code § R315-308-2(2) have been met. Commenters mentioned that additional studies and reviews should be undertaken before issuing the permit modification in order to ensure that the proposed wells will function as intended.*

Division Response

Downgradient monitoring wells have been installed in locations to detect any release to groundwater from the landfill. PPR has submitted, and is required to follow, a groundwater monitoring plan to ensure that any impact from the landfill will be detected by the downgradient wells. The upgradient and downgradient wells appear to monitor the same hydrologic unit (fanglomerate), as evident from the boring logs presented in the Hydrogeological report (December 2018).

The location of the monitoring wells as approved in this modification satisfy the requirements R315-308-2 of the Utah Administrative Code. Doc. 146, p. 9364.

Public Comment #3

*Commenters stated that there is a lack of information regarding groundwater connection between the Landfill and the lake. Groundwater connections from the site to the lake have not been well researched. There is the potential of groundwater flow from upland areas to lakebed spring systems. Commenters asked if groundwater monitoring wells will monitor both the alluvium and the bedrock groundwater.*

### Division Response

The Division acknowledges the commenters' concerns. R315-308-2 of the Utah Administrative Code requires a groundwater monitoring system to have a minimum of two downgradient monitoring wells that represent the quality of groundwater passing through the point of compliance. Groundwater monitoring will follow the sampling plan to ensure that any release from the landfill is detected in a timely manner. The downgradient monitoring wells are the designated points of compliance for the operation of the landfill. Typically, the groundwater monitoring wells monitor the uppermost aquifer, be it alluvial or bedrock. A hydraulic connection is possible between any combination of bedrock and alluvium; however, boring log information provided by the Permittee indicates it is unlikely that there is flow from the alluvium into the bedrock, as evidenced by the production well log.<sup>4</sup> (Footnote added).

The information PPR has provided concerning possible hydraulic connection between the uppermost aquifer and lower aquifers satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, pp. 9364-9365.

### Public Comment #10

*The Utah Geologic Survey (UGS) has not yet updated intermediate-scale or detailed-scale geologic maps of the area. Preliminary site-specific geologic data indicate a thin cover of Quaternary surficial deposits overlying faulted and fractured bedrock. It appears that the consultants for PPR used a geologic map (Crittenden, M.D., Jr., 1988, Bedrock geologic map of Promontory Mountains, Box Elder County, Utah) and updated it with site-specific geologic data. This should be verified by the UGS before proceeding. Commenters were concerned that there is inadequate understanding of the geology, seismic, faulting, and mapping of Promontory Point Peninsula.*

### Division Response

The Director is aware that multiple general studies do exist that suggest faulting within bedrock formations associated with the Great Salt Lake area, including the Promontory Point Peninsula. However no site specific evidence has been presented supporting the commenters' concerns that there may be faulting in the bedrock beneath the landfill.

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<sup>4</sup> See summary PPR's (Loughlin's) response to the Director's comments on the Loughlin Study that "Drilling and groundwater sampling results from the PPR Production Well indicate (1) the quartzite bedrock penetrated by the PPR Production Well is relatively unfractured, and that the fractures that are present have been filled by gypsum and clay, (2) this formation is of extremely low permeability, and (3) the gradient from the bedrock is upward because the aquifer is under confined conditions." Doc. 101, p. 6532.

Rather, evidence from core samples obtained during construction of the production well indicates fractures are cemented.

The information PPR has provided satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, p. 9368.

In addition, the Division staff and the Director evaluated the Loughlin Study, including PPR's responses (prepared by Loughlin) to the Director's comments on the Loughlin Study which are in the Administrative Record. The above Division Responses to public comments state that the information PPR has provided, including the information concerning possible hydraulic connection between the uppermost aquifer and lower aquifers, satisfies the requirements of the Ground Water Monitoring System Rule. Information provided by PPR includes the Loughlin Study and PPR's written responses to the Director's comments and questions on the Loughlin Study, specifically the following information on hydraulic connection and bedrock:

1. "Test pit excavations and monitor well drilling performed by AGECE (2003) and Tetra Tech (2015, 2016) were completed using a backhoe and auger rigs. Both investigations identified the presence of unconsolidated deposits overlying deposits which resulted in auger refusal or backhoe refusal. AGECE (2003) identified bedrock in 23 test pit locations based on backhoe refusal. However, it is likely that a number of these test pits reached total depth in the boulders of the fanglomerate deposit and not within bedrock. Additionally, the boring for Well MW-1 completed by AGECE shows that bedrock was intercepted at a depth of 43 feet, but the auger drill rig was able to continue drilling and drive samples through the "bedrock". Based on this evidence, it is probable that the boring for Well MW-1 penetrated the fanglomerate deposit and not bedrock.

A seismic refraction survey was performed near the Phase 1 Landfill cell by GEOvision (2015), for Tetra Tech. The purpose of the seismic refraction survey was to ascertain the subsurface velocity structure and rip ability beneath six seismic lines, each with a length of 705 feet, and designated SL-1 through SL-6. GEOvision indicated in their report that P-wave velocities which are greater than 7,500 feet per second (ft/s) would be considered non-rippable bedrock. The Phase 1 Landfill Cell is located between two of these seismic lines, SL-2 and SL-5, which are both shown on Figure 3. Seismic refraction interpretive results indicate:

1. Below seismic line SL-2, velocities that exceed 7,500 ft/sec exist between about 80 and 150 feet; and
2. Below seismic line SL-5, velocities that exceed 7,500 ft/sec are identified at depths greater than about 160 feet.

The seismic survey results indicate that some of the earlier test pits completed by AGECE in the areas between seismic lines SL-2 and SL-5 did not reach total depth in bedrock.

Figure 2 shows the location of the PPR Production Well which is near the north end of the property. Appendix B provides a copy of the well log. Approximately 170 feet of unconsolidated deposits consisting mostly of subangular limestone gravels overlie bedrock in the PPR Production Well; see Well Driller's Report (well log) for Utah Division of Water Rights (DWRi), Well Identification Number (WIN) 440907, Appendix B.

Bedrock was not encountered in borings for the 2018 monitor wells that were installed around the Phase 1 Landfill (Loughlin, 2018). The 2018 well borings indicate that Lake Bonneville deposits range in thickness from 20 to 30 feet and overlie an extensive semi-consolidated to consolidated fanglomerate deposit. The fanglomerate consists of silt, clay, and clasts of quartzitic materials that range from sand size to boulders. Geologic logs for the 2018 monitor well borings are presented in Appendix A. The fanglomerate deposit may have been identified in previous site investigations as "weathered bedrock". Doc. 93, pp. 9-10.

2. The Promontory Well penetrated the Geertsen Canyon Quartzite, Browns Hole Formation, and Mutual Formation. The Loughlin Study describes these formations as "highly to intensely fractured/jointed". Doc, 93, pp. 5910-11. In response to questions from the Division about the impact that these subsurface geologic features have on groundwater systems and flow, PPR (Loughlin) responded:
  - a. Descriptions of bedrock depicted above and on pages 10 and 11 of the Hydrogeologic Study are observations of surface outcrops and intensely fractured rocks under subaerial conditions that do not reflect conditions of subsurface bedrock, as identified during the drilling of the PPR Production Well. Doc. 101, p. 6527.
  - b. Based on data from the PPR Production Well, "(1) the bedrock is dry to at least 730 feet, (2) the aquifer developed by the well is confined, and (3) the bedrock aquifer gradient is upward and because the gradient is upward from the much deeper bedrock

aquifer, the shallow fanglomerate aquifer identified in the vicinity of the landfill does not intermingle or flow to the deeper bedrock aquifer.” Doc. 101, p. 6527.

- c. Drilling and groundwater sampling results from the PPR Production Well indicate (1) the quartzite bedrock penetrated by the PPR Production Well is relatively unfractured, and that the fractures that are present have been filled by gypsum and clay, (2) this formation is of extremely low permeability, and (3) the gradient from the bedrock is upward because the aquifer is under confined conditions. Doc. 101, p. 6532.
  - d. The landfill and the aquifer beneath the landfill are within an unfractured, low permeability fanglomerate deposit. No bedrock was intercepted beneath the landfill. Doc. 101, p. 6532.
3. Although bedrock is intensely fractured where exposed at the ground surface, bedrock in the PPR Production Well was dense and hard and relatively unfractured. Where fractures were encountered in the PPR Production Well, they appeared to be filled with clay or mineralization. Doc. 93, p. 5919.
4. 18. *In regard to Aquifer Parameter Values on page 18 and in Appendix D, Slug Test Analyses, while we agree that the correct slug test methods (Dagan for monitoring wells MW-1 through MW-5, and Bouwer-Rice for monitoring wells MW-6 through MW-9, respectively), were employed, Appendix D only lists the AQTESOLV printouts. Please provide the graphical representation of the curve fitting, as we would like to ascertain that the line of best fit, especially in the case of the Bouwer-Rice method, was chosen in a consistent manner.*

The following table presents the December 19, 2018 Hydrogeologic Study results and the findings of manual curve matching the 2018 monitor wells. [slug test table omitted].

Comparison of manual curve matching to the original analysis using automatic curve matching indicates that differences in the results are negligible. Graphical representations of the slug test performed for the 2018 monitor wells MW-6 through MW-9 and analysis using the method of Bouwer and Rice (1976) are attached. Results indicate that the fanglomerate formation has very low permeability, as would be expected in a formation that contains an abundance of silt and clayey materials.

Doc. 101, pp. 6534-35.

5. The Loughlin Study includes the following findings and conclusions:

#### MONITOR WELLS AND GEOLOGY

- Monitor wells MW-6 through MW-8 were installed in the first intercepted groundwater aquifer directly downgradient from the downgradient edge of the landfill cell at distances that range from about 60 to 260 feet from the landfill.
- In the vicinity of the Phase I landfill cell, depth to bedrock exceeds 148 feet.
- The first aquifer intercepted beneath the landfill cell is within the semi-consolidated fanglomerate deposit.
- The fanglomerate surface slopes generally in the same direction as the ground surface.

#### AQUIFER PARAMETERS

- Hydraulic conductivities estimated from well testing differ by three orders of magnitude. The hydraulic conductivity of the unconsolidated deposits is considerably greater (more permeable) than the semi-consolidated deposits and bedrock. Slug testing of 9 monitor wells and pump testing the PPR Production Well indicate that the hydraulic conductivities in:
  - Unconsolidated deposits monitored by MW-1 through MW-4 ranged from about 8 to 124 ft/day;
  - Semi-consolidated deposits monitored by MW-6 through MW-9 ranged from about 1 to 7 ft/day; and
  - Bedrock ranged 0.03 to 4 ft/day.
- Estimated groundwater velocities range from about 0.01 ft/day to 9 ft/day in the vicinity of the landfill cell.

Doc. 93, pp. 20, 22.



Friends admits that the bedrock aquifer at the production well is a confined aquifer but asserts that the Production Well data does not apply to the landfill hydrogeology because of the distance of the Production Well from the landfill, the elevation of the top of the production well is higher than the monitoring wells, the flanglomerate layer was not found at the production well, and there is no shallow aquifer in the Production Well. Opening Brief, p. 26-27; Friend's Reply to PPR's Response to Friends' Opening Brief, p. 4. However, the Director determined, based on information in the Loughlin Study, Loughlin's responses to the Director's comments, and the Director's expertise, that it is unlikely there is flow from the alluvium (flanglomerate aquifer) at the landfill into the bedrock, as evidenced by the production well log. Doc. 146, p. 9365.

Friends also asserts that the Director ignored site-specific evidence of bedrock fracturing, citing to the TetraTek and AGECE studies. Opening Brief, pp. 18-29. However, the Loughlin Study disagrees with the TetraTek and AGECE's studies observations and conclusions, stating that they did not use drilling equipment sufficient to drill through bedrock in test pits or monitoring wells (except MW-5) and that statements that the bedrock was highly fractured are inaccurate. Doc. 101, pp. 6526-27. The Loughlin Study concludes that although bedrock is intensely fractured where exposed at the ground surface, bedrock in the Production Well was dense and hard and relatively unfractured, based on core samples, and that the bedrock observed on the ground surface is limestone bedrock which was not found beneath the production well. Doc. 101, p. 6531. Based on information in the Loughlin Study and Loughlin's responses to the

Director's comments, and the Director's expertise, the Director concluded that there is no site-specific evidence of bedrock fracturing. Doc. 146, p. 9368.

Friends also asserts that the production well log only indicates cementing in the Mutual Formation. Opening Brief, pp. 24-25. PPR admits that the production log only indicates cementing in the Mutual Formation. Doc. 101, p. 6531. However, Loughlin concludes "(1) the quartzite bedrock penetrated by the PPR Production Well is relatively unfractured, and the fractures that are present have been filled by gypsum and clay, (2) this formation is of extremely low permeability, and (3) the gradient from the bedrock is upward because the aquifer is under confined conditions. Doc. 101, p. 6532. The Director accepted the information provided by PPR concerning a possible hydraulic connection between the uppermost aquifer and potential lower aquifers as satisfying R315-308. Doc. 146, p. 9365.

As noted above, the Director's determinations that the bedrock beneath the landfill is cemented and that there is no hydraulic connection between the shallow aquifer and the bedrock are factual, technical, and scientific determinations that are supported by the record. Although Friends marshaled and acknowledged some of the evidence, it failed to marshal and acknowledge all of the evidence in the record that supports the Director's determination.<sup>5</sup> The Director is therefore arguably entitled to a presumption that his determinations are not clearly erroneous. However, even assuming that Friends satisfied its burden to marshal the evidence, Friends has

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<sup>5</sup> For example, Friends does not marshal evidence in the Loughlin Study on slug tests, aquifer parameters or upward gradient of the bedrock aquifer, supporting the Director's determination that there is no hydraulic connection between the shallow aquifer and the bedrock.

failed to carry its burden to overcome the Director's determination. Friends has the burden to identify information that there is a hydraulic connection between the flanglomerate aquifer and the bedrock, that the bedrock is not cemented, and that the Director's decision was a clear error. Friends raises issues and makes speculative and general statements, but does not offer persuasive, specific evidence of a hydraulic connection between the shallow (flanglomerate) aquifer and the bedrock. The ALJ therefore finds that the Director's determinations that the bedrock beneath the landfill is cemented and that there is no hydraulic connection between the shallow aquifer and the bedrock are supported by the record and are not clearly erroneous.

**B. The Director Did Not Err in Determining That the Three Downgradient Monitoring Wells Are Sufficient to Detect Any Releases From Cell 1A.**

Friends asserts that the three downgradient wells are not sufficient, due to complex geology of the site and fractured bedrock, citing to statements by Dr. Carling, Dr. Baskin and Compass Minerals. Opening Brief at pp. 8-10, 14-18.

The Statement of Basis sets forth the Director's determination that the three downgradient monitoring wells are sufficient to detect any releases from the landfill:

The Director believes that the upgradient well and three downgradient wells PPR has proposed meet the requirements of Utah Admin. Code R315-308-2(2). He is satisfied that the downgradient wells will detect releases from the cell they are intended to monitor. Doc. 146, p. 9362.

In addition, each of the following comments/replies and Division responses in the Statement of Basis address the sufficiency of the monitoring wells:

### Public Comment #2

*Commenters stated that the placement of groundwater monitoring wells must be at appropriate locations and depths to yield samples from the uppermost aquifer and all hydraulically connected aquifers below the facility, cell, or unit (Utah Code Ann. R315-308-2(2)). There is no analysis or evidence to establish that these additional requirements of Utah Admin. Code § R315-308-2(2) have been met. Commenters mentioned that additional studies and reviews should be undertaken before issuing the permit modification in order to ensure that the proposed wells will function as intended.*

### Division Response

Downgradient monitoring wells have been installed in locations to detect any release to groundwater from the landfill. PPR has submitted, and is required to follow, a groundwater monitoring plan to ensure that any impact from the landfill will be detected by the downgradient wells. The upgradient and downgradient wells appear to monitor the same hydrologic unit (fanglomerate), as evident from the boring logs presented in the Hydrogeological report (December 2018).

The location of the monitoring wells as approved in this modification satisfy the requirements R315-308-2 of the Utah Administrative Code. Doc. 146, p. 9364.

### Public Comment #7

*Commenters were concerned that the number of monitoring wells is insufficient to meet the requirements of the rules. One commenter suggested an equation for determining the appropriate number of downgradient wells.*

### Division Response

R315-308-2 of the Administrative Code requires a minimum of one upgradient, and two downgradient monitoring wells. PPR installed one monitoring well upgradient and three monitoring wells at the downgradient boundary of the landfill. The Director believes these wells are sufficient to show background conditions and to detect releases from the landfill. The Director has found no basis to use the equation provided by the commenter as a standard for determining the number of monitoring wells. Although the Division did suggest development of a groundwater model to determine the number of downgradient wells, it was concluded that some input parameters were ill-defined, so that a specific inference from a groundwater model would be too subjective to be useful in making a decision.

The number of monitoring wells in the approved modification satisfies the requirements of R315-308 of the Utah Administrative Code. Doc. 146, p. 9366.

#### Public Comment #8

*Commenters were concerned that the interface between monitoring wells within the alluvium and within bedrock has not been established. Additionally, with potential changes in groundwater flow direction over time, more wells should be installed.*

#### Division Response

The Hydrogeologic report provides evidence that groundwater samples taken from the monitoring wells are representative of the aquifer condition below the landfill. See the response to Public Comment #2 and #3 above.

The information PPR has provided satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, p. 9367.

#### Public Comment #9

*There are potential impacts to the GSL ecosystem and related economy, including to microbialites, the avian foodweb, brine shrimp cyst harvest industry, and mineral extraction industries, from groundwater contamination associated with a release from the Landfill facility. Commenters were concerned about how groundwater flow under the Landfill impacts the microbialites in the Great Salt Lake. Current models of microbialite formation suggest they form at groundwater seeps forming calcium carbonate. Microbialite structures in the Great Salt Lake are the densest on the shallow shelves bounded by faults as the water depth changes. Commenters pointed out that there are faults within 4,000 meters west of the western shore of Promontory Point. They are concerned that groundwater could be contaminated by operation of the landfill and could enter those faults without being detected. The Saline Wet Meadow wetland complex is along the entire western shore of Promontory Point. While this can be fed by surface water that contributes to its wetland characteristics, the West Promontory complex was understood to be fed by shallow groundwater. Commenters were also concerned about the potential impacts from contamination of stored solid waste containing heavy metals migrating into groundwater which could impact the migratory bird and waterfowl foodweb of the Great Salt Lake ecosystem. Commenters were also concerned that the groundwater system under the Landfill would be contaminated by Landfill solid waste seepage, impacting the Great Salt Lake ecosystem that the mineral extraction production and brine shrimp industries rely on. These industries generate billions of dollars into Utah's economy, and help support the Department of Natural Resources.*

#### Division Response

The Director understands the commenters' concern regarding the GSL ecosystem and its environmental and economic significance. However the scope of the modification request applies to the relocation of the groundwater monitoring wells, which have been relocated

to comply with R315-308-2 of the Utah Administrative Code. The groundwater monitoring program is designed to detect a release from the landfill to the upper most aquifer and thereby be protective of the resources about which the commenters have concern. See response to comments #2 and #3 above.

The information PPR has provided satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, pp. 9367-68.

Information provided by PPR, including the Loughlin Study and PPR's written responses to the Director's comments and questions on the Loughlin Study, conclude that the three downgradient groundwater monitoring wells are sufficient:

1. '[T]he spacing of the three downgradient wells is appropriate, given the low particle velocities in the fanglomerate aquifer beneath the landfill'. Doc. 101, P. 6535-36.
2. The hydrogeologic characteristics of the landfill area have been defined and show that the wells meet the requirements of R315-308. Doc. 103, pp. 6637-38.
3. The groundwater gradient and flow direction beneath the cell is south-southwest, as demonstrated by groundwater level measurements obtained between October 2018 and May 2019. Measurements obtained show wells MW-6, MW-7, and MW-8 are downgradient of the cell. Variations in groundwater levels and flow direction occur but wells MW-6, MW-7 and MW-8 continue to be downgradient. Additionally, MW-7 is directly downgradient of the leachate collection sump, the lowest collection point for the landfill drainage net and, therefore, is the most probable location for detection of a potential release. Doc. 103, p. 6637.

The Director's determinations that the bedrock beneath the landfill is cemented is addressed above in Section III.A. With respect to Friends' claim that the hydrogeology beneath the landfill is complex or complicated, R315-308-2 provides that the Director may require additional downgradient wells in "complicated hydrogeological settings" (R315-308-2(2)(b)), but the rules do not define this term. It is up to the Director's discretion to determine whether there is a complicated hydrogeological setting and whether to require any additional wells. The Director

did require an additional third downgradient well, instead of the required minimum of two downgradient wells. Although the record does not reflect whether the Director considered the landfill to be a complicated hydrogeological setting (using this terminology)<sup>6</sup>, the Director determined that the three downgradient wells were sufficient to detect any releases from the landfill.

The Director's determination that the three downgradient monitoring wells are sufficient to detect any releases from the landfill is a factual, technical, and scientific determination that is supported by the record, as noted above. Friends has failed to carry its burden to overcome the Director's determination. Friends has the burden to identify information that the three downgradient monitoring wells will not detect releases from the landfill and that the Director's decision was a clear error. Friends asserts that the wells are not sufficient due to complex geology and fractured bedrock, but does not offer persuasive, specific evidence of fractured bedrock, complex geology, or that the wells will not detect any potential releases from the landfill. The ALJ therefore finds that the Director's determinations that the three downgradient monitoring wells are sufficient to detect any releases from the landfill is supported by the record and is not clearly erroneous.

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<sup>6</sup> Although the Director refers to "complex geologic features" in a question to PPR about the Loughlin Study, Doc. 100, p. 6522, the record does show that the Director concluded that the landfill was in a "complicated hydrogeological setting."

**C. The Director Did Not Err in Not Requiring PPR to Drill Into the Bedrock Beneath Cell 1A.**

Friends asserts that the confining layer below the shallow aquifer must be identified in order to define the uppermost aquifer and to adequately design a monitoring system. Friends cites the 1986 RCRA Ground-Water Monitoring Technical Enforcement Guidance Document (“TEGD”) for the proposition that one or more boreholes must be drilled into the first confining layer beneath the uppermost aquifer to identify the confining layer beneath the uppermost aquifer. Opening Brief at pp. 16-18. This EPA guidance document does not apply to this proceeding.<sup>7</sup>

The Statement of Basis sets forth the Director’s basis for not requiring PPR to drill into the bedrock beneath Cell 1A:

Sur-Reply Comment #1

*Commenters were concerned that underneath the landfill cell, the interconnectivity of all aquifers vs. the groundwater-bearing aquifer (fanglomerate) was not adequately investigated.*

Division Response

See response to comments #2, #3, and #8 above. In addition, constructing additional borings into bedrock could create potential conduits for contamination to the hypothetical lower aquifer should a release occur.

Doc. 146, p. 9372.

The information PPR has provided satisfies the requirements R315-308 of the Utah Administrative Code. Doc 146, p. 9372.

Utah Administrative Code R315-308-2 does not require drilling into the confining layer beneath the uppermost aquifer. As discussed above in Section III.A., the Division defined the

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<sup>7</sup> On July 20, 2020, the ALJ issued a Declaratory Order declaring that the Utah Solid and Hazardous Waste Act and corresponding rules are the statutes and rules applicable to Friends’ Petition for Review, not the federal statutes or regulations.



first confining layer using the monitoring well data and the Production Well log and data, which show that that the bedrock is relatively unfractured, any fractures in the bedrock are cemented, and the bedrock aquifer is under confined conditions. The Director's determination that PPR was not required to drill into the bedrock beneath the landfill is a factual, technical, and scientific determination that is supported by the record, as noted above. Friends has failed to carry its burden to overcome the Director's determination. Friends has the burden to show that PPR was required to drill into the bedrock beneath the landfill and that the Director's decision was a clear error. Friends asserts that EPA guidance requires drilling into the bedrock, but EPA guidance does not apply to this proceeding. Utah regulations do not include require drilling into the bedrock and boring into the bedrock could create potential conduits. The Director relied on monitoring well data and the Production Well log and data to characterize the confining layer under the landfill. The ALJ therefore finds that the Director's determinations that that PPR was not required to drill to the bedrock beneath the landfill is supported by the record and is not clearly erroneous.

**D. The Director Did Not Err in Determining There is no Evidence of Springs.**

Friends asserts that there is record evidence that springs exist downgradient of the landfill and that the springs are likely connected to the aquifer beneath the landfill. Friends points to statements by Dr. Baskin, Dr. Baxter, Dr. Carling and Compass Minerals. Opening Brief at pp. 29-31. The Director reviewed these statements but did not find any specific evidence of Friends' assertion. The Statement of Basis addresses this determination:

Public Comment #4

*There is a need for more extensive studies of groundwater movement on the tip of Promontory peninsula and a determination of the source area for lakebed springs. Commenters asked if groundwater fate and transport studies have been conducted. There were statements concerning the fractured flow in bedrock underneath the site, and movement of groundwater through it. Commenters also asked if the source area for the springs on the Great Salt Lake lakebed has been assessed, and if there is a nexus between the recharge area and the springs.*

Division Response

See discussion in Public Comment #2 and #3 above. There is no requirement in the solid waste rules to conduct fate and transport studies for the Promontory Peninsula. Furthermore, no evidence has been presented to the Director that springs exist downgradient of the landfill that could reasonably be expected to be hydraulically connected to the upper most aquifer beneath the landfill. Commenters have asserted that there are springs that are hydraulically connected, but have not provided evidence beyond speculation to support those assertions.

The information PPR has provided concerning possible hydraulic connection between the uppermost aquifer and lower aquifers satisfies the requirements R315-308 of the Utah Administrative Code. Doc. 146, p. 9365.

The Director's determination that there is no record evidence that a specific spring exists downgradient of the landfill or that a specific spring is likely connected to the aquifer beneath the landfill is a factual, technical, and scientific determination that is supported by the record, as noted above. Friends has failed to carry its burden to overcome the Director's determination. Friends has not identified any specific springs or a pathway from the landfill to a specific spring. Friends has not shown that contaminated groundwater from the landfill is likely to reach a specific spring. Friends has not proven that the Director's decision was a clear error. The ALJ therefore finds that the Director's determination that that there is no record evidence that a

specific spring exists downgradient of the landfill and that a specific spring is likely connected to the aquifer beneath the landfill is supported by the record and is not clearly erroneous.

In summary, Subsections III. A. through D. collectively support the ALJ's finding that the Director's decision to issue the Permit Modification is supported by the record and is not clearly erroneous.

#### **IV. THE DIRECTOR DID NOT ERR IN APPROVING THE SAMPLING SCHEDULE**

Friends asserts that in light of evidence that highly fractured bedrock is present beneath the landfill and because contamination from the landfill could quickly reach the downgradient springs, it was clearly erroneous for the Director to not require a more aggressive sampling schedule. Opening Brief at 32-33.

Friends' sampling frequency claim is based on its claim that highly fractured, largely uncemented bedrock is hydraulically connected to the shallow aquifer and the existence of downgradient springs. As discussed above in Section III.A., the ALJ finds that the Director did not err in determining that the bedrock beneath the landfill is largely unfractured, the bedrock fractures are cemented and that the fanglomerate aquifer identified in the vicinity of the landfill does not flow to the deeper bedrock aquifer because the bedrock aquifer is under confined conditions with an upward gradient. Also, as discussed above in Section III.D., the ALJ finds that the Director did not err in determining there is no record evidence that a specific spring exists downgradient of the landfill and that a specific spring is likely connected to the aquifer beneath

the landfill. Based on these findings, Friends' sampling frequency claim has no merit. The ALJ therefore finds that the Director's determination that the Permit Modification, which includes the sampling schedule, satisfied R315-308-2 is supported by the record and is not clearly erroneous.

**V. PPR IS NOT ENTITLED TO AN AWARD OF ATTORNEY FEES**

PPR asserts that it is entitled to an award of attorney fees under Utah Code § 78B-5-825 because Friends' Petition for Review and briefs are without merit and not brought or asserted in good faith. Utah Code § 78B-5-825 provides that [i]n civil actions, the court shall award reasonable attorney fees to a prevailing party if the court determines that the action or defense to the action was without merit and not brought or asserted in good faith."

Utah Code § 78B-5-825 is part of the Judicial Code and applies to judicial proceedings, not special adjudicative proceedings. The statute and regulation governing special adjudicative proceedings, Utah Code §19-1-301.5 and Utah Admin. Code R305-7, do not provide for the award of attorney fees. In addition, PPR does not offer proof that Friends' claims were without merit and were not brought or asserted in good faith. Further, based on the record and Friends' briefs and oral arguments at the hearing, the ALJ finds that Friends' claims do have merit and that there is no evidence in the record that Friends' claims were not brought or asserted in good faith.

**RECOMMENDED ORDER**

Sections I through IV of the Conclusions of Law collectively support the ALJ's finding that Friends has not met its burden to demonstrate that the Director erred in issuing the Permit Modification and that the Director's decision to issue the Permit Modification is supported by the


record and is not clearly erroneous. Having satisfied my charge to undertake a special adjudicative proceeding in accordance with Utah Code § 19-1-301.5, I recommend that the Executive Director issue the following order:

1. Because Friends failed to preserve its claim that the Fanglomerate is the Geersten Canyon Formation, this claim is dismissed, with prejudice.
2. The Director did not err in determining that the Monitoring Well System complies with Utah Administrative Code R315-308-2 and that PPR was not required to conduct modeling.
3. The Director did not err in issuing the Permit Modification.
4. The Director did not err in determining that the bedrock beneath the landfill is cemented and there is no hydraulic connection between the shallow aquifer and bedrock.
5. The Director did not err in determining that the three downgradient monitoring wells are sufficient to detect any releases from Cell 1A.
6. The Director did not err in not requiring PPR to drill into bedrock beneath Cell 1A.
7. The Director did not err in determining that there is no evidence of springs.
8. The Director did not err in approving the sampling schedule.
9. PPR is not entitled to an award of attorney fees.
10. Deny Friends' request for remand of the Director's Groundwater Permit Modification to require the Director to comply with and properly apply the statute and rules to ensure protection of local groundwater and Great Salt Lake from contamination.

**NOTICE OF OPPORTUNITY TO COMMENT**

Parties may file comments on the Recommended Order with the Executive Director within ten business days of service of this Recommended Order in accordance with the requirements of Utah Admin. Code R305-7-213(6). Comments shall not exceed 15 pages. A party may file a response to the other party's comments, not to exceed five pages, within five business days of the date of the service of the comments.

DATED this 12th day of February, 2021.



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Lucy B. Jenkins  
Administrative Law Judge

## CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of February, 2021, a true and correct copy of the foregoing **ALJ'S STATEMENT OF MATERIAL FACTS, CONCLUSIONS OF LAW AND RECOMMENDED ORDER ON THE MERITS**, was sent by electronic mail to the following:

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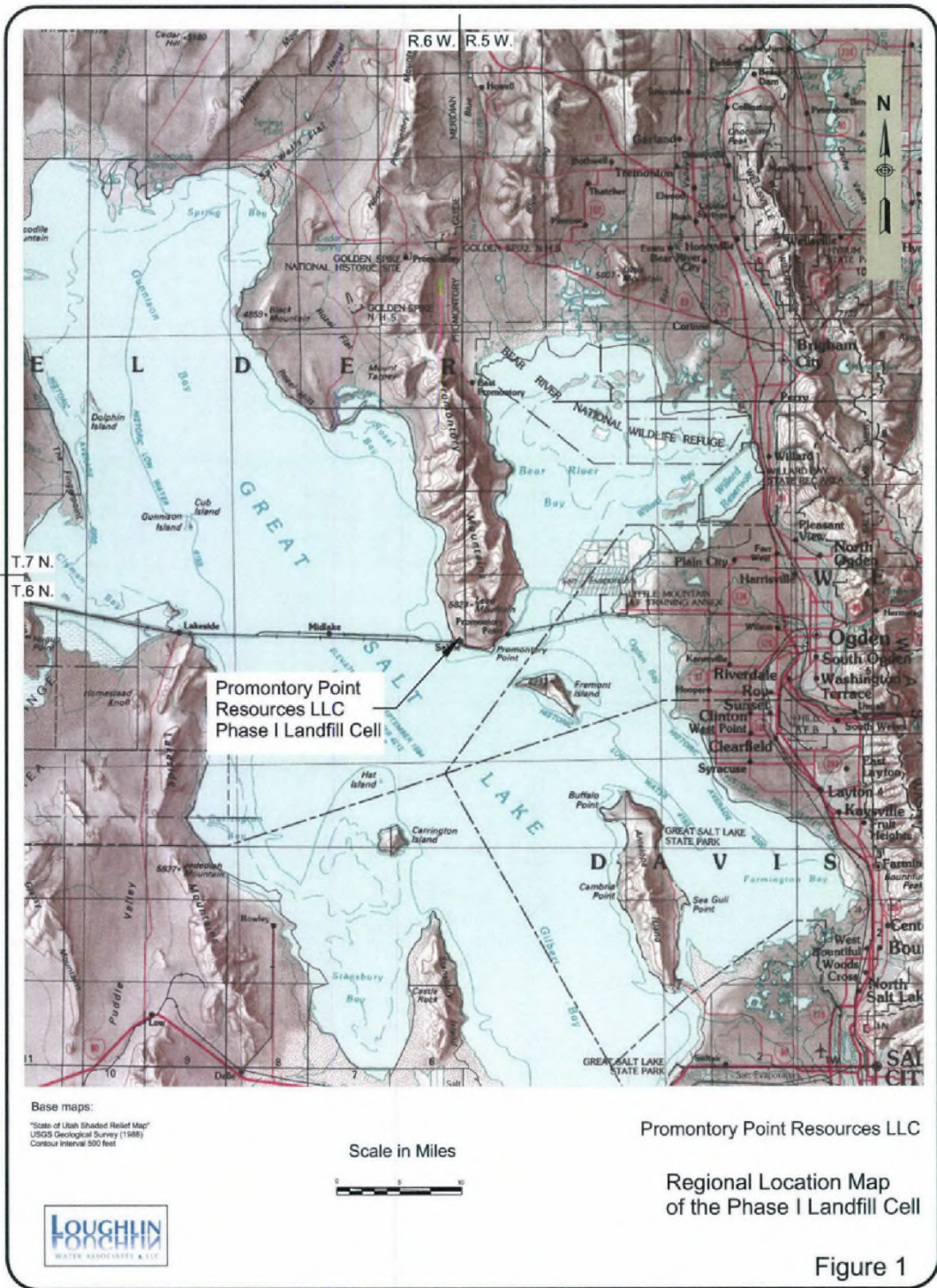
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# **EXHIBIT A**

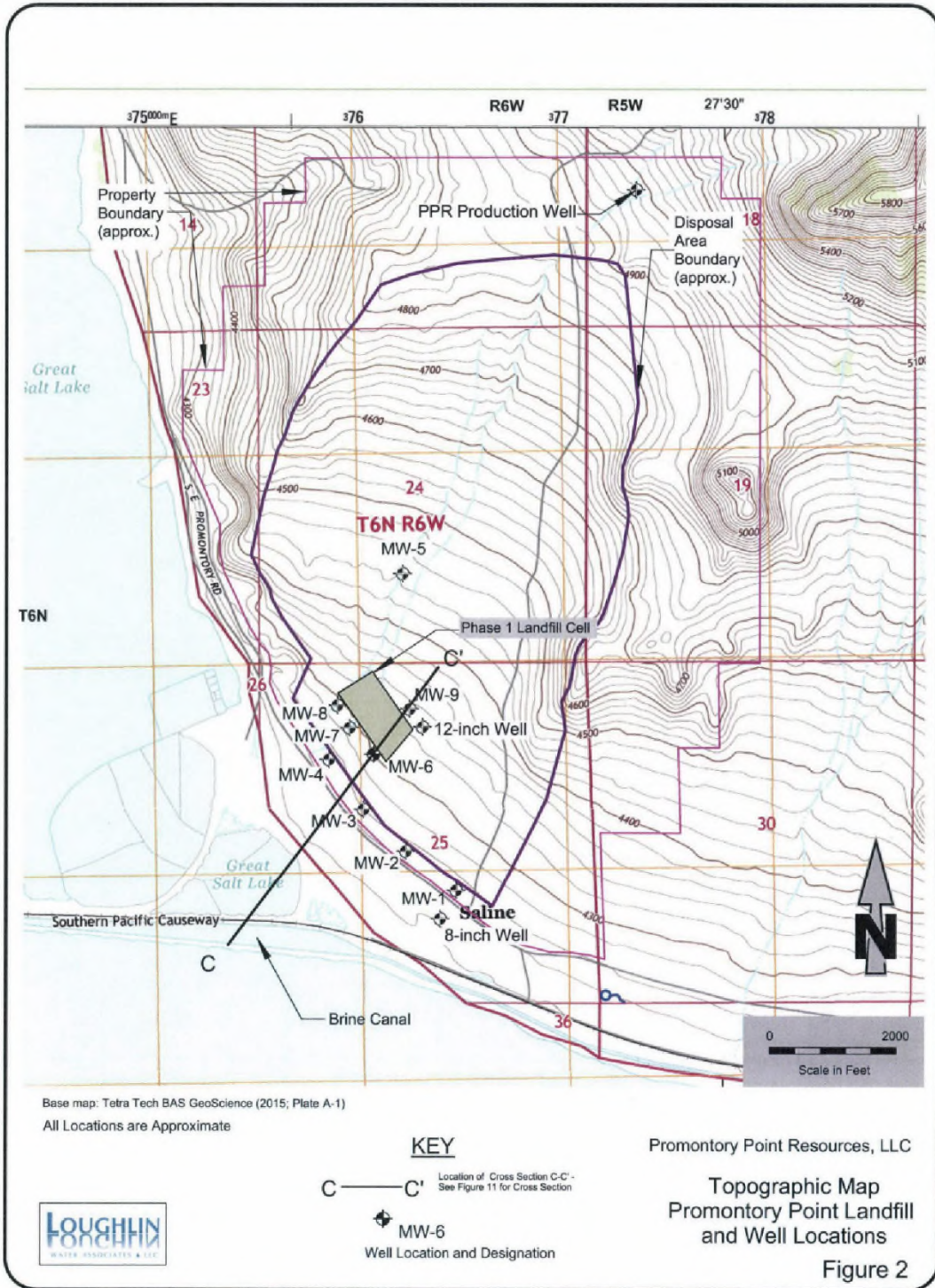




PROMGMS005934

# **EXHIBIT B**






# **EXHIBIT C**



REFERENCE: Division of Water Rights Basemap 2018



**KEY**  
MW-6  Monitor Well Locations  
and Designations  
(MW-6 through MW-9)  
0 150 300  
Scale in Feet

Promontory Point Resources, LLC  
Location of Monitor Wells  
MW-6, MW-7, MW-8 and MW-9

Figure A-3  
PROMGMS005984