

**Proposed Revisions to Water Quality Rules and Regulations, Commercial Oilfield
Waste Disposal Facilities**

Analysis of Comments Received by October 7, 2019



Revised November 1, 2019

Revisions highlighted in yellow

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Commenter:

Paragon Consulting Group, Inc.

Comments and Responses

Section 3

Paragon Consulting Group, Inc.: “We believe that the word “modification” is a bit vague and understand the need for regulatory flexibility; however, we recommend that some clarity be added so that minor and insignificant modifications to previously permitted facilities will allow the facility to continue to operate under its existing permit. Requiring new permits for existing facilities due to minor modifications would likely trigger an avalanche of permit applications and create a regulatory log jam.”

Department Response: WDEQ/WQD reviewed the comment and believes the clarity already exists in Water Quality Rules and Regulations Chapter 3, Section 9(a)(iii), which requires that “...Applications for modification of existing facilities permitted by the Division to increase capability to treat, hold, or dispose of wastes may be approved requiring only the modification to meet minimum design standards if the existing facility is not in violation of applicable regulations. Facilities not in compliance will require modifications to other portions of the facility to bring the facility into compliance with applicable regulations. Other modifications will be allowed if minimum standards for the modification are met.”

If existing facility permittees wish to increase the capability or treat, hold or dispose of wastes, they will need to apply for a modification under Chapter 3 and the facility will need to meet the minimum design standards proposed in Chapter 28. However, if a facility is merely replacing existing equipment in-kind and not increasing the capability to treat, hold or dispose of wastewater, then DEQ/WQD will not require an application for a permit modification.

Section 8

8(a), 8(a)(iv)

Paragon Consulting Group, Inc.: “Most leak-detection monitoring results are either dry or wet sumps so the initial results are binary. We are unclear as to what leak-

detection monitoring results should be graphed. Is the intent to plot water-quality data and leak rates if water is observed in the sumps? Some clarification here would be very helpful.”

Department Response: WDEQ/WQD considered the comment and has revised the passage to the following: “A discussion and analysis of the leak detection monitoring results and corrective action taken in a format approved by the Administrator.”

Section 9

9(a)(i)(D)

Paragon Consulting Group, Inc.: “Most of the COWDFs we have permitted are quite remote, so we recommend setting some sort of maximum distance such as within 1.5 miles from the proposed COWDF boundary. This would add a buffer to the current 1-mile radius for residences.”

Department Response: WDEQ/WQD considered the request. W.S. § 35-11-306(a) sets the distance at one mile. The proposed requirement at 9(a)(i)(D) is in place so that WDEQ/WQD can verify that the facility will comply with the minimum statutory requirement. State agencies are discouraged from promulgating rules that supplement or alter a statute if the statute is clear, so the passage will remain as written.

9(b)(iii)(E)

Paragon Consulting Group, Inc.: “In our experience item 9.b.ii.E is accomplished via a geologic cross section with the pond geometry superimposed on the geologic cross section. Groundwater observations, if present, are usually shown on this cross section. If this is the intent, we recommend adding those requirements and stating that should be in the form of a scaled geologic cross section.”

Department Response: WDEQ/WQD considered the comment and has added an additional paragraph to the list located at 9(b)(iii): “Scaled geologic cross-sections with the pond geometry, monitoring wells, borings, and groundwater observations if present, superimposed on the geologic cross-sections.”

9(b)(iii)(G)

Paragon Consulting Group, Inc.: “We were a bit confused by item 9.b.ii.G since these facilities should be sited outside the 100-year floodplain. It would be helpful to either remove this item so applicants do not get the impression that COWDFs can be constructed in floodplains or to add some clarifying language regarding the intent of this requirement.”

Department Response: WDEQ/WQD considered the comment and has removed the requirement since facilities are not allowed to be sited within the 100-year floodplain, per Section 6(b).

Section 10

10(b)(i)

Paragon Consulting Group, Inc.: “We hope that the permit reviewers understand that most of the receiving headworks are relatively simple and primarily operate via gravity flow and gravimetric separation. Therefore, there are relatively few data points to satisfy 10.b.i other than there was no visible oil or little visible oil prior to discharge to the settlement pond that almost all designs include between the receiving headworks and the evaporation ponds. The regulation is performance driven in that visible oil should not be present on the evaporation ponds, and if observed it must be immediately removed.”

Department Response: WDEQ/WQD considered the comment and has clarified the passage at (b)(i)(A)-(E)(II) to apply only to active wastewater treatment facilities. The requirements for receiving facilities are listed in Section 10(b)(ii).

10(b)(ii)

Paragon Consulting Group, Inc.: “Regarding 10.b.ii, it is unclear how this can be demonstrated before a facility goes into operation as water delivered to the COWDFs varies significantly by region and season; therefore, facilities must be operated fairly dynamically. Again, the regulation is performance driven in that visible oil should not be present on the evaporation ponds, and if observed it must be immediately removed. Therefore, 10.b.ii may not be needed and a demonstration of operational success will not occur until the receiving headworks has been put into operation.”

Department Response: DEQ/WQD considered the comment. DEQ/WQD regularly receives the information proposed in Section 10(b)(ii) and finds it helpful to analyze the proposed design components to determine if they will meet the requirement to remove liquid hydrocarbons from the produced water. The passage will remain as written.

10(c)(i)(A)

Paragon Consulting Group, Inc.: “We suggest adding a requirement that rocks larger than ½ inch in diameter or any other material that could damage the geomembrane shall be removed from the surface to be covered with the geomembrane.”

Department Response: WDEQ/WQD considered the comment and has added an additional passage to 10(c)(i)(A): “Rocks larger than six (6) inches in length shall not be placed within five (5) feet of the interior slope of any pond embankment. All rocks larger than one-half (½) inch in diameter or any other material that could damage the geomembrane shall be removed from the surface to be covered with the geomembrane.”

10(c)

Paragon Consulting Group, Inc.: “We believe that line 428 should be (d) rather than (c).”

Department Response: WDEQ/WQD reviewed the comment and agrees that there is a numbering error. The passage “The facility design shall meet the following liner base, primary and secondary liner, and leak detection system standards:” has been renumbered to paragraph (d).

10(c)(i)(A)

Paragon Consulting Group, Inc.: “We also recommend that the word “compacted” be inserted as shown above in bold Italics in 10.c[d].i.A.”

Department Response: WDEQ/WQD reviewed the comment and has revised the passage as requested.

10(c)(iv)(C)(II)

Paragon Consulting Group, Inc.: “We recommend that the collection line distance included in 10.c[d].iv.C.II be increased to 140 feet since this distance has proven effective in the past, is more constructible for a typical 400 by 600 foot pond, and allows the leak-detection system to function effectively.”

Department Response: WDEQ/WQD reviewed the comment and has revised the passage as requested.

Section 11

11(c)

Paragon Consulting Group, Inc.: “We recommend that this requirement be modified to reflect that fact that many facilities are permitted in areas where groundwater is never observed during the geohydrologic assessment. For example, a site with 23-foot deep ponds will have a typical pond bottom that is somewhere in the neighborhood of 15 or less below grade so if groundwater is not observed to 35 feet, that should be sufficient information for permitting and leak-detection monitoring purposes. In that case, there is no groundwater to sample. This wording could be revised with a clause “that if groundwater is present in ...”

It is also unclear as which Underground Water Class should be used to implement the analyte list found in Chapter 8 Table 1. We recommend that some additional clarification be provided since the list of analytes varies with water class. We also recommend that the list of analytes be tailored to more closely match possible impacts associated with a release from a COWDF, similar to the current analyte list included with recent Permits to Construct issued by the Wyoming Department of Environmental Quality, Water Quality Division.”

Department Response: WDEQ/WQD has reviewed the comment. For the comment regarding observing groundwater during the geohydrologic assessment, WDEQ/WQD has revised the passage to: “Baseline groundwater quality shall be established for any unconfined aquifer encountered at the site prior to any water being placed in the ponds.”

WDEQ/WQD has clarified the reference to Water Quality Rules and Regulations Chapter 8, Table 1 to include Underground Water Class I parameters.

Section 12

Paragon Consulting Group, Inc.: “In our opinion the section included in the proposed rule is appropriate for a typical wastewater treatment plant, but is not practical for a COWDF. We have typically provided the following types of information:

1. Staffing and management structure;
2. Planned work and facility operation schedules;
3. Staff training and qualifications;
4. Wastewater receiving procedures including non-conforming loads as well as record keeping and reporting procedures;
5. Process and instrumentation diagram; and
6. Maintenance and inspection procedures.

We also recommend including a requirement that a contingency plan designed to minimize hazards to human health or the environment from fires, explosions or unplanned sudden or non-sudden release of waste or waste constituents to soil, surface or groundwater be included with the Design Operations and Closure Plan. This plan should include procedures for notifying the appropriate State or local agencies with designated response roles described in this plan. The contingency plan should also include reporting thresholds and response procedures for spills, fires, explosions and other possible failures as well as record keeping procedures. Leak detection monitoring and response procedures should also be included in this plan.”

Department Response: WDEQ/WQD considered the comment and has removed the typical wastewater treatment plant O & M components from the section and has added the COWDF O&M Guidance list as a new appendix A. WDEQ/WQD has also added the requested contingency plan information to the new appendix.

Revised Department Response: WDEQ/WQD considered the comment and has revised Section 12 by removing the typical wastewater treatment plant O & M components. WDEQ/WQD is proposing to require the following O & M information:

(i) Introduction that includes an overview of the facility and operational processes;

(ii) Process and instrumentation diagram;

(iii) Wastewater receiving procedures, including non-conforming loads;

- (iv) Copies of all state and federal permits associated with the facility;*
- (v) Record keeping and reporting procedures;*
- (vi) Planned work and facility operation schedules;*
- (vii) Staffing and management structure;*
- (viii) Maintenance and inspection procedures;*
- (ix) Copies of the sampling and analysis plan for the groundwater monitoring program and the leak detection system; and*
- (ix) A contingency plan that includes:*
 - (A) A discussion of how hazards to human health and the environment will be minimized in case of fires, explosions, or unplanned sudden or non-sudden release of waste or waste constituents to soil, surface water, or groundwater;*
 - (B) Procedures for notifying appropriate State or local agencies with designated response roles; and*
 - (C) Reporting thresholds, response procedures, and recordkeeping requirements for spills, fires, explosions, and other possible failures.*