

EXHIBIT D



Wyoming Refining Company

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Thank you for the opportunity to review DEQ's draft statement of basis and permit renewal for Wyoming Refining Company's ("WRC") Wyoming Pollutant Discharge Elimination System (WYPDES) permit number WY0001163 for the Newcastle Refinery. WRC timely applied for renewal of the permit on January 24, 2023 by submitting the required renewal application and supplemental information. DEQ's timely processing of the permit renewal is greatly appreciated, and WRC looks forward to working with DEQ to ensure the permit is appropriate for the Newcastle Refinery and compliant with all legal requirements.

WRC's concerns with the draft statement of basis and permit renewal apply to the discussion of compliance issues, regulation of the non-contact stormwater Outfall 002, as well as discussion and regulation of Outfall 001. The following comments are offered for your consideration and WRC requests a meeting, at your convenience, to discuss these issues.

- 1. Outfall 002:** In some places in the statement of basis and draft renewal, Outfall 002 is incorrectly considered and treated in the same fashion as Outfall 001 – as a wastewater discharge (i.e.: Draft Permit, Table A). In other places, Outfall 002 discharges are acknowledged as consisting “solely of runoff not commingled or treated with process wastewater” and that WRC is “prohibited from discharging any process wastewater flows at Outfall 002.” Statement of Basis, p. 9. WRC's use of Outfall 002, separate and distinct from Outfall 001, has not changed and remains as characterized in the current permit and its statement of basis. Therefore, the effluent discharged from Outfall 002 remains “runoff not commingled or treated with process water” and subject to technology based effluent limitations only for oil and grease and total organic carbon. Should those limits be exceeded or should the stormwater be commingled or treated with process water, then the BPT mass-based limits from the EPA Effluent Guidelines and Standards for Petroleum Refining Point Source Category, Cracking Subcategory would apply to Outfall 002. 2018 Statement of Basis, Appendix B, p. 1; 2018 Permit, pp. 3-4.

The 2018 permit language tracks nearly exactly with the federal rule, except it applies the Wyoming oil and grease standard of 10 mg/L instead of the federal guideline of 15 mg/L. 40 C.F.R. § 419.22(e)(2). Federal rules also require that limits “be established for each outfall or discharge point of the permitted facility” 40 C.F.R. § 122.45(a). Outfall 002 is a distinct point source, different than Outfall 001 because it receives different effluent from a separate and different treatment process and it discharges to a different receiving waterbody – Little Oil Creek, not the unnamed tributary of Blacktail Creek to which Outfall 001 discharges. Lumping Outfall 002 into the same requirements as Outfall 001 does not allow for appropriate regulation of each unique outfall and is therefore inconsistent with federal requirements.

WRC requests that DEQ continue regulating Outfalls 001 and 002 as separate and distinct sources, in the same manner reflected in the 2018 permit. All references to Outfall 002 should be removed from Table A and from the text of Part 1.A.1. The effluent limits in Table A should be established for Outfall 001 discharges only and should not include a summation of values from Outfalls 001 and 002. As DEQ did with the 2018 permit, separate effluent limitation and monitoring tables should be provided for Outfall 002. See 2018 Permit, pp. 2-6.

2. Compliance Issues.

- a. **Statement of Basis, Table 1A, pages 2-3:** While review of permit exceedances is appropriate when drafting a permit renewal, a list of permit exceedances, which is already publicly available¹ is not required. For WRC's permit, all the permit exceedances have been addressed and rectified. None represents a recurring issue that would warrant additional permit limitations or conditions. In fact, none of the exceedances listed in Table 1A warranted any additional action from DEQ; therefore, characterizing them as "compliance issues" is misleading. As detailed in WRC's permit renewal application and supplemental information, all the permit exceedances were timely addressed, none have been repeated, and therefore none of the exceedances signal any compliance issues that warrant modification or attention in this permit renewal. Table 1A is therefore duplicative, misleading, and unnecessary. As such, Table 1A should be deleted.

Six permit exceedances are listed for Outfall 002 that did not occur during the term of the currently effective permit, which began August 1, 2018. Those six exceedances should therefore not be considered in any event. Even so, those six exceedances, all from the monitoring period ending May 31, 2018, were caused by a single, random, and unprecedented storm event that delivered 4.35 inches of precipitation in a short timeframe. As reported to both DEQ and EPA on June 18, 2018, the stormwater ponds were all empty prior to the rain event. After the storm began, our crews worked late into the night to keep the stormwater releasing as fast as possible at Outfall 002 to protect the integrity of the Black Hills Power substation and to keep any stormwater from entering the wastewater system. However, toward the end of the storm event, the stormwater system received wastewater flow from the wastewater system. WRC reported the incident to DEQ and was informed that the exceedances would be waived due to extenuating circumstances. Neither DEQ nor EPA expressed any compliance concerns in response to the report provided by WRC. In accordance with the permit, significant changes were made to the stormwater BMP (Best Management Practices) systems, including installation of rollover curbing, berms, ditches, and a retaining wall, as well as reconfiguration of the two lift station pumps. The enhanced BMPs appear to be working very well as no further incidents have occurred. Please see Attachment 1 (a map showing the location of stormwater improvement areas), WRC's permit renewal application and supplemental information, as well as the previous event reports provided to DEQ for further information. The isolated storm event that caused permit exceedances at Outfall 002 in May 2018 is not a compliance issue.

Notably, seventeen of the exceedances listed in Table 1A were the result of a one-time event that had a 7-month long effect on WRC's system extending from May 2022 through November 2022. After cleaning the refinery's ethanol storage tank, a temporary spike of ethanol made its way through the wastewater treatment system, fouling some portions of the treatment process. The issue was properly reported to DEQ and EPA and appropriately addressed, as documented in monthly compliance reports sent to DEQ and EPA and in WRC's permit renewal and supplemental information. Corrective actions

¹ See EPA's Integrated Compliance Information System ("ICIS") at <https://enviro.epa.gov/envirofacts/icis-mpdes/search>.

were successfully implemented, and no similar upsets have occurred since. Therefore, the seventeen exceedances listed from May 2022 through November 2022 do not represent any compliance issues.

The April 2023 exceedance for selenium for the monitoring period ending April 2023 was investigated by WRC. After submitting duplicate samples to a laboratory that specializes in selenium analyses, we confirmed that the April 2023 exceedance was laboratory bias or error. Since changing laboratories for selenium analysis in May 2023, the analyses have been completed properly and no further selenium exceedances have occurred.

As described in WRC's supplemental information provided with the permit renewal application, the four sulfide exceedances were the result of livestock activity immediately upstream and within 10- to 20-feet of Outfall 001. Three of the exceedances occurred in September 2021 when original sampling indicated both the daily maximum and the monthly average limits were exceeded. These results did not appear possible as sampling at the Windmill Draw Impoundment² indicated the sulfide concentration was 0.29 mg/L versus 3.6 mg/L at Outfall 001. Another sulfide sample was obtained from Outfall 001 and that result was 3.2 mg/L. A wastewater consultant indicated that the elevated sulfide levels at the outfall were more than likely from cattle defecating immediately upstream of Outfall 001, which is located 0.6 miles downstream from the impoundment. The same thing occurred in September 2022 when the sulfide at the Windmill Draw Impoundment was 0.229 mg/L and the sulfide at Outfall 001 was 1.82 mg/L; however, the daily maximum level was met while the monthly average was exceeded. WRC does not own the property where Outfall 001 is located and cannot fence the livestock out without the landowner's cooperation. However, WRC is doing what it can to keep livestock from this location. WRC's efforts appear to have been effective in 2023, but future effectiveness remains unpredictable at this time.

Also as noted in WRC's supplemental information provided with the permit renewal application, WRC instituted a policy that, absent emergency conditions, storm water will not be released through Outfall 002 until monitoring, sample analysis, and review has been completed to confirm compliance with permit conditions and limits. Since instituting this policy, no additional permit exceedances have occurred at Outfall 002.

- b. Windmill Draw Impoundment Discussion, Statement of Basis, page 2:** DEQ is correct that some issues stem from the presence of livestock upstream of, around, and near Outfall 001; however, statements that the Windmill Draw Impoundment is not fenced are incorrect. The impoundment is completely fenced and has been since its construction nearly forty years ago. While wildlife and birds may access the impoundment, livestock do not. However, the fencing is limited to the impoundment and does not keep livestock out of the area between the impoundment and Outfall 001, which is 3,167 feet, or approximately 0.6 miles, downstream.

² Also known as and referred to as the "containment pond" or the "frog pond."

3. **Additional Sampling Port (SP1), Statement of Basis, page 2; Draft Permit, Part I.A.1.; I.L.10:** For the permit limits provided in concentration, the draft statement of basis and permit renewal proposes to add another compliance point at Sampling Port 1 (SP1). Although the load limits are proposed to apply to Outfall 001 and erroneously to Outfall 002, the concentration limits apparently will apply to SP1. As noted in WRC's renewal application and supplemental information, the Windmill Draw Impoundment provides treatment of the effluent discharging at Outfall 001 through sedimentation and aeration. Additionally, the volume of effluent is reduced through evaporation from the impoundment. Effluent is then further treated through natural processes as it flows overland to Outfall 001 where it discharges to an ephemeral gully. Monitoring at SP1 would only represent partially treated effluent intended for discharge at Outfall 001 and would not represent effluent discharging at Outfall 002 at all. Therefore, use of SP1 would not be "representative of the monitored activity" as required by federal rule. 40 C.F.R. 122.48(b).

Installation of SP1 poses an additional challenge because SP1 is approximately 48 feet east of the buried discharge pipe to the Windmill Draw Impoundment. See Attachment 2. The discharge pipe in that location is buried approximately 6 feet deep and is made of fiberglass, making installation of a sampling port difficult, at best.

WRC requests that the installation of and monitoring at the newly proposed SP1 be removed from the permit because installation of the proposed SP1 poses significant challenges and because SP1 would not yield samples representative of the fully treated effluent. WRC has some data collected from both the on-site wastewater treatment ponds and the surface water leaving the Windmill Draw impoundment. Neither sampling location represents fully treated effluent; however, the data could be compared to Outfall 001 data to illustrate the impact of wildlife and livestock between the impoundment and Outfall 001. Because the livestock and wildlife are beyond WRC's control and are not part of WRC's facility or water treatment, such impacts are not attributable to WRC and should not be considered when developing WRC's permit effluent limitations.

4. **Reasonable Potential Analyses:**

- a. **Hardness Calculations, Statement of Basis, n. 5; Draft Permit, Table A, n. 2:** Wyo. Admin. Code § 020.0011.1 App. F provides that the toxicity of chromium is dependent on hardness and instructs that "[h]ardness values used in these equations must be less than 400 mg/L. For hardness values greater than 400 mg/L, use 400." However, the statement of basis and draft permit rely on a hardness value of 613 mg/L. The Reasonable Potential Analyses should be recalculated using a hardness value of 400 mg/L.
- b. **Chromium Limits, Statement of Basis, Table 1B; Draft Permit, Table A:** As noted in previous permits and in Special Condition 1 on page 11 of the Statement of Basis, the Modified Consent Decree and Second Stipulation of the Parties filed May 22, 1985 in Docket No. 86-108 in *People of the State of Wyoming v. Wyoming Refining Company* in the District Court of the First Judicial District in and for Laramie County still governs this permit. Paragraph 6 of the Second Stipulation states:

DEQ waives any chromium monitoring in view of Defendant's previous monitoring test results from monitor wells and flumes installed on or adjacent to its facilities. The Defendant states that it will not utilize chromium-based compounds in any part of its process at its refinery in Newcastle, Wyoming, and in the event that there is any change in this policy, it will promptly confirm the same to DEQ in writing and will commence conducting chromium monitoring on a quarterly basis.

While effluent limitations for chromium have been retained in the permit, WRC "will not be required to monitor for chromium unless the company begins using chromium-based compounds in their process." Instead, DEQ "will monitor the discharge for chromium compounds whenever compliance monitoring is performed by this agency." See 2018 Statement of Basis, p. 3; 2018 Permit, p. 2. To WRC's knowledge, all samples DEQ has collected from the discharge and monitored for chromium have revealed no detection of chromium since at least 2009. WRC remains in compliance with the Second Stipulation and modified Consent Decree and has not added chromium compounds to its process. As noted in WRC's permit renewal application and supplemental information, chromium is only present "in the metal in welding rods and wire brushes (not used in crude processing or water treatment)." All materials that come into the refinery must be accompanied by a Safety Data Sheet ("SDS") and go through an evaluation system before being used. A search of all refinery records and SDSs was conducted for the permit renewal and no chromium-based compounds were found. DEQ's assertion that chrome steel pipe sheds chromium into the facility is speculative only, not supported by the monitoring data, and does not negate the court-approved modified Consent Decree. Therefore, the modified Consent Decree continues to apply in this renewed permit. Table A for Outfall 001 should be modified to include footnote (1) from the 2018 permit ("Monitoring and effluent limits for chromium do not apply unless the facility uses chromium-based compounds in their process").

Footnote 6 to Table 1B in the Statement of Basis notes that the daily maximum limit is based on the acute aquatic life standard. For chromium VI, the acute standard appears to be 16 micrograms per liter instead of the 11 micrograms per liter provided in Table 1B.

- c. **Ammonia Limits, Statement of Basis, Table 1B; Draft Permit, Table A:** Wyo. Admin. Code 020.0011.1 §21(a) provides that for waterbodies classified as 3B, such as the receiving waterbodies at issue in this permit, ammonia is governed by a narrative standard. The nearest Non-Game Fish or Game Fish waters that discharges from Outfall 001 could reach is Beaver Creek, a class 2ABWW stream, but Outfall 001 is more than 21 miles upstream of Beaver Creek and the Deveraux stock dam blocks the route between the two. Only the 3B narrative standard applies to Outfall 001. However, the statement of basis incorrectly applies the pH-dependent numeric standard for the reasonable potential analysis. As in the 2018 Permit, the narrative standard applies and is met by the load based TBEL for ammonia. The numeric concentration limit should be removed.

- d. **BTEX Limit, Draft Permit, Table A:** By definition, 3B waters do not support fish or any human health beneficial use. Wyo. Admin. Code 020.0011.1 § 4(c)(ii). For BTEX parameters, only Benzene, Ethylbenzene and Xylene have water quality standards, but only for human health uses. Standards for BTEX do not apply to the receiving waterbody; therefore, a water quality based effluent limit for BTEX is inappropriate. Likewise, BTEX is not a required TBEL limit. WRC has not reported any BTEX parameter in its effluent and the most recent sampling for the 2023 permit renewal resulted in a reading below the detection limit. There is no reasonable potential for BTEX to be present at any levels that could cause or contribute to a standard exceedance because WRC employs an Aggressive Biological Treatment Unit (ABTU), which treats for all BTEX parameters. The limit for BTEX should be removed from Table A in the draft permit.

- e. **Fluoride Limit, Statement of Basis, Table 1B; Draft Permit, Table A:** By definition, the 3B receiving waterbody does not support fish or any human health beneficial use. Wyo. Admin. Code 020.0011.1 § 4(c)(ii). The numeric standard for fluoride used in the reasonable potential analysis only applies to waterbodies that support human health, consumption of fish, and drinking water uses, and then only when drinking water is an actual use. Here, the receiving water is classed as 3B and does not support any drinking water use, nor is there any actual drinking water use. Additionally, Outfall 001 is 21 miles upstream from the nearest waterbody that could support a drinking water use (Beaver Creek), but with at least one manmade dam (the Deveraux stock dam) limiting the passage of water between Outfall 001 and Beaver Creek. There is no reasonable potential for the discharge from Outfall 001 to cause or contribute to a standard exceedance for fluoride. The reasonable potential analysis for fluoride should be corrected in the statement of basis and the fluoride limit should be removed from the draft permit.

- f. **E. Coli Limit, Statement of Basis, Table 1B; Draft Permit, Table A.** The receiving waterbody for Outfall 001 is an ephemeral gully that does not support or have any existing primary or secondary contact recreation. Therefore, regulation of this permit for E. coli. is unwarranted and inappropriate. Further, there is no reasonable potential for the discharge at Outfall 001 to cause or contribute to a standard exceedance for E. coli. because there is no source of E. coli within the Newcastle Refinery. The only sources are naturally occurring wildlife and privately owned livestock beyond WRC's control. WRC has fenced the impoundment to keep livestock away but does not, and depending on landowner permissions, might not be able to control the livestock or wildlife between the impoundment and Outfall 001. Even so, the numeric reasonable potential analysis in the statement of basis reveals no need for a limit because the effluent water quality, as sampled at Outfall 001, does not exceed the standard. Therefore, WRC's discharge has no potential to cause or contribute to an exceedance of the E. coli standard and the limit should be removed.

g. Total Suspended Solids Limit, Draft Permit, Table A: It also appears the Total Suspended Solids limits (lbs/day) have been transposed. The monthly average should be 126.0 lbs/day and the daily maximum limit should be 197.6 lbs/day.

5. Whole Effluent Toxicity Testing, Statement of Basis, p. 10; Draft Permit, Table A: The new WET requirements are presented inconsistently in the draft permit. Page 5 of the permit requires Semi-Annual sampling; however, Pages 7, 8, and 9 talk about quarterly and monthly sampling. The WET testing requirements were included, for the first time ever, in the draft permit based on alleged “numerous effluent limit violations with no determined cause.” Statement of Basis, p. 10. As detailed above, that statement is an incorrect characterization of WRC’s compliance history. Nor is there any hint that toxicity issues result from the discharges at either Outfall 001 or Outfall 002. According to 40 C.F.R §122.44(d)(1)(v), Whole Effluent Toxicity limits are included in a permit when it has been determined that a discharge causes, has the reasonable potential to cause, or contributes to an exceedance of a narrative water quality standard. Further, Whole Effluent Toxicity limits are not necessary when the chemical-specific limits for a discharge are sufficient to attain and maintain applicable numeric and narrative water quality standards. *Id.* Because there is no ongoing compliance issue, there is no reason to conclude that the effluent limits contained within the draft permit are not sufficient to meet the applicable numeric and narrative water quality standards.

WET testing involves the use of species that are not and cannot be impacted by WRC’s discharge. Due to the nature of Blacktail Creek and the construction of large stock dams, it is impossible for *Ceriodaphnia dubia*, *Pimephales promelas*, or any fish species to come within 4.5 miles of Outfall 001 as the crow flies. Further, the testing for the toxic effects the discharge may have on *Pimephales promelas* (fathead minnows) is not appropriate to the discharge from Outfall 001. The receiving waterbody for Outfall 001 is classified as 3B, which are bodies of water which do not support nor have the potential to support fish populations. Wyo. Admin. Code 020.0011.1 § 4(c). Outfall 001 is more than 6 miles upstream of the Deveraux stock dam which completely blocks the Blacktail Creek drainage. This also limits the ability of any water fleas/invertebrates that may exist above the Deveraux stock dam from being available as food for fish species in Beaver Creek. Absent any toxicity concerns, the WET testing requirement places onerous and inappropriate monitoring requirements on WRC, with no perceived benefit. The WET testing discussion and requirements should be removed from the Statement of Basis and the draft permit.

6. Monitoring Changes, Draft Permit, Table A: Monitoring and reporting requirements for oil and grease, COD, BOD5, ammonia, phenolic compounds, and selenium were increased “[a]lso due to this facility’s past history of effluent limit violations.” As described above, that statement is incorrect. Past permit exceedances do not indicate any persistent or continuous compliance issues that warrant increased monitoring frequency.

Additionally, the new monitoring requirements for acrolein, arsenic, total nitrogen, total organic carbon, phosphorus, and sulfate should be removed. No reasonable potential has been found for any of those parameters and there is no indication that any are present in quantities that

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cause any concern. Imposing a monthly monitoring requirement over the term of the permit adds considerable expense with no apparent benefit. At most, monitoring should be annual or quarterly for only one year.

WRC appreciates your time and attention to the issues noted. Should you have questions or concerns, please reach out to Terese Hruska, by email at thruska@parpacific.com or by phone at 307-363-0865.

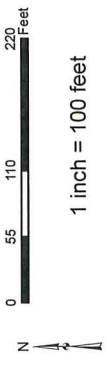


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Improvement Status as of 2024:

- * Rollover curbing on three main street entries is completed.
- * Berm and ditch system west of environmental office and warehouse constructed. Stormwater directed to Pond 5
- * Berm along fence and gate near the main loading rack is constructed.
- * A 4" line with inlet that fed into the sewer system was discovered. A slide gate was installed to prevent flow during a storm event, but still enabled drainage during times of washdown.
- * A retaining wall was constructed in the crude unit to hold back stormwater from entering the refinery sewer systems from the north.
- * Curbing has been placed around several sewer inlets leaving small openings to allow for flow during washdown. This should significantly reduce flow rates into the sewer system during periods of stormwater runoff.
- * Flow from the two lift station pumps will now be run in separate pipes which should increase pumping rates. It is believed the existing system with a single line resulted in the two pumps working against each other.

WRC Stormwater Improvements



Legend

-  Drain Gate Install
-  Wall reconstruction
-  Berm Ditch System
-  Area of raised drain inlets

ATTACHMENT 2

