U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STATEMENT OF BASIS

PERMITTEE:	United States Department of the Air Force
FACILITY:	F.E. Warren Air Force Base (AFB)
PERMIT NUMBER:	CO-0034789
RESPONSIBLE OFFICIAL:	Mark A. Frank, P.E. Deputy Base Civil Engineer
FACILITY CONTACTS:	Russell Littlejohn Environmental Element Chief (307) 773-4356 Email: russell.littlejohn@us.af.mil
MAILING ADDRESS:	90 CES/CEIEC 300 Velse Drive, Suite 600 F.E. Warren AFB, Wyoming 82005
PERMIT TYPE:	Federal Facility Minor - Minimal Discharge Dewatering Permit Renewal

Summary of Specific Changes from the Previous EPA Issued Permit

1. Special monitoring is added for the total metals and other toxic pollutants found in Table III of 40 CFR §122 Appendix D.
2. Analytical results for the special monitoring shall be reported to EPA as an attachment to the DMR for the 12-month period in which samples were collected and analyzed.

Introduction

This statement of basis (SoB) is for the renewal of a National Pollutant Discharge Elimination System (NPDES) Permit (the Permit) to the F.E. Warren AFB dewatering of the missile launch facilities (the facilities) in northeastern Colorado. The Permit establishes discharge limitations for any discharge of water from the facilities' outfalls. The SoB explains the nature of the discharges, the Environmental Protection Agency's (EPA's) decisions for limiting the pollutants in the wastewater, and the regulatory and technical basis for these decisions. EPA, Region 8 is the permitting authority for Colorado federal facilities and provides implementation of federal and state environmental laws within Colorado.

Background Information

This Permit is for the dewatering of the missile launch facilities located in Logan and Weld County in northeastern Colorado. These facilities are under the control of F.E. Warren AFB in

Wyoming. The discharges are in the state of Colorado. The state of Colorado is not delegated NPDES permitting responsibilities for federal facilities. EPA is re-issuing this NPDES Permit.

The missile launch facilities were originally constructed about 1970. Small cracks appeared in the pads due to surface water infiltration into the expansive clay soils surrounding the pads. The water is collected into a sump. When the water level is high enough in the sump, the pump will turn on automatically to pump water to the surface. The dewatering is necessary to keep the facilities dry. Water that is discharged is expected to be surface water that has percolated down into the areas around the missile launch facilities. No industrial activities are performed at the facilities. The discharges are most likely either undergo infiltration/percolation or evaporation before reaching any surface water.

Table 1, below shows the outfalls authorized by this Permit to discharge:

Table 1 - Outfalls

Outfall No.	Latitude	Longitude	Receiving Water
001	40.900000	103.566667	Cedar Creek
002	40.750000	103.616667	Pawnee Creek
003	40.783333	103.516667	Spring Creek
004	40.716667	103.766667	Pawnee Creek
005	40.716667	103.683333	Pawnee Creek
006	40.633333	103.666667	Pawnee Creek
007	40.683333	104.066667	Spring Creek
008	40.783333	103.866667	Pawnee Creek
009	40.850000	103.683333	Pawnee Creek

Receiving Waters

Discharges from facilities would enter the Cedar Creek, Spring Creek, and Pawnee Creek Basins. The receiving waters are in Segment 2a of the Lower South Platte River Basin.

Monitoring Data

Table 2 below shows the monitoring results for Outfall 001 thru Outfall 009 from December 31, 2011 to December 31, 2019. There is one total suspended solid (TSS) 30-day average exceedance in the monitoring data, which occurred in 2012. The 30-day average result was 37 mg/L, and the limit was 30 mg/L. There is no discharge monitoring report (DMR) data for TSS for Outfalls 002 and 003 due to insufficient flow for sampling. The facility also reported a discharge for other outfalls in various years and did not collect samples due to insufficient flow for sampling.

Table 2 - Summary of Self - Monitoring Results for Outfall 001 -009 from Dec. 31, 2011 to Dec. 31, 2019

Effluent Characteristic	Annual Total			30-day Average			7-day Average			Daily Max			Effluent Limitation	
Outfall 001														
	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	30-day	7-day
Flow (gallons/year)	1,600	24,141	64,860	-			-			-			-	-
TSS (mg/L)	-			2.4	10.7	37	2.4	11	37	-			30	45
Oil and Grease (mg/L)	-									0	1.4	2.8	No sheen & 10 mg/L max.	
pH	-									7.5	8.1	8.9	Not less than 6.5 nor greater than 9	
Outfall 002														
Flow (gallons/year)	0	15,491	57,790	-			-			-			-	-
TSS (mg/L)	-			NS	NS	NS	NS	NS	NS	-			30	45
Oil and Grease (mg/L)	-									2.3	2.3	2.3	No sheen & 10 mg/L max.	
pH	-									8.4	8.4	8.4	Not less than 6.5 nor greater than 9	
Outfall 003														
Flow (gallons/year)	290	3,457	13,270	-			-			-			-	-
TSS (mg/L)	-			NS	NS	NS	NS	NS	NS	-			30	45
Oil and Grease (mg/L)	-									-	-	-	No sheen & 10 mg/L max.	
pH	-									-	-	-	Not less than 6.5 nor greater than 9	
Outfall 004														
Flow (gallons/year)	2,830	65,489	238,440	-			-			-			-	-
TSS (mg/L)	-			1	6.0	15	1	6.0	15	-			30	45
Oil and Grease (mg/L)	-									2.1	2.6	3.1	No sheen & 10 mg/L max.	
pH	-									6.7	7.6	8.0	Not less than 6.5 nor greater than 9	
Outfall 005														
Flow (gallons/year)	490	11,994	20,670	-			-			-			-	-
TSS (mg/L)	-			1.2	1.9	2.8	1.2	1.9	2.8	-			30	45
Oil and Grease (mg/L)	-									1.5	1.5	1.5	No sheen & 10 mg/L max.	
pH	-									7.4	7.6	7.8	Not less than 6.5 nor greater than 9	
Outfall 006														
Flow (gallons/year)	0	1,093	6,201	-			-			-			-	-

TSS (mg/L)	-			2.4	6.5	18	2.4	6	18	-		30	45
Oil and Grease (mg/L)	-									2.4	2.5	2.6	No sheen & 10 mg/L max.
pH	-									7.4	8.0	8.4	Not less than 6.5 nor greater than 9
Outfall 007- No discharge and no data													
Outfall 008													
Flow (gallons/year)	250	7,866	28,700	-			-			-		-	-
TSS (mg/L)	-			1.2	8.8	19.6	1.2	11	33	-		30	45
Oil and Grease (mg/L)	-									3.3	3.3	3.3	No sheen & 10 mg/L max.
pH	-									7.2	8.0	8.9	Not less than 6.5 nor greater than 9
Outfall 009													
Flow (gallons/year)	26,345	96,769	620,108	-			-			-		-	-
TSS (mg/L)	-			2.6	2.6	2.6	2.6	2.6	2.6	-		30	45
Oil and Grease (mg/L)	-									0	0	0	No sheen & 10 mg/L max.
pH	-									8.7	8.7	8.7	Not less than 6.5 nor greater than 9

Note: NS-not sampled due to insufficient flow for sampling.

Water Quality Considerations

The receiving waters are in Segment 2a of the Lower South Platte River Basin. Water quality standards for this basin are found in Colorado Regulations No. 38 (see Table 3 below). The water quality standards for the segment are contained in Colorado Regulation No. 38 Classification and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, and Smoky Hill River Basin, effective as of June 30, 2020.

The designated uses for the receiving water include Agriculture, Aquatic Life Warm 1, Recreation E, and Water Supply. These uses are defined in Colorado Regulations No. 31 as follows:

Agriculture: These surface waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock.

Aquatic Life Warm 1: These are waters that (1) currently are capable of sustaining a wide variety of warm water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of specifies.

Recreation E: These surface waters are used for primary contact recreation or have been used for such activities since November 28, 1975.

Water Supply: These surface waters are suitable or intended to become suitable for potable water supplies. After receiving standard treatment (defined as coagulation, flocculation, sedimentation, filtration, and disinfection with chlorine or its equivalent) these waters will meet Colorado drinking water regulations and any revisions, amendments, or supplements thereto.

Table 3, below summarizes the numeric criteria for this segment (from Regulation #38 table):

Table 3 - Segment 2a of the Lower South Platte River Basin. Water quality standards

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS
Lower South Platte River Basin

2. All tributaries to the South Platte River, including all wetlands, from the Weld/Morgan County line to the Colorado/Nebraska border.

COSPLS02	Classifications
Designation	Agriculture
UP	Aq Life Warm 1
	Recreation E
	Water Supply
Qualifiers:	
Other:	
Temporary Modification(s):	
Arsenic(chronic) = hybrid	
Expiration Date of 12/31/2024	
*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).	
*Uranium(acute) = See 38.5(3) for details.	
*Uranium(chronic) = See 38.5(3) for details.	

Physical and Biological	DM	MWAT
Temperature °C	WS-II	WS-II
	acute	chronic
D.O. (mg/L)	--	5.0
pH	6.5 - 9.0	--
chlorophyll a (mg/m²)	--	150*
E. Coli (per 100 mL)	--	126
Inorganic (mg/L)		
	acute	chronic
Ammonia	TVS	TVS
Boron	--	0.75
Chloride	--	250
Chlorine	0.019	0.011
Cyanide	0.005	--
Nitrate	10	--
Nitrite	--	0.5
Phosphorus	--	0.17*
Sulfate	--	WS
Sulfide	--	0.002

Metals (ug/L)	acute	chronic
Arsenic	340	--
Arsenic(T)	--	0.02
Beryllium(T)	--	4.0
Cadmium	TVS	TVS
Cadmium(T)	5.0	--
Chromium III	--	TVS
Chromium III(T)	50	--
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	--	WS
Iron(T)	--	1000
Lead	TVS	TVS
Lead(T)	50	--
Manganese	TVS	TVS/WS
Mercury(T)	--	0.01
Molybdenum(T)	--	150
Nickel	TVS	TVS
Nickel(T)	--	100
Selenium	TVS	TVS
Silver	TVS	TVS
Uranium	varies*	varies*
Zinc	TVS	TVS

Reasonable Potential Analysis (RPA):

Colorado Regulation No. 38 has revised and added the water supply classification for the receiving water segment in June 2020. This results in a chronic Arsenic WQS of 0.02 µg/L. There is no recent data to conduct the RPA for metals. This Permit requires the F.E. Warren AFB to conduct the following new special monitoring requirements. These requirements will start in the first full calendar quarter one year from this Permit's effective date (for example, assuming this Permit's effective date is January 1, 2022, then F.E. Warren AFB will begin quarterly sampling in the first quarter of 2023), to collect sufficient data to perform an RPA for pollutants (such as arsenic, lead, chromium, selenium, copper, zinc, etc.) for the next permit term. This additional time of one year to begin collecting samples will allow the F.E. Warren AFB to obtain additional funds and resources for the expansion of their existing contracts to incorporate these new special monitoring requirements.

Special Monitoring Requirements:

1. Total metals and other toxic pollutants found in Table III of 40 CFR §122 Appendix D.
2. Analytical results for the special monitoring shall be reported to EPA as an attachment to the DMR for the 12-month period in which samples were collected and analyzed.

Pollutants of concern from this wastewater discharge that may affect water quality include pH, total suspended solids, and oil and grease. Colorado Regulation #85 for nutrients management control regulation does not apply. This is because the water that is discharged is expected to be surface water that has percolated down into the areas around the missile launch facilities. In addition, the pollutant information in the permit application does not show any pollutants that may have reasonable potential to exceed water quality standards.

The state of Colorado does not currently have any Total Maximum Daily Loads (TMDLs) for the Segment 2 of the Lower South Platte River Basin. The Permit contains a reopener provision that could be used if a TMDL is developed for this watershed in the future.

Effluent Limits and Self-Monitoring Requirements

The following limits will be required for the outfalls:

	Effluent Limitation	
Effluent Characteristic	30-Day Average a/	7-Day Average a/
Total Suspended Solids	30 mg/L	45 mg/L
The concentration of oil and grease in any single sample shall not exceed 10 mg/L nor shall there be a visible sheen or floating oil in the discharge. b/		
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.		

a/ See Definitions, Section 1.1, for definition of terms.

b/ In the event that an oil sheen or floating oil is observed in the discharge, a grab sample shall be immediately taken, analyzed, and reported. In addition, corrective action shall be taken immediately to mitigate the discharge of oil and grease.

Discussion of Effluent Limitations

The limits for TSS are carried forward from the previous permit, and are based on Colorado Regulations for Effluent Limitations (Colorado Regulation No. 62).

The limit for pH is carried forward from the previous permit, and is based on water quality standards (WQS) for Segment 2a of the Lower South Platte River Basin. (Colorado Regulation No. 38)

The limit for oil and grease is based on professional judgment (PJ). Colorado's regulations for effluent limitations also include a 10mg/L limitation on oil and grease.

The limit for BOD_5 is not needed, because water that is discharged is surface water that has percolated down into the area around the missile launch facilities. There are no domestic sewage sources that enter the groundwater. No industrial activities are performed at the facilities, and there are no sources of BOD_5 from facility operation.

Self-Monitoring Requirements - Outfalls 001, 002, 003, 004, 005, 006, 007, 008, and 009. At a minimum, upon the effective date of this Permit, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report (DMR) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Sample Type a/
Flow, gallons per year (g.p.y.), b/ (total annual flow)	b/	b/
Total Suspended Solids, mg/L	1/year	Grab
pH, units	1/year	Grab
Oil and grease, visual c/	1/year	Visual c/
Total metals and other toxic pollutants found in Table III of 40 CFR §122 Appendix D, starts in the first full calendar quarter one year from this Permit's effective date d/	Quarterly	Grab

a/ See Definitions, Section 1.1 of the Permit, for definition of terms.

b/ The total volume of water discharged during the year shall be based on the reading of a flow meter and shall be reported in gallons. Flow measurements shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained. If there is no discharge, report "no discharge" on the DMR form.

c/ If a visible sheen is detected, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

d/ Analytical results for the special monitoring shall be reported to EPA as an attachment to the DMR for the 12-month period in which samples were collected and analyzed.

Reporting Requirements

With the effective date of this Permit, the Permittee must electronically report all monitoring data into the discharge monitoring reports (DMR) on annually frequency using NetDMR. This reporting frequency aligns with the monitoring frequency.

Antidegradation and Anti-Backsliding Review

The receiving waters are in Segment 2a of the Lower South Platte River Basin. Water quality standards for this basin are found in Colorado Regulations No. 38. The water quality standards for the segment are contained in Colorado Regulation No. 38 Classification and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, and Smoky Hill River Basin, effective June 30, 2020. These waters are designated as use protected.

These are existing facilities, and there are no new or increased water quality impacts. There are also no human sources of pollutants that will impact water quality. Therefore, these facilities may not degrade the quality of state surface waters that have been designated as use-protected waters. An antidegradation review is not necessary per Colorado's Antidegradation Policy, because the receiving stream is a use protected water, and use protected waters are not subject to antidegradation review.

This permit renewal complies with anti-backsliding regulatory requirements. All effluent limitations, standards, and conditions in this Permit are either equal to or more stringent than those in the previous permit.

Endangered Species Act

Section 7(a) of the Endangered Species Act requires Federal agencies to ensure that any actions authorized, funded, or carried out by an agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

The U. S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) website program was utilized to determine what federally listed Endangered, Threatened, Proposed and Candidate Species may occur within the project area. The federally listed threatened and endangered species that may occur downstream of the facilities' outfalls are listed in Table 4:

Table 4 – Potential Downstream Threatened and Endangered Species

Species/Critical Habitat	Scientific Name	Status	Determination
Least tern	*Sterna antillarum*	Endangered	No effect
Mexican spotted owl	*Strix occidentalis lucida*	Threatened	No effect
Piping plover	*Charadrius melodus*	Threatened	No effect
Whooping crane	*Grus americana*	Endangered	No effect
Pallid sturgeon	*Scaphirhynchus albus*	Endangered	No effect
Ute ladies'-tresses	*Spirathes diuvialis*	Threatened	No effect
Western prairie fringed orchid	*Platanthera praeclara*	Threatened	No effect

EPA utilized the information provided by the USFWS IPaC system to identify a determination

for each species in the table above. In addition, EPA had several informal consultation phone calls with USFWS regarding this project.

The justification to support the determination for the species are as follows: This is a renewal permit. There will be no expected changes in water quality in the receiving water and no new construction for the facilities. Any water discharged will have been treated to applicable water quality standards, criteria, and requirements; therefore, there are no expected changes or impacts to downstream habitats.

The facilities' locations are outside of their critical habitat and there is no supporting habitat on site for Mexican spotted owl and Ute ladies'-tresses. In addition, no changes are anticipated to aquatic habitat and no changes are expected in associated riparian habitats that support these species.

There are no depletions to the South Platte River from renewing this Permit for Least tern, Piping plover, Whooping crane, Pallid sturgeon, and Western prairie fringe orchid. Therefore, they do not need to be considered and would be "No effect".

Based on the IPaC information and informal consultation with USFWS, EPA determines this Permit is "No effect" to the species as described in the table above. Since a "No effect" determination was made, no consultation with the USFWS is required.

National Historic Preservation Act (NHPA) Requirements

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. EPA has evaluated its planned reissuance of the NPDES Permit for the F.E. Warren AFB missile launch facilities to assess this action's potential effects on any listed or eligible historic properties or cultural resources. EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources. There will not be any new ground disturbance or significant changes to the volume, quality, or point of discharge. During public notice of this Permit, the State Historic Preservation Office will be notified as an interested party to ensure that historic properties are not negatively affected by the conditions of this Permit.

Miscellaneous

The Permit will be issued for approximately five years, but not to exceed five years. The effective date and expiration date of the Permit will be determined at the time of permit issuance. Permit and Statement of Basis drafted by:

Qian Zhang P.E., EPA Region 8, 8WD-CWW, 303-312-6267

Addendum to Statement of Basis

Response to Comments:

EPA public noticed the F.E. Warren permit on September 30, 2021 and the public notice period closed on November 1, 2021. EPA received the following comments from F.E. Warren Air Force Base.

1. "The location listed for Outfall 007 (N-09) in Section 1.2 of the proposed permit is incorrect. The location should be 40.6833333°, -104.0666667°."

Response: The Outfall 007 location is changed to 40.6833333°, -104.0666667°.

2. "Outfall 007 was previously shown as entering Spring Creek, tributary of Pawnee Creek. And the new, draft permit lists the receiving water as Pawnee Creek in Section 1.2."

Response: The Outfall 007 receiving water is changed to Spring Creek.

3. "Also in Section 1.2, it states that all of the outfalls are found within Weld County, CO. Outfall 003 is located within Logan County."

Response: The Logan County is added in Section 1.2 of the Permit.

401 Certification:

EPA sent a 401 certification request to Colorado on September 21, 2021. Colorado requested an extension for the 401 certification. EPA sent the extension letter to Colorado for the F.E. Warren Air Force Base – Permit No. CO-0034789 on October 18, 2021. The extension was granted through February 1, 2022.

As stated in the extension letter, consistent with 40 CFR § 124.53(c)(3), failure to issue or deny certification by the extension date will be considered by EPA to be a waiver of the certification requirement. The February 1, 2022, extension deadline has passed, and no certification has been received by EPA. As such, the 401 certification is waived.