

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

PERMITTEE:	Keller Transport
FACILITY NAME AND ADDRESS:	Keller Transport Spill Site P.O. Box 30197 Billings, MT 59107
PERMIT NUMBER:	MT0030805
RESPONSIBLE OFFICIAL:	Debra Will, Owner Keller Transport, Inc. (406) 459-2202 dwill.kellertransport@gmail.com
FACILITY CONTACT:	Jim Rolle, Director, Environmental Services West Central Environmental Consultants (406) 549-8487 jrolle@wcec.com
PERMIT TYPE:	Dewatering, Indian Country, Renewal
FACILITY LOCATION:	Milepost 5.2, MT Highway 35 Polson, Lake County, Montana 47.7153° N, 114.0471° W

1 INTRODUCTION

This statement of basis (SoB) is for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit (the Permit) to Keller Transport, Inc. (Permittee) for the Keller Transport Spill Site (Facility). The Permit establishes discharge limitations for any discharge of wastewater from the Facility through Outfalls 002 through 006 to Flathead Lake. The SoB explains the nature of the discharges, EPA's decisions for limiting the pollutants in the wastewater, and the regulatory and technical basis for these decisions.

The Facility is located on the Flathead Reservation (Figure 1). EPA Region 8 is the permitting authority for facilities located in Indian country, as defined in 18 U.S.C. § 1151, located within Region 8 states and implements federal environmental laws in Indian country consistent with the [EPA Policy for the Administration of Environmental Programs on Indian Reservations](#) and the federal government's general trust responsibility to federally recognized Indian tribes.

2 MAJOR CHANGES FROM PREVIOUS PERMIT

Major changes from the previous permit include the following:

- Monitoring frequencies have been reduced from monthly to quarterly.
- Effluent limitations for pH have been removed.

Figure 1. Facility Location Map



3 BACKGROUND INFORMATION

On April 2, 2008, approximately 6,380 gallons of gasoline spilled from a tanker truck due to a vehicle accident at mile marker 5.2 on Montana Highway 35, approximately five miles northeast of Polson, Montana (Figure 1). By the time initial responders arrived at the scene, all the spilled gasoline had seeped into the soil at the site. Immediate spill cleanup consisted of excavating gasoline saturated soils adjacent to and underneath Highway 35 at the spill site. On April 6, 2008, the initial remediation contractor detected organic vapors at two spring pools near the shoreline of Flathead Lake down-gradient of the spill site. On April 7, 2008, the remediation contractor set up a temporary treatment system utilizing carbon adsorption for the two spring pools. Continuous treatment and discharge of water from the springs began on April 8, 2008. An NPDES permit for the Facility was issued in December 2008, authorizing discharge of the treated (remediated) groundwater from the interim treatment plant to Flathead Lake. The Permittee installed an interceptor trench across four residential properties affected by the spill and pulled water from the trench to their treatment facility.

A permanent water treatment system was completed in January 2009 to provide long-term treatment of all hydrocarbon-contaminated groundwater at the site. The treatment facility consisted of ozone treatment followed by air stripping cells with horizontal diffusers. The air-stripped water flow path was then filtered before passing through a 4,000-pound granular activated carbon cell followed by a 1,000-pound granular activated carbon container. The treated effluent then discharged to Flathead Lake via Outfall 001. Operation of the treatment system showed the contaminated groundwater could be successfully treated using just the activated carbon filters, and so the air stripping unit was turned off after the first year of operation. The NPDES permit was modified in 2010 after the permanent treatment plant was operating, lowering the monitoring frequency for benzene from weekly to monthly, due to the quality of the treated water being produced by the treatment facility.

Based on a demonstration that the contaminant plume was stable and water being captured by the interceptor trench was no longer exhibiting contaminant concentrations above applicable standards, EPA's On-Scene Coordinator approved decommissioning of the groundwater treatment system in June 2018. The Permittee proposed an interim shutdown of the system in early summer 2018, to be followed by a period of monitoring and evaluation through the fall of 2018. The purpose of the interim shutdown and evaluation period was to determine how well groundwater would resume flow toward the lake when it was no longer being collected and pumped to the treatment system. If needed, the Permittee planned to submit a design plan for a subsurface trench system to facilitate the passive flow of groundwater from the collection sumps in the intercept trench to the lake and decommissioning of the equipment in the treatment system. After receiving EPA approval from the On-Scene Coordinator, the Permittee conducted the interim shutdown of the treatment system in July 2018, but water began accumulating on the surface of certain yards within a day or two. Accordingly, the treatment system was turned back on to continue pumping accumulated groundwater from the interceptor trench and discharge it from the treatment system.

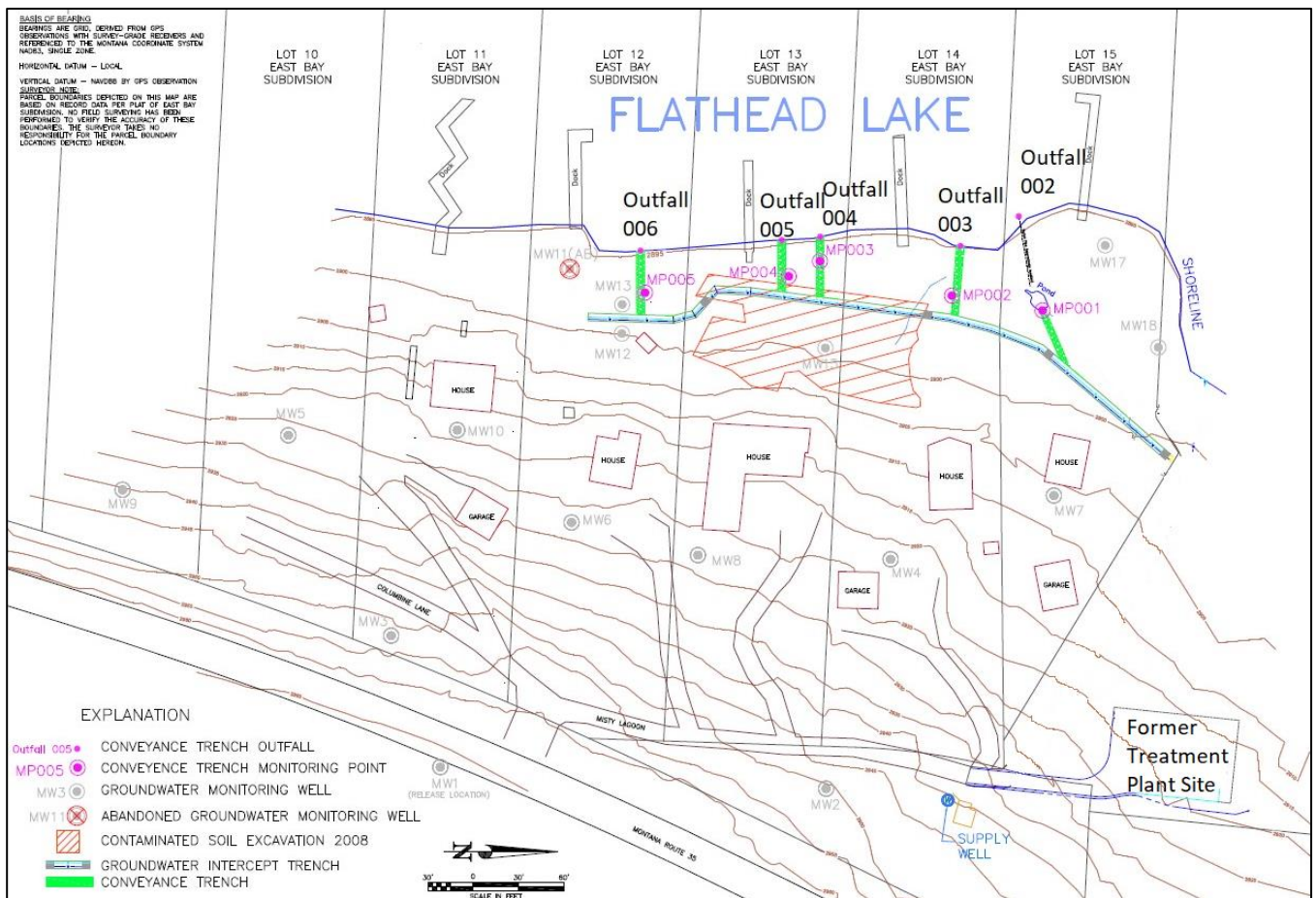
The Permittee submitted a revised shutdown and decommissioning plan in February of 2019, with a revised subsurface drainage design to facilitate the passive flow of groundwater to the

lake and minimize groundwater from surfacing and flooding the yards. EPA's On-Scene Coordinator approved the final shutdown and decommissioning plan in March 2019.

The Permittee completed construction of five passive drainage trenches and shut down the treatment system on May 1, 2019. Four of the subsurface trenches terminate at the lakeshore, and one terminates at a small pond on one of the residential properties approximately 50 feet from the lakeshore. This pond is connected to Flathead Lake by a buried pipe (Figure 2). The trenches are lined with geotextile fabric and filled with oversized washed rock, then covered with geotextile fabric and capped with topsoil. The purpose of the trenches is to facilitate the natural flow of groundwater to the lake and avoid pooling of water in residential lawns.

The treatment plant, all equipment, Outfall 001, and all electrical components were removed from the site in 2019 and 2020. The only remaining surface indication of the former system is a concrete pad where the former treatment system building was located and the five monitoring wells associated with the five new outfalls. The groundwater discharge is no longer treated, but flows through constructed conveyances into Flathead Lake.

Figure 2. Facility Detail Map



3.1 Facility Process Description

There is no longer a treatment facility. The treatment plant was disassembled in 2019 and removed from the site. The Facility currently consists of the interceptor trench, and five monitoring wells accessing five constructed drainage trenches.

3.2 Treatment Process

The Facility does not provide any treatment of the discharged groundwater. Groundwater is discharged via five outfalls into Flathead Lake (Table 1 and Figure 2). As discussed in section 3, Outfall 001 has been abandoned.

Table 1. Outfalls

Outfall ID	Latitude/Longitude	Receiving Water	Description of Outfall
002	47.71558° N / 114.04720° W	Flathead Lake	Constructed conveyance outfall in Lot 15 of East Bay Subdivision
003	47.71552° N / 114.04712° W	Flathead Lake	Constructed conveyance outfall in Lot 14 of East Bay Subdivision
004	47.71526° N / 114.04711° W	Flathead Lake	Constructed conveyance outfall in Lot 13 of East Bay Subdivision
005	47.71519° N / 114.04709° W	Flathead Lake	Constructed conveyance outfall in Lot 13 of East Bay Subdivision
006	47.71493° N / 114.04705° W	Flathead Lake	Constructed conveyance outfall in Lot 12 of East Bay Subdivision

3.3 Chemicals Used

The Facility does not use or add any chemicals to the groundwater discharge. The former treatment facility was originally installed to treat a spill from a tanker truck accident, which contained gasoline and other chemicals commonly found in gasoline.

The spill introduced a large initial mass of pollutants to the site, and this mass has decreased over time. Concentrations of spill material have followed suit – decreasing over time. In addition to the treatment and removal at the former treatment plant, other physical and chemical processes have and will continue to contribute to the decreasing concentrations – volatilization, chemical and biological breakdown, etc. This means that the pollutant plume will likely continue this decreasing trend. For example, Figure 3 shows the concentrations of BTEX found in the influent to the former treatment plant over time, as measured from samples collected by the Permittee. With the exception of two co-solvent flushes performed in 2015 (when the Permittee purposefully added large volumes of ethanol to the groundwater matrix to flush BTEX out of the soil/groundwater and into the treatment plant), BTEX showed a decreasing trend since 2011. Concentrations of BTEX were near or below detection limits starting in approximately 2017. Although BTEX is used as an example in Figure 3, the same trend is present in all of the monitored pollutants associated with gasoline. Thus, the very nature of this site provides some confidence that concentrations of pollutants are unlikely to increase.

Figure 3. Influent BTEX Concentrations Over Time



4 PERMIT HISTORY

According to EPA records maintained for the Facility, this renewal is at the 3rd issuance of this NPDES permit. The previous permit for the Facility became effective on July 1, 2018 and was modified in May of 2021. This previous permit was set to expire on June 30, 2023. The Facility submitted a permit renewal application prior to the permit's expiration, which EPA received on March 17, 2023 and thus the previous permit was administratively continued.

4.1 Discharge Monitoring Report (DMR) Data

The Facility discharges continuously as groundwater flows through the site. The Facility currently has five outfalls (Outfalls 002 through 006), although prior to the permit modification in May 2021, these outfalls didn't exist. Outfall 001 was the outfall of the

treatment plant and was the only outfall associated with the facility until May 2019, when the outfall and treatment plant were removed. In total, the Facility has had ten violations of pH permit limits in the last five years (Table 2). According to the operator, the pH of groundwater coming into the Facility at certain times of year is slightly lower or higher than the pH limits associated with the Permit. Since the Facility provides no treatment or pH adjustment, this high-pH water carries through to the outfall. The Permittee provided a dataset of 42 pH samples from an upstream monitoring well located east of the highway and thus upstream of the spill. This monitoring well represents the “background” dataset for their clean-up. The groundwater pH at this monitoring well ranges between 6.3 and 8.9, which is very similar to the range of pH data reported at the outfalls (Table 2). Other than pH, actual pollutant concentrations were all at or near detection limits and well below permit limits. The Permittee had two missing total petroleum hydrocarbons – gasoline range organics (TPH-GRO) samples in their DMRs. The Permittee stated that there were lab errors with these and by the time the lab error was identified, the holding time had been exceeded and so the sample could not be re-run. The Permittee has since adjusted their sampling schedule to be closer to the beginning of the monitoring period, such that if a sample is missed, another one may still be collected within the appropriate monitoring period.

The only volatile compound detected during the permit term was toluene at Outfalls 005 (twice) and 006 (11 times). Toluene is further discussed in section 6.2.26.2.1.

Table 2. Summary of the DMR Data (July 2018 – March 2023) for Outfalls 001 through 006 from EPA Integrated Compliance Information System (ICIS) database

Parameter	Permit Limit(s)	Reported Average	Reported Range	Number of Data Points	Number of Violations
Total Petroleum Hydrocarbons (TPH) (Gasoline), daily maximum, mg/L	10	ND <u>a/</u>	ND	123	0
pH, standard units	6.5-8.5	7.76 <u>b/</u>	6.24 – 8.73	125	10
Benzene (30-day average), µg/L	0.58	ND	ND	125	0
Benzene (daily maximum), µg/L	5	ND	ND	125	0
Toluene, µg/L	-	ND <u>b/</u>	ND – 8.9	115	-
Ethylbenzene, µg/L	-	ND	ND	115	-
Xylene, µg/L	-	ND	ND	115	-
BTEX, µg/L	100	2.2	ND – 10.4	125	0
Flow (30-day average), gallons per minute (gpm)	-	47	39 – 64	33	-
Flow (daily maximum), gpm	-	58	39 – 64	33	-

a/ ND: Non-detect. This means the reported value was at or below the reporting limit. The reporting limit for parameters are as follows: TPH: 0.02 mg/L, benzene: 0.5 µg/L, toluene: 0.5 µg/L, ethylbenzene: 0.5 µg/L, xylene: 0.5 µg/L, BTEX: 2 µg/L.

b/ Reported median value.

4.2 Other Facility History

The Facility was inspected on June 13, 2022 by representatives from EPA and the Confederated Salish & Kootenai Tribes. The inspection did not document any findings or requests for additional information.

5 DESCRIPTION OF RECEIVING WATER

Water from the Facility is discharged directly to East Bay of Flathead Lake (Figures 1 and 2). Flathead Lake is located in northwestern Montana and is the largest natural freshwater lake in the western United States. Though Flathead Lake is a natural water body, the lake level is controlled by the Salish Kootenai Dam (formerly Kerr Dam), a power-producing facility on the lower Flathead River approximately 4.5 river miles downstream of where it exits Flathead Lake. Regulation of the outflow by the dam maintains the Lake's water level between 2,883 and 2,893 feet above sea level year-round.

Flathead Lake is approximately bisected by the northern boundary of the Flathead Reservation. Located about 12 miles south of the northern reservation boundary, East Bay of Flathead Lake lies entirely within the external boundaries of the Flathead Reservation. The Facility is located within hydrologic unit code (HUC) 17010208 (Flathead Lake).

6 PERMIT LIMITATIONS

6.1 Technology Based Effluent Limitations (TBELs)

EPA has not developed technology-based effluent limitations (TBELs) that apply to discharges from this type of facility.

6.2 Water Quality Based Effluent Limitations (WQBELs)

The Facility discharges to Flathead Lake. The receiving water is within the Flathead Reservation, and thus the Confederated Salish & Kootenai Tribes (CSKT) water quality standards (WQS)¹ apply. EPA has reviewed the applicable Tribal water quality standards for consideration of the development of WQBELs and evaluated whether any total maximum daily loads (TMDLs) apply. Based on the dilution provided by Flathead Lake and the distance downstream to the state of Montana (East Bay generally flows into the Flathead River outlet to the lake), EPA did not consider any other WQS in the development of the Permit.

Section 1.3.6 of CSKT's WQS lists the portion of Flathead Lake within the Flathead Reservation as a class A-1 water. Waters classified as A-1 must be maintained *suitable for drinking, culinary, and food processing purposes after conventional treatment for removal of*

¹ Confederated Salish and Kootenai Tribes of the Flathead Reservation. Surface Water Quality Standards and Antidegradation Policy, CSKT Natural Resources Department, Environmental Protection Division, Water Quality Program, published and submitted to EPA October 2018, approved by EPA April 2019.

naturally present impurities, and are also to be suitable for bathing, swimming and recreation, wildlife (birds, mammals, amphibians, and reptiles), the growth and propagation of salmonid fishes and associated aquatic life, and for agricultural and industrial water supply purposes. Section 1.3.6 of CSKT's WQS also specifies several numeric and narrative water quality standards for A-1 waters covering bacteria, dissolved oxygen, pH, turbidity, temperature, sediment, color, and toxics. Specifically for toxics, Section 1.3.6 Part 3(h) states that "concentrations of toxic or deleterious substances which would remain in the water after conventional water treatment may not exceed the maximum contaminant levels set forth in the U.S. EPA National Primary Drinking Water Regulations or the U.S. EPA National Secondary Drinking Water Regulations, nor may concentrations of toxic or deleterious substances exceed Tribal Numeric Chart levels."

The Tribal Numeric Chart levels referenced above list aquatic life standards and human health standards for priority pollutants and non-priority pollutants and numeric surface water maximum contaminant levels. Section 1.3.13 (*General Requirements and Limitations*) of CSKT's WQS lists general narrative standards for tribal waters. Both numeric and narrative water quality standards were considered in the development of this Permit. No mixing zone is provided in this Permit. The Facility must meet end-of-pipe requirements.

Although the CSKT have adopted WQS that have been approved by EPA, they have not listed water bodies as impaired, nor developed a 303(d) list to require Total Maximum Daily Loads (TMDLs) developed for impaired water bodies. Thus, there are no TMDLs to consider for the Permit at this time. The Permit contains a reopener provision that would allow the Permit to be reopened to include any applicable Waste Load Allocation developed and approved by the CSKT and EPA.

The following pollutants were identified as pollutants of concern and were further analyzed to determine whether they would need to be limited in the Permit.

6.2.1 Narrative Standards

Section 1.3.13 (*General Requirements and Limitations*) of CSKT's WQS lists general narrative standards for tribal waters. The narrative standards require reservation surface waters to be free from substances that...may or will:

- a) Settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines;
- b) Create floating debris, scum, a visible oil film (or be present in concentrations at or above 10 milligrams per liter) or globules of grease or other floating materials;
- c) Produce odors, colors or other conditions that create a nuisance or render undesirable tastes to fish flesh or make fish inedible;
- d) Create concentrations or combinations of materials that are toxic or harmful to human, animal, plant or aquatic life; and,
- e) Create conditions that produce undesirable aquatic life.

Due to the unusual nature of this Permit, the Permittee is unable to observe the conveyance features (their "Facility") before the groundwater discharges to Flathead Lake. Because of

this, the only opportunity for observation is at the shoreline of Flathead Lake where the five conveyance trenches terminate. Therefore, to ensure the Facility is not causing or contributing to an excursion of these narrative water quality standards, EPA will implement them as permit limits in the Permit.

The Permittee will have to incorporate these narrative standards into their inspection requirements by performing visual observations along the shoreline near the discharges to ensure that no violations of these narrative standards are occurring. See section 6.2 of the Permit for more details on inspection requirements.

6.2.2 Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)

Gasoline is a complex combination of hydrocarbon compounds, additives and blending agents. Finished gasoline can contain more than 150 different compounds. However, the volatile organic compounds benzene, toluene, ethylbenzene and the three xylene isomers are commonly used as an indicator parameter to represent the compounds found in gasoline. These compounds have similar physical and chemical characteristics, and are collectively referred to as “BTEX.”

The Permit focuses on consideration and protection of the individual CSKT WQS for benzene, toluene, ethylbenzene, and xylene, rather than focusing on the collective BTEX term. Of these four compounds, benzene, ethylbenzene, and toluene are listed in the CSKT Human Health Priority Pollutants table and ethylbenzene, toluene and xylenes are listed in the CSKT Numeric Surface Water Maximum Contaminant Level (MCL) Standards table. These compounds and their limits as listed in each chart are summarized below (Table 3):

Table 3. Confederated Salish & Kootenai Tribes WQS for Compounds Commonly Found in Gasoline

Parameter	Human Health Standard (Water + Organism) (µg/L)	Human Health Standard (Organism Only) (µg/L)	Adopted MCL Standard (Water Supply) (µg/L)
Benzene	0.58	16	5 <u>a</u> /
Ethylbenzene	68	130	700
Toluene	57	520	1,000
Xylenes	-	-	10,000

a/ While the CSKT do not list benzene in their MCL standards table, they do incorporate EPA’s National Primary Drinking Water Standards by reference in Section 1.3.6 of their WQS. EPA lists benzene as a regulated drinking water contaminant with an MCL of 5 µg/l in its National Primary Drinking Water Standards. Therefore, this value of 5 µg/L is incorporated into this Permit.

The previous permit contained effluent limits and monitoring requirements for benzene. Benzene is typically considered to be the most persistent of the BTEX constituents under

anoxic conditions, the most soluble in water, and the most toxic. Benzene is also a carcinogen. Due to the difficulty removing gasoline from water, benzene is often used as an indicator compound – satisfactory removal of benzene from water is an indicator for removal of other gasoline constituents. Permit limits and monitoring requirements for benzene will be retained in the Permit. The 30-day average benzene effluent limitation will remain at 0.58 µg/L per the CSKT Human Health WQS. The daily maximum effluent limitation will remain at 5 µg/L per the maximum contaminant level.

Available monitoring data for toluene, ethylbenzene, and total xylenes indicate that these pollutants do not have reasonable potential to cause or contribute to an exceedance of any applicable water quality standards (collectively referred to as “RP”). The Permittee’s DMR data (Table 2) shows that ethylbenzene and xylene were not detected at any outfall during the permit term. Toluene has been detected only at Outfalls 005 and 006 in quantities that are nearly an order of magnitude lower than the applicable WQS (Tables 2 and 3). Additionally, the Permittee collected weekly or monthly monitoring of *untreated influent* to their treatment plant prior to shutting it down in 2019. This data shows all “non-detects” of <0.5 µg/L for toluene, ethylbenzene, and xylenes since February 2018 (Figure 3). However, based on the nature of the gasoline spill, and the persistent detections of toluene at Outfalls 005 and 006, EPA still considers the BTEX compounds to be pollutants of concern. Monitoring and reporting of toluene, ethylbenzene, and total xylenes will be required at Outfalls 002 through 006 to continue to protect the receiving water. This dataset will help make informed permitting decisions moving forward. If any of these pollutants is found to be present in quantities that have RP, effluent limitations may be added to the Permit at a future date. Likewise, if the expanded monitoring data continues to show no RP, then monitoring requirements for these pollutants may be reduced or removed at a future date.

6.2.3 Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO)

Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Because there are so many different chemicals in crude oil and in other petroleum products, it is not practical to measure each one separately. Measuring TPH provides an indicator of overall petroleum contamination at a site. Some chemicals that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorene, as well as other petroleum products and gasoline components. Total petroleum hydrocarbons as gasoline range organics (TPH-GRO) specifically measures the more volatile petroleum hydrocarbons – those that have shorter carbon chains and are more likely found in gasoline.

This parameter was included in the previous permit with an effluent limitation of 10 mg/L. TPH-GRO was selected as an appropriate analysis based on the professional judgement of EPA Region 8 permitting staff. The TPH-GRO analysis was used in conjunction with a visual observation of the receiving water at the effluent discharge point looking for a petroleum product sheen on the water. The CSKT do not have WQS for TPH-GRO. However, the TPH-GRO effluent limitation of 10 mg/L is being retained in this Permit to be used in conjunction with CSKT’s narrative WQS for surface waters of the reservation, which state in part that all waters must be “free from substances, which may or will create

floating debris, scum, a visible oil film (or be present in concentrations at or in excess of 10 milligrams per liter) or globules of grease or other floating materials.”

6.2.4 pH

The relevant CSKT water quality standard for pH (Section 1.3.6(3)(c)) states, “Induced variation of hydrogen ion concentration (pH) within the range of 6.5 to 8.5 must be less than 0.5 pH unit. Natural pH outside this range must be maintained without change. Natural pH above 7.0 must be maintained above 7.0.” A pH range limit of 6.5-8.5 was included in the previous permit based on an interpretation of the CSKT water quality standards for A-1 classified waters. This was when the Facility was a treatment plant that adjusted the chemistry of the water multiple times to remove pollutants. Currently, the Facility consists of a few monitoring wells and conveyance trenches under residential properties, and provides no treatment and no chemical adjustments of the water. The discharge pH has dropped below 6.5 and over 8.5 on several occasions since the treatment plant was removed; this results in the Permittee receiving a violation notice of their pH effluent limitations. The Permittee states that the pH variations are likely a natural phenomenon due to the geologic makeup of the native bedrock and influenced by seasonal groundwater recharge patterns (e.g., snowmelt and spring rain events), and that the Permittee has no influence on the natural pH characteristics of the discharge. The only alteration from natural at the site is that the 50 foot long conveyance trenches expedite the movement of groundwater to the lake so that the groundwater does not well up in the residential lawns next to the lake. EPA has determined this alteration has no effect on pH.

EPA has re-evaluated the environmental protection that a pH limit would afford. The Facility does not induce variation of the pH, and since it does not treat the water in any way, the natural pH is maintained without change. Based on this, EPA has determined that the Facility (as currently exists) has no reasonable potential to cause or contribute to an excursion of the pH water quality standard for Flathead Lake. Therefore, EPA will remove the pH permit limits from the Permit. If the treatment process changes, the Permit may be modified to reinstate the pH limits. pH monitoring will still be required (see section 7.1.3) so that this decision can be re-evaluated in the future. This decision does trigger anti-backsliding considerations; these are further discussed in section 6.5.

6.2.5 Temperature

The CSKT temperature water quality criteria allow a slight increase or decrease in naturally occurring water temperatures. In this case, the Facility is discharging natural groundwater to the lake. They do not alter the temperature of the groundwater in any way. Groundwater tends to moderate surface water temperatures year-round. Based on these factors, EPA has determined that there is no reasonable potential to cause or contribute to an exceedance of this standard, and temperature effluent limitations and monitoring will not be included in the Permit.

6.2.6 WET Testing

Many toxic pollutants have cumulative effects on aquatic organisms that cannot be detected by individual chemical testing. However, laboratory tests can measure toxicity directly by exposing living organisms to the wastewater and measuring their responses. Because these tests measure the aggregate toxicity of the whole effluent, this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Discharge data from the Facility indicates that the source water is chemically consistent and contains almost no detectable quantities of pollutants (Table 2). Furthermore, there are no chemicals used during the treatment process. This statement of basis provides a thorough review of CSKT water quality standards and the Permit has implemented monitoring requirements and effluent limitations in consideration of individual pollutants of concern. For these reasons, EPA has determined there is no reasonable potential to cause or contribute to whole effluent toxicity in the receiving water, and therefore WET effluent limitations and monitoring will not be required. The Permit contains a re-opener provision if the need for WET effluent limitations or monitoring is determined at a future date.

6.3 Final Effluent Limitations

Applicable TBELs and WQBELs were compared, and the most stringent of the two was selected for the following effluent limits (Table 4).

Table 4. Final Effluent Limitations for all Outfalls

Effluent Characteristic	30-Day Average Effluent Limitations <u>a</u>/	Daily Maximum Effluent Limitations <u>a</u>/	Limit Basis <u>b</u>/
Total Flow, gallons per minute (gpm)	report only	report only	-
Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO), mg/L	N/A	10	PJ
Benzene, µg/L	0.58	5	WQBEL
Toluene, µg/L	report only	report only	-
Ethylbenzene, µg/L	report only	report only	-
Xylenes, Total, µg/L	report only	report only	-
Benzene, toluene, ethylbenzene, and total xylenes (BTEX), µg/L <u>c</u> /	report only	report only	-

Effluent Characteristic	30-Day Average Effluent Limitations <u>a/</u>	Daily Maximum Effluent Limitations <u>a/</u>	Limit Basis <u>b/</u>
pH, standard units	report only		-
Narrative Limits	The effluent shall not: a) Settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines; b) create scum, a visible oil film or globules of grease or other floating material; c) produce odors, colors or other conditions that create a nuisance or render undesirable tastes to fish or make fish inedible; d) create concentrations or combinations of materials that are toxic or harmful to human, animal or plant life; e) create conditions that produce undesirable aquatic life.		WQBEL

a/ See section 1 of the Permit for definition of terms.

b/ WQBEL = Limitation based on water quality-based effluent limit; PJ = Limitation based on Professional Judgment

c/ Report BTEX as the sum of benzene, toluene, ethylbenzene, and total xylenes.

6.4 Antidegradation

On the Flathead Reservation, all reservation surface waters are provided one of three different levels of antidegradation protection (Tier 1 through Tier 3, with Tier 3 being the most protective). Flathead Lake is not specifically designated as Tier 1, 2, or 3 at this time, and CSKT's WQS "presume that most Tribal waters qualify for Tier 2 protection." Tier 2 waters are high quality waters whose quality exceed levels necessary to support propagation of fish and wildlife and recreation in and on the water. Tier 2 waters shall have their quality maintained and protected unless degradation is allowed through an administrative process involving the CSKT, EPA, and the public. The CSKT determine likelihood of significant degradation on a parameter-by parameter basis.

Discharges from the Facility are existing, and no changes to effluent quality are proposed. All applicable numeric and narrative Tribal water quality standards (required to be met at the end of pipe) were used to set the final effluent limits in this Permit. Furthermore, no changes to ambient concentrations or loading are proposed in the Permit. For these reasons, the proposed activity will not result in significant degradation, and antidegradation review is terminated per the CSKT Antidegradation Policy. Existing and designated uses - as well as the water quality - of the receiving water will continue to be protected under the conditions of the Permit.

6.5 Anti-Backsliding

Federal regulations at 40 CFR § 122.44(l)(1) require that when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit unless the circumstances on which the previous permit were based have materially and substantially changed since the time the Permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR § 122.62.

This permit renewal complies with anti-backsliding regulatory requirements. All effluent limitations, standards, and conditions in the Permit are either equal to or more stringent than those in the previous permit, with the exception of pH. The effluent limit for pH has been removed, and is therefore less stringent in the Permit than in the previous permit. 40 CFR § 122.44(l)(2)(i)(A) allows a permit to be renewed, reissued, or modified that contains a less stringent effluent limitation for a pollutant if “material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation.” Since the previous permit was originally issued in 2018, the treatment plant has been completely removed and all treatment processes removed. The current “Facility” consists of a series of conveyance trenches facilitating the movement of naturally occurring groundwater to the lake. This meets the exception and thus does not violate the anti-backsliding regulatory requirements. See section 6.2.4 for more discussion on the removal of pH effluent limitations.

7 MONITORING REQUIREMENTS

7.1 Self-Monitoring Discussion

This section lays out the basis for assigning monitoring frequencies and types to the various pollutants in the Permit. The monitoring frequency should be sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the Permittee.

The previous permit modification required monthly sampling for all parameters, but contained a condition that monitoring may be reduced to quarterly after one year of monthly monitoring, based on monitoring results and other information available. The reduction in frequency was never requested, but the permit renewal provides a good opportunity for EPA to re-evaluate the monitoring frequency, as there are now nearly two years of monitoring data available for review (Table 2). The available monitoring data shows very little variability across seasons and months, and with the exception of several low level hits for toluene, all hydrocarbon data has been non-detect. Based on this, monthly monitoring is no longer warranted, and EPA is reducing the monitoring frequency to quarterly for all parameters.

7.1.1 Flow monitoring

The previous permit required the Facility to monitor effluent flow on a monthly frequency using a grab sample. This sample type will be retained in the Permit, with a change in frequency to quarterly. A quarterly sampling frequency and grab sample are appropriate for

a long-term groundwater monitoring project that shows little month to month variation in discharge water quality.

7.1.2 Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO)

The previous permit required the Facility to monitor effluent TPH-GRO on a monthly frequency using a grab sample. This sample type will be retained in the Permit, with a change in frequency to quarterly. A quarterly sampling frequency and grab sample are appropriate for a long-term groundwater monitoring project that shows little month to month variation in discharge water quality.

7.1.3 pH

The previous permit required the Facility to monitor effluent pH on a monthly frequency using a grab sample. This sample type will be retained in the Permit, with a change in frequency to quarterly. A quarterly sampling frequency and grab sample are appropriate for a long-term groundwater monitoring project that shows little month to month variation in discharge water quality.

Note that pH samples must be analyzed within 15 minutes of collection. For this reason, most facilities use an *in situ* meter, such as a calibrated pH meter, to measure it directly in the field.

7.1.4 BTEX

The previous permit required the Facility to monitor effluent for the parameters that constitute BTEX (including benzene, toluene, ethylbenzene, and total xylene) on a monthly frequency using a grab sample. This sample type will be retained in the Permit, with a change in frequency to quarterly. A quarterly sampling frequency and grab sample are appropriate for a long-term groundwater monitoring project that shows little month to month variation in discharge water quality.

7.2 Self-Monitoring Requirements

Monitoring requirements (Table 5) must be conducted according to test procedures approved under 40 CFR Part 136, as required in 40 CFR § 122.41(j), unless another method is required under 40 CFR subchapters N or O.

Table 5. Monitoring and Reporting Requirements for all Outfalls

Effluent Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Reported on DMR <u>a/</u>, <u>b/</u>
Total Flow, gpm <u>c/</u>	Quarterly	Grab	Daily Maximum 30-Day Average
Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO), mg/L	Quarterly	Grab	Daily Maximum 30-Day Average

Effluent Characteristic	Monitoring Frequency	Sample Type a/	Data Reported on DMR a/, b/
Benzene, µg/L	Quarterly	Grab	Daily Maximum 30-Day Average
Toluene, µg/L	Quarterly	Grab	Daily Maximum 30-Day Average
Ethylbenzene, µg/L	Quarterly	Grab	Daily Maximum 30-Day Average
Xylenes, Total, µg/L	Quarterly	Grab	Daily Maximum 30-Day Average
BTEX, µg/L	Quarterly	Calculation d/	Daily Maximum 30-Day Average
pH, standard units e/	Quarterly	Grab	Minimum Maximum

a/ See section 1 of the Permit for definition of terms.

b/ Refer to the Permit for requirements regarding how to report data on the DMR.

c/ Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate and the daily maximum flow (maximum volume discharged during a 24-hour period) observed during the reporting period shall be reported in the units provided in the table.

d/ Report BTEX as the sum of benzene, toluene, ethylbenzene, and total xylenes.

e/ pH samples must be analyzed within 15 minutes of sample collection (see section 7.1.3).

8 SPECIAL CONDITIONS

There are no special conditions in the Permit.

9 REPORTING REQUIREMENTS

Reporting requirements are based on requirements in 40 CFR §§ 122.44, 122.48, and Parts 3 and 127. A discharge monitoring report (DMR) frequency of quarterly was chosen, because the Facility discharges continuously and does not show significant variability for most of the limited pollutants.

10 COMPLIANCE RESPONSIBILITIES AND GENERAL REQUIREMENTS

10.1 Inspection Requirements

On a quarterly basis, unless otherwise modified in writing by EPA, the Permittee shall inspect its permitted facility. The Permittee shall document the inspection, as required by the Permit. Inspections are required to ensure that all permit conditions are being met. See section 6.2 of the Permit for more information on inspection requirements.

10.2 Operation and Maintenance

40 CFR § 122.41(e) requires permittees to properly operate and maintain at all times, all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. To ensure this, this Permit will require regular facility inspections and an operation and maintenance plan. Regular facility inspections and a working operation and maintenance plan allow the Permittee to observe and identify any operational deficiencies, and provides a framework to address those deficiencies. Operation and maintenance requirements have been established in section 6.3 of the Permit to help ensure compliance with the provisions of 40 CFR § 122.41(e).

11 ENDANGERED SPECIES CONSIDERATIONS

The Endangered Species Act of 1973 requires all Federal Agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any Federal action carried out by the Agency is not likely to jeopardize the continued existence of any endangered species or threatened species (together, “listed” species), or result in the adverse modification or destruction of habitat of such species that is designated by the FWS as critical (“critical habitat”). See 16 U.S.C. § 1536(a)(2), 50 CFR Part 402. When a Federal agency’s action “may affect” a protected species, that agency is required to consult with the FWS (formal or informal) (50 CFR § 402.14(a)).

The U.S. Fish and Wildlife Information for Planning and Conservation (IPaC) website (<https://ecos.fws.gov/ipac/>) was accessed on May 8, 2023 to determine federally listed Endangered, Threatened, Proposed and Candidate Species for the area near the Facility. The IPaC Trust Resource Report findings are provided below (Table 6). The designated area utilized was identified in the IPaC search and covers approximately 100 acres including the entire spill site and the shoreline and near-lake area surrounding the spill site.

Table 6. IPaC Federally listed Threatened and Endangered Species

Species	Scientific Name	Species Status	Designated Critical Habitat
Canada Lynx	<i>Lynx canadensis</i>	Threatened	None in project action area.
Grizzly Bear	<i>Ursus arctos horribilis</i>	Threatened	None in project action area.
North American Wolverine	<i>Gulo gulo luscus</i>	Proposed Threatened	None designated.
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	None in project action area.
Bull Trout	<i>Salvelinus confluentus</i>	Threatened	The project area overlaps critical habitat for this species.
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	None designated.

11.1 Biological Evaluation

The potential effects of the proposed action on the six listed and candidate species and their critical habitat are provided below. These biological evaluations are based on information obtained from the IPaC site and knowledge regarding the proposed action.

The proposed action is a renewal of an existing discharge NPDES permit for a groundwater remediation site. The Facility consists of five monitoring wells and several underground trenches. The only surface disturbance will be when the Permittee accesses the monitoring wells by foot. The site is located in the backyards of four properties along Flathead Lake. No significant changes to habitat or discharge volumes or quality are planned or expected due to this Permit modification. The permitted activity is not a consumptive use activity, and no water depletions will result from this Permit. Permit effluent limitations are protective of receiving water quality.

Canada lynx, *Lynx canadensis* – This species inhabits subalpine forests of the western United States, specifically locations that receive deep snow and have high populations of snowshoe hares, which are their principal prey. The action area for the proposed action comprises mainly lower elevation lake shoreline and residential yards, and is likely not primary habitat for this species. Regardless of whether Canada lynx are found in this area, the permit reissuance will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Therefore, EPA finds that this proposed permit action will have **no effect** on this species.

Grizzly bear, *Ursus arctos horribilis* – This species can be found throughout the Northern Continental Divide ecosystem of Montana, although they typically avoid areas with human population. The action area for the proposed action comprises mainly lower elevation lake shoreline and residential yards, and is likely not primary habitat for this species. Regardless of whether grizzly bear are found in this area, the permit reissuance will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Therefore, EPA finds that this proposed permit action will have **no effect** on this species.

North American wolverine, *Gulo luscus* – This species can be found throughout the Northern Continental Divide ecosystem of Montana, although they are typically found in remote reaches of alpine forests and tundra and tend to avoid areas with human population. The action area for the proposed action comprises mainly lower elevation lake shoreline and residential yards, and is likely not primary habitat for this species. Regardless of whether wolverine are found in this area, the permit reissuance will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Therefore, EPA finds that this proposed permit action will have **no effect** on this species.

Yellow-billed cuckoo, *Coccyzus americanus* – This species inhabits wooded areas with dense cover and water nearby, including woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. It is possible that this species is found in the action area. However, the permit reissuance will not authorize

new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Therefore, EPA finds that this proposed permit action will have **no effect** on this species.

Bull Trout, *Salvelinus confluentus* – This species is listed as threatened, and the action area for this permit includes critical habitat for this species. The entire Flathead Lake is listed as critical habitat for this species. It is likely that this species is found in the action area. However, the permit reissuance will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. The Facility discharges groundwater that is relatively low in temperature year-round, ensuring this discharge has no adverse effects on the cold-water refugia required by bull trout. For these reasons, EPA finds that this proposed permit action ***may affect, but is not likely to adversely affect*** this species or its critical habitat.

Monarch butterfly, *Danaus plexippus* – This species is currently listed as a candidate species. There are generally no section 7 requirements for candidate species. However, EPA believes permit reissuance will have minimal impact on this species for the same reasons provided for other species above.

Based on the IPaC information, EPA has determined the permitting action *may affect, but is not likely to adversely affect* one or more of the species listed above. A copy of the draft Permit and this Statement of Basis was sent to the FWS requesting concurrence with EPA's finding that reissuance of this NPDES Permit "may affect, but is not likely to adversely affect" the species listed as threatened or endangered in the action area, or their critical habitat.

12 NATIONAL HISTORIC PRESERVATION ACT 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. The first step in this analysis is to consider whether the undertaking has the potential to affect historic properties, if any are present. See 36 CFR 800.3(a)(1). Permit renewals where there is no new construction are generally not the type of action with the potential to cause effects on historic properties.

13 401 CERTIFICATION CONDITIONS

The CSKT are the Clean Water Act (CWA) Section 401 certifying authority for the Permit, and a CWA Section 401 certification will be requested prior to Permit finalization.

14 MISCELLANEOUS

The effective date of the Permit and the Permit expiration date will be determined upon issuance of the Permit. The intention is to issue the Permit for a period not to exceed 5 years.

Permit drafted by Erik Makus, U.S. EPA, (406) 457-5017, May 2023

ADDENDUM

AGENCY CONSULTATIONS

On June 23, 2023, the FWS concurred with EPA's preliminary conclusion that the Permit reissuance is not likely to adversely affect listed species.

The CSKT Tribal Historic Preservation Office was notified during the public comment period but did not comment on EPA's preliminary determination that the Permit reissuance will not impact any historic properties.

On June 23, 2023, EPA sent a CWA Section 401 certification request to the CSKT. On June 27, 2023, the CSKT certified without Section 401 requirements.

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The Permit and statement of basis were public noticed on EPA's website and in the *Missoulian* on July 1, 2023. No comments were received.