

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Major Industrial Permit No. UT0000175

In compliance with provisions of the *Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended (the "Act")*,

CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)

is hereby authorized to discharge from its wastewater treatment facility to receiving waters named

**NORTHWEST OIL DRAIN/ SALT LAKE SEWAGE CANALS AND NORTHWEST OIL DRAIN/
SALT LAKE SEWAGE CANALS – FARMINGTON BAY,**

in accordance with specific limitations, outfalls, and other conditions set forth herein.

This permit shall become effective on August 1, 2020.

This permit expires at midnight on July 31, 2025.

Signed this 29th day of July, 2020.



Erica Brown Gaddis, PhD
Director

DWQ-2019-013911

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PART I
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WASTEWATER

I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

- A. Description of Discharge Points. The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

Outfall	Description of Discharge Point
001	Located at latitude 40°49'29" and longitude 111 ° 55'48". Consists of discharge from a biological/mechanical system. Discharges into the Northwest Oil Drain Canal at approximately 1 MGD.

- B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

- C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately, and lasting through the life of this permit, there shall be no acute toxicity in Outfall 001 as defined in *Part VIII*, and determined by test procedures described in *Part I. C.4(or 3 if no compliance schedule).a & b* of this permit.
2.
 - a. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Table 1						
Parameter	Effluent Mass and Concentration Limitations ^a					
	30 day Average mg/L	7 day Average mg/L	30 Day Average lbs/day	Daily Maximum lbs/day	Daily Minimum	Daily Maximum
BOD₅	25	35	310	558	--	--
TSS	25	35	248	389	--	--
COD	--	--	2156	4171	--	--
Oil & Grease	--	--	91	170	--	--
Phenolic Compounds	--	--	2.0	4.2	--	--
Ammonia (as N)	--	--	150	330	--	--
Sulfide	--	--	1.5	3.3	--	--
Total Chromium	--	--	2.9	8.3	--	--
Hexavalent Chromium	--	--	0.25	0.68	--	--
WET, Acute Biomonitoring ^d <i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i> (Fathead Minnow)	--	--	--	--	--	LC ₅₀ > 100% effluent
pH, SU	--	--	--	--	6.5	9.0

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Table 2			
Parameter	Self-Monitoring and Reporting Requirements ^a		
	Frequency	Sample Type	Units
Total Flow ^{b, c}	Continuous	Recorder	MGD
BOD₅	Weekly	Grab	mg/L, lbs/day
TSS	Weekly	Grab	mg/L, lbs/day
COD	Weekly	Grab	lbs/day
Oil & Grease	Weekly	Grab	lbs/day
Phenolic Compounds	Weekly	Grab	lbs/day
Ammonia (as N)	Weekly	Grab	lbs/day
Sulfide	Weekly	Grab	lbs/day
Total Chromium ^d	Quarterly	Grab	lbs/day
Hexavalent Chromium ^d	Quarterly	Grab	lbs/day
WET, Acute Biomonitoring ^e	Quarterly	Composite	Pass/Fail
pH	Weekly	Grab	SU
Metals ^{f, g}	Bi-Annual	Comp/Grab	mg/L

Table References

- a. See Definitions, *Part VIII*, for definition of terms.
- b. Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.
- c. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
- d. Quarterly monitoring shall commence with the first quarter in which the use of chromium is resumed.
- e. The acute Ceriodaphnia will be tested during the 1st and 3rd quarters and the acute fathead minnows will be tested during the 2nd and 4th quarters.
- f. Chevron shall monitor the following metals at the end of pipe bi-annually with the ***most sensitive EPA approved method (40 CFR 136)***; Arsenic, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Mercury (Method 1631), Nickel, Selenium, Silver, Thallium and Zinc. The sample type (composite or grab) should be performed according to the method's requirements.
- g. Metals are being sampled in support of the work being done for the Reasonable Potential Analysis. The Metal parameters will be monitored and reported on a bi-annual basis by the facility on Discharge Monitoring Report, but will not have a limit associated with them. If Chevron decides to sample more frequently for any parameter, the additional data shall be reported to DWQ per Part V. E of this permit.

Table Reference End

3. Whole Effluent Toxicity (WET) Testing.

- a. *Whole Effluent Testing – Acute Toxicity.* Starting immediately, the permittee shall quarterly, conduct acute static renewal toxicity tests on a (grab/composite) sample of the final effluent at Outfall(s). The sample shall be collected at the point of compliance before mixing with the receiving water.

The monitoring frequency for acute tests shall be quarterly unless a sample is found to be acutely toxic during a routine test. If that occurs, the monitoring frequency shall become weekly (See *Part I.C.3.b, Accelerated Testing*). Unless otherwise approved by the Director, samples shall be collected on a two day progression; i.e., if

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the first sample is on a Monday, during the next sampling period, the sampling shall begin on a Wednesday, etc.

The static-renewal acute toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012 as per 40 CFR 136.3(a) TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS. The permittee shall conduct the 48-hour static renewal toxicity test using *Ceriodaphnia dubia* (solution renewal every 24 hours) and the acute 96-hour static renewal toxicity test using *Pimephales promelas* (fathead minnow)(solution renewal every 24 hours). Based on the Test Acceptability Criteria included in Utah Pollutant Discharge Elimination System (UPDES) Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring) January, 2017, the Director may require acceptable variations in the test, i.e. temperature, carbon dioxide atmosphere, or any other acceptable variations in the testing procedure, as documented in the Fact Sheet Statement of Basis. If possible dilution water should be taken from the receiving stream. A valid replacement test is required within the specified sampling period to remain in compliance.

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the results to be considered valid. If more than 10 percent control survival occurs, the test shall be repeated until satisfactory control mortality is achieved. The permittee shall meet all QA/QC requirements of the acute WET testing method listed in this Section of the permit.

If the permit contains a total residual chlorine limitation such that it may interfere with WET testing (>0.20 mg/L), the permittee may dechlorinate the sample in accordance with approved USEPA methods for WET testing the sample. If dechlorination is affecting the test, the permittee may collect the sample just before chlorination with Director approval.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the required reporting period (month, quarter or semi-annual) e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28. Monthly test results shall be reported along with the DMR submitted for that month. The format for the report shall be consistent with Appendix C of "Utah Pollutant Discharge Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (Biomonitoring), Utah Division of Water Quality, February 2018.

- b. *Accelerated Testing.* When whole effluent toxicity is indicated during routine WET testing as specified in this permit, the permittee shall notify the Director in writing within 5 days after becoming aware of the test result. The permittee shall perform an accelerated schedule of WET testing to establish whether a pattern of toxicity exists unless the permittee notifies the Director and commences a PTI, TIE, or a TRE. Accelerated testing or the PTI, TIE, or TRE will begin within fourteen days after the permittee becomes aware of the test result. Accelerated testing shall be conducted as specified under Part I. Pattern of Toxicity. If the accelerated testing demonstrates no pattern of toxicity, routine monitoring shall be resumed.

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- c. *Pattern of Toxicity.* A pattern of toxicity is defined by the results of a series of up to five biomonitoring tests pursuant to the accelerated testing requirements using a full set of dilutions for acute (five plus the control), on the species found to be more sensitive, once every week for up to five consecutive weeks for acute.

If two (2) consecutive tests (not including the scheduled test which triggered the search for a pattern of toxicity) do not result in an exceedance of the acute toxicity criteria, no further accelerated testing will be required and no pattern of toxicity will be found to exist. The permittee will provide written verification to the Director within 5 days of determining no pattern of toxicity exists, and resume routine monitoring.

A pattern of toxicity may or may not be established based on the following:

WET tests should be run at least weekly (acute) (note that only one test should be run at a time), for up to 5 tests, until either:

- 1) 2 consecutive tests fail, or 3 out of 5 tests fail, at which point a pattern of toxicity will have been identified, or
- 2) 2 consecutive tests pass, or 3 out of 5 tests pass, in which case no pattern of toxicity is identified.

- d. *Preliminary Toxicity Investigation.*

- (1) When a pattern of toxicity is detected the permittee will notify the Director in writing within 5 days and begin an evaluation of the possible causes of the toxicity. The permittee will have 15 working days from demonstration of the pattern of toxicity to complete an optional Preliminary Toxicity Investigation (PTI) and submit a written report of the results to the Director. The PTI may include, but is not limited to: additional chemical and biological monitoring, examination of pretreatment program records, examination of discharge monitoring reports, a thorough review of the testing protocol, evaluation of treatment processes and chemical use, inspection of material storage and transfer areas to determine if any spill may have occurred.
- (2) If the PTI identifies a probable toxicant and/or a probable source of toxicity, the permittee shall submit, as part of its final results, written notification of that effect to the Director. Within thirty days of completing the PTI the permittee shall submit to the Director for approval a control program to control effluent toxicity and shall proceed to implement such plan in accordance with the Director's approval. The control program, as submitted to or revised by the Director, will be incorporated into the permit. After final implementation, the permittee must demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit. With adequate justification, the Director may extend these deadlines.
- (3) If no probable explanation for toxicity is identified in the PTI, the permittee shall notify the Director as part of its final report, along with a schedule for conducting a Phase I Toxicity Reduction Evaluation (TRE) (see Part IC.3.d(4)e) Toxicity Reduction Evaluation

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- (4) If toxicity spontaneously disappears during the PTI, the permittee shall submit written notification to that effect to the Director, with supporting testing evidence.
- e. *Toxicity Reduction Evaluation (TRE)*. If a pattern of toxicity is detected the permittee shall initiate a TIE/TRE within 7 days unless the Director has accepted the decision to complete a PTI. With adequate justification, the Director may extend the 7-day deadline. The purpose of the TIE portion of a TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and the TRE will control or provide treatment for the toxicity.

A TRE may include but is not limited to one, all, or a combination of the following:

- (1) Phase I – Toxicity Characterization
- (2) Phase II – Toxicity Identification Procedures
- (3) Phase III – Toxicity Control Procedures
- (4) Any other appropriate procedures for toxicity source elimination and control.

If the TRE establishes that the toxicity cannot be immediately eliminated, the permittee shall submit a proposed compliance plan to the Director. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the Director, this permit may be reopened and modified.

If toxicity spontaneously disappears during the TIE/TRE, the permittee shall submit written notification to that effect to the Director.

If the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the permittee shall submit the following:

- (a) An alternative control program for compliance with the numerical requirements.
- (b) If necessary, as determined by the Director, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

This permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the Director, and/or modified WET testing requirements without public notice.

Failure to conduct an adequate TIE/TRE plan or program as described above, or the submittal of a plan or program judged inadequate by the Director, shall be considered a violation of this permit. After implementation of TIE/TRE plan, the permittee must demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit.

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D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1)* or by NetDMR, post-marked or entered into NetDMR no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, “no discharge” shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VII.G)*, and submitted by NetDMR, or to the Division of Water Quality at the following address:

Department of Environmental Quality
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

* Starting January 1, 2017 monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception.

PART II
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PRETREATMENT

II. INDUSTRIAL PRETREATMENT REQUIREMENTS

A. Definitions.

1. POTW or publicly owned treatment works means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

- B. Discharges to a POTW. Any process wastewater that the facility may discharge to the sanitary sewer, either as direct discharge or as a hauled waste, is subject to federal, state and local pretreatment regulations. Pursuant to Section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in *40 CFR Part 403*, the State Pretreatment Requirements found in *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

- C. Hazardous Waste Requirements. In accordance with *40 CFR Part 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR Part 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

- D. Hauled Hazardous Waste. Hauled hazardous waste shall not be discharged to a POTW without notification to the Division of Water Quality.

III. BIOSOLIDS REQUIREMENTS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, this facility is an industrial facility where all sanitary waste is sent to a local sanitary sewer system for treatment, and thus does not generate any biosolids from sanitary sewage on site. As a result, no biosolids requirements are included.

IV. STORM WATER REQUIREMENTS.

DWQ will regulate and Chevron will manage storm water discharges associated with industrial activity that are not treated and discharged to outfall 1 via a separate storm water permit, as necessary.

V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10 and 40CFR Part 503*, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.
- F. Records Contents. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The individual(s) who performed the sampling or measurements;
 - 3. The date(s) and time(s) analyses were performed;
 - 4. The individual(s) who performed the analyses;
 - 5. The analytical techniques or methods used; and,
 - 6. The results of such analyses.
- G. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location
- H. Twenty-four Hour Notice of Noncompliance Reporting.
 - 1. The permittee shall (orally) report any noncompliance including transportation accidents, spills which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.

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2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4300 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any noncompliance which may endanger health or the environment;
 - b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part VI.G, Bypass of Treatment Facilities.*);
 - c. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H, Upset Conditions.*);
 - d. Violation of a daily discharge limitation for any of the pollutants listed in the permit; or,
 - e. Violation of any of the Table 3 metals limits.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part V.H.3*
- J. Inspection and Entry The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, collection, storage facilities or area, transport vehicles and containers;

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4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location,
5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law will be permitted to enter without delay for the purposes of performing their responsibilities.

VI. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions or the Act is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under UCA 19-5-115(2) a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at Part VI.G, *Bypass of Treatment Facilities* and Part VI.H, *Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain 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. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.
- G. Bypass of Treatment Facilities.
 - 1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.

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2. Prohibition of Bypass.

- a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (3) The permittee submitted notices as required under *section VI.G.3*.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections VI.G.2.a (1), (2) and (3)*.

3. Notice.

- a. *Anticipated bypass.* Except as provided above in *section VI.G.2* and below in *section VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
 - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
 - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
 - (6) Any additional information requested by the Director.
- b. *Emergency Bypass.* Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *section VI.G.3.a.(1) through (6)* to the extent practicable.

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- c. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part V.H, Twenty Four Hour Reporting*. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under *Part V.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
 - d. The permittee complied with any remedial measures required under *Part VI.D, Duty to Mitigate*.
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

- J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/L);
 - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,
 - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

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2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 ug/L);
 - b. One milligram per liter (1 mg/L) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
 - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

VII. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of parameters discharged or pollutant sold or given away. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
 - 1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
 - 2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Director, and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position

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having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

3. Changes to authorization. If an authorization under *paragraph VII.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph VII.G.2* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
 1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;

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2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
 2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
 3. Revisions to the current CWA § 208 area-wide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Toxicity Limitation - Reopener Provision.
This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) limitations, a compliance date, a compliance schedule, a change in the whole effluent toxicity (biomonitoring) protocol, additional or modified numerical limitations, or any other conditions related to the control of toxicants if one or more of the following events occur;
1. Toxicity is detected, as per *Part I.C.3.a* of this permit, during the duration of this permit.
 2. The TRE results indicate that the toxicant(s) represent pollutant(s) or pollutant parameter(s) that may be controlled with specific numerical limits and the Director concludes that numerical controls are appropriate.
 3. Following the implementation of numerical control(s) of toxicant(s), the Director agrees that a modified biomonitoring protocol is necessary to compensate for those toxicants that are controlled numerically.
 4. The TRE reveals other unique conditions or characteristics, which in the opinion of the permit issuing authority justify the incorporation of unanticipated special conditions in the permit.

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- Q. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".

VIII. DEFINITIONS

A. Wastewater.

1. The “7-day (and weekly) average”, other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The “30-day (and monthly) average,” other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. “Act,” means the *Utah Water Quality Act*.
4. “Acute toxicity” occurs when 50 percent or more mortality is observed for either test species at any effluent concentration (lethal concentration or “LC₅₀”).
5. “Bypass,” means the diversion of waste streams from any portion of a treatment facility.
6. “IC₂₅” is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.
7. “Composite Samples” shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
 - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
 - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
 - c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,

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- d. Continuous sample volume, with sample collection rate proportional to flow rate.
8. “CWA,” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
9. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
10. “EPA,” means the United States Environmental Protection Agency.
11. “Director,” means Director of the Division of Water Quality.
12. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
13. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
14. “Severe Property Damage,” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. “Upset,” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
16. “Significant materials” includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *CERCLA*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.
17. “Significant spills” includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311 of the Clean Water Act* (see *40 CFR 110.10* and *CFR 117.21*) or *Section 102 of CERCLA* (see *40 CFR 302.4*).
18. “Waste pile” means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

**FACT SHEET AND STATEMENT OF BASIS
CHEVRON PRODUCTS COMPANY
A DIVISION OF CHEVRON USA, INC.
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT00000175
MAJOR INDUSTRIAL**

FACILITY CONTACTS

Person Name:	Mitra Kashanchi	Person Name:	Serena Yau
Position:	Refinery Manager	Position:	Environmental Team Lead
Telephone Phone:	(801) 539 7200	Telephone Phone:	(801) 539 7238
Person Name:	Ralphaelynne (Lynna) Lee	Person Name:	Jeff Boyczuk
Position:	Environmental Specialist	Position:	Process Lead Engineer
Telephone Phone:	(801) 539 7354	Telephone Phone:	(801) 539 7188

Facility Name: Chevron Product Company (A Division of Chevron USA, Inc.)
Facility Address: 685 South Chevron Way
North Salt Lake City, UT 84054

Telephone: (801) 539-7200

Mailing Address: Same as above

DESCRIPTION OF FACILITY

The Chevron Products Company Salt Lake Refinery is a petroleum refinery facility located at 685 Chevron Way, North Salt Lake. It has a Standard Industrial Classification (SIC) code 2911, for petroleum refining.

The wastewater treatment plant (WWTP) consists of a wastewater collection box, three parallel surge tanks, two induced air flotation units (one used as lead, one as spare), one float dewatering device, two equalization tanks (operated either in parallel, series, or individually), ten submerged biological contactors (two stages in series), eight rotating biological contactors (two stages in series), two clarifiers (operated either in parallel or individually), an aerobic sludge digester, two disc filter vessels, and an effluent weir box. The Regenerative Thermal Oxidizer (RTO) is also part of the WWTP; it collects benzene and other volatile organic compounds from the front-end of the plant and is used to comply with the benzene waste operations NESHAP (BWON) air emission requirements [40 CFR 61]. There are chemical injection points within the WWTP for coagulant, flocculant, phosphoric acid, and hydrogen peroxide addition. Coagulants and flocculants are fed for optimizing solids removal processes, phosphoric acid is added as required for supplemental nutrient for biological treatment process, and hydrogen peroxide is used when needed to address safety concerns for the presence of hydrogen sulfide. Biological solids wasted from clarifiers are aerobically digested, dewatered and shipped offsite for proper disposal. The following equipment is auxiliary in accordance with 40 CFR 122.41 (e): one or more of the surge tanks, one induced air flotation unit, one of the two equalization tanks, one or more of the biological contactors, one blower, one clarifier, one disc filter, and one blower at the aerobic digester.

Storm water associated with industrial activity is conveyed from process areas and containment areas through the facility collection systems to a central lift station, where it is combined with other process wastewater in the surge tanks. When present, storm water from the contained and process areas is treated then discharged through Outfall 001. Any other storm water outside of the process area is generally retained onsite for infiltration using berms and a wetland located within facility boundaries.

An additional refinery stream (lime pond water from the Alkylation Unit) will be discussed in a later section; this stream originates from the Alkylation Unit's east pit and consists of the localized storm water and steam condensate.

The process wastewater streams (except for the lime pond water) make their way from the process area drains and collection system into the main collection box, from which combined wastewater is pumped to either of the surge tanks. The levels of wastewater in the surge tanks are used to maintain steady flow at the inlet of the WWTP. Initial oil-water separation takes place in the surge tanks, and the oil skimmed from the top of the surge tanks is sent to the refinery oil recovery tanks for further processing. Sludge collected at the bottom of the surge tanks is regularly removed, dewatered, and shipped off-site for proper disposal.

The process wastewater from the surge tanks is directed to the main induced air flotation unit (IAF), where additional oil-bearing material removal occurs. The oily float material removed from the IAF is thickened and used as part of the coker quench cycle to recover petroleum value, consistent with 40 CFR section 261.4(a)(12)(i) and EPA's clarification provided in RO146077.

IAF underflow is pumped to one or both equalization tanks. These tanks serve the purpose of both flow and load equalizing so that the variability in loading is minimized to the biological process. Phosphoric acid injection is used on as-needed basis as supplemental nutrient for the biological process.

The biological treatment consists of four biological contactor stages. The first stage has a total of six submerged biological contactors (SBCs) run in parallel, and the second stage has a total of four SBCs run in parallel. The SBCs are rotated through the waste stream passing through the contactor, allowing microbes and waste to contact and waste to be adsorbed. Supplemental air is supplied by a blower via a common air header to provide air to the fixed-film microbes present on the SBCs and the RBCs. The main function of the microorganisms in the first and second stages is to remove soluble organics from the wastewater stream.

The third stage has a total of four rotating biological contactors (RBCs) in parallel, and the fourth stage has a total of four RBCs in parallel as well. The RBCs are rotated using a motor that moves the shaft attached to the RBCs through the waste stream. The main function of the third and fourth stage is to support continued microorganism removal of soluble organics and support the nitrifying microorganisms needed to treat ammonia.

Following the biological treatment, treated wastewater is sent to a splitter box which splits flow to the final clarifiers for biological solids separation. Water from the lime pond is also fed to the final clarifiers. This stream combines with the treated wastewater at the final clarifiers since it has not come into contact with oil or organic compounds that need to be removed in upstream equipment. Solids removed from the final clarifiers are sent to an aerobic digester, then dewatered and shipped offsite for proper disposal.

Effluent leaving the final clarifiers, flows through tertiary treatment using two-disc filters operating in parallel. The purpose of this filtration equipment is to remove remaining suspended solids.

Following tertiary filtration, final effluent is routed to the effluent discharge weir, for flow measurement

then to the outfall (located at latitude 40°49'29" North, longitude 11°55'48" West) that drains into the North West Oil Drain Canal and eventually into the Great Salt Lake. This outfall is the only location for discharging treated effluent discussed in this narrative. The effluent discharge weir is also the current sample point for all required NPDES permit samples reported in the monthly Discharge Monitoring Report (DMR).

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Key changes since the 2012 NPDES permit application and subsequent permit issuance include: 1) the installation of the tertiary cloth media disc filters, 2) optimization of coagulant feed locations, and 3) the Crude Unit Reliability and Efficiency (CURE) project added an additional desalter unit in series.

Chevron is currently in construction to convert the hydrofluoric acid (HF) alkylation unit to ISOALKY technology, with the ISOALKY technology becoming fully operation in 2020. As part of the project, the refinery's HF-specific equipment and its inventory of hydrofluoric acid will be removed.

DISCHARGE

DESCRIPTION OF DISCHARGE

The Chevron Salt Lake Refinery's wastewater treatment plant (WWTP) is used to process wastewater from the refinery processes, marketing terminal operations, and the Chevron pipeline pump station. The WWTP plant also receives:

- All storm water runoff from the process areas,
- Wastewater coming from ground water remediation and monitoring wells,
- Hydrostatic test water from storage tanks and pipelines. When necessary, testing water is stored onsite for evaporation.
- Wash water from equipment cleaning,
- Well purge water from the underground monitoring wells,
- Construction-site wastewater and storm water,
- Naturally occurring spring water from the Bonneville Spring on Chevron property (this water is normally pumped to the wetlands on the property but would make its way to the plant in the event of a pump failure),
- Process water and storm water run-off from the Linde hydrogen plant co-located on Chevron property
- In the unlikely event of a fire or other emergency, firefighting fluids and other materials would likely drain to the wastewater treatment plant

Outfall
001

Description of Discharge Point

Located at latitude 40°49'29" and longitude 111 ° 55'48". Consists of discharge from a biological/mechanical system. Discharges into the Northwest Oil Drain Canal at approximately 1 MGD.

RECEIVING WATERS AND STREAM CLASSIFICATION

If a discharge were to occur, it would be pumped into an irrigation ditch, which is a Class 2B, 3E and 5D according to *Utah Administrative Code (UAC) R317-2-13*:

Northwest Oil Drain/Salt Lake Sewage Canal

- Class 2B **Protected for infrequent primary contact recreation.** Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.
- Class 3E **Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.**

Northwest Oil Drain/Salt Lake Sewage Canals – Farmington Bay

- Class 5D Farmington Bay
Beneficial Uses -- **Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.**

BASIS FOR EFFLUENT LIMITATIONS

Chevron Facility meets the applicability of the Petroleum Refining, found in *40 CFR 419*. Chevron is categorized into the Subpart B-Cracking Subcategory. There are three categories of limitations promulgated:

1. Best Practicable Control Technology Currently Available (BPT)
2. Best Available Technology Economically Achievable (BAT)
3. Best Conventional Pollutant Control Technology (BCT)

Effluent mass limitations were calculated from the feedstock rates Chevron provided. For each technology and the most stringent were selected as indicated in the below tables.

Table 1. Petroleum Refining Subpart B-Cracking						
Daily Maximum Limits						
Pollutants	Limiting Category	Process Max. (lbs/day)	Storm Water Max (lbs/day)	Total Max. (lbs/day)	Previous Permit (lbs/day)	Renewal Limits (lbs/day)
BOD	BPT, BCT	495.47	62.35	557.82	502	558
TSS	BPT, BCT	345.33	43.65	388.98	350	389
COD	BPT, BAT	3703.53	467.63	4171.17	3757	4171
Oil & Grease	BPT, BCT	150.14	20.26	170.41	154	170
Phenols	BPT	3.70	0.45	4.16	3.74	4.2
Ammonia	BPT, BAT	330.31	0	330.31	293	330
Sulfide	BPT, BAT	3.25	0	3.25	2.89	3.3
Tot. Chromium	BAT	7.51	0.78	8.29	7.6	8.3
Hex. Chromium	BPT	0.60	0.08	0.68	0.53	0.68

Table 2. Petroleum Refining Subpart B-Cracking						
30 Day Average Limits						
Pollutants	Limiting Category	Process Max. (lbs/day)	Storm Water Max (lbs/day)	Total Max. (lbs/day)	Previous Permit (lbs/day)	Renewal Limits (lbs/day)
BOD	BPT, BCT	275.26	34.29	309.56	279	310
TSS	BPT, BCT	220.21	28.06	248.27	224	248
COD	BPT, BAT	1921.83	233.82	2155.65	1941	2156
Oil & Grease	BPT, BCT	80.08	10.44	90.52	81.6	91
Phenols	BPT	1.80	0.22	2.02	1.82	2.0
Ammonia	BPT, BAT	150.14	0	150.14	133	150
Sulfide	BPT, BAT	1.45	0	1.45	1.29	1.5
Tot. Chromium	BAT	2.62	0.28	2.90	2.72	2.9
Hex. Chromium	BPT, BAT	0.21	0.04	0.25	0.24	0.25

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD₅), and pH are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. For additional limitations and monitoring requirements and justifications, please see Memorandum entitled *Antidegradation Review for the Chevron Products Company* date May 15, 2020. (Attachment 2)

Beginning on January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date.

Chevron's UPDES pervious permit was issued January 1, 2015 and therefore was not required to monitor for all metal parameters. For this permit cycle, Chevron will be required to perform, at a minimum, bi-annual metal sampling.

The permit limitations are:

Table 3						
Parameter	Effluent Mass and Concentration Limitations^a					
	30 day Average mg/L	7 day Average mg/L	30 Day Average lbs/day	Daily Maximum lbs/day	Daily Minimum	Daily Maximum
BOD₅	25	35	310	558	--	--
TSS	25	35	248	389	--	--
COD	--	--	2156	4171	--	--
Oil & Grease	--	--	91	170	--	--
Phenolic Compounds	--	--	2.0	4.2	--	--
Ammonia (as N)	--	--	150	330	--	--
Sulfide	--	--	1.5	3.3	--	--
Total Chromium	--	--	2.9	8.3	--	--
Hexavalent Chromium	--	--	0.25	0.68	--	--
WET, Acute Biomonitoring^d <i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i> (Fathead Minnow)	--	--	--	--	--	LC ₅₀ > 100% effluent
pH, SU	--	--	--	--	6.5	9.0

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit with the addition of monitoring for pH with a range between 6.5 to 9.0 SU. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Table 4			
Parameter	Self-Monitoring and Reporting Requirements ^a		
	Frequency	Sample Type	Units
Total Flow ^{b, c}	Continuous	Recorder	MGD
BOD₅	Weekly	Grab	mg/L, lbs/day
TSS	Weekly	Grab	mg/L, lbs/day
COD	Weekly	Grab	lbs/day
Oil & Grease	Weekly	Grab	lbs/day
Phenolic Compounds	Weekly	Grab	lbs/day
Ammonia (as N)	Weekly	Grab	lbs/day
Sulfide	Weekly	Grab	lbs/day
Total Chromium ^d	Quarterly	Grab	lbs/day
Hexavalent Chromium ^d	Quarterly	Grab	lbs/day
WET, Acute Biomonitoring ^e	Quarterly	Composite	Pass/Fail
pH	Weekly	Grab	SU
Metals ^{f, g}	Bi-Annual	Comp/Grab	mg/L

Table 3 and 4 References

- a. See Definitions, *Part VIII*, for definition of terms.
- b. Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.
- c. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
- d. Quarterly monitoring shall commence with the first quarter in which the use of chromium is resumed.
- e. The acute Ceriodaphnia will be tested during the 1st and 3rd quarters and the acute fathead minnows will be tested during the 2nd and 4th quarters.
- f. Chevron shall monitor the following metals at the end of pipe bi-annually with the ***most sensitive EPA approved method (40 CFR 136)***; Arsenic, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Mercury (Method 1631), Nickel, Selenium, Silver, Thallium and Zinc. The sample type (composite or grab) should be performed according to the method's requirements.
- g. Metals are being sampled in support of the work being done for the Reasonable Potential Analysis. The Metal parameters will be monitored and reported on a bi-annual basis by the facility on Discharge Monitoring Report, but will not have a limit associated with them. If Chevron decides to sample more frequently for any parameter, the additional data shall be reported to DWQ per Part V. E of this permit.

Table Reference End

BIOSOLIDS

This facility discharges all sanitary waste to a local sanitary sewer system, and thus does not generate any biosolids from sanitary sewage on site. As a result, no biosolids requirements are included.

STORM WATER

STORMWATER REQUIREMENTS

DWQ will regulate and Chevron will manage storm water discharges associated with industrial activity that are not treated and discharged to outfall 1 via a separate storm water permit, as necessary.

PRETREATMENT REQUIREMENTS

The permittee does not discharge industrial wastewater to a publicly owned treatment works (POTW), the permittee treats and discharges all of the facility's process wastewater. If the permittee were to haul industrial wastewater to a POTW then the permittee must notify the DWQ and meet the requirement stated in Part II of the UPDES Permit.

Any wastewater, discharged to a public sanitary sewer is subject to Federal, State, and local pretreatment regulations. Pursuant to Section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal pretreatment regulations promulgated in *40 CFR Section 403*, the State pretreatment requirements found in *UAC R317-8-8*, and any specific local discharge limitations developed by the wastewater treatment plant accepting any process wastewater from the permittee.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, *UAC R317-8-4.2*, Permit Provisions, *UAC R317-8-5.3* and Water Quality Standards, *UAC R317-2-5* and *R317 -2-7.2*.

Since Chevron is classified as a major industrial discharger, the renewal permit will require acute whole effluent toxicity (WET) testing. Whole Effluent Toxicity Testing from Outfall 001 will consist of alternating testing between two species *Ceriodaphnia dubia* and *Pimephales promelas* as detailed in the permit. The permit will contain the standard requirements for accelerated testing upon failure of a WET test, and a Preliminary Toxicity Investigation (PTI) and Toxicity Reduction Evaluation (TRE) as necessary.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Sarah Leavitt Ward, Discharge
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Lisa Stevens, Storm Water
Chris Bittner, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

Re PUBLIC NOTICE

Began: June 12, 2020
Ended: July 17, 2020

Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit was published on the Division of Water Quality Public Notice website.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed.

Responsiveness Summary

No comments were received during the public notice period ending July 17, 2020.

The public notice beginning February 5, 2020 and ending March 6, 2020 received comments and changes to the permit as stated below.

Annual metal sampling was changed to bi-annual sampling.

The Storm Water Section was removed from the UPDES Discharge Permit with requirements being met, as necessary, with a Multi Sector General Permit through the DWQ Storm Water section.

Statements were added to the Memorandum to provided clarification.

One public notice comment was received during the February 5, 2020 through March 6, 2020 public notice comments period from Chad Turner from Chevron Products Company, Inc. The response from DWQ is below, with additional clarification and corrects.

RE: Response to Comments
UDPES Permit No. UT0000175
Chevron Products Company (A Division of Chevron U.S.A. Inc.)

Dear Mr. Turner:

The purpose of this letter is to acknowledge and address comments made in your March 6, 2020 letter to the Division of Water Quality (DWQ) with regards to the proposed Utah Pollution Discharge Elimination System (UPDES) Renewal Permit No. UT0000175 for Chevron Products Company.

Your comments are addressed below in the order presented from your letter followed by the DWQ responses.

Comment I. The Storm Water Requirements Are Without Basis and Should be Removed.

The Draft Permit includes extensive requirements in Section IV for the management of storm water discharges at the Refinery that simply do not fit the on-the-ground realities at the site. These include a requirement to develop a Storm Water Pollution Prevention Plan ("SWPPP") that includes a map of all drainage areas and storm water outfalls and the location of receiving streams or other surface water bodies. The provisions would also require annual site evaluations to determine and reduce pollutant loadings "entering the drainage system" and a plan that includes consideration of practices "to divert, infiltrate, reuse, otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site." Draft Permit at 12 (emphasis added). Implementing these requirements is not practically possible given that any storm water associated with industrial activity is conveyed to the treatment plant, and no untreated industrial storm water is discharged from the site. Given these realities, Chevron believes there is not a valid legal basis for these requirements.

As acknowledged in the Draft Permit and FSSOB, all storm water in the industrial process areas at the Refinery Site is conveyed to a collection system that is then conveyed to the treatment plant along with wastewater and is then treated and discharged to Outfall 001. FSSOB, page 2.¹ There are areas of the Refinery Site that do not convey storm water to the treatment plant, but those areas do not have industrial activities and do not discharge storm water from the Refinery Site. Id ("Storm water outside of the process area is generally retained onsite for infiltration using berms and a wetland located within facility boundaries[]")(emphasis added). In other words, there are no storm water discharges associated with industrial activity as defined in state and federal regulations. Because there is no untreated industrial storm water at the Refinery Site, the inclusion of requirements in the Draft Permit that require Chevron to address storm water discharges to outfalls that do not exist exceeds DWQ's authority under both state and federal law. It also ignores the practical realities of storm water management and the extensive regulation of the Refinery Site by the Division of Waste Management and Radiation Control ("DWMRC"). Each of these concerns is discussed in greater detail below.

A. DWQ Provides No Basis for Applying Storm Water Requirements in the FSSOB.

Under Utah law, a statement of basis "shall briefly describe the derivation of the conditions of the draft permit and the reasons for them[.]" UAC R3 1 7-8-6.3(6). Similarly, the fact sheet must include "[a] brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions[.]" UAC R3 1 7-8-6.4(2)(c). The FSSOB fails to satisfy these requirements with respect to the Draft Permit's storm water provisions.

The FSSOB acknowledges the addition of the storm water requirements as a change since the prior permit but does not provide a legal basis for their inclusion. See FSSOB at 3. The storm water discussion in the FSSOB is limited to noting that "[t]he storm water requirements are based on the UPDES Multi-Sector General Permit [(MSGP)] for Storm Water Discharges Associated with Industrial Activity," and summarizing the elements of the SWPPP. FSSOB at 8. But the FSSOB makes no mention of the regulatory basis for applying the MSGP requirements to the Refinery Site nor does it provide a rationale for making the change from the prior permit. A general citation to the MSGP is not a satisfactory reference to a statutory or regulatory provision supporting provisions in an individual UPDES permit. Chevron acknowledges that the prior version of the permit included language indicating that coverage under the MSGP was required for any storm water discharges associated with the industrial activities that are not conveyed to the treatment plant - but there are no such discharges at the Site.

B. There is No Untreated Storm Water Associated with Industrial Activity at the Chevron Site.

DWQ does not have a legal basis for its application of the Section IV Draft Permit requirements for storm water in part because all of Chevron's storm water associated with industrial activity is treated such that no untreated storm water² leaves the Refinery Site. All industrial storm water at the Refinery is conveyed to the wastewater treatment plant, where it is comingled with Refinery wastewater and discharged after treatment through Outfall 001. For all other areas of the Refinery outside of the industrial process areas, storm water is retained onsite and does not discharge to an outfall at all. Accordingly, there is no storm water discharge from the site as contemplated in the Draft Permit provisions.

Storm water discharge associated with industrial activity is defined as "the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant." UAC R317-8-3.9(6)(c)(emphasis added)³. Storm water associated with industrial activity explicitly "excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas." Draft Permit at 32 (emphasis added); see also UAC R317-8-3.9(6)(c); 40 CFR § 122.26(b)(14).

All industrial areas at the Refinery Site convey storm water from those areas to the wastewater treatment plant. Storm water that falls outside of those areas-including in large areas of onsite wetlands-does not meet the definition of industrial storm water and is therefore not covered by the MSGP. These areas include the administration building, associated parking lots and roads, open space and wetland areas, and waste management units (regulated by DWMRC, as outlined below). Chevron's permit application materials included a map distinguishing the industrial process areas where storm water is conveyed to the treatment plant from designated non-industrial areas.⁴ Berms at the Refinery Site separate these non-industrial areas from the process areas. These non-industrial areas are not subject to the MSGP or the proposed storm water requirements in the Draft Permit.

C. The NPDES Program Covers Discharges to Surface Waters.

The UPDES storm water permit program is a federally delegated program under the National Pollutant Discharge Elimination System ("NPDES") permit program. The NPDES program allows the Administrator to issue permits for discharges of pollutants to navigable waters from

point sources. 33 U.S.C. §§ 1342(a)(1); 1362(12)(A). Federal regulations clarify that the NPDES Program "requires permits for the discharge of 'pollutants' from any 'point source' into 'waters of the United States.'" 40 CFR § 122.1(b)(a). Under the NPDES permit program, a state can apply "to administer its own permit program for discharges into navigable waters within its jurisdiction." 33 U.S.C. § 1342(b).

Chevron understands that DWQ's basis for applying the industrial storm water provisions in the Draft Permit - despite there being no industrial storm water that isn't treated before leaving the Site - may be a concern about storm water discharges to groundwater. However, under the NPDES permit program, DWQ has no authority to impose restrictions on storm water discharges to groundwater through a UPDES permit. Groundwater, which is clearly not a "navigable water," is not considered a water of the United States. See 40 CFR § 122.2.

Groundwater is not regulated under the NPDES permit program or the UPDES program. Indeed, Utah's own regulations exempt discharges that are not regulated under NPDES from UPDES permitting requirements. See UAC R3 17-8-2.1(2)(i) (stating that "[d]ischarges which are not regulated by the U.S. EPA under Section 402 of the Clean Water Act" do not require a permit under UPDES.). Because discharge of storm water into groundwater is not regulated under NPDES, it is also excluded from the requirements of UPDES under UAC R3 17-8-2.1(2). Accordingly, by expanding the scope of the Draft Permit to apply to groundwater, DWQ would be acting outside of its delegated authority and contrary to federal law. Although Chevron acknowledges the state's ability to regulate certain discharges of pollutants to groundwater and to protect groundwater quality, the UPDES program is not the program under which to do so and there is no regulatory purpose to do so through the Draft Permit.

D. The Definition of "Waters of the State" Does Not Apply to Waterbodies Entirely Within Chevron's Property Boundaries.

DWQ has asserted in our discussions that its jurisdiction over "waters of the state" is broader than its delegated jurisdiction in the federal Clean Water Act NPDES Program. However, as previously stated, there are no untreated discharges of industrial storm water at the Refinery. Furthermore, with the exception of the Northwest Oil Drain (to which the regulated outfall discharges), no other surface water at the Refinery Site meets the definition of "water of the State." This would therefore not provide a legal basis for imposition of the storm water requirements of the Draft Permit.

The scope of jurisdiction under the Utah Water Quality Act is both broader and narrower than that of the Clean Water Act. Although the definition of "waters of the state" does indeed include "all streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial," it expressly does not include "bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife[.]" Utah Code Ann. § 19-5-102 (emphasis added). Other than the Northwest Oil Drain, any surface waters at the Refinery Site are confined and retained within the limits of Chevron's private property, and Chevron has done extensive groundwater monitoring (as indicated below) to confirm that pollutants do not leave the site through groundwater. Accordingly, these water bodies do not constitute a "water of the state" and state law does not provide an independent legal basis for the storm water requirements in the Draft Permit.

E. Storm Water Retention and Infiltration Necessarily Require Discharges to Groundwater and Implementation of the Draft Permit Requirements is Practically Impossible at the Refinery Site.

DWQ's apparent position that it can regulate discharges of storm water to groundwater is inconsistent with other provisions of the Draft Permit, conflicts with the very definition of storm water and is contrary to common storm water management practices. The Draft Permit expressly acknowledges that "traditional storm water management practices" include infiltration and retention. See Draft Permit at 12-13. These common storm water management practices necessarily result in potential "discharges" of storm water to groundwater, creating conflict and confusion with DWQ's attempt to regulate storm water under the UPDES program for the sake of protecting groundwater. We also note that the Draft Permit prohibits "non-storm water discharges to waters of the State"⁵, which is inconsistent with other sections of the Draft Permit that allow non-storm water discharges. This inconsistency further demonstrates that DWQ has no basis for the storm water requirements in the Draft Permit.

Additionally, it would be impossible for Chevron to implement the SWPPP and other monitoring requirements as included in the Draft Permit given the practical realities at the Site. There are no storm water outfalls to be identified, there are no industrial "pollutant sources" to be identified outside the treated areas, and there are no measures or controls to be implemented given the nature of activities in these areas. Implementing a monitoring program with quarterly visual inspections of storm water discharges is also not possible in these areas. For these reasons, the wholesale inclusion of standard industrial storm water requirements in the Draft Permit is also practically infeasible.

F. Groundwater at the Chevron Site is Heavily Regulated by the Utah Division of Waste Management and Radiation Control and Under Continuous Monitoring Through That Program.

In addition to there not being discharges of untreated industrial storm water at the Refinery Site for DWQ to regulate, the Utah Division of Waste Management and Radiation Control ("DWMRC") has regulated groundwater at the Refinery Site since approximately 1984. Pursuant to a 1991 agreement, Chevron has conducted on-site environmental investigations, corrective action and closure of historical waste units. Since that time, Chevron has conducted regular environmental monitoring pursuant to Post Closure Permit, EPA# UTD092029768 (reissued September 21, 2017) including an ongoing comprehensive groundwater monitoring plan throughout the facility.⁶

Chevron's objection to the storm water requirements in the Draft Permit is not an attempt to avoid regulation, but Chevron believes such regulation is duplicative and unnecessary, particularly in light of DWMRC's extensive regulation of the Site and its oversight and approval of the groundwater monitoring and modeling program.

G. The Example Permits for Other Facilities Provided by DWQ Are Not Analogous to the Refinery and Do Not Support DWQ's Position.

During our discussions, DWQ also indicated that inclusion of the Section IV requirements in the Draft Permit was appropriate because it was consistent with DWQ's inclusion of such requirements in UPDES Permits for other facilities that do not have discrete storm water outfalls. The examples provided were Swift Beef Company, UPDES No. UT0000281 and Payson City Wastewater Treatment Facility, UPDES No. UT0020427. Neither of these facilities are refineries, or even analogous industrial facilities. Based on review of their permits, it also does not appear

that either have collection systems for industrial storm water that convey and treat it along with wastewater. Beyond the terms of these permits, we are unable to determine what DWQ's legal basis for applying the storm water requirements was. Moreover, we are not aware of any formal policy or regulation specifically supporting their application, and the mere fact that DWQ has taken a position that has not been challenged by other permittees does not provide a basis for DWQ's position in Chevron's Draft Permit. Chevron cannot accept permit conditions that are neither necessary nor legally supported, as doing so would imply that we consent to their inclusion and could also establish a precedent that, among other things, prevents future changes to the Permit.

¹ "Storm water is conveyed from process areas and containment areas through the facility collection systems to a central lift station, where it is combined [sic] with other process wastewater in the surge tanks. When present, storm water from the contained and process areas is treated and then discharged through Outfall 001."

² "Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. 40 C.F.R. § 122.26(b)(13)(emphasis added).

³ This definition also appears in both the state and federal MSGP, as well as the federal regulations. See Utah MSGP at 34; Federal MSGP at A-8; 40 CFR § 122.26(b)(14).

⁴ Figure 2 submitted with the application included some notes indicating possible discharges to wetlands in areas 4 and 5

⁵ "Non-storm water discharges to waters of the State, which are not, [sic] authorized by a UPDES permit are unlawful, and must be terminated." Section IV(C)(1)(c)(7)(c). "Non-storm water discharges" is not defined elsewhere in the Permit, nor is the term is qualified by reference to "industrial activity," which creates confusion as to what is covered by the Permit and what is not. Given that other sections of the Permit allow non-storm water discharges, this language needs to be amended to reflect the specific provisions of this individual permit.

⁶ See <https://deg.utah.gov/businesses-facilities/chevron-products-post-closure-permit> for permit details, monitoring program requirements, and determinations regarding groundwater migration.

DWQ Response to Request for Remedy Comments:

DWQ has reviewed the comments regarding the Multi Sector General Permit (MSGP) stormwater requirements in the UPDES Discharge Permit. DWQ will gather more information through a site inspection and determine the stormwater permitting requirements. The MSGP stormwater requirements will be removed from the UPDES Discharge Permit and be replaced with the below statement.

DWQ will regulate and Chevron will manage storm water discharges associated with industrial activity that are not treated and discharged to outfall 1 via a separate storm water permit, as necessary.

Comment II. Additional Requested Revisions to the FSSOB.

- Page 2, paragraph 2: Change sentence to read, "Storm water is conveyed from process areas and containment areas through the facility collection systems to a central lift station, where it is combined with other process wastewater in the surge tanks."
- Page 3, "Description of Discharge" Punctuation – Change "Hydrostatic test water from storage tanks and pipelines, when necessary, testing water is stored onsite ponds for evaporation[]" to "Hydrostatic test water from storage tanks and pipelines. When necessary, testing water is stored in onsite for evaporation."

- Page 6, Reasonable Potential Analysis – As noted elsewhere in the FSSOB, reasonable potential analysis and anti-degradation analysis were indeed performed for the Permit but the language in the second sentence suggests otherwise. Change paragraph to read as follows:

“Since January 1, 2016 DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after the date. Annual metal sampling will be required. Less than 10 data points may affect the reasonable potential outcomes which may require additional monitoring in the future.”

DWQ Response to Request for Remedy Comments:

DWQ will make the requested verbiage changes to Page 2, paragraph 2 for storm water and Page 3 for hydrostatic test water. To complete a run for reasonable potential, more than 10 data points per parameter are needed. Only one data set per parameter was received with the permit application, therefore there was limited metal data available to run a reasonable potential analysis. The reasonable potential statement will read as follows:

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD5), and pH are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. For additional limitations and monitoring requirements and justifications, please see Memorandum entitled Antidegradation Review for the Chevron Products Company date May 15, 2020. (Attachment 2)

Beginning on January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date.

Chevron's UPDES previous permit was issued January 1, 2015 and therefore was not required to monitor for all metal parameters. For this permit cycle, Chevron will be required to perform, at a minimum, bi-annual metal sampling.

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ATTACHMENT 1

Effluent Monitoring Data

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Effluent Monitoring Data

Chevron UPDES Permit Application Attachment 5

	BOD5				pH		O&G		Ammonia as N		Phenolics		Flow		COD		Sulfide		TSS				WET		Nitrate-Nitrite (as N)	Nitrogen, Kjeldahl, total (as N)	Phosphorus, Total (as P)
	Monthly Average	Daily Max	Concentration 7-d Average	Concentration 7-d Average	Min	Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Monthly Average	Daily Max	Concentration 30-d average	Concentration 7-d average	Ceriodaphnia	Pimephales Promelas	ppm	ppm	ppm
Date	lb/d	lb/d	ppm	ppm	SU	SU	lb/d	lb/d	lb/d	lb/d	lb/d	lb/d	MMGD	MMGD	lb/d	lb/d	lb/d	lb/d	lb/d	lb/d	ppm	ppm					
Jan-15	78	243	6.8	13	7.4	7.6	38.7	67.5	34.3	98.3	0.3	0.4	1.2	1.7	880.3	1176.0	0.5	1.1	86.5	119.0	7.6	8.4	N/A	N/A	*****	*****	*****
Feb-15	30	46	3.0	4	7.4	7.6	22.5	23.8	8.6	11.1	0.2	0.2	1.1	1.3	661.6	826.9	0.2	0.3	78.1	102.3	8.8	11.5	1	N/A	*****	*****	*****
Mar-15	61	171	6.0	10	7.3	7.5	25.2	31.5	9.2	17.6	0.3	0.3	1.1	1.5	669.3	831.6	0.2	0.2	57.0	80.2	5.7	6.8	N/A	N/A	*****	*****	*****
Apr-15	67	180	6.5	8	7.2	7.3	23.7	34.6	16.9	29.7	0.2	0.3	1.2	1.7	776.9	1355.2	0.3	0.7	77.5	110.6	8.2	8.8	N/A	N/A	*****	*****	*****
May-15	76	138	6.4	11	7.2	7.5	57.2	87.3	19.4	36.8	0.3	0.3	1.4	1.9	760.6	913.8	0.4	0.7	123.7	158.9	11.1	12.8	N/A	0	*****	*****	*****
Jun-15	110	195	13.9	19	7.3	7.6	44.1	76.6	30.4	84.7	0.2	0.2	1.0	1.3	811.0	1235.9	0.7	2.0	125.4	209.3	16.1	22.6	N/A	N/A	*****	*****	*****
Jul-15	85	182	7.8	14	7.4	7.5	54.4	94.9	45.0	60.9	0.3	0.3	1.3	1.9	923.9	1242.3	0.8	2.4	125.9	155.8	12.7	17.6	N/A	N/A	*****	*****	*****
Aug-15	85	361	7.3	16	7.6	7.7	35.1	59.1	32.0	82.8	0.3	0.3	1.3	1.7	1028.3	2223.9	0.5	1.7	117.0	266.9	10.1	21.6	0	N/A	*****	*****	*****
Sep-15	78	190	7.1	15	7.6	7.7	25.6	29.0	26.2	78.9	0.3	0.3	1.2	1.6	728.0	1067.1	0.3	0.9	105.4	177.1	10.0	11.6	N/A	N/A	*****	*****	*****
Oct-15	80	169	9.0	13	7.5	7.6	21.8	25.8	20.9	40.1	0.2	0.3	1.0	1.2	1105.7	1302.8	0.7	1.2	103.3	158.3	11.8	19.2	N/A	N/A	*****	*****	*****
Nov-15	108	207	13.1	22	7.4	7.6	38.6	69.2	22.8	30.4	0.2	0.2	1.0	1.3	990.5	1368.4	0.8	1.5	135.1	223.6	16.7	26.8	N/A	0	*****	*****	*****
Dec-15	138	298	13.4	15	7.4	8.0	44.7	129.5	24.3	40.0	0.3	0.3	1.2	1.7	961.2	1271.7	1.0	3.0	126.3	192.1	12.3	14.8	N/A	N/A	*****	*****	*****
Jan-16	175	433	17.4	25	7.4	7.5	61.9	102.6	25.4	72.3	0.2	0.3	1.2	1.7	1227.2	2021.8	1.0	2.0	167.3	212.3	17.3	21.6	N/A	N/A	*****	*****	*****
Feb-16	199	464	19.3	40	7.4	7.4	42.2	91.0	31.7	66.1	0.3	0.3	1.3	1.7	949.5	1414.6	0.3	0.9	165.3	267.6	15.5	24.4	0	N/A	*****	*****	*****
Mar-16	148	313	14.1	19	7.4	7.5	48.4	87.9	19.0	28.6	0.3	0.3	1.2	1.7	948.9	1660.2	0.8	1.9	178.0	251.5	16.1	19.6	N/A	N/A	8.0	2.1	0.8
Apr-16	106	160	8.9	20	7.4	7.6	35.2	58.0	18.0	31.1	0.3	0.3	1.4	1.7	918.7	1483.9	0.5	0.7	112.6	133.7	10.1	20	N/A	N/A	5.5	3.5	0.9
May-16	197	944	24.2	74	7.3	7.7	29.0	53.4	57.8	247.5	0.2	0.3	1.1	1.3	1586.7	4475.5	0.4	0.6	137.1	222.6	14.6	22.4	N/A	0	9.1	2.6	0.2
Jun-16	88	161	11.1	18	7.3	7.6	60.2	92.2	26.8	44.8	0.2	0.3	1.2	1.5	750.3	994.8	0.2	0.3	91.7	126.1	9.6	14.4	N/A	N/A	11.3	2.1	0.1
Jul-16	43	77	4.3	5	7.3	7.5	25.6	27.4	19.7	29.4	0.3	0.3	1.2	1.4	489.4	706.3	0.8	2.3	65.8	77.6	6.5	8.4	N/A	N/A	9.4	2.9	0.1
Aug-16	28	48	2.7	3	7.3	7.6	25.4	29.6	7.3	12.1	0.3	0.3	1.3	1.5	669.9	957.8	0.2	0.4	19.3	37.8	1.8	3.2	0	N/A	6.8	1.9	0.4
Sep-16	30	47	2.9	4	7.5	7.8	31.4	50.9	8.1	20.3	0.2	0.3	1.3	1.8	519.2	637.9	0.2	0.3	59.4	96.6	5.9	10	N/A	N/A	5.1	3.0	0.3
Oct-16	89	370	8.9	26	7.4	7.6	52.7	133.1	14.1	48.8	0.4	0.7	1.3	1.5	612.6	1267.5	0.6	2.0	79.1	196.0	7.5	18.4	N/A	N/A	10.5	2.2	0.6
Nov-16	40	86	3.6	7	7.4	7.6	28.9	35.0	6.3	14.5	0.3	0.4	1.2	1.7	704.0	1022.7	0.3	0.7	67.8	115.7	5.8	9.6	N/A	0	10.5	43.3	0.5
Dec-16	71	155	6.1	10	7.2	7.6	30.7	35.6	31.7	64.0	0.3	0.3	1.4	1.7	646.4	1066.8	0.7	1.2	92.6	134.2	8.6	12	N/A	N/A	6.9	4.8	0.7
Jan-17	65	117	5.1	8	7.4	7.7	50.2	137.1	15.9	38.3	0.4	0.9	1.5	1.7	556.6	660.0	0.3	0.5	67.5	104.5	5.5	7.6	N/A	N/A	6.4	4.0	0.2
Feb-17	46	117	4.0	6	7.4	7.7	27.5	30.3	13.9	24.0	0.3	0.3	1.4	1.7	549.8	617.5	0.3	0.4	52.2	72.6	4.7	6	0	N/A	6.1	2.1	0.3
Mar-17	93	168	8.3	10	7.4	7.5	55.4	73.2	11.1	29.7	0.5	0.7	1.3	1.8	558.1	676.4	0.2	0.4	56.2	66.3	5.4	7.2	N/A	N/A	5.3	2.0	0.4
Apr-17	103	181	8.9	12	7.3	7.6	57.1	62.3	16.0	21.6	0.6	0.6	1.4	1.5	530.7	710.2	0.2	0.4	67.7	119.6	6.0	9.6	N/A	N/A	7.4	0.1	0.2
May-17	86	172	9.9	15	7.3	7.5	44.4	52.2	11.1	24.9	0.4	0.5	1.0	1.2	334.9	443.2	0.1	0.2	32.2	47.6	3.9	5.2	N/A	0	10.9	2.4	0.9
Jun-17	85	203	8.6	13	7.5	7.7	47.7	50.6	4.8	9.1	0.5	0.5	1.2	1.3	508.3	572.0	0.2	0.3	28.6	30.4	3.0	5.2	N/A	N/A	10.7	1.3	0.7
Jul-17	75	125	8.1	11	7.5	7.8	46.0	55.2	49.2	104.3	0.5	0.7	1.1	1.4	550.1	900.1	0.3	0.7	55.7	131.2	6.6	15.6	N/A	N/A	9.6	4.8	0.4
Aug-17	96	186	10.6	12	7.3	7.5	62.7	89.5	28.9	56.0	0.6	0.9	1.1	1.3	471.3	912.4	0.3	0.6	50.8	93.8	5.4	7.2	0	N/A	8.3	6.7	0.7
Sep-17	61	98	5.9	18	7.4	7.5	54.5	64.9	46.7	92.1	0.5	0.6	1.2	1.5	612.7	691.8	0.2	0.4	48.5	72.6	4.5	10.8	N/A	N/A	1.7	9.9	0.3
Oct-17	48	68	5.8	9	7.3	7.6	44.0	48.0	26.9	84.6	0.4	0.5	0.9	1.2	907.1	1726.7	0.2	0.4	55.5	86.1	6.6	11.2	N/A	N/A	5.2	2.5	0.6
Nov-17	50	101	5.6	10	7.4	7.7	44.3	48.2	6.9	13.9	0.4	0.5	1.1	1.3	854.4	1226.2	0.1	0.3	28.9	38.6	3.3	4	N/A	0	7.0	2.9	1.4
Dec-17	55	128	6.3	10	7.5	7.7	50.3	54.5	5.9	13.9	0.4	0.5	1.0	1.3	810.6	1240.8	0.2	0.6	44.1	76.1	5.1	9.2	N/A	N/A	5.7	1.9	0.3
Jan-18	53	151	6.4	12	7.5	7.8	41.5	45.1	5.9	13.9	0.4	0.5	1.0	1.4	902.3	1141.3	0.2	0.3	25.6	27.1	3.1	3.2	N/A	N/A	9.2	1.5	0.7
Feb-18	67	172	8.8	19	7.4	7.6	42.2	56.1	15.9	41.2	0.4	0.4	0.9	1.1	881.6	1174.1	0.3	0.9	47.1	97.1	6.2	12.4	0	N/A	9.5	2.0	0.5
Mar-18	73	109	7.5	9	7.3	7.6	58.2	76.9	22.5	44.7	0.5	0.6	1.2	1.6	1077.0	1297.0	0.3	0.4	48.5	65.7	5.2	6.4	N/A	N/A	8.7	3.1	0.4
Apr-18	97	224	9.9	15	7.5	7.6	72.5	131.8	124.4	230.5	0.5	0.6	1.0	1.4	1053.8	1747.2	0.4	1.0	90.3	145.8	9.2	13.6	N/A	N/A	2.7	15.3	0.7
May-18	78	126	8.3	11	7.2	7.6	54.2	83.3	91.1	136.9	0.5	0.5	1.1	1.4	1060.3	1673.5	0.6	1.1	73.1	125.8	7.6	12.4	N/A	1	6.9	8.8	0.3
Jun-18	53	86	6.1	12	7.3	7.5	59.9	105.4	37.6	89.2	0.5	0.5	1.0	1.2	455.9	812.1	0.2	0.2	34.4	43.5	3.8	12	N/A	N/A	8.8	2.5	0.4
Jul-18	68	169	7.3	11	7.3	7.5	47.5	54.1	35.7	96.2	0.5	0.5	1.1	1.3	1118.4	2551.4	0.1	0.2	41.8	56.5	4.6	6.4	N/A	N/A	8.1	4.7	0.8
Aug-18	47	79	5.6	7	7.2	7.4	40.0	48.2	15.3	43.6	0.4	0.4	1.0	1.2	714.6	862.3	0.1	0.1	23.7	26.4	3.1	3.2	0	N/A	10.1	3.2	0.3
Sep-18	40	45	5.0	6	7.4	7.7	40.4	45.2	47.8	150.8	0.4	0.5	1.0	1.3	1162.1	1540.9	0.1	0.2	38.2	68.6	4.6	7.6	N/A	N/A	17.9	6.0	0.2
Oct-18	81	190	9.6	13	7.5	7.8	48.4	59.0	128.6	246.8	0.5	0.5	1.1	1.4	1744.3	2953.7	0.3	0.7	56.9	108.9	6.2	10.4	N/A	N/A	3.5	9.5	0.3
Nov-18	45	76	5.8	7	7.6	7.8	39.2	53.5	7.3	17.1	0.4	0.4	1.0	1.4	1549.1	2156.5	0.2	0.3	84.4	135.5	12.1	21.6	N/A	0	1.6	8.4	0.1
Dec-18	59	131	7.0	10	7.4	7.8	40.1	42.3	29.6	69.9	0.4	0.4	1.0	1.3	1515.0	2156.0	0.4	0.9	40.7	57.0	5.1	10	N/A	NA	6.9	9.4	0.3

ATTACHMENT 2

Wasteload Analysis

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State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

L. Scott Baird
Executive Director

DIVISION OF WATER QUALITY
Erica Brown Gaddis, PhD
Director

MEMORANDUM

TO: Sarah Leavitt, Permit Writer

FROM: Chris Bittner, Standards Coordinator

DATE: May 15, 2020

SUBJECT: Antidegradation Review for the Chevron Products Company Salt Lake Refinery

2019 UPDES Permit Renewal UT0021725

Receiving Water and Designated Uses (UAC R317-2-13):

Northwest Oil Drain /Salt Lake Sewage Canals Class 2B protected for infrequent primary and secondary contact recreation Class 3E severely habitat-limited waters. Narrative Standards will be applied to protect these waters for aquatic life Northwest Oil Drain/Salt Lake Sewage Canals→Farmington Bay Class 5D protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

The Level I anti-degradation review was conducted in accordance with the *Interim Methods for Evaluating Use Support for Great Salt Lake Utah Pollution Discharge Elimination System (UPDES) Permits* (v. 1.0 January 4, 2016). The Level II anti-degradation review is based on the requirements of UAC R317-2-3. The whole effluent toxicity (WET) requirements are based on the *Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity* (DWQ, February, 2018).

Level I Antidegradation Review

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD5), E. coli, pH and percent removal for BOD5 and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The DWQ has determined that this discharge will not cause or

Antidegradation Review for the Chevron Products Company

Salt Lake Refinery

2019 UPDES Permit Renewal UT0021725

contribute to a violation of water quality standards based upon the Reasonable Potential Analysis and Level 1 Review that follows. An Antidegradation Level II review is not required since water quality will not be further lowered by the proposed activity, *UAC R317-2-3.5.b.1.(b)*.

Numeric criteria are available for pH, E. coli and turbidity for the recreational use in the Northwest Oil Drain (NWOD). However, no numeric criteria are available for the aquatic life uses in the NWOD or Farmington Bay. The Level I anti-degradation review, protection of existing uses, was conducted in accordance with the *Interim Methods for Evaluating Use Support for Great Salt Lake Utah Pollution Discharge Elimination System (UPDES) Permits* (v. 1.0 January 4, 2016) (*Interim Methods*). These methods were under development when the previous permit was issued but the methods used were similar. No existing uses are identified that require more stringent protection than the designated uses.

As described in the *Interim Methods*, effluent pollutant concentrations were screened against Class 3D aquatic life numeric criteria to determine reasonable potential and the protection of the uses. Based on application of Narrative Standards, acute criteria were screening values for the NWOD and chronic criteria were used to protect downstream uses at Farmington Bay under the Narrative Standards.

Chevron is required to identify the pollutants present in their effluent. In Attachment 7, Table 2C-5B of the renewal application, Chevron identified the following metal and metalloid toxic pollutants as believed present in the effluent: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, and cyanide. Quantitative data are needed to evaluate if these pollutants demonstrate reasonable potential. Table 2C-5B includes the result of a single analysis of the effluent for these pollutants.

The previous permit evaluated reasonable potential using the information presented in the March 27, 2014 Chevron letter titled *Renewal of UPDES Permit UT0000175 – Revised Supplemental RPA Documentation*. An alternative approach for analyzing reasonable potential, consistent with USEPA guidance, was proposed and accepted by DWQ. This approach initially relied on a single analytical result for nine metals and metalloids to calculate the maximum expected concentration in the effluent. When the maximum expected concentrations exceeded the comparison criteria, additional samples were collected and analyzed for four of the metals and metalloids. With the additional sample results included, the maximum expected concentrations supported no reasonable potential for these metals and metalloids¹. The additional analyses for cyanide, selenium and zinc demonstrate that effluent concentrations were variable over the two month sampling period. To reduce some of the remaining uncertainties, additional monitoring requirements were added by DWQ to the 2014 permit. These monitoring requirements included measurements of flows in the NWOD and the concentrations of ammonia and selenium in the NWOD. The results are documented in the *Northwest Oil Drain and Salt Lake Sewage Canal Selenium, Ammonia and Flow Characterization Report* (Stantec, May 10, 2018) (*NWOD Report*). Figure 1 illustrates the monitoring locations and Figure 2 summarizes the results as

¹ The maximum expected concentration is calculated by including statistical uncertainty that is reduced when additional samples are available (USEPA, 1991 *Technical Support Document for Water Quality-based Toxics Control*)

presented in the *NWOD Report*.

The specific monitoring objectives for the *NWOD Report* were to provide additional data to evaluate:

1. Protection of downstream aquatic life uses in Farmington Bay from chronic selenium toxicity.
2. Protection of aquatic life uses using whole-effluent toxicity (WET) testing.
3. Characterization of mercury concentrations in the effluent.

Significant Updates compared to 2014 permit. Ammonia.

As reported in the *NWOD Report*, ammonia concentrations were measured at several locations on the NWOD during the previous permit cycle (Figures 1, 2, and 3). These ammonia concentrations represent all sources of ammonia to the NWOD. For this permit cycle, the updated 2013 EPA ammonia criteria were used for screening because these criteria better represent the potential for ammonia toxicity for the aquatic life expected at this location. The 2013 EPA chronic criteria applied are based on an absence of salmonids (trout) and unionid mussels in the receiving waters.

Ammonia concentrations measured at the discharge to Farmington Bay compared to the chronic screening criteria are shown on Figure 4. Ammonia concentrations exceed the screening values and were further investigated for reasonable potential.

First, the representativeness of the 2013 EPA ammonia criteria was evaluated in more detail. This evaluation concluded that these are appropriate screening values for determining effluent limits for the discharge to Farmington Bay. Ammonia is generally toxic to aquatic life but species vary widely in their sensitivity. Ammonia is also a nutrient that is taken up rapidly by plants and bacteria when present at sub-toxic concentrations. Farmington Bay includes freshwater taxa such as daphnids and mayflies¹. Fish can be sensitive to ammonia and fish have been observed in Farmington Bay and surrounding wetlands. Fish are observed in similar freshwater habitats at Great Salt Lake and fish presence in nearby waters such as waterfowl management areas and observations of fish-eating birds support that fish should be considered residents for the comparison criteria. Studies are ongoing to better characterize fish populations in Farmington Bay. For this permit cycle, early life-stages of fish were presumed to be absent for the winter months similar to the lower Jordan River.

The ammonia loads to Farmington Bay are compared to the ammonia loads discharged from the SLCWRF and the Chevron Refinery in Figure 5. The Chevron Refinery's portions of the ammonia loads to the NWOD add up to 5 percent to the SLCWRF loads. Ammonia loads to Farmington Bay generally correlate well with the loads from the SLCWRF.

¹ <https://documents.deq.utah.gov/water-quality/standards-technical-services/gsl-website-docs/alu-standards-development/DWQ-2019-000534.pdf>

**Antidegradation Review for the Chevron Products Company
Salt Lake Refinery
2019 UPDES Permit Renewal UT0021725**

The SLCWRF is anticipated to reduce their ammonia discharges when a new treatment plant is completed. As shown on the Figure 6, this will affect the future assimilative capacity for Chevron because of the small volume of Chevron's effluent compared to the SLCWRF effluent. In addition to the flow, the pH upstream of Chevron may also be affected which will affect the ammonia criteria. Based on the currently available data and the anticipated changes to the SLCWRF permitted effluent limits, ammonia does not have reasonable potential for the Chevron Refinery for this permit cycle.

Selenium.

NWOD measurements for dissolved selenium demonstrate that the screening chronic criterion of 4.6 µg/L is met in the NWOD including at the discharge to Farmington Bay (Figures 2 and 7). These data demonstrate that the discharge does not have reasonable potential for selenium. However, the available data from the NWOD and Chevron's *Renewal of UPDES Permit UT0000175 – Revised Supplemental RPA Documentation* demonstrate that selenium concentrations are variable. Accordingly, additional effluent characterization data are recommended to support the absence of reasonable potential analysis for the next permit. The additional monitoring data will also confirm the efficacy of the treatment processes.

Whole Effluent Toxicity (WET).

Dilution is used to determine if acute or chronic duration WET tests will be required. Dilution exceeding 20:1 require acute testing and lower dilutions require chronic testing. Dilution was measured for the *NWOD Report* and as shown on Figure 7, dilution flows at the Chevron outfall exceed 20:1. These measurements confirm that Chevron's existing acute WET requirements are appropriate.

Other Metals and Inorganics.

Chevron identifies the specific pollutants that are believed to be present in the effluent in Attachment 7, Table 2C- 5B in the renewal application and in the 2014 *Renewal of UPDES Permit UT0000175 – Revised Supplemental RPA Documentation*. Of the pollutants identified as believed to be present, the *Revised Supplemental RPA Documentation* documents that the effluent concentrations of cyanide, selenium and zinc were variable over the two month period that additional samples were collected for analyses. The single analytical result for the metals and inorganics data submitted with this permit application confirm no reasonable potential as concluded in the March 27, 2014 *Revised Supplemental RPA Documentation* for the previous permit cycle. However, more frequent monitoring is recommended for the upcoming permit cycle to characterize the effluent variability and support future reasonable potential determinations consistent with DWQ's Reasonable Potential Guidance, September 15, 2015 and 40 CFR 122.44(d)(1)(ii).

Mercury.

The FSSOB for the previous permit cycle recommended a monitoring requirement using a more sensitive mercury analytical method (Method 1631) to quantify mercury in the effluent. This requirement was inadvertently omitted from the permit and is added to this permit.

Level II Antidegradation Review.

Based on the information provided in this permit application, a Level II anti-degradation review is not required because water quality will not be further lowered under the renewed permit (R317-2-3.5(b)1). There is no increase in concentrations or loading anticipated.



Figure 1. Monitoring Locations from NWOD Report.

Antidegradation Review for the Chevron Products Company Salt Lake Refinery 2019 UPDES Permit Renewal UT0021725

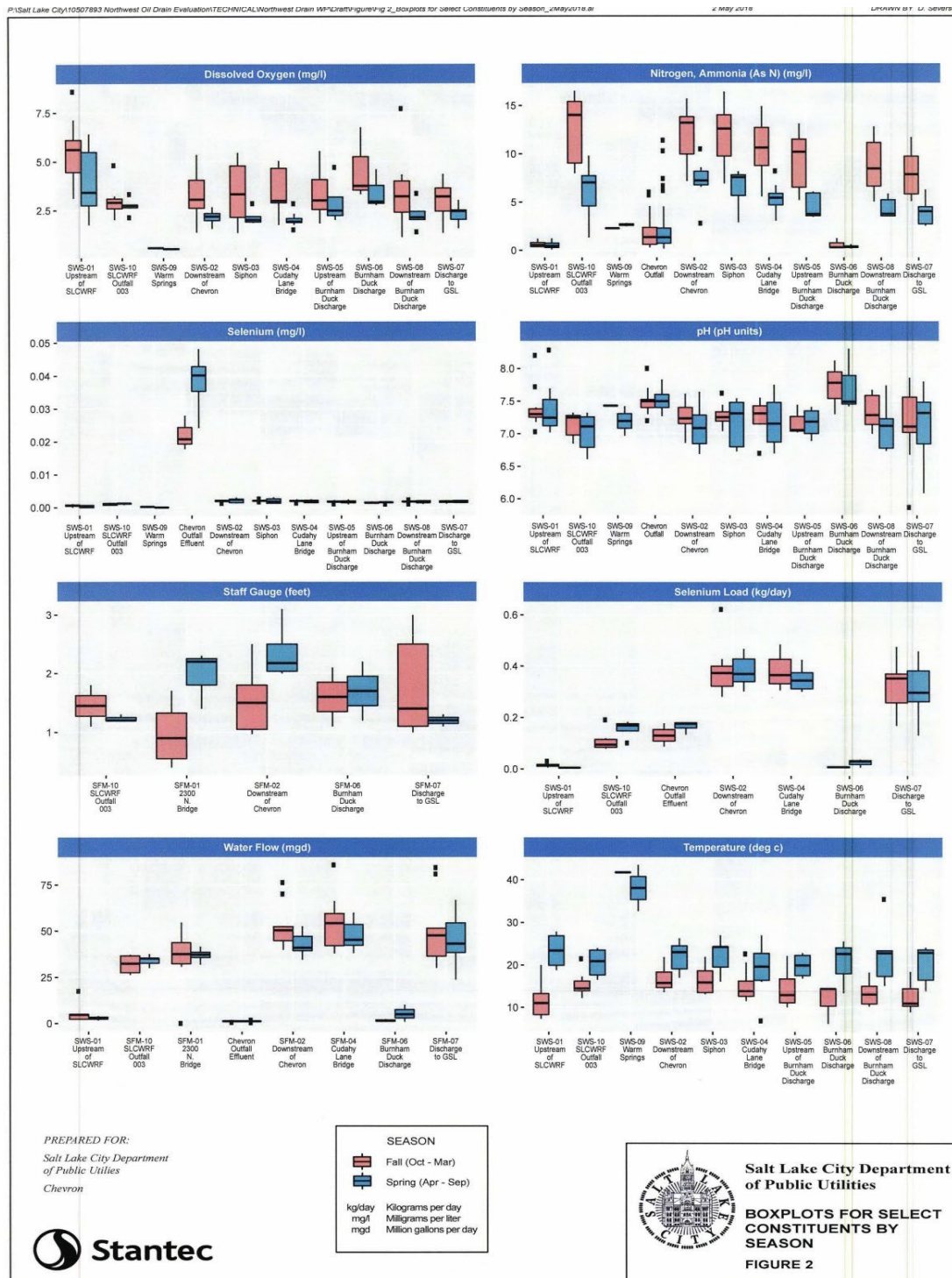


Figure 2 Boxplots of Concentrations Measured from NWOD Report

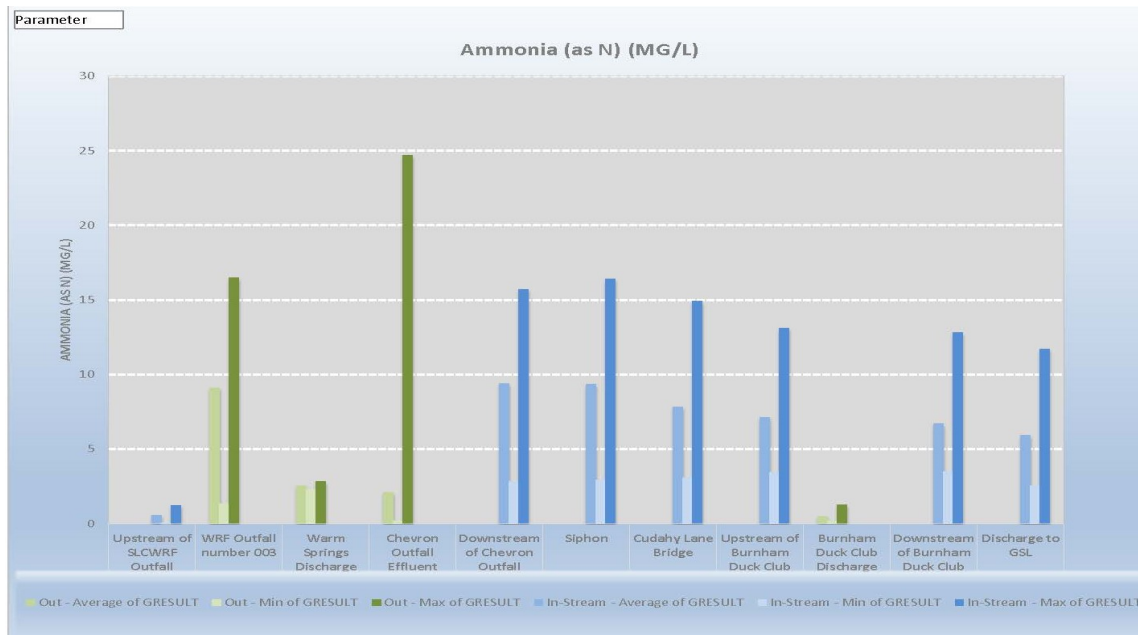


Figure 3. Measured ammonia concentrations as total N in effluents and the Northwest Oil Drain from the NWOD Report

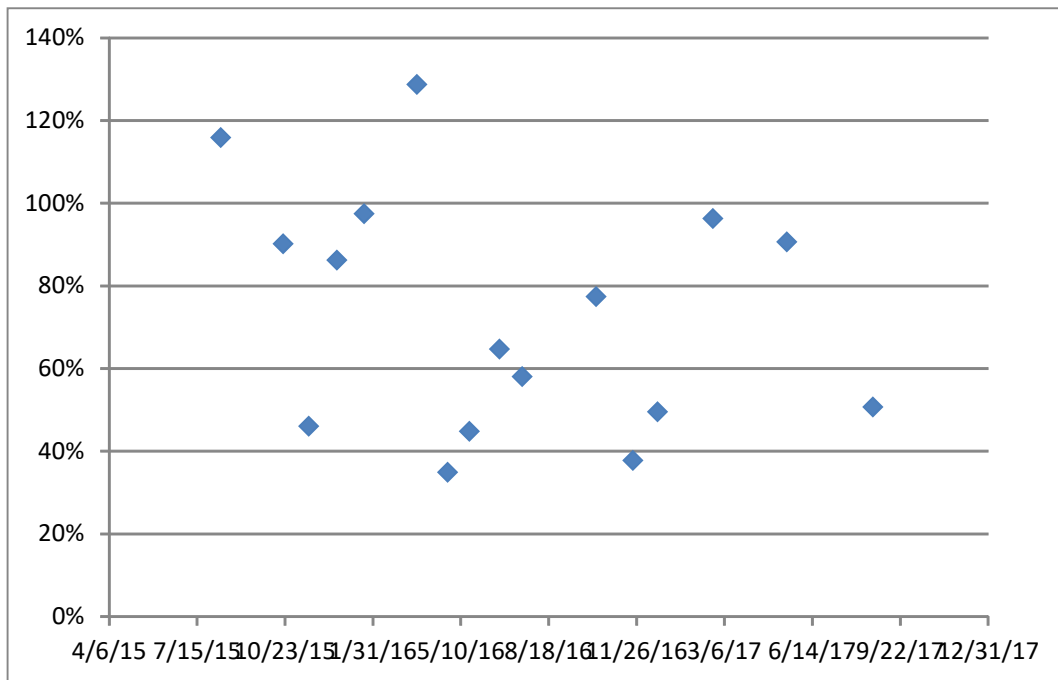


Figure 4. Measured ammonia concentrations in Northwest Oil Drain at Farmington Bay divided by chronic ammonia criteria

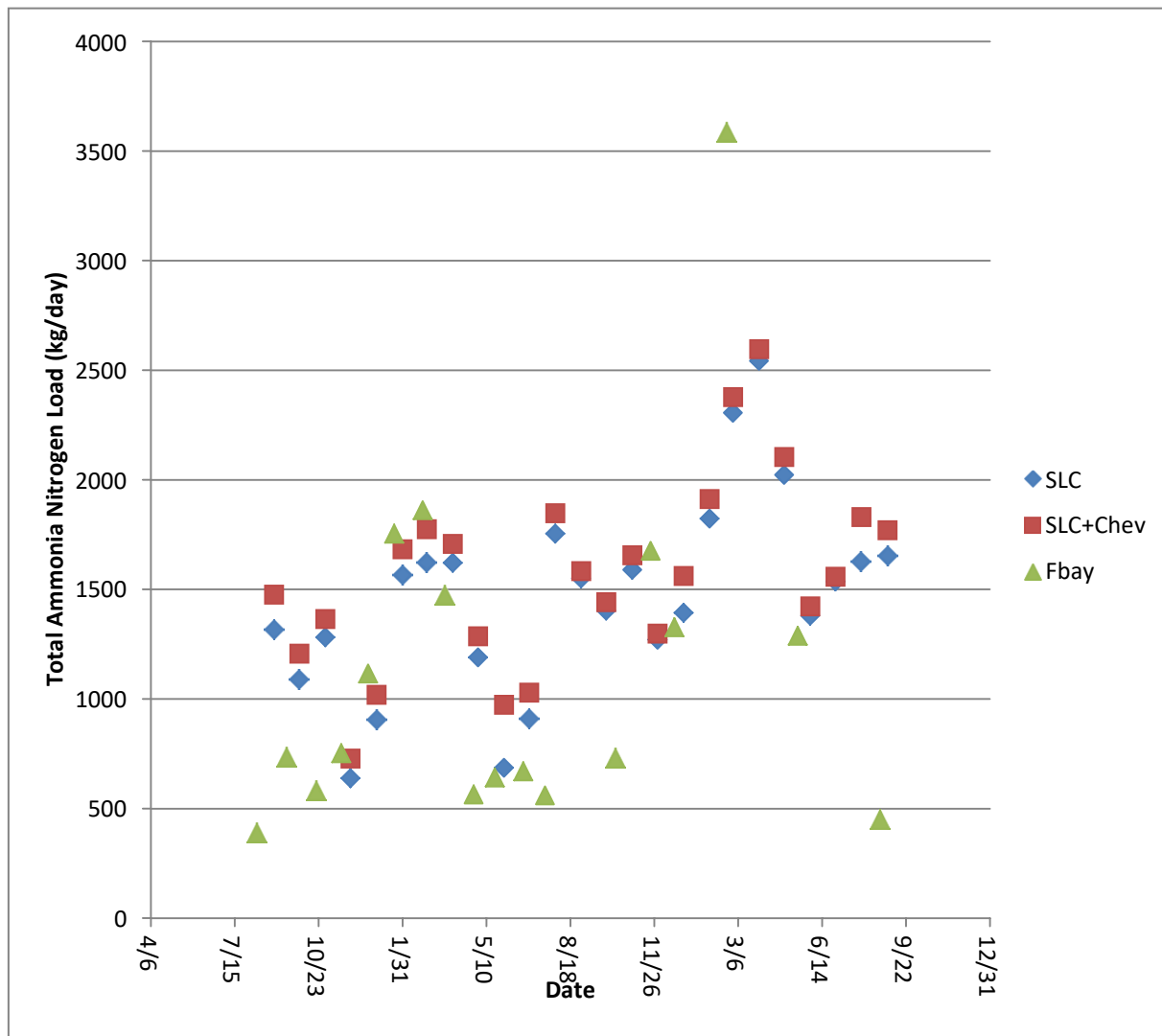


Figure 5. Comparisons of Ammonia Loads measured at the outfalls for Chevron and the Salt Lake City Water Reclamation Facility and the NWOD discharge to Farmington Bay, the Salt Lake City Water Reclamation Facility and the Chevron Refinery.

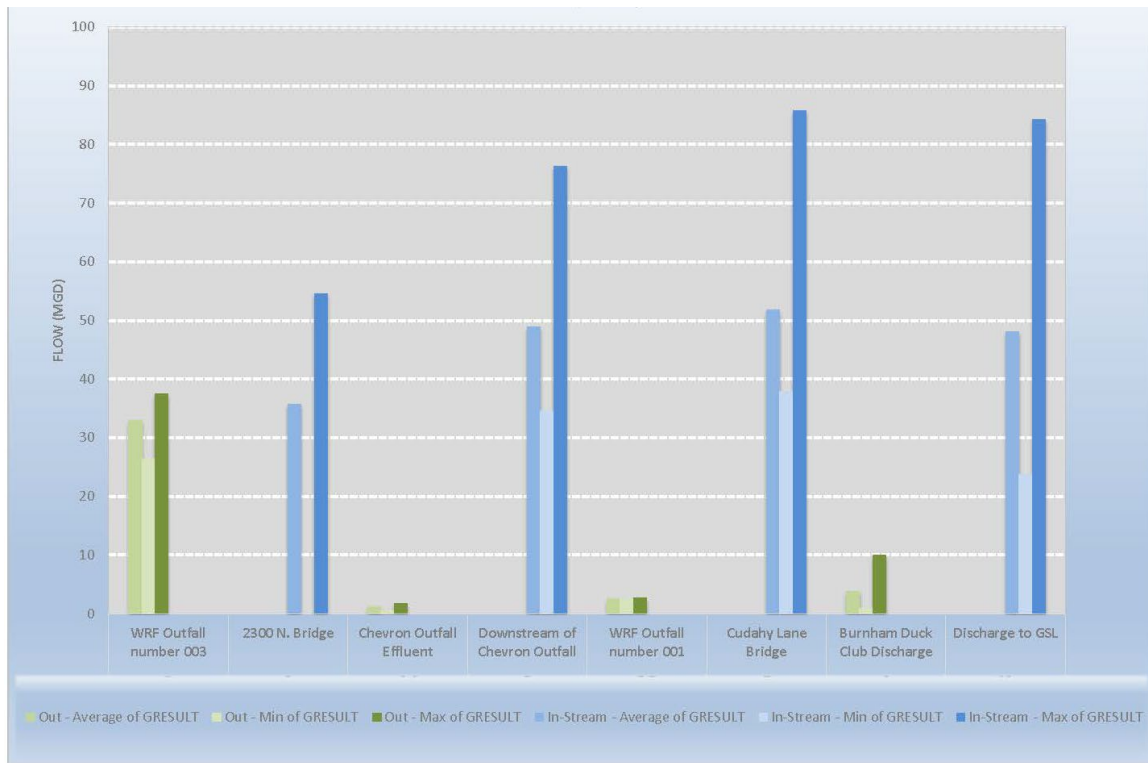


Figure 6. Flow measurements for effluents and Northwest Oil Drain from the NWOD report

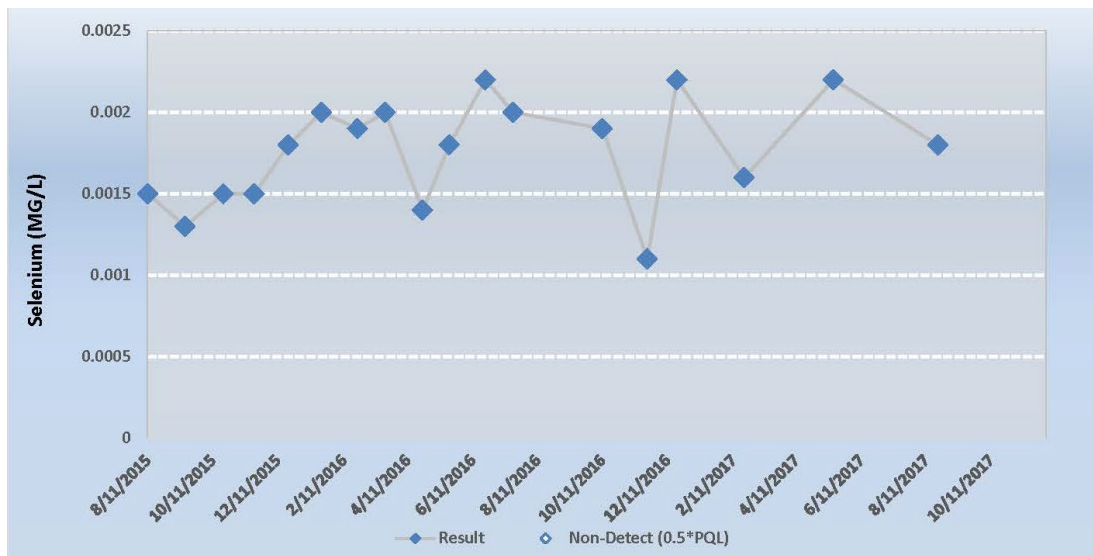


Figure 7. Selenium concentrations in Northwest Oil Drain at discharge to Farmington Bay from the NWOD Report

ATTACHMENT 3

Reasonable Potential Analysis

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REASONABLE POTENTIAL ANALYSIS

Water Quality has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided model. As a result of the model, more parameters may be included in the renewal permit. A Copy of the Reasonable Potential Analysis Guidance (RP Guide) is available at water Quality. There are four outcomes for the RP Analysis¹. They are;

- Outcome A: A new effluent limitation will be placed in the permit.
- Outcome B: No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
- Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
- Outcome D: No limitation or routine monitoring requirements are in the permit.

(REASONABLE POTENTIAL LANGUAGE)

Metal sampling was not required in the previous permit; therefore, a complete analysis for RP could not be completed. Metal sampling will be required for at least this permit cycle.

¹ See Reasonable Potential Analysis Guidance for definitions of terms