

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
WATER QUALITY BOARD
P.O. BOX 144870
SALT LAKE CITY, UTAH 84114-4870

**Ground Water Discharge Permit
Permit No. UGW470005**

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

Uintah Advantage, LLC
2105 West 1800 North
Farr West, UT 84404

hereafter referred to as the Permittee, is granted a Ground Water Discharge Permit for two industrial waste water evaporation ponds in Uintah County, Utah. The Permittee's two adjacent waste water ponds are located at Latitude 40° 08' 21" North, Longitude 109° 50' 50" West on the following tract of land (Uintah Base Line and Meridian):

Name	Section	Township	Range	Allotment
Waste Water Ponds #1 and #2	14	4 South	1 East	in Northeast ¼

This permit is based on representation made by the Permittee and other information contained in the administrative record. It is the responsibility of the Permittee to read and understand all provisions of this permit.

The facility shall be constructed and operated in accordance with conditions set forth in the permit and the Utah Administrative Rules for Ground Water Quality Protection (UAC R317-6).

This permit shall become effective 2019.

This permit and authorization to operate shall expire at midnight , 2024.

Erica Brown Gaddis, Ph.D.
Director
Utah Division of Water Quality

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PART I CONSTRUCTION PERMIT ISSUANCE

A. AUTHORIZED CONSTRUCTION

As part of this ground water discharge permit, a construction permit is hereby issued to Uintah Advantage, LLC as summarized below and detailed in Appendix A. Construction for this Project will consist of two, adjacent 10-acre industrial waste water evaporation ponds.

B. DESIGN AND CONSTRUCTION

Under authority of the Utah Water Quality Act, Section 19-5-108(1) Utah Code Ann. 1953, as amended and Utah Administrative Code R317-1, the authorized facilities will be constructed in accordance with the engineering design plans and specifications attached as Appendix A.

The Project entails the construction and operation of a crude oil upgrading facility that will process locally-produced yellow and black wax crude into naphtha, pitch, lube-oil base, low-sulfur diesel and other refined petroleum products. The process water produced from the facility will be routed through an onsite wastewater treatment plant to reduce petroleum constituents and other contaminants and then discharged for evaporation in two lined ponds with a combined operating volume of approximately 240 acre-feet.

Approved construction elements include:

- The industrial waste water evaporation ponds will be constructed with a composite liner system consisting of a 45-mil reinforced linear low-density polyethylene (RLLDPE) primary (upper) liner and a 45-mil RLLDPE secondary (lower) liner.
- The liners will be separated by a geocomposite layer drainage gap between the primary and secondary RLLDPE liners to route leakage to a pond leak collection sump constructed at the low-point of each pond.
- The evaporation ponds will have a leak collection and recovery sump (LCRS) system. A pump will be installed in the leak detection sumps (as needed), and leakage water will be pumped back to the ponds if more than one foot of fluid head is observed above the secondary liner elevation.

BAT Performance Monitoring - Best available technology monitoring will include minimum vertical freeboard, maximum allowable leakage rate, and maximum allowable head:

- Minimum Vertical Freeboard. A minimum of 24 inches of vertical freeboard shall be maintained to ensure total containment of waste water liquids.
- Maximum Allowable Leakage Rate. The LCRS is the primary compliance monitoring point. Based on a pond area of approximately 10 acres for each pond, the calculated maximum allowable leakage rate through the primary reinforced polyethylene liner is 3.8 gallons per minute (5,528 gallons per day) for each waste water evaporation pond.

- The pond elevation rate will also be recorded on a daily basis. A drop in the pond elevation that exceeds the calculated pond evaporation rate will also indicate an exceedance of the maximum allowable leakage rate.
- Maximum Allowable Head. The maximum allowable hydraulic head imposed on the secondary liner (measured in the leak detection sump) will be one foot of fluid head above the secondary liner in the leak collection sumps. Fluids collected in the leak detection sump will be pumped back to the evaporation pond(s) to ensure that less than one foot of hydraulic head above the secondary liner in the leak collection sumps is maintained.

Spill Containment - The permittee shall design, maintain and construct all pipelines and pumping facilities with a spill containment system that shall:

- Prevent any spills or leakage from any contact with the ground surface or ground water.

Any spill that causes pollution or has the potential to cause pollution to waters of the state, including groundwater, shall be reported in accordance with Part III.I.

PART II SPECIFIC CONDITIONS

A. GROUND WATER CLASSIFICATION

Based on ground water quality data submitted in the permit application and available data from the area, ground water at the site is defined as Class III Limited Use Ground Water.

B. GROUND WATER PROTECTION LEVELS

In accordance with UAC R317-6-4.6, Class III ground water will be protected as a potential source of drinking water, after substantial treatment, and as a source of water for industry and agriculture. Class III protection levels are established in accordance with the following criteria in UAC R317-6-4.6B:

1. Total dissolved solids (TDS) may not exceed the greater of 1.25 times the background concentration level or background plus two standard deviations.
2. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the pollutant may not exceed the greater of 0.5 times the ground water quality standard, or the limit of detection.
3. When a contaminant is present in a detectable amount as a background concentration, the concentration of the pollutant may not exceed the greater of 1.5 times the background concentration or 0.5 times the ground water quality standard or background plus two standard deviations; however, in no case will the concentration of a pollutant be allowed to exceed the ground water quality standard. If the background concentration exceeds the ground water quality standard no increase will be allowed.

C. PERMITTED FACILITIES AND BEST AVAILABLE TECHNOLOGY (BAT) STANDARD

1. Authorized Construction - the project facilities authorized by this permit consist of two industrial waste water evaporation ponds.
2. Design and Construction - the authorized industrial waste water ponds will be constructed in accordance with the engineering design plans and specifications approved by the Construction Permit. The area to be lined is approximately 10 acres for each pond. The waste water evaporation ponds will be constructed with a composite liner system with a leak collection and recovery sump (LCRS) system, including:
 - a) 45-mil Reinforced Linear Low-Density Polyethylene (RLLDPE) Primary (Upper) Liner - Specifications for the RLLDPE liners are provided in the Ground Water Discharge Permit application.
 - b) 45-mil RLLDPE Secondary (Lower) Liner – a 45-mil polyethylene liner over a 1-inch minus sand and gravel bed.
 - c) Leak Detection Layer – the liners will be separated by a geonet geomembrane layer drainage gap between the primary and secondary RLLDPE liners to route leakage to the LCRS leak collection sumps located at the low point within the pond floors.

3. BAT Performance Monitoring - Best available technology monitoring will include a minimum vertical freeboard, maximum allowable leakage rate, and maximum allowable head monitoring. These performance standards are based on the precedence and *Action Leakage Rates for Leak Detection Systems* (EPA, January 1992).
 - a. Minimum Vertical Freeboard – a minimum of 24 inches of vertical freeboard shall be maintained to ensure total containment of the waste water ponds.
 - b. Maximum Allowable Leakage Rate – Based on pond areas of approximately 10 acres, the maximum allowable leakage rate through the primary RLLDPE in each pond is 3.8 gallons per minute (5,528 gallons per day).
 - c. Maximum Allowable Head – the maximum allowable hydraulic head imposed on the secondary RLLDPE liners (measured in the leak detection sumps) will be one foot of fluid head above the secondary liner in the leak collection sumps.
4. Spill Containment - The permittee shall design, maintain and construct all pipelines and pumping facilities with a spill containment system that shall:
 - a. Prevent any spills or leakage from any contact with the ground surface or ground water.
 - b. Convey all spills or leakage to the waste water ponds.
5. Any spill that does come into contact with the ground surface or ground water that causes pollution or has the potential to cause pollution to waters of the state shall be reported in accordance with Part III.I.

D. COMPLIANCE MONITORING REQUIREMENTS

1. Compliance Monitoring Points
 - a. Leak Detection - The LCRS installed under the primary pond liner will serve as the ground water compliance mechanism and monitoring point.
2. BAT Performance Monitoring - Leak Detection Sump
 - a. Fluid Measurement – The pond elevation and water elevation in the leak detection sump will be recorded during each on-site inspection, as part of the information listed in Parts II.G and III.G.
 - b. Sump Fluids - if fluids are detected in a LRCS, sump fluids will be pumped to the pond surface to ensure that less than one foot of hydraulic head above the secondary liner in the leak collection sumps is maintained. The volume of pumped fluid will be recorded on a daily basis.

E. NON-COMPLIANCE STATUS

1. Probable Out-of-Compliance Status - The permittee shall evaluate results of each site inspection to determine any failure of BAT performance as described in Part II.C. Upon determination that a BAT performance failure has occurred, the permittee shall:

- a. Immediately reinspect the failed BAT component to evaluate the source of the failure. If the source of the failure is identified, take immediate action to address the failure and proceed as described in Part II.E.2 below.
- b. If no source of the BAT failure is immediately identified, upon exceedance of any one BAT parameter, described in Part II.C, for two consecutive sampling events, proceed as described in Part II.E.2 below.

2. Out-of-Compliance Status Based on BAT Performance Failure

- a. Out-of-Compliance Status shall be defined as follows:

- 1) For parameters that have been defined for BAT performance in Part II.C, out-of-compliance shall be defined as two consecutive observations exceeding the BAT performance criteria.
- 2) Exceedance of the maximum allowable leakage rate:

**Table 1 Maximum Allowable Liner Leakage Rate
(per 10-acre Pond)**

Monitoring System Component	Maximum Allowable Leakage Rate
Industrial Waste Water Ponds	
LRCS sumps	3.8 gallons per minute (5,528 gallons per day)

- 3) A drop in pond surface elevation that indicates that the maximum allowable leakage rate is exceeded even if excess fluid is not detected in the LRCS.

- b. Notification - upon determination by the permittee or the Director, in accordance with UAC R317-6-6.17, that an out-of-compliance status exists, the permittee shall:

- 1) Verbally notify the Director of the out-of-compliance status or acknowledge Director Notice that such a status exists within 24 hours of receipt of data, and
- 2) Provide written notice within 5 days of the determination, and
- 3) Continue daily inspections, or as determined by the Director.

- c. Source and Contamination Assessment Study Plan - within 30 days after the written notice to the Director required in Part I.F. 2.b.2, above, the permittee shall submit an assessment study plan and compliance schedule for:

- 1) Assessment of the source or cause of the BAT failure, and determination of steps necessary to correct the source.

- 2) Assessment of the extent of any ground water contamination and any potential dispersion.
- 3) Evaluation of potential remedial actions to restore and maintain ground water quality, and ensure that the ground water standards will not be exceeded.

F. REPORTING REQUIREMENTS

1. Quarterly Monitoring Summary- monitoring required in Part II.D.2 above shall be reported according to the schedule in Table 2 below, unless modified by the Director:

Table 2: Compliance Monitoring Report Schedule

	<u>Quarter</u>	<u>Report Due Date</u>
1 st	(January, February, March)	April 30 th
2 nd	(April, May, June)	July 31 st
3 rd	(July, August, September)	October 31 st
4 th	(October, November, December)	January 31 st

2. Quarterly Monitoring Summary will include:
 - a. Summary of monitoring results; including any instances of Probable-Out-of-Compliance Status and confirmed Out-of-Compliance Status, system repairs, additional monitoring results, or remedial efforts.
 - b. Copies of all daily inspection records as described in Part III.G.
3. Electronic Filing Requirements- In addition to submittal of the hard copy data, above, the permittee will electronically submit the required ground water monitoring data and inspection records in the electronic format specified by the Director. The data may be submitted by e-mail, compact disc, or other approved transmittal mechanism.

G. COMPLIANCE SCHEDULE

1. Quarterly Monitoring Summaries will be submitted to the Director as described in Part II.D.
2. Waste water pond inspections shall be conducted on a daily basis.
3. Final Closure Plan. In the event that the permittee decides to discontinue its operations at the facility the permittee shall notify the Director of such a decision and submit a Final Closure Plan within 180 days prior to the closure of the facility. The permittee shall resubmit Final Closure Plans within 60 days of receipt of written notice of deficiencies therein.

PART III MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. REPRESENTATIVE SAMPLING

Any samples taken in compliance with the monitoring requirements established under Part II shall be representative of the monitored activity.

B. ANALYTICAL PROCEDURES

Any water sample analysis must be conducted according to test procedures specified under UAC R317-6-6.3.L, 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. REPORTING OF MONITORING RESULTS

Monitoring documentation obtained during each reporting period specified in the permit shall be submitted to the Director, Utah Division of Water Quality at the following address no later than the last day of the month following the completed reporting period:

State of Utah
Division of Water Quality
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Attention: Ground Water Protection Section

Electronic reporting:

<https://deq.utah.gov/ProgramsServices/services/submissions/index.htm>

E. COMPLIANCE SCHEDULES

Unless otherwise specified in this Permit, 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.

F. ADDITIONAL MONITORING BY THE PERMITTEE

If the permittee monitors any pollutant more frequently than required by this permit, using approved test procedures as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted. Such increased frequency shall also be indicated.

G. RECORDS CONTENTS

A. On-site daily inspections will record the following information:

1. Name of Inspector

2. Date and Time of inspection
3. Weather conditions (e.g. sunny, warm, rainy) including temperature and any significant rainfall in the last seven days
4. Nature of inspection (routine or repair inspections)
5. Condition of liner and location of any breaches in the liner noted on a site plan
6. Any repair action taken
7. Water level in pond
8. Water level in leak collection sump (elevation of secondary/lower liner of LCRS must be known). Water level must be less than one foot above secondary liner in leak collection sumps.
9. Indication if pumping is necessary
10. Volume of water pumped. Pump rate should be less than 5,528 gallons per day (per pond) to maintain one foot of hydraulic head above secondary pond liner in leak collection sumps
11. Changes in operation procedures
12. Signature of inspector

H. RETENTION OF RECORDS

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and 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 three years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

I. TWENTY-FOUR HOUR NOTICE OF NONCOMPLIANCE REPORTING

1. The permittee shall verbally report any noncompliance which may endanger public health or the environment as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances. The report shall be made to the Utah Department of Environmental Quality 24 hour number, (801) 536-4123, or to the Division of Water Quality, Ground Water Protection Section at (801) 536-4300, during normal business hours (Monday through Friday 8:00 am - 5:00 pm Mountain Time).
2. A written submission shall also be provided to the Director 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; and,
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
3. Reports shall be submitted to the addresses in Part III.D, Reporting of Monitoring Results.

J. 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 III.E are submitted.

K. 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; and,
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.

PART IV 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 is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under Section 19-5-115(2) of the Act a second time shall be punished by a fine not exceeding \$50,000 per day. 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.

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.

PART V 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 when the alteration or addition could significantly change the nature of the facility or increase the quantity of pollutants discharged.
- B. ANTICIPATED NONCOMPLIANCE
The permittee shall give advance notice 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 must apply for and obtain a permit renewal or extension. The application should 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 as follows:
 - a. For a corporation: by a responsible corporate officer;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
 - c. For a municipality, State, Federal, or other public agency: 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 specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (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 Part IV.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 Part IV.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 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 by the permittee, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the Act, permit applications, permits, effluent data, and ground water quality data shall not be considered confidential.

J. 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.

K. SEVERABILITY

The provisions of this permit are severable, and if any provision 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.

L. TRANSFERS

This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date;
2. The notice includes a written agreement between the existing and new permittee 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 described in Paragraph 2 above.

M. STATE LAWS

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, penalties established pursuant to any applicable state law or regulation under authority preserved by Section 19-5-117 of the Act.

N. REOPENER PROVISION

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. If alternative compliance mechanisms are required.
2. If new ground water standards are adopted by the Board, the permit may be reopened and modified to extend the terms of the permit or to include pollutants covered by new standards. The permittee may apply for a variance under the conditions outlined in R317-6-6.4.D.

APPENDIX A
CONSTRUCTION PLAN
PERMIT AND SPECIFICATIONS

DRAFT

Vince Memmott
Chief Technology Officer
Uintah Advantage, LLC
2105 West 1800 North
Ogden, Utah 84404

Dear Mr. Memmott:

Subject: **Construction Permit** for two identical 10 acre waste water ponds and 1 smaller process-unit storm water holding pond (542,000 gallon)

On February 13, 2019, the Division of Water Quality (DWQ) received the final engineering plans and specifications for the construction of two identical 10 acre waste water ponds and 1 smaller process-unit storm water holding pond (542,000 gallon) for the Uintah Advantage Crude Refining Facility. These documents have been stamped by Blaine R. Zwahlen, P.E. The original submittal was a little confusing because there were references to various liner materials. This final document indicates that the liner material will be a 45-mil reinforced polyethylene (Dura-Skrim N45B)

The following is a summary of the proposed major construction projects:

- Two identical 10 acre waste water ponds and
- 1 smaller process-unit storm water holding pond (542,000 gallon)

The plans and specifications, as submitted, comply with *the Utah Water Quality Rules, (R317, Utah Administrative Code)*. A **Construction Permit** is hereby issued as constituted by this letter, subject to the following conditions:

- 1. Any revisions or modifications to the approved plans and specifications must be submitted to DWQ for review and approval, before construction or implementation thereof. Please submit any changes for review and approval directly to Woodrow Campbell, P.E., of the DWQ Ground Water Protection Section.*
- 2. A written operations and maintenance manual, containing a description of the functioning of the facilities, an outline of routine maintenance procedures, and all checklists and maintenance logs needed for proper operation of the system, must be submitted and approved before the final inspection and operation of the system.*
- 3. The approved facilities must not be placed in service unless DWQ has conducted a final inspection, reviewed and approved the As-Built Construction Certification Report, issued a ground water discharge permit for the facility, if applicable and provided written authorization to place the constructed facilities in service.*

The plans and specifications for this project have been stamped and signed by a Professional Engineer currently licensed to practice in the state of Utah. The construction design, inspection supervision, and written construction certification of all work associated with this Construction Permit must be performed by a Professional Engineer licensed to practice in the state of Utah.

This Construction Permit will expire one year from the date of its issuance, as evidenced by the date of this letter, unless substantial progress is made in constructing the approved facilities or the plans and specifications have been resubmitted and the construction permit is reissued. This permit does not relieve you, in any way, of your obligations to comply with other applicable local requirements. You may contact Darrin Brown, Tri-County Health Department at 435-247-1160 or Nathan Hall, DEQ District Engineer at 435-247-1167 for further assistance regarding local matters.

Because of the inherent hazard potential at lagoons and ponds, warning signs should be posted at these facilities to state the dangers of drowning and asphyxiation. Safety ropes (or equivalent) running down the pond side slopes, and fastened to posts at the top of the dikes should be available to allow anyone trapped in the ponds to escape.

Please contact Mr. Campbell at the beginning of construction to allow periodic inspections to be scheduled. Upon completion of the project, a final inspection and approval of the As-Built Construction Certification Report is required before the approval to operate the completed facilities can be issued. Please remain in contact with Mr. Campbell to schedule the final inspection. The Construction Certification Report with final as-built drawings must include test results for the following construction quality assurance and quality control (CQA/QC) elements:

Soil Subgrade

- Proctor Curves,
- Soil Classification,
- Field Compaction Testing, and
- Subgrade Acceptance Certification.

Flexible Membrane Liner

- Panel Placement Log,
- Trial Seam Test Log,
- Seaming Record,
- Seam Test Record,
- Repair Log,
- As-Built Drawing,
- Manufacturers Certification including QA/QC Testing of the Rolls, and
- Professional Engineer Certification.

If we can be of further assistance, please contact Mr. Woodrow Campbell at wwcampbell@utah.gov or (801) 536-4353.

Sincerely,

Erica Brown Gaddis, PhD
Director

EBG/WWC/DJH:

cc: Darrin Brown, Tri-County Health Department (via email w/o attachment)
Nathan Hall, DEQ District Engineer (via email w/o attachment)
Blaine R. Zwahlen, P.E. (via email w/o attachment)

DWQ-2019-001745

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