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Department of
Environmental Quality

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Interim Executive Director

DIVISION OF WATER QUALITY
Erica Brown Gaddis, PhD
Director

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DWQ-2019-009932 BLJ

PERMIT # UGW210010

September 12, 2019

Mr. Jared Holt
Holt Farms, LLC, dba Holt Dairy
Bar V Holdings, LLC
PO Box 130
Enterprise, UT 84725

Subject: Issuance of Modified Permit No. UGW210010

Dear Mr. Holt:

The 30-day public comment period closed on July 8, 2019 for the draft modified Ground Water Discharge and Construction Permit UGW210010, incorporating Holt Dairy's new wastewater containment basin. No comments were received during the public comment period. The final Ground Water Discharge Permit and Statement of Basis are enclosed. An invoice is also enclosed for the legislative mandated fee of $5,200 for 52 hours of staff time preparing the permit. Please remit this fee to Emily Canton of the Division of Water Quality.

The Division of Water Quality values your feedback to help us improve the permitting process to better meet your needs. Please go to http://www.waterquality.utah.gov and take a few minutes to complete our customer feedback form (*Give Feedback* on the lower left side of the web page).

If you have any questions or comments about the permit, please contact Mark Novak at mnovak@utah.gov or (801) 536-4358.

Sincerely,

Dan Hall

Dan Hall, P.G.
Ground Water Protection Manager

DH/MN/blj

Enclosures (3): 1. Statement of Basis (DWQ-2019-006186)
2. Ground Water Discharge Permit (DWQ-2019-005930)
3. Invoice (DWQ-2019-010097)

Cc: Via Email
Dr. David Blodgett, Southwest Utah Health Department
Paul Wright, District Engineer

DWQ-2019-009932

STATEMENT OF BASIS
Ground Water Discharge Permit Modification
Permit UGW210010

Holt Farms, LLC
Mailing Address: Bar V Holding, LLC.
PO Box 130
Enterprise, Utah 84725

June, 2019

Purpose

Ground Water Discharge Permit UGW210010 for Holt Dairy, LLC was renewed for another 5-year term on October 6, 2015. The permit is now being modified to cover construction and operation of a new wastewater containment basin. Monitoring during the previous permit term has shown that the uppermost ground water underlying the site is still protected from contaminants introduced at the land surface by confining layers and an upward hydraulic gradient. In addition, the dairy facility and waste handling systems were constructed to minimize discharge of contaminants to the subsurface.

Facility Description

Holt Dairy operates a 5000 to 6000 cow dairy located approximately 1.5 miles west of New Castle, Utah. The facility is located in the southwest quarter of Section 18, Township 36 South, Range 15 West, SLBM. The facility includes:

- Six Freestall Barns and Exercise Corrals, Flush Lanes, and connecting Cross Alleys;
- Five Shade Barns without Exercise Corrals;
- One Corral for dry cows;
- One Sick Pen;
- One 80 cow Carousel Parlor with Milking Equipment;
- One 84 cow Carousel Parlor with Milking Equipment;
- One Hospital Parlor with Milking Equipment;
- One Calving Barn;
- Two Sand Lanes;
- One Biolink Flush Water System;
- One Reception Pit and Duplex Pump System;
- Composting and Mixing Areas;
- A site graded complete water and drainage system for all of the above items; and
- Three Anaerobic Lagoons with 60-mil HDPE Liner Systems.
- A Sedimentation Settling Cell
- A Pond Sump/Pump System

Construction was done according to the conditions of a construction permit issued by the

Division of Water Quality on September 16, 2009. A construction permit was also issued for approved additions.

The permit is being modified to accommodate a planned new wastewater containment basin to hold wastewater and storm water prior to application to crops during the growing season. The basin will hold approximately 200 acre feet of water and will be located three miles west of the existing dairy and wastewater facilities.

The milking parlor utilizes an estimated 300,000 gallons of water daily. The water is used to pre-cool milk, cooling of milking equipment, for cow cleaning and for cleaning of equipment and facilities. The water is collected from the barn and is sent to a solids separator where the solids will be separated and the liquids are installed in the lagoon. Water used for cooling is recycled by collecting the warmed water in storage until it is used for cleaning of the parlor and cows. Water used for cleaning contains milk residues and manure as well as a small quantity of detergents and small amounts of disinfectants including iodine.

Wastewater that is collected from the milking parlor is piped to the solid separator. This equipment includes a series of gravity solid separating cells and a bio-link mechanical separator system. These facilities separate 70% of the solids from the liquid stream.

The freestalls are bedded with sand or composted manure and they are cleaned by flushing three times a day. The water from the freestall flush is conveyed over a concrete sand alley to remove as much of the sand as possible, the remaining effluent is run through the separator. Solids are composted at the site to be land applied at the appropriate time. The flush lanes are flushed with water taken from approximately 6 feet below the surface of the process tank of the Biolink separation system that has been used during the current days' wastewater production, for odor reduction by using cleaner and aerobic water for flushing.

The exercise lot and closeup lot are lined with compacted native soil and graded such that the runoff from the lots are collected and directed to the Biolink separator via the drainage system. The manure and bedding deposited in the exercise pens, closeup lot and calving barn are piled and hauled to the composting area as needed.

All the wastewater and runoff water flow through the gravity and mechanical separators. The mechanical separator is equipped with a bypass and overflow collection which is directed to the gravity separator and then to Lagoon #1. Overflow water goes to Lagoon #2.

The liquids are stored in three anaerobic lagoons, lined with a 60-mil high-density polyethylene (HDPE) flexible membrane liner installed on top of a compacted soil base. Lagoon #1 is 412 feet by 218 feet with an approximate area of 2 acres and volume of 16 acre-feet. During normal operation all the effluent is conveyed from the Biolink to Lagoon #1 to allow for settling and eventual removal of solids. Lagoon #2 is used for evaporation and storage of wastewater prior to land application and is 412 feet by 1,002

feet with an area of approximately 9.4 acres and volume of 95 acre-feet. A transfer pipe at the normal high water level conveys water from Lagoon #1 to Lagoon #2. During normal operation, only overflow from Lagoon #1 and runoff from the site overflow directly to Lagoon #2. In an abnormal event such as a large storm or power outage, effluent will be directed directly to Lagoon #2 from the reception pit. Operating depth of the lagoons is 10 feet with a maximum depth of 12 feet and 2 feet of freeboard. The new Lagoon #3 will be used for excess and winter storage, to dilute the wastewater, and for land application to crops.

The lagoons are sized based on 300,000 gallons per day of milking parlor process water, storage for the winter season when the effluent cannot be land-applied, and runoff from the 100-year, 24-hour storm event. During the growing season the liquids are mixed with clean water and applied to crops. A portion of the solids are composted and some of the compost may be exported to neighboring farms. Composted and non-composted solids are land applied to crop land owned by Holt Dairy with manure spreading equipment.

Hydrogeology

The facilities are located in Escalante Valley approximately two miles west of the point where Pinto Creek emerges from the mountain front. Sites where surface streams flow across coarse-grained deposits along mountain fronts are often important sources of recharge for aquifers in the alluvial valley deposits. Information obtained after drilling and installing three ground water monitoring wells revealed that materials under the site are predominantly silt and clay, with some minor lenses of sand and gravel.

While drilling the borings for the monitoring wells, uppermost ground water was encountered at approximately 250 feet below ground surface. After the wells were installed, static water levels in the wells were measured at 175 to 185 feet below ground surface (bgs). This indicates that the uppermost aquifer is under confined conditions and may be protected from contaminants introduced near the ground surface by nearly 300 feet of mostly fine-grained sediments and an upward (artesian) hydraulic gradient. Upgradient monitoring well MW-1 had a ground water temperature of 100 degrees F at 300 feet below ground surface, which suggests a geothermal source. The chemistry of ground water sampled at MW-1 is also different from that in downgradient monitor wells.

Historically, ground water levels in Escalante Valley have been falling due to overpumping. Ground water withdrawals and overpumping in the Beryl Junction area has resulted in land subsidence and earth fissures that were documented by the Utah Geological Survey. Additionally, overpumping may affect water levels in monitoring wells, vertical hydraulic gradients, and ground water flow directions during the lifetime of this facility.

Monitoring since this permit was first issued shows that while ground water levels in the monitor wells fluctuate over time, they have not dropped below 199 feet bgs. (Well MW-3, July 2012 measurement).

Monitor wells will be used at the new containment basin site, but have not been drilled yet. A well completed in March, 2017 approximately 600 feet north of the proposed location indicated that ground water can be estimated to occur 144 feet below ground surface. The driller's log for this well indicates mostly silt, sand and gravel at depth of the uppermost ground water.

Best Available Technology

The wastewater lagoons are lined with 60-mil HDPE flexible membrane liners over a one-foot subbase of compacted soil.

All facilities with sustained hydrostatic conditions, including reception pits and the milking parlor, are constructed with concrete and have water stops in all joints.

All open lots have a minimum of 12 inches of native soil compacted to 95% proctor, and this soil has a clay content greater than 18%.

Land application of solids and liquids will be done under a Comprehensive Nutrient Management Plan developed by a certified nutrient management planner.

Background Ground Water Quality, Ground Water Class, and Protection Levels

In order to better understand variability of ground water quality and pressure head in the ground water flow system, eight sets of water quality samples and water level measurements were collected from each monitoring well over a one-year period. Based on the accelerated water quality monitoring data, background water quality for key parameters has been established as summarized in Table 1.

Table 1: Background Ground Water Quality (mg/L)

Monitoring Well	TDS	Nitrate + Nitrite	Ammonia
MW-1 (upgradient)	1,090	1.6	0.06
MW-2	604	0.5	0.05
MW-3	829	0.2	0.05

Based on laboratory analytical results of eight samples collected in 2010 and 2011 from the three monitoring wells installed at the dairy site, the uppermost ground water is classified as Class II Drinking Water Quality with total dissolved solids (TDS) ranging from 600 to 1,100 mg/L.

Table 2 summarizes well-specific ground water protection levels, which were derived from background water quality data in accordance with UAC R317-6-4.

Table 2: Ground Water Protection Levels (mg/L)

Monitoring Well	TDS	Nitrate + Nitrite	Ammonia[c]
MW-2	1,007 [a]	2.5 [b]	7.5 [b]
MW-3	1,127 [a]	2.5 [b]	7.5 [b]

(a) Based on mean concentration X 1.25 (UAC R317-6-4).
(b) Based on 0.25 X ground water quality standard (UAC R317-6-4).
(c) Ammonia standard based on EPA Lifetime Health Advisory of 30 mg/L.

Ground water protection levels will only apply to changes in ground water quality due to contaminants introduced into the uppermost aquifer by the dairy facility (i.e., not from naturally-occurring geothermal effects).

Ground water from the monitor wells was sampled on June 3, 2015 as a permit condition. Results of this sampling are shown in Table 3. Protection levels were not exceeded in downgradient wells. While well MW-1 exceeded background concentrations for Nitrate + Nitrite in this sample event, it is an upgradient well that samples ground water from a geothermal source, and its static water levels have not dropped below the confining layers.

Table 3: Ground Water Chemistry, Sampled June 3, 2015. (mg/L)

Monitoring Well	TDS	Nitrate + Nitrite	Ammonia
MW-1	1010	3.5	0.06
MW-2	560	0.3	<0.05
MW-3	844	0.1	0.05

Compliance Ground Water Monitoring

Ground water conditions at the site were unknown during the permit application process. Based on the assumption that hydrogeologic conditions would be similar to most valley and bench locations in Utah, Holt Dairy was required to drill one upgradient monitoring well (MW-1) and two downgradient monitoring wells (MW-2 and MW-3) located along the presumed direction of ground water flow. When the wells were drilled, it was discovered that the upper 300 feet of the subsurface was predominantly silt and clay, and the uppermost ground water was encountered beneath these layers under confined (artesian) conditions. Under these confined conditions, contaminants introduced near the ground surface at the dairy site are not likely to affect the uppermost ground water.

Based on the presence of confined conditions, sampling and analysis of ground water quality from the site monitoring wells would not be useful to evaluate compliance with permit conditions. Instead of ground water quality monitoring, compliance monitoring will be based on measurement of depth to water and ground water elevations in the monitoring wells. The depth to ground water data will be used to evaluate whether static ground water levels in the confined aquifer are dropping during the operation of the dairy facility, which could change the existing upward hydraulic gradient and make downward contaminant migration possible.

If static ground water elevations measured in the monitoring wells drop to or below the initial elevation where ground water was first encountered during drilling (250 feet below ground surface), water quality monitoring of the wells will be resumed. Ground water quality monitoring may also be resumed at any time upon notification by the Executive Secretary. The Permittee shall also sample all three monitoring wells six months before the expiration date of this permit term, as part of the permit renewal application.

Compliance with permit conditions at the existing facilities will be demonstrated by monitoring static water levels in the confined aquifer as described above, water quality monitoring if necessary, maintaining best available technology of containment facilities appropriate for the site conditions, and following the approved Comprehensive Nutrient Management Plan for land application.

At least two monitor wells will be constructed at the new containment basin site, one at a location that appears to be upgradient of the basin and one apparently downgradient. However, because ground water conditions at the site of the existing dairy facilities are not in one single, unconfined aquifer that would provide the best indication of discharge from the facilities, a compliance monitoring plan will not be developed for the new basin site three miles away until conditions are better understood following completion of the two monitor wells. At least one sample will be taken from a downgradient well and analyzed for the constituents listed in Part II.D.4(e) of the permit. Following development and approval of a monitoring plan for the new containment basin site, background ground water quality and protection levels will be defined for the permit based on at least eight independent samples taken from the downgradient well over at least one year.

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
UTAH WATER QUALITY BOARD
SALT LAKE CITY, UTAH 84114-4870

GROUND WATER DISCHARGE PERMIT
Permit No. UGW210010

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

Holt Farms, LLC, dba Holt Dairy
Bar V Holdings, LLC
PO Box 130
Enterprise, Utah 84725

is granted a ground water discharge permit for the operation of a dairy confining 5000 to 6000 cows located one and a half miles west of Newcastle in Iron County, Utah. The dairy, wastewater lagoons and associated wastewater collection and treatment facilities are located in the southwest quarter of Section 18, Township 36 South, Range 15 West, and Salt Lake Base & Meridian. The permit is being modified to cover construction and operation of a new wastewater containment basin located about two miles west of the existing dairy and wastewater facilities

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

The facilities described herein shall be 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 on Sept 16, 2019

This permit shall expire on Sept 15, 2024

Erica B. Gaddis

Erica Gaddis PhD
Director

DWQ-2019-005930

I. CONSTRUCTION PERMIT

On April 17, 2019, the Division of Water Quality (DWQ) received the Groundwater Discharge Modification Report and Application for the new 200 Acre-Foot Excess Water Pond. This report also contained the engineering plans and specifications for required for the Construction Permit. This document was prepared and signed by Joel A. Myers, a Utah Certified Professional Engineer (P.E.) of GEM Engineering, Inc.

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

- 200 Acre-Foot Excess Water Pond

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 Jeremy Rogers Southwest Utah Public Health Department at 435-986-2582 or Paul Wright District Engineer 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):

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,
- Manufactures Certification including QA/QC Testing of the Rolls, and
- Professional Engineer Certification.

II. SPECIFIC CONDITIONS

A. Ground Water Classification

Based on eight samples taken from each of the three monitor wells on the site in 2010 and 2011, ground water at the dairy site is classified as Class II Drinking Water Quality. Ground water class at the new wastewater containment basin site will be defined following accelerated background monitoring required in Part II.D(4)(h).

B. Background Ground Water Quality and Protection Levels

Background ground water quality, based on eight samples taken in 2010 and 2011 from each of the three site monitoring wells is summarized in Table 1. Total dissolved solids (TDS) concentrations range from 600 to 1,100 milligrams per liter (mg/L) and no parameters are above Utah Ground Water Quality Standards. Ground water quality and protection levels at the new wastewater containment basin will be defined following accelerated background monitoring required in Part II.D(4)(h).

Table 1: Background Water Quality in Monitor Wells (Units in mg/l)

Well	Total Dissolved Solids	Nitrate & Nitrite	Ammonia
MW-1	1090	1.6	0.06
MW-2	604	0.5	0.05
MW-3	829	0.2	0.05

Protection levels derived according to UAC R317-6-4 are listed in Table 2.

Table 2: Protection Levels (Units in mg/l)

Well	Total Dissolved Solids	Nitrate & Nitrite	Ammonia[3]
MW-2	1007[1]	2.5[2]	7.5[2]
MW-3	1127[1]	2.5[2]	7.5[2]

1. Based on Mean X 1.25
2. Based on 0.25 X ground water quality standard
3. Ammonia standard based on EPA Lifetime Health Advisory of 30 mg/l

C. Best Available Technology and Performance Standard

1. Best Available Technology

The administration of this permit is founded on the use of best available technology, in accordance with the requirements of UAC R317-6-1.3. Only wastes from the dairy operations may be disposed of in the approved wastewater system.

2. Performance Standard for Best Available Technology
   Compliance with the requirements for use of best available technology will be demonstrated by construction of the wastewater system in accordance with the applicable Construction Permits issued by the Division of Water Quality (DWQ), including Part I of this permit. Land application of wastes shall be done in accordance with a Comprehensive Nutrient Management Plan developed by a certified nutrient management planner.

3. Closure Plan
   At least 180 days prior to closure of any lagoon or lagoon system, the permitee shall submit to the Division of Water Quality (DWQ) a site-specific closure plan for disposition of the liquids, solids, and liner material of the lagoon(s) to be closed. The liner material must be disposed of in a manner which will not lead to ground water contamination. The monitoring wells may be sampled for a post closure monitoring period as determined by DWQ.

D. Compliance Monitoring

1. Compliance Monitoring Wells
   The permitee has constructed one up gradient and two down gradient compliance monitoring wells at the dairy site. Information on these wells is listed in Table 1.

Table 3. Monitoring Well Information

Well	Location[1]	Elevation (TOC)[2]	Well Depth	Depth of Screened Interval	Ground Water Elevation January 2010[2]
MW-1	S 3389', W 3016' from NE corner of Section 18	300.00	310	250–310	116.43
MW-2	S 1167', E 1067' from W ¼ corner of Section 18	288.28	330	270–330	112.46
MW-3	N 530', E 1116' from SW corner of Section 18	287.43	325	265-325	112.90

Locations in Section 18, Township 36 S., Range 15 W., SLBM.
Top of Casing elevations referenced to a 300.00-foot datum at MW-1. ToC elevations will be surveyed to elevation above mean sea level as a permit condition.

Holt Dairy will construct at least one upgradient and one downgradient well at the new wastewater basin site.

2. Protection of Monitoring Wells

All compliance monitoring wells must be protected from damage due to surface vehicular traffic or contamination due to surface spills, and shall be maintained in full operational condition for the life of this permit. Any compliance monitoring well that becomes damaged beyond repair or is rendered unusable for any reason will be replaced by the Permittee within 90 days or as directed by DWQ.

3. Ground Water Protection Levels
Protection levels for downgradient wells were derived from the background data according to UAC R317-6-4.5 are listed in Table 2. Protection levels apply only to changes in ground water quality due to releases from the dairy facilities and not to changes due to natural ground water flow or ground water flow caused by basin-wide overproduction of ground water.

4. Monitoring Procedures
   a. Water Quality Sampling Plan and Quality Assurance Project Plan.
   All water quality monitoring to be conducted under this permit shall be conducted in accordance with the current or most recently-approved Sampling and Analysis Plan.

   b. Frequency
   The permittee shall measure depth to ground water and determine ground water elevations as described below quarterly. Ground water compliance monitoring as described below shall be conducted:

      1) If ground water elevations in any monitor well drop below the elevation where ground water was first encountered during well drilling (250 feet below ground surface);

      2) At least six months before the expiration date of this permit, and the results reported as part of the permit renewal application;

      3) Upon request of DWQ.

   c. Depth to Ground Water - Depth to ground water must be measured to the nearest 0.01 foot below the top of the well casing before collecting any samples from the wells.

   d. Ground Water Elevations - Ground water elevations shall be determined by subtracting the depth to ground water measurement from the top of casing elevations in Table 1 and reported in feet above mean sea level to the nearest 0.01 foot.

   e. Ground Water Quality Sampling - grab samples of ground water from compliance monitoring wells will be collected for the following analyses.

1) Field Stabilization Parameters - pH, temperature, and specific conductance.

2) Laboratory Parameters – samples will be analyzed for compliance with the well-specific protection levels for the following parameters:
Ammonia as N,
Chloride,
Nitrate + nitrate as N, and
Total dissolved solids (TDS).

In addition, samples will be analyzed for the following major ions: bicarbonate, carbonate, calcium, magnesium, potassium, and sodium.

f. Certified Laboratory - All laboratory analyses shall be performed by a laboratory certified by the State of Utah in accordance with UAC R317-6-6.3.L.

g. Sampling of New Wells – Future monitor wells at the new wastewater containment basin shall be sampled for the parameters listed in Part II.D.4(f), above. Unless an alternate plan is required by DWQ, the upgradient well will be sampled semiannually and the downgradient well sampled quarterly. At least one sample shall be taken from the downgradient well and analyzed before any waste is placed in the basin.

h. Accelerated Background Monitoring - At least eight samples shall be taken from all new monitor wells over a one-year period beginning immediately after well completion and development. The results shall be reported to DWQ in Excel spreadsheet format, listing all parameters for each sampling event.

E. Non-Compliance Status

1. Probable Noncompliance Status

Exists if ground water quality monitoring results indicate that the protection levels developed for this permit are exceeded in any monitoring well or if the static ground water level in any monitor well goes below 250 feet below ground surface for two consecutive quarters. In this case the permitee shall sample all monitor wells at the site, submit the analytical results thereof, and notify DWQ of the probable noncompliance status within 30 days of the initial detection. The permittee shall implement an accelerated schedule of monthly sampling of all monitor wells for at least three months or until directed by DWQ that monthly monitoring may stop.

Upon review of monitoring data and other information, DWQ may require the permittee to submit a source and contamination assessment study plan to determine

the source or cause of the contamination. The study plan shall be implemented upon DWQ approval.

2. Out-of-Compliance Status
Exists when the value for any one ground water pollutant exceeds the protection level in at least two consecutive sample events from a compliance monitoring point, and the results of a source and contamination assessment study required by DWQ indicate that the contamination originated from the dairy facilities or from land application of dairy wastes from Holt Dairy.

Upon determination by the permittee, in accordance with UAC R317-6-6.17 that an out-of-compliance exists, the permittee shall verbally notify DWQ of the out-of-compliance within 24 hours, and provide written notice within 5 days of the detection.

a. Remediation Assessment Study Plan
Within 30 days of the verbal notice to DWQ, the permitee shall submit a remediation assessment study plan and compliance schedule for:

1) Assessment of the extent of the ground water contamination and any potential dispersion.

2) Evaluation of potential remedial actions to restore and maintain ground water quality, and ensure that the ground water standards will not be exceeded at the compliance monitoring wells.

The plan shall be implemented upon DWQ approval.

3. Failure to Maintain Best Available Technology Required by Permit
A facility will be determined to be in an out-of-compliance status if best available technology has failed or cannot be maintained according to the provisions required by this permit, unless:

a. The permitee has notified according to Part I.F.2, and

b. The failure was not intentional or was not caused by the permitee's negligence, either in action or failure to act, and

c. The permitee has taken adequate remedial measures in a timely manner or has developed an approvable remedial action plan and implementation schedule for restoration of best available control technology, an equivalent control technology, or closure of the facility (implementation of an equivalent technology will require permit modification and re-issuance), and

d. The permitee has demonstrated that any discharge of a pollutant from the facility is not in violation of the provisions of UCA 19-5-107.

4. Additional Notification
In the event of out-of-compliance status due to either an exceedance of ground water protection levels due to the permittee's activities, or a failure of Best Available Technology, the permitee shall notify the County Commission in which the incident occurs and the Southwest Utah District Health Department within 24 hours or the first working day following a spill.

5. Contingency Plan for Exceedance of Protection Levels
If, after review of ground water monitoring data, the results of source and contamination assessment, the remediation assessment, and other relevant information, DWQ may require the permitee to develop a Corrective Action Plan (under the provisions of R317-6-6.15) to remediate the contamination. Actions taken under the plan may include emptying liquids and sludge from the leaking lagoon into any of the permittee's other permitted and functioning lagoons, repairing or reconstructing the lagoon liner as needed, constructing temporary holding ponds lined with flexible membrane liners, containing liquid waste release and developing wells for the purpose of extracting the contaminated ground water. Contaminated ground water may be stored in the lagoons or land applied if possible.

6. Contingency Plan for Failure of Best Available Technology
In the event of BAT failure for any of the ponds, the contents of the ponds will be drawn down by application to the evaporation field. The system would then be operated by isolating the faulty structure and incorporating extreme water conservation techniques to allow time for regaining integrity.

F. Reporting Requirements

1. Semi-Annual Ground Water Monitoring Reports.
Semi-annual monitoring reports shall include the following information:

a. Depth to water and ground water elevations in all monitoring wells, and potentiometric contours derived from them, plotted on a base map of the dairy site, for measurements taken in both quarters of the half-year monitoring period.

a. Field data sheets, or copies thereof, including the field parameters required in Part I.D.4.e.1, above, and other pertinent field data, such as well name/number, date and time, names of sampling crew, depth to ground water, type of sampling pump or bailer, measured casing volume, volume of water purged before sampling and any information required to be reported under the approved land application plan.

b. Results of ground water analysis, including date sampled, date received and the results of analysis for each parameter, including: value or concentration, units of measurement, method detection limit for the examination, analytical method and the date of analysis. The analytical methods and the method detection limits for every parameter specified in this permit in Part I.E.4 must conform to those in the approved Water Quality Sampling and Analysis Plan. Analytical results shall also be reported in Excel spreadsheet format, with results for each parameter listed for all sampling events done for compliance with this permit.

2. Noncompliance or Probable Noncompliance
Reporting requirements for out-of-compliance status or probable noncompliance status shall be according to the provisions of Part I.F.

3. Electronic Filing Requirements
Quarterly monitoring reports will be submitted electronically to the Division of Water Quality electronic submissions portal at:
https://deq.utah.gov/water-quality/water-quality-electronic-submissions

4. Semi-Annual Ground Water Monitoring Report Schedule
Monitoring required in Part I.D.4 (above) shall be reported according to the Compliance Monitoring Reporting Schedule of Table 2 below, unless modified by DWQ.

TABLE 4: Compliance Monitoring Reporting Schedule

Monitoring Period	**Report Due Date**
January through June	August 1
July through December	February 1

5. Failure of Best Available Technology
Reporting requirements for failure of Best Available Technology shall be according to the provisions of Part I.E.2.

G. Compliance Schedule

1. Monitor Well Measuring Points:

a. Within 60 days of issuance of this renewed permit, the permittee shall survey the top-of-casing measuring points of the monitor wells used for to determine permit compliance in feet above mean sea level, and report the results to DWQ. Thereafter, measurements of ground water elevations required for permit compliance shall be reported in feet above mean sea level.

2. New Monitor Well Report
   a. At least 30 days before any wastewater is planned to be placed in the new containment basin, Holt Dairy shall submit a report to DWQ on ground water conditions at the site as revealed by construction of the upgradient and downgradient monitor wells. The report shall describe the composition of subsurface materials encountered during drilling of the wells, depth at which ground water was first encountered, depth at which the ground water stabilized after it was encountered in both wells, casing construction details, and analytical results for the parameters required in Part II.D.4(e) from samples taken from both wells. After reviewing the results, DWQ will specify a monitoring plan for the containment basin site, as a minor modification to this permit.

III. REPORTING REQUIREMENTS

A. Representative Sampling

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

A. Analytical Procedures

Water sample analysis must be conducted according to test procedures specified under UAC R317-6-6.3L, unless other test procedures have been specified in this permit.

B. 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.

C. Reporting of Monitoring Results

Monitoring results obtained during each quarterly 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 15th day of the month following the completed reporting period:

Attention: Ground Water Protection Program
State of Utah
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

The due dates for reporting are defined in Part II G of this permit.

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 Permitee

If the permitee monitors any pollutant at a compliance monitoring point 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.

F. Records Contents

1. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements:
    b. The individual(s) who performed the sampling or measurements;
    c. The date(s) and time(s) analyses were performed;
    d. The name of the certified laboratory which performed the analyses;
    e. The analytical techniques or methods used; and,
    f. The results of such analyses.

G. Retention of Records

The permitee 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 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.

H. Notice of Noncompliance Reporting

1. The permitee 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 permitee first became aware of the circumstances. The report shall be made to the Utah Department of Environmental Quality 24 hour number, (801) 538-6333, or to the Division of Water Quality, Ground Water Protection Section at (801) 538-6146, during normal business hours (8:00 am - 5:00 p.m. Mountain Time).

2. A written submission shall also be provided to the Director within five days of the time that the permitee 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 II.D, Reporting of Monitoring Results.

I. Other Noncompliance Reporting

Instances of noncompliance not required to be reported within 5 days, shall be reported at the time that monitoring reports for Part II.D are submitted.

J. Inspection and Entry

The permitee 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 permitee'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.

IV. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

The permitee 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 permitee shall give advance notice to the Director of the Water Quality Board 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 permitee 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 permitee 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

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D. Duty to Mitigate

The permitee 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 permitee 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 permitee 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 permitee only when the operation is necessary to achieve compliance with the conditions of the permit.

V. REQUIREMENTS

A. Planned Changes

The permitee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility which could significantly change the nature of the facility or increase the quantity of pollutants discharged.

B. Anticipated Noncompliance

The permitee shall give advance notice of any planned changes in the permitted facility or activity which is anticipated 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 permitee 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 permitee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permitee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

E. Duty to Provide Information

The permitee 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 permitee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

F. Other Information

When the permitee 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 permitee, 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 permitee if:

1. The current permitee 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 permitee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Director does not notify the existing permitee and the proposed new permitee 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 Part IV.L.2 above.

M. State Laws.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permitee 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. Re-opener Provisions.

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 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 permitee may apply for a variance under the conditions outlined in R317-6.4(D)

2. Changes have been determined in background ground water quality.

STATE OF UTAH

INVOICE

SEND PAYMENT TO:
DEPT OF ENVIRONMENTAL QUALITY
WATER QUALITY
195 N 1950 West 3rd Fl
Salt Lake City UT 84114-4870

Invoice Number:	Original Invoice Date:
2070000054	08-12-19
Amount Due:	**Due Date:**
$5,200.00	09-11-19

AMOUNT ENCLOSED _____

Please write INVOICE NO. on front of check or money order

MAKE CHECKS PAYABLE TO:
UTAH DIVISION OF WATER QUALITY
AR DEPT:BPRO 480:48070

BILL TO: **Holt Farms, LLC**
Jim Holt
PO Box 130
Enterprise UT 84725

Contact : Susan Woeppel 801-536-4354

RETURN THIS PORTION WITH YOUR PAYMENT
RETAIN FOR YOUR RECORDS

STATE OF UTAH

Invoice Number:	Original Invoice Date:	Due Date:	Amount Due:
2070000054	08-12-19	09-11-19	$5,200.00

Invoice Charges

Line Number	Description	Amount
1	GROUND WATER PERMIT UGW210010 ISSUANCE HOURS 52 HOURS @ $100/HR	$5,200.00
	Total Invoice Charges	$5,200.00

Other Charges

Description	Amount
Other Fee	$0.00
NSF Fee	$0.00
Total Other Charges	$0.00
Payments Applied	$0.00
Total Amount Due	$5,200.00

Instructions:

DUE DATE: 09-11-19 AMOUNT DUE: $5,200.00

DWQ-2019-010097