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. UGW010008

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

Circle Four Farms
P.O Box 100
Milford UT 84751

hereafter referred to as the Permittee, is granted a Ground Water Discharge Permit the operation of hog production facilities at 42 existing farm sites southwest of Milford, Utah. The farm sites are located in Sections 22, 23, 27 and 34, T. 30 S., R. 13 W., Salt Lake Base & Meridian.

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 on March 6, 2014 .

This permit and authorization to operate shall expire at midnight March 6, 2019.

Signed this 5th day of March, 2014.

Leah Ann Lamb
Acting Director

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APPENDIX I: Farm and Monitoring Well Compliance Summary

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Applicable Circle Four Farms Operations Documents for this permit include but are not limited to:

Bion System Operation and Maintenance Manual

Circle Four Farms Sampling and Analysis Plan

Anaerobic Lagoon Systems Operation and Maintenance Manual

Spill Prevention and Response Manual

Sludge Disposal and Farm Closure Plan

Nutrient Management Plan for Land Application

Manure Drying Program Plan

PART I SPECIFIC CONDITIONS

A. GROUND WATER CLASSIFICATION

Ground water class as defined in UAC R317-6-4 is indicated for each farm site in Appendix I. Ground water classification is determined through background ground water monitoring in the monitoring wells associated with each farm site. At farm sites 42301, 42302, 42303, 42304, 42305, 42306, 42307, 42308 and 42315 ground water is classified as Class IA, Pristine Ground Water. Farm site 42316 is underlain by Class III, Drinking Water Quality Ground Water.

B. BACKGROUND GROUND WATER QUALITY

Ground water quality information is presented in Appendix I. All parameters in Appendix I are in units of mg/l, except pH. Background is defined as the mean concentration in the well during the background monitoring period. For any new wells installed during the permit term, a formal determination of background water quality will be made after completion of accelerated background monitoring as required in Part I.E.5.(c).

C. GROUND WATER PROTECTION LEVELS

Ground water protection levels for each farm site are presented in Appendix I. Protection levels are based on background sampling performed to date and on the requirements of R314-6-4 as required in Part I.E.5.(c) of this permit. Compliance limits are based on the greater of the protection level or the mean background plus twice the standard deviation.

D. BEST AVAILABLE TECHNOLOGY (BAT) STANDARD

The administration of this permit is founded on the use of best available technology (BAT), in accordance with the requirements of UAC R317-6-1.3.

Construction standards for the farm sites covered by this permit are detailed in the construction permits. The construction permits associated with each farm site are listed in Table 1.

TABLE 1 Construction Permits

Farm Sites	Construction Permit
42301, 42302, 42303, 42304	August 3, 1998
42315, 42316	July 14, 2000
42305, 42306	October 1, 2001
42307, 42308	September 15, 2006

Except farm sites 42302 and 42303, these farm sites each have at least one primary lagoon and one containment basin for evaporation. The lagoon systems are sized to accept up to 1.8 cubic feet (for Sow and Finisher farms) or 2.3 cubic feet (for Nursery farms) of volume per live animal weight (LAW) in the primary lagoon and provide enough surface area for evaporation of water in the containment basin. Farm sites 42302 and 42303 have a common Bion system that treats combined waste from the two farm sites. The system consists of three ponds and a concrete processing pad for each farm site, and a settling

pond, polishing pond and two evaporation or containment basins that will be shared by the two farms. Bioreactor 1 (B1) is a primary aerobic treatment pond for each farm site in the Bion system. It receives liquid waste directly from animal facilities. Two Solids Ecoreactor ponds (SE1) for each farms site are constructed to provide solid waste settling in the Bion system process. Liquid waste from the SE1 is transferred as slurry to a shallow concrete pad (CPP) for further drying. Solid Ecoreactor 2 (SE2) is a secondary solids settling pond that receives the combined wastewater flow from SE1 cells from each farm site. Liquid from the SE2 is transferred to Bioreactor 2 (B2). B2 is a polishing pond for water that will be recycled back into the barn pits. Treated water discharged from the B2 cell is contained in the basins (EVAP-1 or 2) for evaporation. When EVAP-1 is full liquid waste overflows to EVAP-2.

All of the primary lagoons, the containment basins, and the Bion ponds are lined with 40-mil flexible membrane liner (FML). The liners are designed to yield a liner hydraulic permeability coefficient no greater than $1x10^{-7}$ cm/sec. The dimensions, maximum operating depth, free board, liquid contact area, and operating volume of each primary and containment basin for each farm site are presented in the construction permits and construction permit applications covering those units. This information is summarized in Appendix III. Only wastes from the hog-raising operations may be treated in the lagoons.

Waste water from the lagoons and solids generated from the Bion System may be land-applied on an emergency basis as described below at the agronomic rate according to the most recently revised and approved version of the Nutrient Management Plan (NMP) for Land Application. For the purposes of this permit, the agronomic rate is defined as the rate where all available nitrogen is taken up by crops or other plants before it can leach below the root zone, and where other waste constituents are applied at rates that do not cause ground or surface water pollution or plant toxicity incompatible with the intended use of the land. Emergency waste generated as a result of significant spills, the cleanup of a contamination event, or the necessary removal of waste from the facility to allow the investigation of a possible leak or to perform repairs may be land applied in accordance with the NMP.

Currently Circle Four Farms has 10 farm sites in operation for this permit, and each site has a primary lagoon where manure solids are collected. It is necessary to remove accumulated solids from the bottom of each primary lagoon at the farm sites. Circle Four Farm has implemented a program to remove the solids from the lagoons and dry the manure on a drying pad constructed near the lagoon. The manure is a nutrient source and the drying of the manure will allow the nutrients to be sold and applied to local cropland at agronomic rates.

1. Performance Standard for Best Available Technology
Compliance with the requirements for use of best available technology (BAT) will be demonstrated by construction, maintenance and operation of the lagoon systems according to the construction permits issued previously for the sites.

   a. *Liner* - Performance of the FML liner will be evaluated for compliance with the requirements of Part II.E of this permit. Liner integrity will be evaluated prior to operation with the approved construction quality assurance/quality control (QA/QC) plans contained in the application for this permit.

The liner integrity must be maintained. Deterioration of materials or any other situation which prevents the liner from functioning according to the approved design shall constitute non-compliance with this permit. After completion of construction, synthetic liners must remain in contact with the prepared soil base of the lagoons and containment basins, as provided by liner slack and ballast when necessary to minimize billowing caused by the wind. Adequate slack and ballast when necessary will also be provided to minimize stresses and suspensions of the liner at the toe of the dikes due to variations in ambient temperature and incident solar radiation. Any large suspensions or billowing of synthetic liner is considered a failure of this performance standard. The formation of bulges or whales in the liner when the lagoons contain water is an indication of a leak in the liner. When whales form in the liner, the liner must be repaired in an expeditious manner. Impact to the underlying soils must be assessed in conformance with the provisions detailed in the most recently revised and approved version of the Spill Prevention and Response Plan.

b. *Lagoons* - The performance standard for anaerobic lagoons operation is based on operating and maintaining the lagoons in a manner consistent with the design criteria detailed in the construction permits. The design of the primary lagoons is based on a total volumetric capacity of approximately 1.80 cubic feet per pound of LAW, consisting of 1.2 cubic foot for treatment and 0.6 cubic foot for 20-year sludge accumulation for boars, sows, and finishing hogs. Total volumetric lagoon capacity for nursery pigs is based on 1.97 cubic feet per pound of LAW for treatment and 0.29 cubic feet per pound of LAW for a 20-year sludge accumulation. The evaporation basins (secondary lagoons or containment basins) are designed to have a normal operating depth with additional surface area needed to maintain a constant depth, at the same time of each year and evaporate the excess wastewater during each annual cycle. Construction dimensions for each primary and secondary at each farm site are summarized in Appendix III.

The anaerobic lagoon system must be operated and maintained in accordance with the most recently revised and approved Anaerobic Lagoon Systems Operation and Maintenance Manual. Performance of the anaerobic lagoons will be demonstrated by the monitoring specified in Part I.E.5.b.

c. *Bion System:* The performance standard for Bion System is based on operating and maintaining the systems in a manner consistent with the design criteria detailed in the construction permit. The system must be operated and maintained in accordance with the most recently revised and approved Bion System Operation and Maintenance Manual. Performance of the Bion System will be demonstrated by the monitoring specified in Part I.E.5.b.

d. *Land Application* - Land application is currently limited to the parcels of land contained in the West ½ of Section 27, North ½ of the North ½ of Section 28 and the West ½ of Section 33, T. 29 S., R. 11 W., SLB&M. Land application of wastewater from the farm sites covered by this permit is not planned as a routine method of wastewater treatment, but may be employed in an emergency situation as a result of significant spills, the cleanup of a contamination event, or the necessary removal of waste from a facility to allow the investigation of a possible

leak or to perform repairs. Land application of wastes generated at any of the facilities covered by this permit may not be performed on any parcel of land not described above without first notifying and receiving the approval of the Director. Any land application of wastes generated at any of the facilities covered by this permit must be performed in accordance with the most recently revised and approved version of the Nutrient Management Plan for Land Application.

e. *Manure Drying Pads* - Manure drying pads at any of the facilities covered by this permit may not be performed on any parcel of land without first notifying and receiving the approval of the Director. Pad construction must be performed in accordance with the most recently revised and approved version of the Manure Drying Program Plan.

2. Closure Plan

Any lagoon system or Bion System closure must be undertaken in compliance with the most recently revised and approved version of the Sludge Disposal and Farm Closure Plan that has been prepared by the permittee.

Prior to closure of any lagoon or lagoon system, the permittee shall submit to the Director a site-specific closure plan for disposition of the liquids, solids and liner material of the lagoon(s) to be closed. A plan for land application of the liquids and solids at appropriate agronomic rates, on-site or at manure drying pads, or other disposal methods, will be submitted for approval by the Director. The lagoon liner material will be tested according to an approved testing plan to determine an appropriate means of disposal, which will not lead to ground water contamination. The monitoring wells will continue to be sampled for a post closure monitoring period as determined by the Director.

E. COMPLIANCE MONITORING REQUIREMENTS

The permittee is required to monitor ground water quality and source activities that could potentially impact the ground water quality. Monitoring shall be performed according to the provisions of Part I.E.5 to assure compliance with the terms of this permit.

1. Compliance Monitoring Wells

The network of monitoring wells shall provide the ability to detect contamination in the uppermost ground water aquifer, which could result from excess lagoon seepage. Under the provisions of this permit, ground water contamination in the shallow aquifer under the lagoon sites would be a reason for the permittee to take remedial action before further degradation occurs.

a) Location of Monitoring Wells - The permittee has installed a monitoring well system at each existing farm site to establish the ground water gradient underlying each lagoon system and to monitor ground water quality in both the upgradient and downgradient wells. The permittee will be required to drill additional wells if the ground water flow directions are different than expected as revealed when the wells are drilled. The locations and status of the wells are described in Appendix II. The locations of any new wells installed for the farm sites covered under this permit shall be submitted in this format: latitude and longitude relative to NAD83.

b) Damage to Monitoring Wells - If a monitoring well is damaged or is otherwise rendered inadequate for its intended purpose or if a previous hydraulic gradient between two monitor wells is reversed, the Director shall be notified in writing within five days of the permittee becoming aware of the condition.

c) Future Modification of Monitoring Well Network - If at any time the Director determines the monitoring well network to be inadequate due to a change in gradient or for any other reason, the permittee shall submit within 30 days of receipt of notification a plan and compliance schedule to modify the monitoring well network.

2. Monitoring Period
The permittee shall conduct the monitoring detailed in Part I.E.5 for the term of the permit.

3. Monitoring Requirements
The permittee shall comply with the ground water standards, compliance limits listed in Appendix I of this permit, and other monitoring requirements contained in the Utah Ground Water Quality Protection Regulations (UAC R317-6). The monitoring required in Part I.E.5 is based on compounds which may be discharged to ground water or may characterize ground water from different sources and which may be sampled at monitoring wells. The ground water regulations also contain standards for contaminants such as metals, pesticides and volatile organic compounds. Accordingly the permittee must not discharge these or any other contaminants, which could impair beneficial uses of the ground water, even though the permit does not require monitoring for them.

4. Protection Levels and Compliance Limits

a) Application - The monitoring requirements listed below in Part I.E.5 apply to all upgradient and downgradient wells. The protection levels for indicator parameters are calculated using the Ground Water Quality Protection Regulations (UAC R317-6-4), background water quality data, and historical well data.

b) Exceedance in Upgradient Well - If the compliance limits referenced in Part I.C are exceeded in any upgradient well, the permittee shall note the exceedance in the next semi-annual monitoring report. If ground water elevations indicate that the well is no longer upgradient of the lagoon, or if ground water mounding has developed, the exceedance shall be treated as a non-compliance event according to the provisions of Part I.F. As part of the resolution of the non-compliance situation, the permittee may be required to propose changes to the monitoring plan for the site sufficient to demonstrate that ground water is not being polluted in violation of UAC R317-6.

5. Monitoring Details

a) Semi-annual Ground Water Quality Compliance Monitoring - Semi-annual ground water compliance monitoring shall be conducted by the permittee under the provisions of this permit.

Sample collection, handling and analysis shall be conducted in accordance with the most recently revised and approved version of the Circle Four Farms Sampling and Analysis Plan.

Unless revised by the Circle Four Farms Sampling and Analysis Plan, the field parameters to be measured during the semi-annual monitoring shall be: temperature, specific conductance, pH, and ground water elevation. Ground water elevations shall be determined according to Part I.E.5.d.

Unless revised by the Circle Four Farms Sampling and Analysis Plan, the laboratory parameters to be measured during the semi-annual monitoring shall be: Nitrate plus Nitrite as Nitrogen, Bicarbonate, Chloride, and Total Dissolved Solids (TDS).

The results of the semi-annual compliance monitoring shall be submitted to the Division of Water Quality along with supporting field data in the Semi-annual Ground Water Quality Monitoring Report according to Part II.B.

b) Annual Monitoring - Annual compliance monitoring shall be conducted by the permittee under the provisions of this permit according to the most recently revised and approved version of the Circle Four Sampling and Analysis Plan, the Circle Four Anaerobic Lagoon Systems Operation and Maintenance Manual, and the Circle Four Sludge Disposal and Farm Closure Plan as indicated below.

All water supply and production wells supporting the activities at the farm sites covered by this permit shall be monitored annually for Nitrate plus Nitrite as Nitrogen and Total Dissolved Solids (TDS). Sample collection, handling, and analysis shall be conducted in accordance with the most recently revised and approved version of the Circle Four Farms Sampling and Analysis Plan. The results accompanied by any supporting data shall be submitted to the Division of Water Quality with the next Semi-annual Ground Water Quality Monitoring Report according to Part II.B

The waste water from a representative operating primary manure lagoon at a nursery (41202), sow (41102), and finisher (41302) farm site in the Skyline Complex and at a nursery (42201), sow (42101), and finisher (42301) farm site in the Blue Mountain Complex shall be analyzed annually for the following parameters: temperature, specific conductance, pH, nitrate plus nitrite as nitrogen, ammonia, total Kjeldahl nitrogen (TKN), sulfate, bromide, chloride, total dissolved solids, sodium, potassium, calcium, magnesium, bicarbonate, carbonate, phosphorus, arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc. Sample collection, handling, and analysis shall be conducted in accordance with the most recently revised and approved version of the Circle Four Farms Sampling and Analysis Plan. Samples shall be taken in the late summer when parameter concentrations should be at their yearly maximum. Analyses for nitrogen species shall be conducted at the same laboratory. Results of the wastewater monitoring accompanied by any supporting raw data shall be submitted to the Division of Water Quality with the next Semi-annual Ground Water Quality Monitoring Report according to Part II.B.

Lagoon performance monitoring shall be conducted annually according to the most recently revised and approved version of the Anaerobic Lagoon Systems Operation and Maintenance Manual. Results of the lagoon performance monitoring accompanied by any supporting raw data shall be submitted to the Division of Water Quality according to Part II.C

Sludge profiling of all primary lagoons shall be conducted annually at one third of the farms to ensure that each primary lagoon has been profiled every three years by the permittee according to the most recently revised and approved version of the Sludge Disposal and Farm Closure Plan. The results of this profiling accompanied by any supporting raw data shall be submitted to the Division of Water Quality according to Part II.D.

Sludge sampling at the primary lagoon at a nursery (41202), sow (41102), and finisher (41302) farm site in the Skyline Complex and at a nursery (42201), sow (42101), and finisher (42301) farm site in the Blue Mountain Complex shall be conducted according to the most recently revised and approved version of the Sludge Disposal and Farm Closure Plan. The results of this sludge sampling accompanied by any supporting raw data shall be submitted to the Division of Water Quality with the next Semi-annual Ground Water Quality Monitoring Report according to Part II.B.

c) Background Ground Water Quality Monitoring - Background ground water quality has been established in the upgradient monitoring wells for all the farm sites covered by this permit for the purpose of establishing protection levels and compliance limits. The samples were analyzed for the following parameters: temperature, specific conductance, pH, nitrate plus nitrite as nitrogen, ammonia, bicarbonate, chloride, total dissolved solids (TDS), sodium, potassium, magnesium, calcium, carbonate, and sulfate. At least one sample from each downgradient monitor well was also analyzed for all these parameters. If any additional upgradient or downgradient wells are installed, the permittee shall collect quarterly samples at equal time intervals over a two-year period from each upgradient well and each downgradient well. The samples shall be analyzed for the parameters listed above. Sample collection, handling, and analysis shall be conducted in accordance with the most recently revised and approved version of the Circle Four Farms Sampling and Analysis Plan. The results accompanied by any supporting data shall be submitted to the Division of Water Quality with the next Semi-annual Ground Water Quality Monitoring Report according to Part II.B

d) Depth to Ground Water and Ground Water Elevation - Depth to ground water shall be measured to the nearest 0.01 foot, below the reference point at the top of the well casing. For each monitoring well, the permittee shall submit a report to the Division of Water Quality accompanied by a surveyors report indicating the elevation, in feet above mean sea level to the nearest 0.01 foot, of the reference point at the top of the well casing from which all ground water depths are measured.

Ground water elevations shall be measured semi-annually at all active monitoring wells at the farm sites covered by this permit. Ground water elevations shall be calculated by subtracting the depth to ground water measurement from the

elevation of the reference point at the top of the well casing and reported in feet above mean sea level to the nearest 0.01 foot. Ground water elevation calculations for each semi-annual ground water sampling event shall be submitted with the Semi-annual Ground Water Quality Monitoring Report.

For the purpose of constructing ground water potentiometric surface contour maps, ground water elevation data shall be collected within 48 hours for each farm site and two weeks for farm site clusters (NE Blue Mtn, SW Blue Mtn, West Skyline, etc.). Ground water potentiometric contour maps shall be constructed from these data and submitted to the Division of Water Quality with the next Semi-annual Ground Water Quality Monitoring Report according to Part I.G.

e) Laboratory Approval - All water analyses shall be performed by a laboratory certified by the State of Utah in accordance with the most recently revised and approved version of the Circle Four Farms Sampling and Analysis Plan and the provisions of UAC R317-6-6.3.

f) Future Modification of Monitoring Plan - If the Director or permittee determine that hydrogeologic conditions at any farm site do not allow a direct comparison of upgradient and downgradient ground water quality, protection levels and compliance limits shall be established based on ground water quality in the down gradient well. In this event, the Director shall direct the permittee to begin collection of background water quality data in the downgradient well according to Part I.E.5.c. Alternatively, the permittee may propose another method of compliance monitoring within 90 days of the determination that upgradient-downgradient comparison is not possible.

F. NON-COMPLIANCE STATUS

1. Probable Out-of-Compliance Status - The permittee shall evaluate results of each ground water sampling event to determine any exceedence of the Ground Water Protection Levels found in Appendix 1. Upon determination that a Ground Water Protection Level has been exceeded at any downgradient compliance monitoring well, the permittee shall:

   a. Immediately re-sample the monitoring well(s) found to be in probable out-of-compliance status for laboratory analysis of the exceeded protection level parameter(s). Submit the analytical results thereof, and notify the Director of the probable out-of-compliance status within 30 days of the initial detection.

   b. Upon exceedence of any one parameter listed in Part I.C for two consecutive sampling events, immediately implement an accelerated schedule of quarterly sampling analysis, consistent with the requirements of this permit. This quarterly sampling will continue for at least two quarters or until the compliance status can be determined by the Director. Reports of the results of this sampling will be submitted to the Director as soon as they are available, but not later than 30 days from each date of sampling.

2. Out-of-Compliance Status Based on Confirmed Exceedance of Permit Ground Water Protection Levels

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

1) For parameters that have been defined as detectable in the background and for which protection levels have been established, out-of-compliance shall be defined as two consecutive samples exceeding the protection level or compliance limit. Out of compliance status for exceedance of bicarbonate or chloride occurs only when their respective compliance limits are exceeded and the compliance limit for total dissolved solids is also exceeded.

b. Notification and Accelerated Monitoring - 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 within 24 hours, and provide written notice within 5 days of the detection, and

A written submission shall also be provided to the Director within five days of the time that the permittee becomes aware of the noncompliance. The written submission shall contain:

i) A description of the noncompliance and its cause;

ii) The period of noncompliance, including exact dates and times;

iii) The estimated time noncompliance is expected to continue if it has not been corrected; and,

iv) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2) 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 (8:00 am - 5:00 pm Mountain Time Monday through Friday).

3) Continue an accelerated schedule of quarterly ground water monitoring for at least two quarters and continue quarterly monitoring until the facility is brought into compliance 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.1, above, the permittee shall submit an assessment study plan and compliance schedule for:

i) Assessment of the source or cause of the contamination, and determination of steps necessary to correct the source, if the contamination is caused by facilities or activities for which the permittee is responsible.

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

iii) 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.

3. Out-of-Compliance Status Based Upon Failure To Maintain Best Available Technology - In the event that BAT monitoring indicates a violation of any of the construction or performance standards outlined in Part I.D of this permit, the permittee shall submit to the Director a notification and description of the violation in accordance with Part II.I of this permit.

4. 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 Permittee has notified according to Part I.F.2, and

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

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

5. Additional Notification - In the event of out-of-compliance status due to either an exceedance of ground water compliance limits, a spill, or a failure of Best Available Technology, the permittee shall notify the Beaver County Commission and the Southwest Utah District Health Department within 24 hours or the first working day following a spill.

6. Contingency Plan - If, after review of ground water monitoring data and other relevant information, the Director determines that use of any lagoon has caused an exceedance of ground water compliance limits at any compliance monitoring point, the permittee shall conduct a Contamination Investigation to determine the

extent and severity of contamination caused by the lagoon and submit it for review by the Division of Water Quality within 45 days of determination of out-of-compliance status. After review of this report the Director may require the permittee to develop a Corrective Action Plan to remediate the contamination. Actions taken under the plan may include emptying liquids and sludge from the leaking lagoon into one of the other lagoons in the permittee farm complex, repairing or reconstructing the lagoon liner as needed, constructing temporary holding ponds lined with flexible membrane liners, and developing wells for the purpose of extracting the contaminated ground water. Contaminated ground water may be stored in the lagoons or land applied according to the most recently revised and approved Nutrient Management Plan for Land Application, if necessary and feasible.

Significant hog waste spills from the waste handling system must be addressed in compliance with the most recently revised and approved version of the Spill Prevention and Response Manual that has been prepared by the permittee. Minor spill events shall be reported with the next Semi-annual Ground Water Quality Monitoring Report according to Part II.B

G. REPORTING REQUIREMENTS

1. Semi-Annual Ground Water Monitoring - monitoring required in Part I.E.5 above shall be reported according to the schedule in Table 3 below, unless modified by the Director:

Table 3: Semi-Annual Compliance Monitoring Report Schedule

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

2. Water Level Measurements - water level measurements from ground water monitoring wells will be reported as measured depth to ground water from the surveyed casing measuring point, and ground water elevations as converted by casing measuring point elevations.

3. Ground Water Quality Sampling - reporting will include:

   a. Field Data Sheets - or copies thereof, including the field measurements, required in Part I.E.5.a above, or as listed in the most recently revised and approved Circle Four Farms Sampling and Analysis Plan; well name/number, date and time, names of sampling crew, type of sampling pump or bail, volume of water purged before sampling, and any pertinent comments relating to sampling conditions.

   b. Laboratory Analytical Results - including date sampled, date received; and the results of analysis for each parameter, including: value or concentration, units of measurement, reporting limit (minimum detection limit for the examination), analytical method, and the date of the analysis. The analytical methods and the method detection limits for every parameter must conform to those specified in the most recently

revised and approved version of the Circle Four Farms Sampling and Analysis Plan.

4) Annual Sludge Profile Monitoring Report - The report of the annual sludge profile monitoring shall be submitted within 30 days of completion of all sampling, monitoring, and analysis.

5) Annual Lagoon Performance Monitoring Report - The report of the annual lagoon performance monitoring shall be submitted within 30 days of completion of all sampling, monitoring, and analysis.

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

7) Electronic Filing Requirements - In addition to submittal of the hard copy data, above, the permittee will electronically submit the required ground water monitoring data in the electronic format specified by the Director. The data may be submitted by e-mail, compact disc, or other approved transmittal mechanism.

H. COMPLIANCE SCHEDULE

There are no outstanding compliance items at time of permit issuance for UGW010008.

PART II MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. REPRESENTATIVE SAMPLING
Samples taken in compliance with the monitoring requirements established under Part I shall be representative of the monitored activity.

B. ANALYTICAL PROCEDURES
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 results 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 15th 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

E. 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.

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
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.

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 II.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 II.D 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 III 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 IV 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 mentioned 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 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.

2. If alternative compliance mechanisms are required.

3. If subsequent ground water monitoring data reveals the background water quality values in Part I Table 1 are not accurate.

APPENDIX I

UGW010008 FARM AND MONITORING WELL COMPLIANCE LIMIT SUMMARY

FARM SYSTEM	NITRATE + NITRITE (mg/L)	BICARBONATE (mg/L)	CHLORIDE (mg/L)	TOTAL DISSOLVED SOLIDS (mg/L)
42301	2.5	208	85	500
42302	2.5	216	108	587
42303	2.5	216	108	587
42304	2.5	226	80	509
42305	2.5	233	157	689
42306	2.5	229	145	623
42307	2.5	222	160	643
42308	2.5	299	142	643
42315	2.5	245	74	502
42316	5	428	1939	6495

pH range for all farms is 6.5 – 8.5

*Ground water protection levels and compliance limits are established in accordance with R317-6-4. Only the highest allowable value is shown in Appendix 1.

APPENDIX II
Monitoring Well Locations

Farm Site	Well	Location (as built)	Elevation (as built)	Status
42301	42301MD	Latitude 38^0 11' 14.43" N Longitude 113^0 17'58.62" W	5140.4	active
	42301MU	Latitude 38^0 11' 11.84" N Longitude 113^0 18'14.17" W	5144.6	active
42302 & 42303	42302-3MU	Latitude 38^0 10' 44.84" N Longitude 113^0 18' 18.29" W	5126.9	active
	42302-3MD	Latitude 38^0 10' 46.03" N Longitude 113^0 17' 55.37" W	5118.0	active
	42302-3MD2	Latitude 38^0 10' 37.14" N Longitude 113^0 17' 48.16" W	5108.9	active
42304	42304MU	Latitude 38^0 10' 24.86" N Longitude 113^0 18' 14.07" W	5110.3	active
	42304MD	Latitude 38^0 10' 25.41" N Longitude 113^0 17' 58.52" W	5104.3	active
42305	42305-6MU	Latitude 38^0 11' 01.04" N Longitude 113^0 17' 05.43" W	5118.8	active
	42305MD	Latitude 38^0 11' 03.49" N Longitude 113^0 16' 56.86" W	5132.6	active
	42305MD2	Latitude 38^0 10' 57.70" N Longitude 113^0 16' 57.70" W	5115.24	active
42306	42305-6MU	Latitude 38^0 11' 01.04" N Longitude 113^0 17' 05.43" W	5118.8	active
	42306MD	Latitude 38^0 11' 03.56" N Longitude 113^0 16' 48.37" W	5119.8	active
	42306MD2	Latitude 38^0 10' 57.71" N Longitude 113^0 16' 49.79" W	5113.2	active
42307	42305-6MU	Latitude 38^0 11' 01.04" N Longitude 113^0 17' 05.43" W	5118.8	active
	42307MD	Latitude 38^0 11' 01" N Longitude 113^0 16' 37" W	5119.7	active
	42307MD2	Latitude 38^0 11' 01" N Longitude 113^0 16' 37" W	5127.4	active
42308	42305-6MU	Latitude 38^0 10' 01.04" N Longitude 113^0 17' 05.43" W	5118.8	active
	42308MD	Latitude 38^0 10' 58" N Longitude 113^0 16' 31" W	5113.7	active
	42308MD2	Latitude 38^0 10' 58" N Longitude 113^0 16' 31" W	5108.9	active

APPENDIX II
Monitoring Well Locations

Farm Site	Well	Location (as built)	Elevation (as built)	Status
42315	42315MU	Latitude 38^0 09' 30.26" N Longitude 113^0 18' 19.46" W	5077.6	inactive
	42315MU2	Latitude 38^0 09' 39.00" N Longitude 113^0 18' 18.38" W	5083.6	active
	42315MD	Latitude 38^0 09' 36.95" N Longitude 113^0 18' 09.39" W	5077.5	active
42316	42316MU	Latitude 38^0 09' 30.06" N Longitude 113^0 18' 02.80" W	5072.9	active
	42316MD	Latitude 38^0 09' 26.56" N Longitude 113^0 17' 49.74" W	5061.8	active

APPENDIX III - Summary of Construction Details for Primary and Secondary Lagoons

Farm Site		Liquid Level Length, ft	Liquid Level Width, ft	Bottom Level Length, ft	Bottom Level Width, ft	Max. Liquid Depth, ft	Wetted Surface at Max. Liquid Depth, acres	Operating Volume at Max. Liquid Level Depth, cu. ft
42301	primary	512	512	332	322	30	6.21	5,423,520
	secondary	437	437	411.8	411.8	4.2	4.41	756,707
42302 & 42303	Bion System. *System process information is considered confidential to BION NMS, Inc., and access is limited by Utah Statutory Provisions Relevant to Business Confidentiality*							
42304	primary	512	512	332	322	30	6.21	5,423,520
	secondary	437	437	411.8	411.8	4.2	4.41	756,707
42305	primary	574	574	394	394	30	7.78	7,108,680
	secondary	440	440	415	415	4.2	4.47	767,795
42306	primary	574	574	394	394	30	7.78	7,108,680
	secondary	440	440	415	415	4.2	4.47	767,795
42307	primary	574	574	394	394	30	7.78	7,108,680
	secondary	440	440	415	415	4.2	4.47	767,795
42308	primary	574	574	394	394	30	7.78	7,108,680
	secondary	440	440	415	415	4.2	4.47	767,795
42315	primary	512	512	332	322	30	6.21	5,423,520
	secondary	437	437	411.8	411.8	4.2	4.41	756,707
42316	primary	512	512	332	322	30	6.21	5,423,520
	secondary	437	437	411.8	411.8	4.2	4.41	756,707