A. Permit Certificate

INDUSTRIAL
WASTEWATER REUSE PERMIT
LA-000103-06

Glanbia Foods, Inc, LOCATED AT 1728 South 2300 East, Gooding, ID 83330 AND IN **Townships 5 South, Range 15 East, Section 36; Township 5 South, Range 16 East, Section 31; Township 6 South, Range 15 East, Sections 1 and 12; and Township 6 South, Range 16 East, Sections 6 and 7** IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE RECYCLED WATER RULES (IDAPA 58.01.17), THE WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER QUALITY RULE (IDAPA 58.01.11), AND THE ACCOMPANYING PERMIT, APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON **MAY 11, 2017**.

5-11-12

Bill Allred
Regional Administrator
Twin Falls Regional Office
Idaho Department of Environmental Quality

Date:

DEPARTMENT OF ENVIRONMENTAL QUALITY
1363 Fillmore Street
Twin Falls, Idaho 83301
(208) 736-2190

B. Permit Contents, Appendices, and Reference Documents

Reference Documents

1. Plan of Operation (Operation and Maintenance Manual), including the following:
   - Quality Assurance Project Plan
   - Contingency Plan
   - Runoff Management Plan
   - Grazing Management Plan
   - Odor Management Plan
   - Waste Solids (Sludge) Management Plan
   - Emergency Contingency Plan

The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000103-06 and are enforceable as such. This permit does not relieve Glanbia Foods, Inc, hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – Typically April 01 through October 31 (214 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 "Ground Water Quality Rule"
Guidance	Guidance for the Reclamation and Reuse of Municipal and Industrial Wastewater, DEQ
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to reuse hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop, and calculated monthly during the growing season (GS). The equation used to calculate the IWR is: $IWR = P_{def} / E_i$ P_{def} is the precipitation deficit and is synonymous with the net irrigation water requirement of the crop. The P_{def} can be found at the following website: http://www.kimberly.uidaho.edu/ETIdaho/. E_i is the irrigation system efficiency.
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – Typically November 01 through March 31 (151 days)

C. Abbreviations, Definition

NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation
Reuse	The use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, aquifer recharge, use in surface water features, toilet flushing in commercial buildings, dust control, and other uses.
Reuse Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year, typically November 01 – October 31. For example, the 2000 Reporting Year was November 01, 1999 through October 31, 2000.
SAR	Sodium Absorption Ratio
SI	Supplemental Irrigation water applied to the reuse treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 *Water Quality Standards and Wastewater Treatment Requirements*
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WW	Wastewater applied to the reuse treatment site

D. Facility Information

Legal Name of Permittee	Glanbia Foods, Inc
Type of Wastewater	Industrial Wastewater
Method of Treatment	Wastewater pretreatment system followed by slow-rate land application
Type of Facility	Cheese and whey processor
Facility Location	Processing plant at 1728 South 2300 East, Gooding, ID 833301
Legal Location	Arkoosh Site: Parts of Township 5 South, Range 15 East, Section 36 and Township 6 South, Range 15 East, Section 1; Township 5 South, Range 16 East, Section 31 and Township 6 South, Range 16 East, Section 6. Wolfe Site: Parts of Township 6 South, Range 15 East, Section 12 and Township 6 South, Range 16 East, Section 7.
County	Gooding County
USGS Quad	Arkoosh Site: Gooding Wolfe Site: Tunupa
Soils on Site	Arkoosh Site: Sandy loams over hardpan and basalt Wolfe Site: Ackleton fine sandy loam, Ackleton-Jestrick-Rock Outcrop complex, Harsan-Wako complex, and Idow-Wendell-Minveno complex
Depth to Ground Water	Approximately 150 to 180 feet
Beneficial Uses of Ground Water	Domestic, agricultural, industrial
Nearest Surface Water	Arkoosh Site: Little Wood River is located to the immediate north. Wolfe Site: The South Gooding Main Canal runs along a portion of the northern border. The B-2 Lateral runs through the Wolfe site, near Pivot 2 and Linear Fields 3 and 5. The Little Wood River is located approximately 2 miles north.
Beneficial Uses of Surface Water	Agricultural irrigation, cold water biota, salmonid spawning, primary and secondary contact recreation
Responsible Official **Mailing Address** **Phone / Fax**	Mr. Steven Brawley Director of Engineering and Regulatory Affairs 1373 Fillmore Street Twin Falls, Idaho 83301 208-735-4645

E. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the Department in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-103-01 Six (6) months after permit issuance	**Plan of Operation**: Permittee shall submit to DEQ for review and approval an updated Plan of Operations (otherwise known as an Operation and Maintenance 'O&M' Manual) to address the requirements of this permit. The Plan of Operations shall comply with requirements stated in IDAPA 58.01.17.300.05 and should address the items in the latest revision of the Plan of Operation Checklist. The Plan of Operation shall be updated as necessary to reflect current operations. The plan of operation must also include a Quality Assurance Project Plan (QAPP) for monitoring required in this permit. The plan shall cover field activities; laboratory analytical methods and other activities; data verification and validation; data storage, retrieval and assessment; and monitoring program evaluation and improvement. The QAPP must also address accurate flow measurement for each source of irrigation water to each hydraulic management unit. The most current DEQ guidance entitled "Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater" should be used as a reference for the updates to the Plan of Operation. At a minimum, the Grazing Management Plan and the method for calculating IWR, specifically the irrigation efficiency for each HMU, should be updated to reflect the most current methods. The updated Plan of Operation must also address how local field condition observations will be used to adjust the IWR for the site.
CA-103-02 Seepage Test Procedure submitted six months prior to planned seepage testing. Seepage Test the Wastewater Surge Pond by July 2013 Seepage Test the Irrigation Water Storage Pond by November 2015	**Seepage Testing**: Permittee shall conduct seepage testing on both lagoons to demonstrate that the lagoon liners are containing the wastewater. Procedures for performing a seepage test shall be submitted to DEQ for review and approval prior to conducting seepage testing. In accordance with the Settlement Agreement, the seepage rate for Irrigation Water Storage Pond shall be no more than 0.210 inches per day. The same seepage rate will also be applied to the Wastewater Surge Pond. If a lagoon is found to be leaking at a rate higher than 0.21 inches/day, the permittee must do one of the following options: a. Repair the leak and retest for compliance; b. Re-line the lagoon and retest for compliance; c. Drain the lagoon in an approved manner and stop using the lagoon; or d. Determine the impact of the leaking lagoon on the environment based on ground water sampling and modeling. The procedure for performing ground water sampling and monitoring must be approved

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
	by the Department. Any impact must comply with IDAPA 58.01.11, "Ground Water Quality Rule," and IDAPA 58.01.02, "Water Quality Standards." If the impact does not comply with IDAPA 58.01.11, "Ground Water Quality Rule," and IDAPA 58.01.02, "Water Quality Standards," the owner of the lagoon must follow one of the other three options (a-c).
CA-103-03 Twelve (12) months after permit issuance	**TDS Impact Analyses:** Permittee shall submit to DEQ for review and approval a TDS impact analyses that addresses the TDS loading on the Arkoosh site and the Wolfe site from the application of wastewater on the land. If the analyses indicate that the TDS loading from the application of wastewater on either site will contribute to the degradation of the ground water, as defined by IDAPA 58.01.11, *Ground Water Quality Rule*, DEQ will follow the actions specified in Section 400 of IDAPA 58.01.11, *Ground Water Quality Rule.* The analyses must include TDS contributions from the wastewater streams that, if approved by DEQ, are sent directly to the land application site without treatment.
CA-103-04 Nine (9) months after permit issuance	**Wastewater Treatment Plant Assessment:** Permittee shall submit to DEQ for review and approval an assessment of the ability of the wastewater treatment plant to consistently and reliably meet the discharge requirements of 50 ppm for both BOD and TSS. The assessment must include a discussion about the results of the Failure Mode Effect Analysis (FMEA) risk assessment exercise performed by GFI and the associated Technical Services Report dated December 2010. The Technical Services Report includes four "Actions Recommended to Prevent" for four areas that are directly associated with the wastewater treatment plant. The four areas are the primary filtration/ sand-grit trap, equalization of wastewater load prior to treatment plant, digester influent pumps, and biogas collection system and they are highlighted in red in the FMEA because they have a high risk priority number associated with them, as determined by the authors of the report. The assessment must, at a minimum, address these four recommended actions specifically. The assessment must include any actions that will be taken by the permittee to improve the consistency and reliability of the wastewater pre-treatment plant and a schedule of the when the actions will be implemented. Once approved by DEQ, the schedule will become an enforceable part of the permit.
CA-103-05 Prior to discharge of any wastewater stream that is directly to the Irrigation	**Direct discharge of wastewater streams:** The permittee has previously requested authorization for the direct discharge of particular wastewater streams to the Irrigation Water Storage Pond. Prior to directly discharging the proposed wastewater streams to the Irrigation Water Storage Pond, the Permittee must submit to DEQ for review and approval justification that the direct discharge of the wastewater streams will meet the requirements of this permit and IDAPA 58.01.17, *Recycled Water Rules*. The submittal must

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
Water Storage Pond	include sample data from the wastewater stream(s) to demonstrate compliance with the permit requirements as well as the *Recycled Water Rules* and justify that the sample data is representative of the wastewater stream(s) at all times. The submittal must also include the provisions that will be implemented to ensure that the permit requirements will be met (i.e. automatic diversion to the treatment plant if the permit requirements are not met, etc).
CA-103-06 Fifteen (15) months after permit issuance	**Emergency Contingency Plan:** The permittee must submit an emergency contingency plan that will define the criteria for determining what will be considered an emergency situation that will require diversion of wastewater directly to the 5-day irrigation pond. The emergency contingency plan must indicate that DEQ will be notified whenever such diversion occurs and must include all actions taken by GFI to remedy the situation. The emergency contingency plan must also indicate that the diversion of wastewater directly to the irrigation storage pond will only occur when discharging the wastewater to the wastewater treatment plant may potentially cause an upset of the wastewater treatment plant operations.
CA-103-07 Six (6) months prior to permit expiration	**Permit Renewal Application**: If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, submit an application package to DEQ for permit renewal.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Type of Wastewater	Industrial wastewater generated from cheese production and whey processes
Application Site Area	Arkoosh Site: 933.5 Acres Wolfe Site: 530.4 Acres
Application Season	Year-round (365 days/calendar year)
Growing Season (GS)	April 1 through October 31 (214 days)
Non-growing Season (NGS)	November 1 through March 31 (151 days)
Operator Certification	None Required
Reporting Year for Annual Loading Rates	November 1 through October 31
Method of Wastewater Treatment	Unless otherwise approved by DEQ in writing or as specified in the DEQ approved Emergency Contingency Plan required by CA-103-06 , all wastewater from the facility shall be discharged to an equalization lagoon, routed through the pretreatment plant, and then into a five-day holding prior to land application as the final treatment process.
Wastewater Pretreatment System Requirement	The wastewater pretreatment system shall, at a minimum, consist of an anaerobic digestor followed by aerobic treatment (biological nutrient reduction with activated sludge treatment). The pretreatment system shall be maintained and operated in good working order.
Wastewater Pretreatment System Effluent Requirements	Except for periods of operational upset or as otherwise delineated in a DEQ-approved Contingency Plan, wastewater exiting the pretreatment system shall contain no more than 50 parts per million (ppm) biological oxygen demand (BOD) and no more than 50 ppm total suspended solids (TSS), based on a 24-hour flow-proportional composite sample of effluent from the aerobic plant outlet.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Wastewater Directly Discharged to the Five Day Holding Pond	If DEQ approves a specific wastewater stream to bypass the pretreatment system, then the wastewater that is not sent through the pre-treatment system shall not contain more than 50 ppm BOD and no more than 50 ppm TSS, based on a 24-hour flow-proportional composite sample. Wastewater that does not meet the aforementioned water quality requirements must be treated by the wastewater pretreatment system prior to discharge into the five-day holding pond. Continuous monitoring of the TSS concentration of the non-pretreated wastewater effluent will be required. If any instantaneous reading of TSS in the wastewater stream exceeds 50 ppm, the direct discharge line must be automatically diverted to the wastewater treatment plant until the TSS concentration in the non-treated wastewater effluent is below 50 ppm. DEQ may rescind approval of a particular wastewater stream to bypass the treatment plant at any time if the required monitoring for that bypass stream does not consistently demonstrate compliance with the effluent water quality requirements specified above, i.e. TSS and BOD less than 50 ppm.
Pathogen Control	The permittee is required to test for the presence of Salmonella, Shigella, Listeria monocytogenes, and Escheria Coli O157:H7 as specified in Section G of this permit. If the second test is positive for the presence of any of the organisms, the permittee must promptly take all actions necessary to 1) identify the source of the microorganisms, if possible, and 2) eliminate these microorganisms from the wastewater
Growing Season Hydraulic Loading Rate (Applies to wastewater and supplemental irrigation water).	Substantially at the irrigation water requirement throughout the growing season. Local field condition observations may be considered along with the IWR in accordance with the methods specified in the approved updated Plan of Operation required by CA-103-01.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Non-Growing Season Maximum Hydraulic Loading Rate	The maximum NGS hydraulic loading rate is equal to: Soil AWC – Precipitation $_{NGS}$ + Evapotranspiration $_{NGS}$ for each hydraulic management unit (HMU) using the following values: Soil AWC: dependent on soil type Precip., NGS: 5.72 inches (Nov 1 through March 31) ET, NGS: 7.87 inches (Nov 1 through March 31)

HMU #	**Field Description**	**Million Gallons**
010321	Pivot 1 and Fields 3,5, and 6	9.6
010322	Pivot 2 and Fields 7,8, 9, and 13	51.6
010325	Pivot 4	26.8
010326	Pivot 3 and Fields 10 and 11	11.5
010327	Pivot 5 and Filed 14	8.0
010328	Pivot 6 and Fields 16, 19, 22, and 23	38.0
010329	Pivot 7 and Fields 15, 17, and 21	22.7
010330	Pivot 8 and Fields 18 and 20	10.1
010332	Pivot 31 and Fields 35, A, and B	22.9
010333	Pivot 32	25.1
010334	Fields 33, 34, E and H	26.4
010335	Pivot 37 and Fields D,F, and G	19.2
010336	Pivot 36 and Field C	12.1

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Runoff and Ponding Requirements	The permittee shall manage the wastewater land application site in accordance with an approved Runoff Management Plan. To prevent runoff from the site, Best Management Practices (BMPs) shall be used around all areas where runoff may potentially occur. Berms and other BMPs shall be used to protect the wellhead of on-site irrigation wells. New BMPs shall be reviewed and approved by DEQ prior to implementation. The permittee shall, to the maximum extent reasonably possible, operate the land application facility to prevent ponding. This includes, but is not limited to, the obligation to install, operate, and maintain equipment, structures, and other BMPs to prevent and correct ponding. At all times, the permittee shall prevent wastewater from ponding in the fields to the point where the ponded water putrefies or supports vectors or insects. Surface water collection sites adjacent to the Gnesa property (on Field B in MU-010332) shall only be used to collect runoff from rain or snowmelt. Water collected at these sites shall be immediately pumped out of the collection site.
Livestock Grazing	All grazing activities shall be conducted in accordance with the permittee's approved Grazing Management Plan.
Ground Water Quality	Ground water quality shall be in compliance with the Ground Water Quality Rule (GWQR), IDAPA 58.01.11.
Maximum COD Loading, seasonal average in Pounds/acre-day, each HMU	50 pounds / acre-day seasonal average for growing season. 50 pounds / acre-day seasonal average for the non-growing season.
Maximum Nitrogen Loading Rate, pounds/acre-year, each HMU (from all sources including waste solids and supplemental fertilizers)	150% of typical crop uptake (see definition) or University of Idaho Extension, College of Agriculture and Life Sciences, Fertilizer Guides.
Maximum Phosphorus Loading Rate, pounds/acre-year, each HMU (from all sources including waste solids and supplemental fertilizers)	No phosphorous loading limits at this time. In the event that DEQ determines phosphorous limits are necessary, DEQ shall issue a draft modification to the permit and a staff analysis, and shall process the modification as provided in IDAPA 58.01.17.700.
Maximum Total Dissolved Inorganic Solids (TDIS) Loading Rate Limit, pounds/acre-year, each HMU	A TDIS loading rate limit may be established based on the results of the TDS Impact Analyses required by CA-103-02.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Construction Plans	Prior to construction or modification of any wastewater facilities associated with the land application system, plans and specifications shall be submitted for DEQ review and approval. Within 30 days of completion of construction, the permittee shall submit as-built plans for review and approval.
Buffer Zones and Wellhead Protection	Notwithstanding any other provision of this permit, including without limitation the buffer zones set forth herein, the permittee shall comply with the following: 1) wastewater applied by the permittee shall be restricted to the premises of the land application site, and 2) the permittee shall not discharge wastewater to surface waters of the state, without first obtaining all permits and other authorizations required by state and federal law. Except where otherwise indicated in this permit, the following buffer zone distances shall be provided between wastewater application mechanisms and the following: • Public Access Points: 50 feet or more • Permittee's Property Line: 50 feet or more • Man-made Surface Water: 50 feet or more • Inhabited Dwellings: 300 feet or more • Private Wells: 500 feet or more • Public Water Supply Wells: 1000 feet or more The permittee shall at all times observe the buffer zones as specified in Site Map 3 in Appendix 2 of this permit and the following: • No untreated wastewater shall be applied within 1,000 feet of either of the two residences located on the Gnesa property. • No wastewater, treated or untreated, shall be applied within 400 feet of either of the two residences located on the Gnesa property. • No treated or untreated wastewater application by sprinklers within 1,000 feet of either of the two residences located on the Gnesa property. • No wastewater shall be applied to the northwest corner of the Wolfe property; only non-wastewater will be used for irrigation in this location.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
	• Wastewater application on areas designated Linear 3 and Linear 4 on the site map in Appendix 3 shall only be done with linear irrigation devices with drag tubes, not with sprinklers. • No wastewater shall be applied within 300 feet south of the Wood residence, or within 50 feet south of the boundary between the Wolfe and Wood properties, whichever is greater. In the event of odor or other problems caused by wastewater land application, the buffer zone requirements for Linear 3 and Linear 4 may be increased per consent of the permittee and Wood; however the buffer zone will not be increased greater than 400 feet of the Wood residence. • The permittee shall construct, operate, and maintain a system such that natural drainage from the south boundary of the Wood property to the north boundary of the Wolfe property shall be maintained. • No wastewater shall be applied within 300 feet of the Donaldson residence. • No wastewater shall be applied within 50 feet of the property boundary between the Wolfe and Donaldson properties. • No wastewater application by sprinklers within 1,000 feet of the Donaldson residence. • No wastewater shall be applied within 300 feet of the Mallett residence. No wastewater application by sprinklers within 1,000 feet of the Mallett residence.
Supplemental Irrigation Water Protection	Where wastewater and irrigation water interconnections exist in the distribution system, a DEQ-approved backflow prevention device shall be installed.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Odor Management	The wastewater treatment plant, reuse facilities, and other operations associated with the facility shall not create a public health hazard or nuisance conditions including odors. These facilities shall be managed in accordance with the permittee's DEQ approved Odor Management Plan. In the event that nuisance odors, verified by DEQ, occur, the Plan shall be revised as necessary to eliminate or minimize the reoccurrence of nuisance odors.
Fencing and Posting	Signs shall be posted around the land application systems near all homes located around the perimeter of the site and at the entrance of all access roads into the site. At a minimum, the signs shall state "No Trespassing" or equivalent.
Waste Solids Management Requirements	Arkoosh Site: Even application of truck wash sand and grit sump sludge is allowed on approved HMUs in accordance with the approved Sludge Management Plan. Application areas will not be reused in the same year. Also refer to Condition I.5 of this permit. Wolfe Site: Prior to application of any waste solids on the land application site, a DEQ approved waste solids management plan is required. Also refer to Condition I.5 of this permit. The waste solids management plan must address the fact that the nitrate-nitrogen concentration has been increasing in the soils on the Wolfe site and explain how the management of the waste solids will not contribute to further increases.
Allowable Crops	Crops grown for direct human consumption (those crops that are not processed prior to consumption) are not allowed.

G. Monitoring Requirements

The Permittee is allowed to apply wastewater and treat it on a reuse site as prescribed in the table below and in accordance with all other applicable permit conditions and schedules.

1) Appropriate analytical methods, as given in the *Idaho Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Plan of Operation, as required by CA-103-01.

2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Table in this section.

3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.

4) Unless otherwise agreed to in writing by the DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table on the following pages. Monitoring is required at the frequency show in the table below if wastewater is applied anytime during the time period shown.

5) Ten (10) soil sample locations shall be selected for each management unit with greater than fifteen acres and Five (5) soil sample locations shall be selected for each management unit with fifteen acres or less. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches. The soil samples collected at each depth shall be composited to yield three (3) samples for analysis from each management unit.

6) Ground Water Monitoring Procedure: Ground Water Monitoring Wells shall be purged a minimum of three casing volumes and/or until field measurements for pH, specific conductance and temperature meet the following conditions: two successive temperature values measured at least five minutes apart are within one degree Celsius of each other, pH values for two successive measurements measured at least five minutes apart are within 0.2 units of each other, and two successive specific conductance values measured at least five minutes apart are within 10% of each other. This procedure will determine when the wells are suitable for sampling for constituents required by the permit. Other procedures, such as low flow sampling, may be considered by DEQ for approval. The static water level shall be measured prior to pumping or sampling for ground water.

7) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.

8) Monitoring locations are defined in Appendix 1, “Environmental Monitoring Serial Numbers”.

G. Monitoring Requirements

1.1.1. Facility Monitoring Table

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Daily	FM-010301	Emergency bypass flow meter	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM-010302	Flow to the wastewater pre-treatment plant	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM-010303	Five Day Pond Discharge to the HMUs	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM – 010304	Wastewater flow to the Wolfe pump station	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM – 010305	Wastewater flow from the Wolfe pump station to each of the Wolfe Site management units	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM – 010306	Wastewater flow to each of the Arkoosh management units	Flow (MG/month and inches/acre) • Record Daily • Report Monthly
Daily	FM-010307	Supplemental irrigation flow to each of the HMUs	Flow (MG/month and inches/acre) • Record Daily Report Monthly
Daily, NGS only	Each HMU in use	Visual assessment	Field conditions observations (frozen, ice layer, areas of ponding, or other unusual conditions)
Weekly	WW-010305	One, 24-hour flow proportional composite sample	BOD, TSS
Continuous, when wastewater sent directly to Five-day storage pond	WW-010306	Direct measurement of wastewater directly discharged to the Five-day storage pond	TSS concentration • Measure continuously • Report and record daily average and highest daily measurement

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Weekly	WW-010306 Wastewater directly discharged to the Five-day storage pond, as approved by DEQ	One, 24-hour flow proportional composite sample	BOD, TSS
Monthly	WW-010306	Grab sample	COD, total Kjeldahl nitrogen, ammonia-nitrogen, nitrite + nitrate-nitrogen, total phosphorus, electrical conductivity, pH, TDIS
Quarterly	WW-010304	Aseptic grab (presence or absence)	Salmonella, Shigella, Listeria monocytogenes, Escherichia coli O157:H7 If the presence of one of these organisms is detected (i.e., a positive test result), a second test will be conducted within 24 hours of the previous, positive test. If the second test is negative, the regular testing schedule will resume.
Quarterly	WW-010304	Aseptic grab (presence or absence)	Escherichia coli
Quarterly (January, April, July, and October)	Ground Water monitoring wells, listed in Appendix 1	See Note 6	Water table elevation (ft), water table depth (ft), nitrate-nitrogen, total phosphorus, total dissolved solids, chloride, total iron [1], total manganese [1], total coliform, Escherichia coli (absence/ presence) [2]
Monthly	Each HMU	Calculate IWR for each crop type	Volume (million gallons and acre-inches) to each HMU, record monthly

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Annually in April	Each soil monitoring unit	See note 5	Electrical conductivity (mmhos/cm in saturated paste extract), nitrate-nitrogen, ammonium nitrogen, plant available phosphorus, pH, sodium absorption ratio
Each Harvest	Each HMU	Crop type and yield	Pounds/acre and total pounds per HMU (specify moisture basis)
	Each HMU	Plant tissue analysis: Composite sample of harvested portion	Nitrate-nitrogen, total Kjeldahl nitrogen, total Phosphorous, ash (dry weight basis)
Annually	Each HMU	Calculate crop nitrogen, phosphorous, and ash removal	Pounds/acre and total pounds per HMU (dry basis)
	Each HMU	Calculate NGS wastewater loading rate	Million gallons & Inches/NGS
	Each HMU	Calculate GS wastewater loading rate	Million gallons & Inches/GS
	Each HMU	Calculate NGS supplemental irrigation water loading rate	Million gallons & Inches/NGS
	Each HMU	Calculate GS supplemental irrigation water loading rate	Million gallons & Inches/GS
	Each HMU	Calculate seasonal average COD loading rate (GS and NGS)	Pounds/acre-day
	Each HMU	Calculate wastewater nitrogen, phosphorous, and TDIS loading rate	Pounds/acre-year
	Each HMU	Calculate supplemental irrigation water nitrogen, phosphorous, and TDIS loading rate	Pounds/acre-year
	Each HMU	Calculate nitrogen and phosphorous fertilizer application rates	Pounds/acre-year

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
	Each HMU	Calculate waste solids nitrogen, phosphorous, and TDIS applications rates	Pounds/acre-year
	All supplemental irrigation pumps directly connected to the wastewater distribution system.	Backflow testing	Document the testing of all backflow prevention devices for all supplemental irrigation pumps directly connected to the wastewater distribution system(s). Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly.
Once per year	All flow measurement locations	Flow measurement calibration of all flows related to wastewater reuse	Document the flow measurement calibration of all flow meters and pumps used directly or indirectly to measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied to each HMU.
Whenever an emergency bypass occurs, as defined by CA-103-06		Log of emergency diversions	- Dates and cause of the emergency bypass - Actions taken to correct emergency situation - Annual analysis of emergency diversions to determine if preventative measures must be implemented to prevent recurrent emergency situations from continuing in the future

1. Analytical results are required for dissolved iron and/or manganese only if the results for total iron and/or manganese exceed the standards in IDAPA 58.01.11.200.01.b.
2. Analytical results are required for Escherichia coli only if total coliform is present.

H. Standard Reporting Requirements

1.) The Permittee shall submit an Annual Wastewater-Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than February 28th of each year, which shall cover the previous reporting year. The Annual Report shall include an interpretive discussion of monitoring data (ground water, soils, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.

2.) The annual report shall contain the results of the required monitoring as described in *Section G. Monitoring Requirements*. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.

3.) The annual report shall be submitted to the Engineering Manager in the applicable Regional DEQ Office.

Dave Anderson, Engineering Manager
Twin Falls Regional Office
1363 Fillmore St.
Twin Falls, ID 83301
208-736-2190

4.) Notice of completion of any work described in *Section E. Compliance Schedule for Required Activities* shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.

5.) All laboratory reports containing the sample results for monitoring required by *Section G. Monitoring Requirements* of this permit shall be submitted with the Annual Report.

I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.

2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.

3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:

    a. Apply wastewater as evenly as practicable to the treatment area;
    b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
    c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.

4. The permittee shall:

    a. Manage the wastewater reuse treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
    b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.

5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.

6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.

7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:

    a. Enter the permitted facility,
    b. Inspect any records that must be kept under the conditions of the permit.
    c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.

d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.

8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:

   a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
   b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
   c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

      DEQ Regional Office: see Permit Certificate Page
      Emergency 24 Hour Number: 1-800-632-8000

   d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:

      i. A description of the non-compliance and its cause;
      ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
      iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.

   e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.

9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.

10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

J. Standard Permit Conditions: Modifications, Violation, and Revocation

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.

2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700 with respect to any conditions stated in this permit upon review and approval of the DEQ.

3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in Section I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.

4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.

5. Any person violating any provision of the Wastewater Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars ($10,000) or one thousand dollars ($1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.

6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.

7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.

8. If, pursuant to Idaho Code 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.

9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.

J. Standard Permit Conditions: Modifications, Violation, and Revocation

10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

Appendix 1 - Environmental Monitoring Serial Numbers

1.1. HYDRAULIC MANAGEMENT UNITS

Serial Number	Description	Acres
MU-010321	Pivot 1 and Fields 3,5, and 6 (Arkoosh)	44
MU-010322	Pivot 2 and Fields 7, 8, 9 and 13 (Arkoosh)	209.1
MU-010325	Pivot 4 (Arkoosh)	161.8
MU-010326	Pivot 3 and Fields 10 and 11 (Arkoosh)	43.5
MU-010327	Pivot 5 and Field 14 (Arkoosh)	47
MU-010328	Pivot 6 and Fields 16, 19, 22 and 23 (Arkoosh)	228.8
MU-010329	Pivot 7 and Fields 15, 17, and 21 (Arkoosh)	138
MU-010330	Pivot 8 and Fields 18 and 20 (Arkoosh)	61.3
MU-010332	Pivot 31 and Fields 35, A, and B (Wolfe)	111.4
MU-010333	Pivot 32 (Wolfe)	118.0
MU-010334	Fields 33, 34, E and H (Wolfe)	110.9
MU-010335	Pivot 37 and Fields D, F, and G (Wolfe)	108.2
MU-010336	Pivot 36 and Field C (Wolfe)	81.9

1.2. WASTEWATER SAMPLING POINTS

Serial Number	Description
FM-010301	Emergency bypass flow from the Plant directly to LG-0103-04
FM-010302	From the processing plant into the wastewater treatment system
FM-010303	Flow from LG-010304 to all of the HMUs
FM-010304	Wastewater flow to the Wolfe pump station from LG-010304
FM-010305	Wastewater flow to each HMU from the Wolfe pump station
FM-010306	Wastewater flow to each Arkoosh HMU
FM-010307	Supplemental irrigation flow to each HMU

1.3. SOIL MONITORING UNITS

Serial Number	Description	Associated MU
SU-010321	Pivot 1 and Fields 3,5, and 6 (Arkoosh)	MU-010321
SU-010322	Pivot 2, rocky (Arkoosh)	MU-010322
SU-010323	Pivot 2, cropped, and Fields 7, 8, 9, and 13	MU-010322

	(Arkoosh)	
SU-010325	Pivot 4 (Arkoosh)	MU-010325
SU-010326	Pivot 3 and Fields 10 and 11 (Arkoosh)	MU-010326
SU-010327	Pivot 5 and Field 14 (Arkoosh)	MU-010327
SU-010328	Pivot 6 and Fields 16, 19, 22 and 23 (Arkoosh)	MU-010328
SU-010329	Pivot 7 and Fields 15, 17, and 21 (Arkoosh)	MU-010329
SU-010330	Pivot 8 and Fields 18 and 20 (Arkoosh)	MU-010330
SU-010332	Pivot 31 and Fields 35, A, and B (Wolfe)	MU-010332
SU-010333	Pivot 32 (Wolfe)	MU-010333
SU-010334	Fields 33, 34, E and H (Wolfe)	MU-010334
SU-010335	Pivot 37 and Fields D, F, and G (Wolfe)	MU-010335
SU-010336	Pivot 36 and Field C (Wolfe)	MU-010336

1.4. GROUND WATER MONITORING

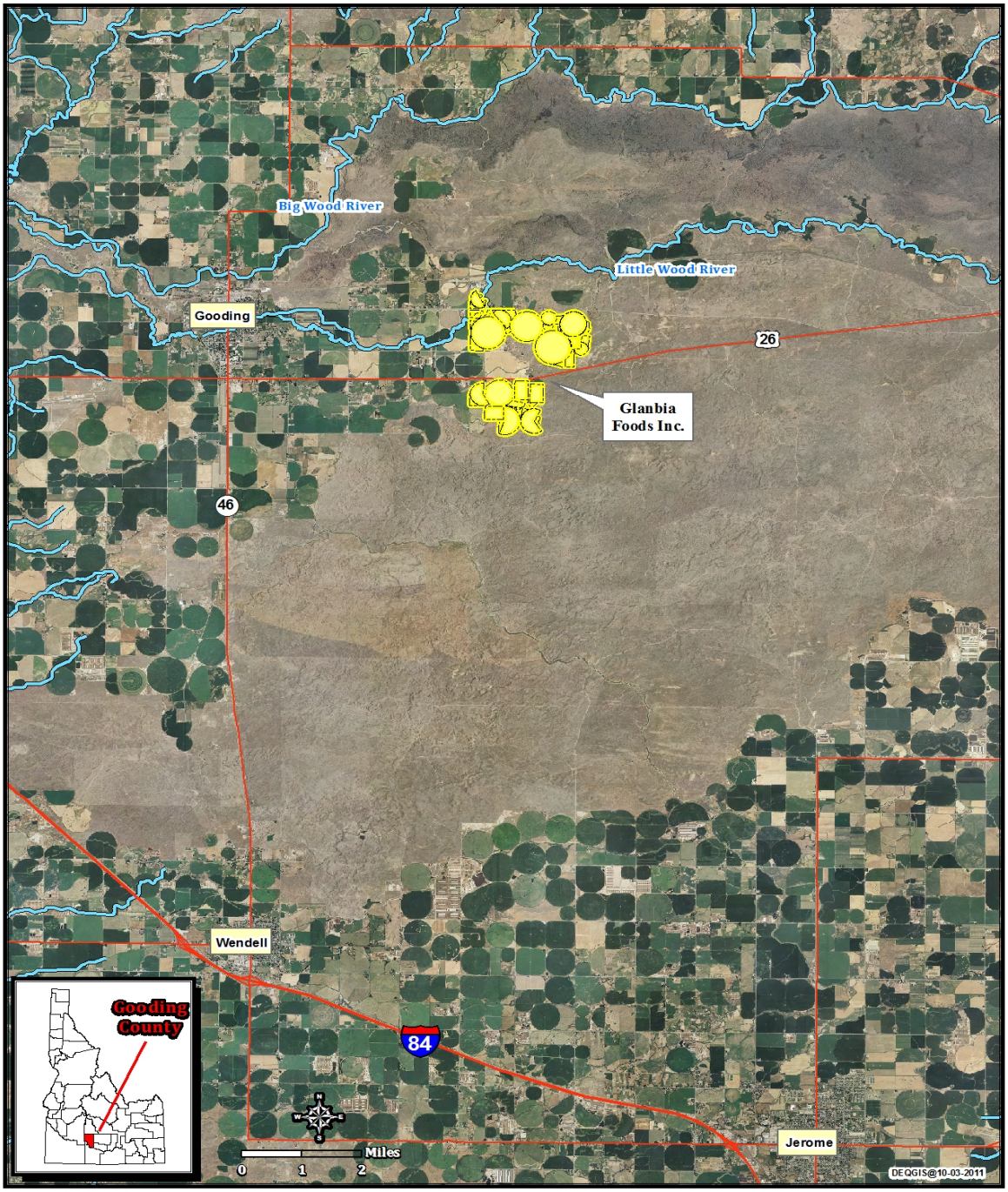
Serial Number	Description	Location
GW-010306	GWM1, Arkoosh, Monitoring Well	Up gradient
GW-010307	GWM2, Arkoosh, Monitoring Well	Up gradient
GW-010308	GWM3, Arkoosh, Monitoring Well	Down gradient
GW-010309	GWM4, Arkoosh, Monitoring Well	Down gradient
GW-0103010	GWM5, Arkoosh, Monitoring Well	Down gradient
GW-0103011	GWM6, Wolfe, Monitoring Well	Up gradient
GW-0103012	GWM7, Wolfe, Monitoring Well	Down gradient
GW-0103013	GWM8, Wolfe, Monitoring Well	Up gradient
GW-0103014	GWM9, Wolfe, Monitoring Well	Down gradient

1.5. LAGOONS

Serial Number	Description
LG-010303	Wastewater Surge Pond (one-day holding pond)
LG-010304	Irrigation Water Storage Pond (five-day holding pond)

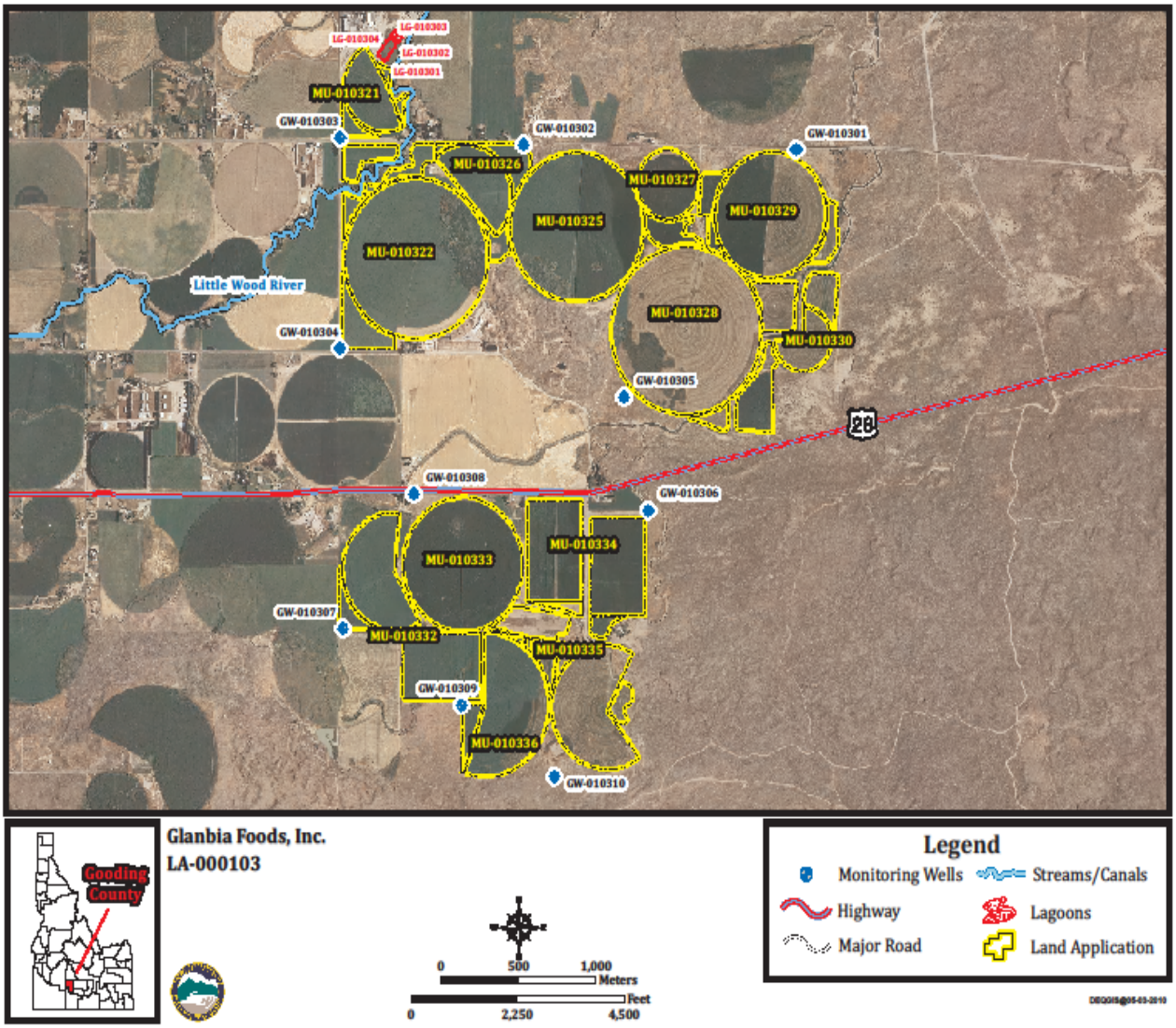
Appendix 2 – Site Maps

Site Map No. 1



Appendix 2 – Site Maps

Site Map No. 2



Appendix 2 – Site Maps

Site Map No. 3 – Settlement Agreement Buffer Zone Map