STATE OF MAINE
Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

June 4, 2012

Ms. Annaleis Hafford, P.E.
Vice President, Olver Associates Inc.
290 Main Street
Winterport, ME. 04496

RE: Permit Compliance System Tracking Number (PCS) # MEU508206
Maine Waste Discharge License (WDL) Application # W008206-6C-E-R
Final License

Dear Ms. Hafford:

Enclosed please find a copy of your **final** Maine WDL which was approved by the Department of Environmental Protection. Please read the license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding this matter, please feel free to call me at 287-7658.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Clarissa Trasko, DEP/EMRO
Sandy Mojica, USEPA

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

CORINNA SEWER DISTRICT	)	PROTECTION AND IMPROVEMENT
CORINNA, PENOBSCOT COUNTY, MAINE	)	OF WATERS
SURFACE WASTE WATER DISPOSAL SYSTEM	)	
MEU508206	)	WASTE DISCHARGE LICENSE
W008206-6C-E-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of the CORINNA SEWER DISTRICT (CSD/licensee hereinafter) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The CSD has submitted a timely and complete application to the Department for the renewal of Waste Discharge License (WDL) #W008206-5L-A-N/Permit Compliance System (PCS) MEU508206 (WDL/license hereinafter) issued by the Department on September 2, 2004, for a five-year term. The license authorized the operation of a surface wastewater disposal (spray-irrigation) system for the treatment and seasonal disposal of wastewater generated by entities within the CSD boundaries at a monthly average rate of 0.11 million gallons per day (MGD). Wastewater is land applied by way of a spray irrigation system that is located on a 166-acre parcel of land approximately one mile southeasterly of the center of town. The spray irrigation system disposes of wastewater to four spray irrigation areas that encompass 38.5 acres of land. It is noted the area of Field #2 was expand by approximately 2.5 acres since issuance of the previous license. Approximately 20 acres of land is occupied by two facultative treatment lagoons (with a working capacity of 3.5 million gallons [MG] each) and a 50-MG storage lagoon.

MODIFICATIONS RQUESTED

1. Increase the spray application rate for Field #1 (4.7 acres) from 2.7 inches/acre/week (73,300 gallons/acre/week) to 3.0 inches/acre/week (81,500 gallons/acre/week).

2. Increase the spray application rate for Field #4 (15.5 acres) from 2.7 inches/acre/week (73,300 gallons/acre/week) to 4.0 inches/acre/week (108,600 gallons/acre/week).

PERMIT SUMMARY

This licensing action is carrying forward all the terms and conditions of the previous licensing action except that this license:

1. Is granting the permittee's request to increase the application rates for Field #1 and Field #4.

2. Is expressing the application rates in terms of total gallons/week/spray field as opposed to gallons/acre/week to give the licensee more flexibility in managing the spray fields.

3. Is eliminating chlorides from the list of parameters to be monitored in the ground water monitoring wells given test results submitted to date have been consistently two orders of magnitude below the Department's critical threshold concentration of 250 mg/L.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated April 23, 2012, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

   (a) Existing water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

CONCLUSIONS (cont'd)

(e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of the CORINNA SEWER DISTRICT, to operate a surface waste water disposal system for the disposal of up to 486,820 gallons per day (gpd) which is equivalent to 3,407,740 gallons per week (gpw) of sanitary waste waters, SUBJECT TO THE FOLLOWING CONDITIONS, and all applicable standards and regulations including:

1. Standard Conditions of Approval for POTW Waste Discharge Licenses dated July 16, 1996, copy attached.

2. The attached Special Conditions, including effluent limitations and monitoring requirements.

3. This license becomes effective upon the date of signature below and expires at midnight five (5) years thereafter. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this license, the terms and conditions of this license and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective April 1, 2003)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DONE AND DATED AT AUGUSTA, MAINE, THIS 5th DAY OF June, 2012.

BY: Michael Kuhns
For Patricia W. Aho, Commissioner

Filed
JUN - 7 2012
State of Maine
Board of Environmental Protection

Date of initial receipt of application: August 17, 2009
Date of application acceptance: September 1, 2009

Date filed with Board of Environmental Protection _____

This Order prepared by GREGG WOOD, BUREAU OF LAND & WATER QUALITY

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date of the license and lasting through the license expiration date, the licensee is authorized to operate a surface waste water treatment and disposal system. The **STORAGE LAGOON EFFLUENT (OUTFALL #001)** [(1)] shall be limited and monitored as specified below.

	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Biochemical Oxygen Demand *[00310]*	100 mg/L *[19]*	1/Month[(2)] *[01/30]*	Grab *[GR]*
Lagoon Level Freeboard *[82564]*	Report, Feet` *[27]*	1/Week[(2)] *[01/07]*	Measure *[MS]*
Total Suspended Solids *[00530]*	100 mg/L *[19]*	1/Month[(2)] *[01/30]*	Grab *[GR]*
Nitrate-Nitrogen *[00620]*	Report mg/L *[19]*	1/Month[(2)] *[01/30]*	Grab *[GR]*
pH (Standard Units) *[00400]*	6.0 – 9.0 S.U. *[12]*	---	---
Metals (Total): Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc *[01002, 01027, 01034, 01042, 01051, 71900, 01067, 01092]*	Report, ug/L *[28]*	1/5 Years[(3)] *[01/5Y]*	Grab *[GR]*

The bracketed italicized numeric values in the table above and the tables that follow are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports. Footnotes: - See pages11 and 12 of this license.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning the effective date of the license and lasting through the license expiration date, application of waste water to the land via a spray irrigation system shall be limited to the time period **April 15th to November 15th of each calendar year. SPRAY-IRRIGATION FIELD #1 (SF-1)** comprised of 4.7 acres is located westerly of the lagoons shall be limited and monitored as specified below.

April 15th to November 15th

SF-1 (4.7 acres at 3.0 inches/acre/week)

	Monthly Total as specified	Weekly Maximum as specified	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Application Rate (Weekly) (4) *[51125]*	---	383,050 gal/week(5) *[8G]*	Report gal/day(5) *[07]*	1/Week *[01/07]*	Calculate *[CA]*
Flow - Total Gallons(3) *[82220]*	Report (Gallons) *[80]*	---	Report (Gallons) *[80]*	1/Month *[01/30]*	Calculate *[CA]*

Footnotes: - See pages 11 and 12 of this license.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning the effective date of the license and lasting through the license expiration date, application of waste water to the land via a spray irrigation system shall be limited to the time period **April 15th to November 15th of each calendar year. SPRAY-IRRIGATION FIELD #2 (SF-2/2U)** comprised of 11.7 acres is located easterly of the lagoons shall be limited and monitored as specified below.

April 15th to November 15th

SF-2/2U (11.7 acres at 2.7 inches/acre/week) (10)

	Monthly Total as specified	Weekly Maximum as specified	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Application Rate (Weekly) (4) [51125]	---	857,610 gal/week(5) [8G]	Report gal/day(5) [07]	1/Week [01/07]	Calculate [CA]
Flow - Total Gallons(3) [82220]	Report (Gallons) [80]	---	Report (Gallons) [80]	1/Month [01/30]	Calculate [CA]

Footnotes: - See pages 11 and 12 of this license.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning the effective date of the license and lasting through the license expiration date, application of waste water to the land via a spray irrigation system shall be limited to the time period **April 15th to November 15th of each calendar year. SPRAY-IRRIGATION FIELD #3 (SF-3)** comprised of 6.6 acres is located northerly of the lagoons shall be limited and monitored as specified below.

April 15th to November 15th

SF-3 (6.6 acres at 2.7 inches/acre/week)

	Monthly Total as specified	Weekly Maximum as specified	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Application Rate (Weekly) (4) *[51125]*	---	483,780 gal/week(5) *[8G]*	Report gal/day(5) *[07]*	1/Week *[01/07]*	Calculate *[CA]*
Flow - Total Gallons(3) *[82220]*	Report (Gallons) *[80]*	---	Report (Gallons) *[80]*	1/Month *[01/30]*	Calculate *[CA]*

Footnotes: - See pages 11 and 12 of this license.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning the effective date of the license and lasting through the license expiration date, application of waste water to the land via a spray irrigation system shall be limited to the time period **April 15th to November 15th of each calendar year. SPRAY-IRRIGATION FIELD #4 (SF-4)** comprised of 15.5 acres is located northerly of the lagoons shall be limited and monitored as specified below.

April 15th to November 15th

SF-4 (15.5 acres at 4.0 inches/acre/week)

	Monthly Total as specified	Weekly Maximum as specified	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Application Rate (Weekly) (4) [51125]	---	1,683,300 gal/week(5) [8G]	Report gal/day(5) [07]	1/Week [01/07]	Calculate [CA]
Flow - Total Gallons(3) [82220]	Report (Gallons) [80]	---	Report (Gallons) [80]	1/Month [01/30]	Calculate [CA]

Footnotes: - See pages 11 and 12 of this license.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning the effective date of the license and lasting through the license expiration date, **GROUND WATER MONITORING WELLS (MW-U, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7)** shall be limited and monitored as specified below. Monitoring well MW-U, considered background, is located upgradient of the lagoons, MW -1 is located downgradient of spray are 2U, MW-2 is located westerly and downgradient of spray area #1, MW-3 is located westerly and downgradient of spray area #3, MW-4 is located northerly of the lagoons but southerly of MW-3, MW-5 is located along the northwest corner of the lagoons, MW-6 is located northerly of spray area #4, MW-7 is located southwesterly of spray area #1.

	Daily Maximum as specified	Minimum Measurement Frequency	Sample Type as specified
Depth to Water Level Below Landsurface *[72019]*	Report (feet)[6] *[27]*	2/Year[7] *[02/YR]*	Measure *[MS]*
Nitrate-Nitrogen *[00620]*	10 mg/L *[19]*	2/Year[8] *[02/YR]*	Grab *[GR]*
Specific Conductance *[00095]*	Report (umhos/cm) *[11]*	2/Year[8] *[02/YR]*	Grab *[GR]*
Temperature (°F) *[00011]*	Report (°F) *[15]*	2/Year[8] [02/YR]	Grab *[GR]*
pH (Standard Units) *[00400]*	Report (S.U.) *[12]*	2/Year[8] [02/YR]	Grab *[GR]*
Total Suspended Solids *[00530]*	Report (mg/L) *[19]*	2/Year[8] *[02/YR]*	Grab *[GR]*
Metals (Total): Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc *[01002, 01027, 01034, 01042, 01051, 71900, 01067, 01092]*	Report ug/L *[28]*	2/5 Years[8] *[02/5YR]*	Grab *[GR]*

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning the effective date of the license and lasting through the license expiration date, the licensee shall sample the **LAGOON UNDERDRAIN (OUTFALL #002)** as specified below.

	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow Rate *[00058]*	Report (gpd) *[78]*	3/Year(9) *[03/YR]*	Estimate *[ES]*
Total Suspended Solids *[00530]*	Report (mg/L) *[19]*	3/Year(9) *[03/YR]*	Grab *[GR]*
Specific Conductance *[00095]*	Report (umhos/cm) *[11]*	3/Year(9) *[03/YR]*	Grab *[GR]*
Temperature (°F) *[00011]*	Report (°F) *[15]*	3/Year(9) *[03/YR]*	Grab *[GR]*

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Footnotes – [Special Condition A(1) – A(7)]

Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

Lagoon Effluent

1. Storage lagoon effluent shall be sampled (at the control building pump room which conveys effluent to the spray-irrigation fields) and shall be representative of what is actually sprayed on the fields. Any change in sampling location must be approved by the Department in writing.

2. Storage lagoon effluent sampling shall be conducted in the months of **April, May, August, and October** of each calendar year in accordance with approved methods for sampling, handling and preservation with the exception of Lagoon Level Freeboard. Lagoon level freeboard shall be measured to the nearest one-tenth ($1/10^{th}$) of a foot between the months of **April through November** of each year. The licensee is not required to test for these parameters during a month where no waste water was disposed of via the spray irrigation system.

3. Metals testing shall be performed during the twelve month period prior to the expiration date of the license.

Spray-Irrigation Fields

4. The licensee shall measure the flow of waste water to the irrigation area by the use of a flow measuring device that is checked for calibration at least once per calendar year. Weekly is defined as Sunday through Saturday.

5. For Discharge Monitoring Report (DMR) reporting purposes, the licensee shall report the highest daily and weekly application rate for the month in the applicable box on the form. Compliance with weekly reporting requirements must be reported for the month in which the calendar week ends.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes – [Special Condition A(1) - A(7)]

Ground Water, and Underdrain Monitoring

6. Depth to Water Level Below the Land Surface is measured to the nearest one-tenth ($1/10^{th}$) of a foot as referenced from the surface of the ground at the base of the monitoring well.

7. Depth to Water Level Below the Land Surface shall be conducted in the monitoring wells during the months of **May and October** of each calendar year.

8. Ground water sampling shall be conducted in the months of in **May and October** of each year. Sampling, handling and preservation shall be conducted in accordance with federally approved methods.

   Temperature, and pH are considered to be "field" parameters, and are to be measured in the field via instrumentation. Specific conductance (calibrated to 25.0° C) is considered to be a "field" parameter and should be measured in the field via instrumentation but may also be measured in the laboratory The licensee is required to test for these parameters whether wastewater was disposed of via the spray-irrigation system or not.

9. Underdrain sampling shall be conducted the months of in **July, August and September** of each year.

10. **On or before December 31, 2013,** ***[PCS Code 95999]*** the licensee shall submit to the Department for review, a report that makes a determination that SF-2 is capable of accepting an application rate of at least 2.7 inches/acre/week or 73,300 gallons/acre/week. If not capable, the report shall make a recommendation as to a more appropriate application rate for SF-2.

B. TREATMENT PLANT OPERATOR

This treatment facility must be operated by a person holding a minimum of a Maine **Grade SITS-II** certificate (or a Maine Professional Engineer [P.E.]) pursuant to Title 32 M.R.S.A., Section 4171 et seq and Department Rule Chapter 531. All proposed contracts for facility operation by any person must be approved by the Department prior to the licensee engaging the services of the contract operator.

SPECIAL CONDITIONS

C. AUTHORIZED DISCHARGES

The licensee is authorized to discharge treated sanitary waste water only in accordance with the terms and conditions of this license and only to the existing spray-irrigation fields [Spray Irrigation Fields SF-1, SF-2/2U, SF-3, and SF-4] from those sources as indicated in the Waste Discharge License application submitted to the Department on August 17, 2009. Discharge of waste water from any other location or from sources other than those indicated on said application requires formal modification of this license. The collection, treatment or discharge of waste water which has constituents unlike that or significantly higher in strength than that of domestic waste water is prohibited without formal modification of this license.

D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition #6, the permittee shall notify the Department of the following:

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and
2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:
   (a) the quality and quantity of waste water introduced to the waste water collection and treatment system; and
   (b) any anticipated impact caused by the change in the quantity or quality of the waste water to be discharged from the treatment system.

E. GENERAL OPERATIONAL CONSTRAINTS

1. All waste water shall receive biological treatment through a properly designed, operated and maintained lagoon system prior to land irrigation.

2. The spray-irrigation facilities shall be effectively maintained and operated at all times so that there is no discharge to surface waters, nor any contamination of ground water which will render it unsatisfactory for usage as a public drinking water supply.

3. The surface waste water disposal system shall not cause the lowering of the quality of the ground water, as measured in the ground water monitoring wells specified by this license, below the State Primary and Secondary Drinking Water Standards specified in the Maine State Drinking Water Regulations pursuant to Maine law 22 M.R.S.A. § 2611.
   In the event that ground water monitoring results indicate lowering of the existing

SPECIAL CONDITIONS

E. GENERAL OPERATIONAL CONSTRAINTS (cont'd)

groundwater quality, the licensee may be required to take immediate remedial action(s), which may include but not limited to, adjustment of the irrigation schedule or application rates, a reduction of the pollutant loading, ground water remediation, or ceasing operation of the system until the groundwater attains applicable standards.

4. The Department shall be notified as soon as the licensee becomes aware of any threat to public health, unlicensed discharge of waste water, sanitary system overflows (SSO's) or any malfunction that threatens the proper operation of the system. Notification shall be made in accordance with the attached Standard Condition #4 of this license.

   A sanitary sewer overflow (SSO) is the release of raw sewage from a sanitary collection system prior to reaching the treatment plant or facility. Spills out of manholes, into basements, onto municipal or private property and into the waters of the State are all considered to be SSO's.

5. The licensee shall maintain a file on the location of all system components and relevant features. Each component shall be mapped and field located sufficiently to allow adequate inspections and monitoring by both the licensee and the Department.

6. System components including collection pipes, tanks, manholes, pumps, pumping stations, spray disposal fields, and monitoring wells shall be identified and referenced by a unique identifier (alphabetical, numeric or alpha-numeric) in all logs and reports.

F. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS

1. Suitable vegetative cover shall be maintained. Waste water may not be applied to areas without sufficient vegetation or ground cover as to prevent erosion or surface water runoff outside the designated boundaries of the spray fields.

2. At least 10 inches of separation from the ground surface to the ground water table shall be present prior to each spray irrigation event. There shall be no runoff outside the designated spray field boundaries as a result of operation of the spray system.

3. No waste water shall be applied to the site following a rainfall accumulation exceeding 1.0 inch within the previous 24-hour period. A rain gauge shall be located on site to monitor daily precipitation. The licensee shall also manage application rates by taking into consideration the forecast for rain events in the 48-hour period in the future.

4. No waste water shall be applied where there is more than 0.5 inches of snow present on the surface of the ground.

SPECIAL CONDITIONS

F. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS (cont'd)

5. No waste water shall be applied when there is any evidence of frost or frozen ground within the upper 10 inches of the soil profile.

6. No traffic or equipment shall be allowed in the spray-irrigation field except where installation occurs or where normal operations and maintenance are performed.

G. SPRAY IRRIGATION OPERATIONAL PROCEDURES, LOGS AND REPORTS

1. **Prior to the commencement of spray irrigation for the season**, the licensee shall notify the Department's compliance inspector that they have verified that site conditions are appropriate (frozen ground, soil moisture etc) for spray irrigation.
2. The permittee shall maintain enough ground water level inspection wells per spray field to ensure that 10 inches of separation from the ground surface to the observed groundwater level is present prior to each spray event for each section of a field that is going to be sprayed. Depths to ground water shall be recorded in accordance with the format similar to *"Monthly Operations Log"* provided as **Attachment A** of this license.

3. The licensee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities. Should significant malfunctions or leaks be detected, the licensee must shut down the malfunctioning portion of the spray system and make necessary repairs before resuming operation. The licensee shall cease irrigation if runoff is observed outside the designated boundaries of the spray field(s).

4. **The licensee shall maintain a daily log** of all spray irrigation which records the date, weather, rainfall, areas irrigated, volume sprayed (gallons), application rates (daily and weekly), and other relevant observations/comments from daily inspections. The log shall be in accordance with the general format of the *"Monthly Operations Log"* provided as **Attachment A** of this license, or other format approved by the Department. Weekly application rates shall be reported in accordance with the general format of the *"Spray Application Report by Week"* provided as **Attachment B** of this license or other format as approved by the Department. The *Monthly Operations Log,* and *Spray Application Report by Week* for each month shall be submitted to the Department as an attachment to the monthly Discharge Monitoring Reports (DMRs) in a format approved by the Department. Copies will also be maintained on site for Department review and for license operation maintenance purposes.

SPECIAL CONDITIONS

H. VEGETATION MANAGEMENT

1. The licensee shall remove grasses and other vegetation such as shrubs and trees if necessary so as not to impair the operation of the spray-irrigation system, ensure uniform distribution of waste water over the desired application area and to optimize nutrient uptake and removal.

2. The vegetative buffer zones along the perimeter of the site shall be maintained to maximize vegetation and forest canopy density in order to minimize off-site drift of spray.

I. LAGOON MAINTENANCE

1. The banks of the lagoons shall be inspected periodically during the operating season and properly maintained at all times. There shall be no overflow through or over the banks. Any signs of leaks, destructive animal activity or soil erosion of the banks shall be repaired immediately.

2. The banks of the lagoons shall be maintained to keep them free of woody vegetation and other vegetation that may be detrimental to the integrity of the bank and/or lagoon liner.

3. The waters within the lagoons shall be kept free of all vegetation (i.e. grasses, reeds, cattails, etc) that hinders the operation of the lagoon.

4. The licensee shall maintain the lagoons freeboard at design levels or at least two (2) feet (measured to a $1/10^{th}$ of a foot increment) whichever is greater. The storage lagoon shall be operated in such a way as to balance the disposal of waste water via spray irrigation, including the necessary storage capacity for precipitation, to ensure that design freeboard levels are maintained.

5. The treatment and storage lagoons shall be dredged as necessary to maintain the proper operating depths in both lagoons that will provide best practicable treatment of the wastewater. All material removed from the lagoon(s) shall be properly disposed of in accordance with all applicable State and Federal rules and regulations.

J. INSPECTIONS AND MAINTENANCE

The licensee shall periodically inspect all system components to ensure the facility is being operated and maintained in accordance with the design of the system. Maintenance logs shall be maintained for each major system component including pumps, pump stations, lagoons, spray apparatus, and pipes. At a minimum, the logs shall include the unique identifier [Special Condition E(6)], the date of maintenance, type of maintenance performed, names or person performing the maintenance, and other relevant system observations.

SPECIAL CONDITIONS

K. GROUND WATER MONITORING WELLS

1. All monitoring wells shall be equipped with a cap and lock to limit access and shall be maintained in a secured state at all times. The integrity of the monitoring wells shall also be verified annually.

2. The Department reserves the right to require increasing the depth and or relocating any of the groundwater monitoring wells if the well is perennially dry or is determined not to be representative of groundwater conditions.

L. OPERATIONS AND MAINTENANCE (O & M) PLAN AND SITE PLAN(S)

This facility shall have a current written comprehensive Operation & Maintenance (O & M) Plan. The plan shall provide a systematic approach by which the licensee shall at all times, properly operate and maintain all facilities and the systems of treatment and control (and related appurtenances) which are installed or used by the licensee to achieve compliance with the conditions of this license.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the licensee shall evaluate and modify the O& M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O& M Plan shall be kept on-site at all times and made available to the Department personnel upon request.

Within 90 days of completion of new and substantial upgrades of the wastewater treatment facility, the licensee shall submit the updated O&M Plan to their Department inspector for review and comment.

M. PUBLIC ACCESS TO LAND APPLICATION SITES AND SIGNAGE

Access to the land application sites shall be limited during the season of active site use. The licensee shall install signs measuring at least 8 ½" x 11", in areas of concern around the perimeter of the lagoon and spray irrigation site that inform the general public that the area is being used to dispose of sanitary waste waters. The signs must be constructed of materials that are weather resistant. The licensee must annually inspect and make any necessary repairs to the signage to comply with this condition.

SPECIAL CONDITIONS

N. DISPOSAL OF TRANSPORTED WASTE IN WASTEWATER TREATMENT FACILITY

The licensee is prohibited from accepting transported wastes for disposal into any part or parts of the wastewater disposal system unless this license is amended by the Department and the transported waste is incorporated into the treatment waste stream in a manner consistent with Department Chapter 555 regulations *Standards for the Addition of Transported Wastes to Wastewater Treatment Facilities.* Transported wastes means any liquid non-hazardous waste delivered to a wastewater treatment facility by a truck or other similar conveyance that has different chemical constituents or a greater strength than the influent described on the facility's application for a waste discharge license. Such wastes may include, but are not limited to septage, industrial wastes or other wastes to which chemicals in quantities potentially harmful to the treatment facility or receiving water have been added

O. MONITORING AND REPORTING

Monitoring results obtained during the previous month (**April through November**) shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and postmarked on or before the thirteenth (13^{th}) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

Department of Environmental Protection
Eastern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
106 Hogan Road
Bangor, Maine 04011

Alternatively, if you are submitting an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the 15^{th} day of the month following the completed reporting period. Hard Copy documentation submitted in support of the eDMR must be postmarked on or before the thirteenth (13^{th}) day of the month or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15^{th} day of the month following the completed reporting period.

SPECIAL CONDITIONS

P. REOPENING OF LICENSE MODIFICATIONS

Upon evaluation of any required test results, results of inspections and/or reporting required by the Special Conditions of this licensing action, additional site specific or any other pertinent information or test results obtained during the term of this license, the Department may, at anytime and with notice to the licensee, modify this license to require additional monitoring, inspections and/or reporting based on the new information.

Q. SEVERABILITY

In the event that any provision, or part thereof, of this license is declared to be unlawful by a reviewing court, the remainder of this license shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision or part thereof, had been omitted, unless otherwise ordered by the court.

Attachment A

Monthly Operations Log

Corinna Sewer District (WDL #W008206) **(Month/Year)** _____

Spray Field #_____ **Weekly Application Rate:** _____gallons/week

A	B	C	D	E	F	G
Date	Precipitation Previous 24 hours (inches)	Air Temp (°F)	Weather	Wind-Direction Speed (mph)	Depth To GW in Observation well (inches)	Total Gallons Pumped (gallons)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Signature of Responsible Official: _____ Date _____

Attachment B

Spray Application Report by Week

Corinna Sewer District (WDL #W008206) **(Month/Year)** _____

Spray Field #	Weekly Limit (Gallons/Week)	Spray Application Rates (Gallons/Week)					Monthly Total
		Week 1	Week 2	Week 3	Week 4	Week 5	

Signature of Responsible Official: _____ Date _____

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **April 23, 2012**

PERMIT COMPLIANCE TRACKING SYSTEM NUMBER: **MEU508206**

LICENSE NUMBER: **W008206-6C-E-R**

NAME AND MAILING ADDRESS OF APPLICANT:

CORINNA SEWER DISTRICT
P.O.Box 424
Corinna, Maine 04928

COUNTY: **Penobscot County**

NAME AND ADDRESS OF FACILITY:

Corinna Sewer District
Smith Road/Greenbush Road
Corinna, ME 04928

RECEIVING WATER/ CLASSIFICATION: **Groundwater /Class GW-A**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Ms. Annaleis Hafford, P.E.**
Vice President, Olver Associates Inc.
(207) 223-2232
e-mail: annaleis@olverassociatesinc.com

1. APPLICATION SUMMARY:

a. Application: The CSD has submitted a timely and complete application to the Department for the renewal of Waste Discharge License (WDL) #W008206-5L-A-N/Permit Compliance System (PCS) MEU508206 (WDL/license hereinafter) issued by the Department on September 2, 2004, for a five-year term. The license authorized the operation of a surface wastewater disposal (spray-irrigation) system for the treatment and seasonal disposal of wastewater generated by entities within the CSD boundaries at a monthly average rate of 0.11 million gallons per day (MGD). Wastewater is land applied by way of a spray irrigation system that is located on a 166-acre parcel of land approximately one mile southeasterly of the center of town. The spray irrigation system disposes of wastewater to four spray irrigation areas that encompass 38.5 acres of land. It is noted the area of Field #2 was expand by approximately 2.5 acres since issuance of the previous license. Approximately 20 acres of land is occupied by two facultative treatment lagoons (with a working capacity of 3.5 million gallons [MG] each) and a 50-MG storage lagoon.

1. **APPLICATION SUMMARY (cont'd)**

b. Wastewater Treatment: The surface wastewater disposal system consists of two-3.5 million gallon (MG) facultative biological treatment lagoons, a 50 MG storage lagoon (at a working depth of 19 feet and three foot freeboard), and a 38.5-acre land application area.

The wastewater receives a secondary level of treatment in two facultative treatment lagoons operated in series. The facultative treatment lagoons will provide 7.0 MG of working volume for treatment with an average detention time of 60 days. The lagoons were designed in series to achieve an effluent BOD of 100 mg/L or less. Lagoon sideslopes have a grade of three feet horizontal to one foot vertical and include a 60 mil geotextile membrane over a 12" sand blanket. Underdrains have been installed beneath all of the lagoons.

Treated effluent is conveyed from the two treatment lagoons and stored in a separate storage lagoon (with a capacity of 50 MG or a maximum detention time of 245 days) to be held during periods when site conditions do not allow land application. A hydrogeological report for the spray site determined that the site can safely dispose of 72 MG per year which exceeds the 50 MG design capacity of the storage lagoon. The system is designed to treat up to 0.11 MGD generated by the municipality.

c. Spray Applications: The spray irrigation treatment plant system has sufficient valving available to isolate each spray field and each section of the spray field. The site can be operated such that all spray areas are on-line concurrently or separately. Flow meters have been installed at each pump with application rates monitored for each spray field. The spray irrigation pumps are of vertical turbine construction with variable fixed drives and a 40 HP power rating that can discharge up to 390 gpm. There are a total of 146 spray nozzles each with a maximum spray diameter of 62 feet.

d. Spray-field Site Conditions: The CSD owns a total of 166 acres of land, of which about 56 acres are utilized for the treatment facility and the four spray irrigation fields. The lagoons occupy approximately 20 acres and the four spray irrigation areas encompass 38.6 acres. The site was selected based on its proximity to the existing treatment plant, soil and hydrogeological suitability for the project as well as its secluded location. Soil types in the area of the spray irrigation fields are classified as a Dixmont-Thorndike-Monarda association ranging from somewhat excessively to poorly drained. These types of soils, formed in glacial till, are derived from dark gray fine-grained quartzite, slate, phyllite and some calcareous sandstone, and are characterized as coarse-loamy, loamy-skeletal or coarse-loamy with dense basal till suitable for treatment of wastewater that is applied to the spray irrigation areas.

1. APPLICATION SUMMARY (cont'd)

e. Modifications requested – The licensee has requested the following modification to the WDL:

1. Increase the spray application rate for Field #1 (4.7 acres) from 2.7 inches/acre/week (73,300 gallons/acre/week) to 3.0 inches/acre/week (81,500 gallons/acre/week).

2. Increase the spray application rate for Field #4 (15.5 acres) from 2.7 inches/acre/week (73,300 gallons/acre/week) to 4.0 inches/acre/week (108,600 gallons/acre/week).

2. LICENSE SUMMARY

a. Terms and conditions – This licensing action is carrying forward all the terms and conditions of the previous permitting action except that this license;

1. Is granting the permittee's request to increase the application rates for Field #1 and Field #4.

2. Is expressing the application rates in terms of total gallons/week/spray field as opposed to gallons/acre/week to given the licensee more flexibility in managing the spray fields.

3. Is eliminating chlorides from the list of parameters to be monitored in the ground water monitoring wells given test results submitted to date have been consistently two orders of magnitude below the Department's critical threshold concentration of 250 mg/L.

b. History: Recent Department licensing actions include the following:

July 1, 1999	-	The Department issued WDL #002179-5L-D-R for the discharge of 1.1 million gallons per day (MGD) of municipal and industrial wastewater to the East Branch of the Sebasticook River.
June 2000	-	The District made a formal decision to abandon the existing treatment facility and replace it with a new spray irrigation system.
2002-2003	-	Sewer collection system improvement project completed to eliminate or minimize CSO occurrences.
February 13, 2004	-	The Corinna Sewer District submitted an application for renewal of its Waste Discharge License and to abandon the existing treatment plant and replace it with a spray irrigation system.
September 2, 2004		The Department issued (WDL) #W008206-5L-A-N for a five-year term. The WDL authorized the use of a surface waste water disposal system for the CSD.
August 17, 2009		The CSD submitted a timely and complete application to the Department for the renewal of the WDL for the CSD facility.

3. CONDITIONS OF THE LICENSE

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A § 470 indicates the groundwater at the point of discharge is classified as Class GW-A receiving waters. Maine law, 38 M.R.S.A., §465-C describes the standards for Class GW-A waters as the highest classification of groundwater and shall be of such quality that it can be used for public water supplies. These waters shall be free of radioactive matter or any matter that imparts color, turbidity, taste or odor which would impair the usage of these waters, other than occurring from natural phenomena.

5. TREATMENT

Slow rate land irrigation treatment is an environmentally sound and appropriate technology for best practicable treatment and disposal of sanitary wastewater. The soils and vegetation within the irrigation area will provide adequate filtration and absorption to preserve the integrity of the soil, and both the surface and groundwater quality in the area.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Design Flow: - The facility is designed for 0.11 MGD (average daily flow) and 0.40 MGD (maximum daily flow) of wastewater generated.

Outfall #001 – Storage lagoon effluent to be spray irrigated.

b. Monitoring Parameters

1. *Biochemical Oxygen Demand* (BOD_5) and *Total Suspended Solids (TSS)* - Monitoring for BOD and TSS yields an indication the condition of the wastewater being applied, of excessive loading of organic material and the effectiveness of the spray-irrigation treatment process. The daily maximum concentration limit of 100 mg/L is a Department best professional judgment of best practicable treatment (BPT) for properly designed and operated lagoon systems.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfall #001 - Storage lagoon effluent to be spray irrigated.

A review of the monthly Discharge Monitoring Report (DMR) for the period 2009 – 2011 indicate values have been reported as follows:

Biochemical oxygen demand – effluent (DMRs=10)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily maximum	100 mg/L	9 - 40	21

Total suspended solids – effluent (DMRs=10)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily maximum	100 mg/L	4 - 45	20

2. *Nitrate-nitrogen.* Nitrogen compounds are by-products of the biological breakdown of ammonia and are inherent in domestic like sanitary wastewater. Because nitrate-nitrogen is weakly absorbed by soil, it functions as a reliable indicator of contamination from waste-disposal sites. Elevated levels of nitrate-nitrogen in the drinking water supply are of human health concern. The National Primary Drinking Water standard for nitrate-nitrogen is 10 mg/L. A review of the monthly Discharge Monitoring Report (DMR) for the period 2009 – 2011 indicate values have been reported as follows:

Nitrate-nitrogen – effluent (DMRs=10)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily maximum	Report	<1.0 – 1.3	<1.0

3. *Specific Conductance, Temperature and pH* are considered to be "field" parameters meaning that they are measured directly in the field via instrumentation and does not require laboratory analysis. They are considered a surveillance level monitoring parameter that is used as an early-warning indicator of potential groundwater contamination. A review of the monthly DMR for the period 2009 – 2011 indicate values have been reported as follows:

Specific conductance– effluent (DMRs=9)

Value	Limit (umhos/cm)	Range (umhos/cm)	Mean (umhos/cm)
Daily maximum	Report	309 - 460	379

Temperature – effluent (DMRs=5)

Value	Limit (°F)	Range (°F)	Mean (°F)
Daily maximum	Report	54 - 61	53

pH – effluent (DMRs=10)

Value	Limit (su)	Low (su)	High (su)
Daily maximum	Report	7.2	9.4

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfall #001 - Storage lagoon effluent to be spray irrigated.

Freeboard is defined as the distance between the water level in the lagoon and the lowest point in the top of the lagoon berm. Monitoring the freeboard is important in managing the lagoon water levels to prevent overtopping of the lagoon berm and to evaluate facility operation for managing flows and annual precipitation. A review of the monthly DMR for the period 2009 – 2011 indicate values have been reported as follows:

Freeboard (DMRs=10)

Value	Limit (ft)	Range (ft)	Mean (ft)
Daily maximum	Report	8 – 22	13

The previous license required the permit to monitor the effluent from the storage lagoon once during the term of the license and report the results for a suite of metals that included, total arsenic, total cadmium, total chromium, total copper, total lead, total nickel, total zinc and total mercury. A review of the monthly DMR for the period 2009 – 2011 indicate values have been reported as follows:

Metals (DMRs=1)

Parameter	Limit (ug/L)	Result (ug/L)
Arsenic (total)	Report	7
Cadmium (total)	Report	0.3
Chromium (total)	Report	<2
Copper (total)	Report	15
Lead (total)	Report	2
Mercury (total)	Report	2
Nickel (total)	Report	---
Zinc (total)	Report	<200

Spray Irrigation Fields (SF-1, SF-2/2U, SF-3, SF-4)

c. Spray Irrigation Application Rate – The previous licensing action established a weekly maximum rate of 73,300 gallons per acre (2.7 inches/week) for all four spray fields that was based on a hydrogeologic investigation of the site and surficial geology. The weekly limits are established as a margin of safety against hydraulically overloading a spray field and are based on the treatment capabilities of the in-situ soils.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Spray Irrigation Fields (SF-1, SF-2/2U, SF-3, SF-4)

A review of the monthly DMR data for the period 2009 – 2011 indicate values have been reported as follows:

(DMRs = 21)

Spray Field	Limit (gals/acre)	Range (gal/acre)	Average (gal/acre)
SF-1	73,300	29,155 – 94,806	67,685
SF-2/2U	73,300	27,451 – 71,724	42,270
SF-3	73,300	16,273 - 82,880	61,201
SF-4	73,300	28,666 – 137,258	78,409

(DMRs = 21)

Spray Field	Daily Max. (gals/day)	Range (gal/day)	Average (gal/day)
SF-1	Report	43,016 – 124,331	66,185
SF-2/2U	Report	19,272 – 93,319	50,531
SF-3	Report	19,211 – 82,899	57,133
SF-4	Report	81,890 – 287,935	166,492

During the past seven years of operation, the licensee has determined certain spray fields as a whole or sub-areas within a designated spray field are capable of accepting higher application rates than 73,300 gallons per week. As a result, the licensee has requested to increase the rates in fields SF-1 and SF-4 and the Department is granting said increases. See section 1(e) of this Fact Sheet.

Spray Field	Weekly license limit	Equivalent Inches	Weekly limit for Field
SF #1 (4.7 acres)	81,500 gallons/acre	3.0 inches	383,050 gallons/week
SF #2/2U (11.7 acres)	73,300 gallons/acre	2.7 inches	857,610 gallons/week
SF #3 (6.6 acres)	73,300 gallons/acre	2.7 inches	483,780 gallons/week
SF #4 (15.5 acres)	108,600 gallons/acre	4.0 inches	1,683,300 gallons/week

Note: 1 acre-inch is equivalent to 27, 152 gallons

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Spray Irrigation Fields (SF-1, SF-2/2U, SF-3, SF-4)

Regardless of the calculated rate, the system operator shall monitor each waste application to verify adequate infiltration of the waste into the soil and an irrigation cycle should be stopped if runoff starts to occur.

Ground Water Monitoring

d. Groundwater Monitoring Wells – The previous licensing action established a requirement to sample seven ground water monitoring wells described as follows:

Monitoring Wells	Location
MW-1	Upgradient and easterly of lagoons. Considered background well
MW-2	Located westerly and downgradient of spray area #1
MW-3	Located westerly and downgradient of spray area #3
MW-4	Downgradient & northerly of lagoons
MW-5	Downgradient & northwesterly from lagoons
MW-6	Downgradient & northerly of spray area #4
MW-7	Downgradient & southwesterly of spray area #1

Refer to the site plan attached to the Fact Sheet showing the location of the monitoring wells.

Monitoring parameters included Depth to Water Level Below Landsurface, Nitrate-Nitrogen, Total Chloride, Specific Conductance, Temperature, pH, Total Suspended Solids (TSS) and metals. A review of the monitoring well data for the period 2007 – 2011 indicates values have been reported as follows:

MW1 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	47 - 61	52
Specific conductance (umhos/cm)	Report	240 - 361	309
pH (standard units)	Report	7.6 – 7.8	n/a
Total suspended solids (mg/L)	Report	1.1 – 7.1	3.0
Nitrate nitrogen (mg/L)	Report	<1.0 - <1.0	<1.0
Chlorides (mg/L)	Report	<1 - 11	1.5
Depth to ground water (feet)	Report	0.13 – 3.1	0.9

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Ground Water Monitoring

MW1 (n=2)

Arsenic (total)	Report	2 - 3	2.5
Cadmium (total)	Report	<0.2 – 3.5	2.0
Chromium (total)	Report	<2 - 10	5.5
Copper (total)	Report	<1 – 5.0	3.0
Lead (total)	Report	<1.0 – 3.0	2.0
Mercury (total)	Report	<0.2 - <0.2	<0.2
Nickel (total)	Report	2 – 5.0	4.0
Zinc (total)	Report	2 – 10.0	6.0

MW2 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	45 - 55	50
Specific conductance (umhos/cm)	Report	237 – 425	314
pH (standard units)	Report	6.0 – 6.8	n/a
Total suspended solids (mg/L)	Report	<1.0 – 58	14
Nitrate nitrogen (mg/L)	Report	<1.0 – 4.2	1.4
Chlorides (mg/L)	Report	31 - 78	53
Depth to ground water (feet)	Report	0.5 – 2.2	1.2

MW2 (n=2)

Arsenic (total)	Report	<5 – 6.0	4.0
Cadmium (total)	Report	<0.2 – 1.0	0.6
Chromium (total)	Report	<2 - 10	6.0
Copper (total)	Report	<1 - 12	6.0
Lead (total)	Report	<1 - 3	2.0
Mercury (total)	Report	<02 - <0.2	<0.2
Nickel (total)	Report	3 - 16	10
Zinc (total)	Report	6 - 24	15

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Ground Water Monitoring

MW3 (n=4)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	44 - 54	50
Specific conductance (umhos/cm)	Report	48 - 238	122
pH (standard units)	Report	6.35 – 6.75	n/a
Total suspended solids (mg/L)	Report	<1 – 4.4	3
Nitrate nitrogen (mg/L)	Report	<1 - <1	<1
Chlorides (mg/L)	Report	<1 - 12	5
Depth to ground water (feet)	Report	11.6 – 16.2	11

MW3 (n=0)

Arsenic (total)	Report	n/d	n/d
Cadmium (total)	Report	n/d	n/d
Chromium (total)	Report	n/d	n/d
Copper (total)	Report	n/d	n/d
Lead (total)	Report	n/d	n/d
Mercury (total)	Report	n/d	n/d
Nickel (total)	Report	n/d	n/d
Zinc (total)	Report	n/d	n/d

n/d – no data

MW4 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	47 - 63	54
Specific conductance (umhos/cm)	Report	244 - 346	286
pH (standard units)	Report	6.57 – 8.0	n/a
Total suspended solids (mg/L)	Report	<1.0 - 57	10
Nitrate nitrogen (mg/L)	Report	<1.0 - 2.2	0.5
Chlorides (mg/L)	Report	2 - 12	7
Depth to ground water (feet)	Report	3.6 – 5.7	4.4

MW4 (n=2)

Arsenic (total)	Report	2.0 – 8.0	5
Cadmium (total)	Report	<1.0 - <1.0	<1.0
Chromium (total)	Report	n/d	n/d
Copper (total)	Report	<3.0 – 7.0	4
Lead (total)	Report	<3.0 – 4.0	3
Mercury (total)	Report	<0.2 - <0.2	<0.2
Nickel (total)	Report	4.0 - <5.0	3.0
Zinc (total)	Report	<2.0 - <8.0	n/a

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Ground Water Monitoring

MW5 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	44 - 58	53
Specific conductance (umhos/cm)	Report	225 - 303	250
pH (standard units)	Report	7.6 – 8.0	n/a
Total suspended solids (mg/L)	Report	<1.0 – 6.9	3
Nitrate nitrogen (mg/L)	Report	<1.0 - <1.0	<0.5
Chlorides (mg/L)	Report	<1.0 – 1.2	1
Depth to ground water (feet)	Report	0.4 – 3.7	2.8

MW5 (n=2)

Arsenic (total)	Report	3.0 – 6.0	4.5
Cadmium (total)	Report	<0.2 - <1.0	<0.3
Chromium (total)	Report	<0.2 - <1.0	<0.3
Copper (total)	Report	<3.0 – 5.0	3
Lead (total)	Report	2 - <3	2
Mercury (total)	Report	<0.2 - <0.2	<0.1
Nickel (total)	Report	<2.0 – <5.0	<2.0
Zinc (total)	Report	<2.0 – 8.0	4

MW6 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	46 - 65	54
Specific conductance (umhos/cm)	Report	483 - 532	496
pH (standard units)	Report	7.4 – 7.9	n/a
Total suspended solids (mg/L)	Report	<1.0 - 14	2
Nitrate nitrogen (mg/L)	Report	<1.0 - <1.0	<0.5
Chlorides (mg/L)	Report	<1 - 12	8
Depth to ground water (feet)	Report	0.3 – 4.3	1.5

MW6 (n=2

Arsenic (total)	Report	<2 – 3.0	2
Cadmium (total)	Report	<0.2 - <1.0	<0.3
Chromium (total)	Report	<1 - <2	<1
Copper (total)	Report	<1 - <3	<2
Lead (total)	Report	<1 - <3	<2
Mercury (total)	Report	<0.2 - <0.2	<0.1
Nickel (total)	Report	<2 - <5	<2
Zinc (total)	Report	<2 - <5	<2

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Ground Water Monitoring

MW7 (n=9)

Parameter	Limit	Range	Mean
Temperature (°F)	Report	45 - 60	52
Specific conductance (umhos/cm)	Report	258 - 403	340
pH (standard units)	Report	6.2 – 7.7	n/a
Total suspended solids (mg/L)	Report	<1 - 18	5
Nitrate nitrogen (mg/L)	Report	<1.0 - <1.0	<0.5
Chlorides (mg/L)	Report	<1.0 - 36	16
Depth to ground water (feet)	Report	0.4 - 6	3.2

MW7 (n=2

Arsenic (total)	Report	3.0 – 4.0	3.5
Cadmium (total)	Report	<0.2 - <1.0	<0.3
Chromium (total)	Report	< 2.0 - <10.0	<0.
Copper (total)	Report	<1 – 6.0	3
Lead (total)	Report	<1 – 3.0	2.0
Mercury (total)	Report	<0.2 - <0.2	<0.1
Nickel (total)	Report	2 – 5.0	3.5
Zinc (total)	Report	11 - 25	18

Outfall #002 – Underdrain monitoring

e. Underdrain Monitoring

Underdrain monitoring is required for early detection of leaks associated with the lagoon liners. Monitoring frequency has been established at three times per year in July, August and September. Sampling in these months during low groundwater flow conditions tend to reveal leaks from the lagoon liner more readily. A review of the monitoring well data for the period 2009 – 2011 indicates values have been reported as follows:

Flow– effluent (DMRs=9)

Value	Limit (gpm)	Range (gpm)	Mean(gpm)
Daily maximum	Report	1 - 5	2.1

Total suspended solids – effluent (DMRs=5)

Value	Limit (mg/l)	Range (mg/L)	Mean (mg/L)
Daily maximum	Report	<1.0 – 2.0	1.0

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfall #002 – Underdrain monitoring

Specific conductance– effluent (DMRs=9)

Value	Limit (umhos/cm)	Range (umhos/cm)	Mean (umhos/cm)
Daily maximum	Report	342 - 460	379

Temperature – effluent (DMRs=9)

Value	Limit (°F)	Range (°F)	Mean (°F)
Daily maximum	Report	54 - 60	57

7. SYSTEM CALIBRATION

Discharge rates, application rates and uniformity of application change over time as equipment gets older and components wear, or if the system is operated differently from the assumed design. Operating below design pressure greatly reduces the coverage diameter and application uniformity. For these reasons, the licensee shall calibrate each of the spray field flow meters on an annual basis as well as regularly perform a visual inspection of pump pressure readings, flow readings, flow nozzle and distribution pattern. The Department understands the spray nozzle patters will be different throughout the site, but as long as proper adjustment is maintained with no site runoff, further calibration will not be required.

8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As licensed, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class GW-A classification.

9. PUBLIC COMMENTS

Public notice of this application was made in the local newspaper on or about August 13, 2009. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft licenses shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

Additional information concerning this licensing action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-7693
E-mail: gregg.wood@maine.gov

11. RESPONSE TO COMMENTS

During the period of April 23, 2012, through the issuance date of this license, the Department solicited comments on the proposed draft license to be issued for the discharge(s) from the licensee's facility. The Department did not receive comments from the licensee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the license. Therefore, the Department has not prepared a Response to Comments.

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
STANDARD CONDITIONS OF INDUSTRIAL WASTE DISCHARGE LICENSES

1. General Conditions

A. All discharges shall be consistent with the terms and conditions of this license; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this license; it shall be a violation of the terms and conditions of this license to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this license.

B. The licensee shall permit the Department of Environmental Protection Staff upon the presentation of proper credentials:

1) To enter upon licensee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this license;

2) To have access to and copy any records required to be kept under the terms and conditions of this license;

3) To inspect any monitoring equipment or monitoring method required in this license; or,

4) To measure and/or sample at any intake, process or cooling effluent stream, wastewater treatment facility, and/or outfall.

C. This license shall be subject to such monitoring requirements as may be reasonably required by the Department of Environmental Protection including the installation, use, and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The licensee shall provide the Department of Environmental Protection with periodic reports on the proper Department of Environmental Protection reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

D. This license does not preclude obtaining other required Federal, State, or Municipal permits and does not authorize or approve the construction of any onshore physical structures or facilities or the undertaking of any work in any navigable waters.

E. The issuance of this license does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights nor any infringement of Federal, State or local laws or regulations.

F. Nothing in this license shall be construed to relieve the licensee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond his control, such as accident, equipment breakdown, labor dispute, or natural disaster.

2. Treatment Plant Operator

The Treatment Facility must be operated by a person holding a Grade ~~I, II, III, IV, V~~ certificate pursuant to 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the department before the licensee may engage the services of the contract operator.

~~3. Disinfection~~

~~Disinfection shall be used to reduce the concentration of bacteria to or~~ below ~~the level~~ specified in the "Effluent Limitations and Monitoring Requirement" ~~section of~~ this license. If chlorination is used as a means of disinfection, an approved ~~contact~~ chamber shall be provided. The chlorine residual in the effluent shall at no ~~time~~ cause any demonstrable harm to aquatic life in the receiving waters. A positive chlorine residual shall be maintained at all times as required by this license, ~~however~~, at no time ~~shall the total chlorine residual of the effluent exceed 1.0 mg/l.~~

4. Wastewater Treatment and Sampling Facilities

a. The licensee shall collect all waste flows designated by the Department of Environmental Protection as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

b. The licensee shall at all times maintain in good working order and operate at maximum efficiency all wastewater collection, treatment and/or control facilities.

c. All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

d. Final plans an specifications must be submitted to the staff of the Department of Environmental Protection and approved prior to the construction or modification of any treatment facilities.

e. The licensee shall install flow measuring facilities of a design approved by the Department of Environmental Protection.

f. The licensee must provide an outfall of a design approved by the Department of Environmental Protection which is placed in the receiving waters in such a manner that maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

5. Monitoring and Reporting

a. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the licensee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the department.

b. The sampling, preservation, handling, and analytical methods used must conform with Standard Methods for the Examination of Water and Wastewaters, American Public Health Association, 1015 18th Street, N.W., Washington, D.C. 20036, latest approved edition, or methods referenced in 40 CFR Part 136, Guidelines Establishing Test Procedures for Analysis of Pollutants. However, different but equivalent methods are allowable if they receive the prior written approval from the Department of Environmental Protection.

c. Reporting

(1) The results of the above monitoring requirements shall be reported on reporting forms supplied by the department in the units specified at a frequency of once:

~~yearly~~ ~~semi-annually~~ ~~quarterly~~ monthly

(2) All reports shall be submitted to the Department by not later than the tenth of the month following the end of the monitoring period.

(3) Any reports or records of monitoring activities and results shall include for all samples: (a) the date, exact place, and time of sampling; (b) the dates and times analyses; (d) the analytical techniques/methods used, including sampling, handling, and preservation techniques; and (e) the results of all required analyses.

d. All reports shall be signed by:

(1) In the case of corporations, by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the reporting form originates.

(2) In the case of a partnership, by a general partner or duly authorized representative.

(3) In the case of a sole proprietorship, by the proprietor or duly authorized representative.

(4) In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or duly authorized employee.

(e) All monitoring reports and future correspondence regarding monitoring facilities should be directed to:

Bureau of Water Quality Control
Department of Environmental Protection
State House Station #17
Augusta, Maine 04333

6. Non-Compliance Notification

a. In the event the licensee bypasses collection or treatment facilities or is unable to comply with any of the conditions of this license due, among other reasons, to:

1. breakdown of waste treatment equipment;

2. accidents caused by error or negligence;

3. high strength, high volume or incompatible wastes, or

4. other causes such as acts of nature,

the licensee shall notify the Department of Environmental Protection verbally as soon as its agents have knowledge of the incident.

b. Within five (5) days of becoming aware of such condition the licensee shall provide the Department of Environmental Protection in writing, the following information:

1. A description of the discharge and cause of noncompliance; and

2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

c. If the licensee knows in advance of changes in licensed facilities or activities which may result in non-compliance or of the need to bypass, it shall submit prior notice at least ten days in advance of such occurance.

d. In the event a bypass is due to inflow or infiltration of uncontaminated water into a sewer system, reporting requirements may be adjusted by the Department to a monthly basis.

7. Change of Discharge

The licensee shall notify the department in writing as soon as it has knowledge of any significant changes or proposed changes in its discharge, including but not limited to:

a) the temporary or permanent termination of the discharge;

b) changes in the waste collection, treatment or disposal facilities;

c) changes in the volume or character of wastewater flows;

d) permanent changes in industrial production rates;

e) the proposed addition, directly or indirectly, of toxic pollutants not authorized by the license or reflected in the application filed with the department;

f) the addition to a municipal or quasi-municipal treatment system of industrial wastes which are categorically regulated by the U.S. EPA pursuant to the agency's pretreatment program.

8. Transfer of Ownership

In the event that any person possessing a license issued by the Department shall transfer the ownership of the property, facility or structure which is the source of a licensed discharge, without transfer of the license being approved by the Department, the license granted by the Department shall continue to authorize a discharge within the limits and subject to the terms and conditions stated in the license, provided that the parties to the transfer shall be jointly an severally liable for any violation thereof until such time as the Department approves transfer or issuance of a waste discharge license to the new owner. The Department may in its discretion require the new owner to apply for a new license, or may approve transfer of the existing license upon a satisfactory showing that the new owner can abide by its terms and conditions.

9. Records Retention

All records and information resulting from the monitoring activities required by this license including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years.

10. Other Materials

Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

a. They are not

(1) designated as toxic or hazardous under the provisions of Sections 307 and 311 respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law, or

(2) known to be hazardous or toxic by the licensee.

b. The discharge of such materials will not violate applicable water quality standards.

11. Removed Substances

Solids, sludges, trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of wastewaters shall be disposed of in a manner approved by the Department of Environmental Protection.

12. Bypass of Waste Treatment Facilities

The diversion or bypass of any discharge from facilities utilized by the licensee to maintain compliance with the terms and conditions of this license is prohibited, except (1) where unavoidable to prevent loss of life or severe property damage, or (2) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this license. The licensee shall notify the Department of Environmental Protection of each such diversion or bypass in accordance with the procedure specified in paragraph 6 above for reporting non-compliance. It is the duty of the licensee to take all feasible steps to prevent, minimize and mitigate bypasses. If infiltration or inflow of stormwater or groundwater contribute to bypasses, the licensee shall submit to the department for approval, a wet weather flow management plan. The plan shall describe measures implemented to maximize the volume of flow through the treatment facilities and the efficiency of the treatment process. Submission of this plan shall not remove any responsibilities of the licensee pursuant to paragraph 6.

13. Emergency Action--Electric Power Failure

In order to maintain compliance with the effluent limitations and prohibitions of this license, the licensee shall either:

a. maintain an alternative power source sufficient to operate the wastewater control facilities; or

b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

14. Spill Prevention and Containment

The licensee shall within six (6) months of the effective date of this license submit to the Department of Environmental Protection a spill prevention plan. Said plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminants and shall specify means of disposal and/or treatment to be practiced.

15. Connection to Municipal Treatment System

All wastewaters designated by the Department of Environmental Protection as treatable in a municipal treatment system will be consigned to a municipal treatment system when said system becomes available. This waste discharge license will automatically expire 90 days after a municipal facility becomes available unless this time is extended by the Department, in writing, for good cause shown.

16. Pretreatment

The licensee shall comply with all Federal Statutes, regulations, and conditions of permits applicable to its discharge of wastewaters, including, but not limited to, those requiring the installation of pretreatment facilities or establishment of pretreatment programs.

DEFINITIONS

FOR THE PURPOSE OF THIS LICENSE THE FOLLOWING SHALL APPLY

A. Grab Sample: An individual sample collected in a period of less than 15 minutes.

B. Composite Sample: A sample consisting of a minimum of eight grab samples collected at equal intervals during a 24-hour period (or a lesser period if specified in the section on Monitoring and Sampling) and combined proportional to flow or a sample continuously collected proportionally to flow over the same time period.

C. Daily Maximum For Concentration: The maximum value not to be exceeded at any time.

D. Daily Maximum For Quantity: The maximum value not to be exceeded during any day.

E. Weekly or Monthly Average: The sum of all daily samples measurement or test results made during a week or month divided by the number of tests or measurement made during the respective time period. Exception: bacteriological tests shall be calculated as a geometric mean.

F. Bypass: The diversion of wastewater, either by act or by design, from any portion of a treatment facility or conveyance system.