STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

April 30, 2007

Jerome Guevremont, Superintendent
Chick Hill Pollution Control Facility
231 Chick Hill Drive
P.O. Box 632
Rangeley, Maine 04970-0632

RE: Permit Compliance System Tracking Number (PCS) # MEU508086
Maine Waste Discharge License (WDL) Application # W008086-5L-B-R
Final License

Dear Mr. Guevremont:

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,

David Silver
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Beth Dehaas, DEP/CMRO;
Sandy Lao, USEPA;

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF RANGELEY	)	PROTECTION AND
RANGELEY, FRANKLIN COUNTY, MAINE	)	IMPROVEMENT OF WATERS
PUBLICLY OWNED TREATMENT WORKS	)	
SURFACE WASTE WATER DISPOSAL	)	
MEU508086	)	WASTE DISCHARGE LICENSE
#W008086-5L-B-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) has considered the application of the TOWN OF RANGELEY (Town) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W008086-5L-A-N, that was issued on April 27, 2001 and expired on April 27, 2006. In 2006, the Town of Rangeley served 448 customer connections including commercial facilities primarily associated with the downtown district of town (10 additional connections are anticipated annually). The Town operates the Chick Hill Pollution Control Facility, a spray irrigation / snow making waste water treatment and disposal facility. The town currently disposes of 71.5 million gallons (MG) of treated waste water per year.

Treated waste water may be land applied via spray irrigation equipment from April 15th through and including November 15th of any year, depending on weather and site conditions. Snowmaking may occur between November 15th through and including April 30th of the following year also depending on weather and site conditions.

The spray irrigation system currently disposes of treated waste water at three distinct areas, Field Area #2, Area #6 and #7 (approved spray areas [#1, #3] are not currently used (i.e. not cleared of vegetation, upgraded with piping and discharge nozzles or other ancillary improvements yet). Previously approved (but not yet utilized) spray area #1 is scheduled to be online in 2008. The snow making applications currently occur in two distinct areas, Field Area #4 and #5.

At the facility there are two aerated lagoons, one storage lagoon, an operations building, and the spray irrigation and snowmaking areas. The storage lagoon has a waste water capacity of 27 MG during normal operating conditions. The two aerated lagoons each have a water capacity of gallons of 2.5 MG for a total holding capacity of 32.0 MG.

The facility has been assigned number MEU508086 in the Department's permit compliance system (PCS) for data acquisition and data management.

LICENSE SUMMARY

This license is similar to the April 27, 2001 WDL in that it is carrying forward from the previous licensing action:

1. With respect to the waste water treatment lagoons;

   a) continuous influent flow monitoring,

   b) freeboard level measurements, and,

   c) effluent monitoring for biochemical oxygen demand (BOD), total suspended solids (TSS), and nitrate-nitrogen.

2. With respect to spray irrigation/snowmaking;

   a) maintaining the restriction of requiring spray irrigation to occur only when there is at least ten (10) inches of separation between the ground surface and ground water table during the time of spray,

   b) continuing the authorization to make snow (freeze crystallization) as a discharge method over the previously designated snow making area with up to 15 MG on Field Area #4, and 14 MG on Field Area #5 for a total of 29 million gallons per winter season (during November 15th to April 30th of the following year), and,

   c) continuing the authorization to spray irrigate at a rate not to exceed 2.5 inches per acre per week (67,882 gallons per acre per week) on fields #1, 2, & 3, and at a rate not to exceed 4.5 inches per acre per week (122,186 gallons per acre per week) on fields #6 and #7.

3. With respect to ground water monitoring well sampling; reporting of depth to water level below land surface, nitrate-nitrogen, specific conductance, temperature, and pH.

4. With respect to the lagoon underdrain, sampling requirements for specific conductance, fecal coliform bacteria, temperature, nitrate-nitrogen, and pH.

5. Continuing the prohibition against accepting sanitary septage wastes to the system (as an existing septage disposal permit has already been issued [on adjacent town-owned land dedicated for receiving the septic wastes separate from the waste water treatment facility / spray irrigation and snow making areas]).

LICENSE SUMMARY (CONT'D)

This license is different from the April 27, 2001 WDL action in that it is:

1. With respect to the waste water treatment lagoons;
   a) Including measuring lagoon effluent depth to measuring weekly lagoon monitoring for freeboard levels (to be consistent with other similar facilities), depth is still to be reported by this license.
   b) eliminating the requirement to sample, measure, and report chloride, total kjeldahl nitrogen and pH effluent values (however the applicant may have to demonstrate, upon request by Department staff, compliance with the pH limits that have been carried forward from the previous licensing),
   c) establishing the requirement to monitor for specific conductance and temperature (and other previously established parameters [i.e., BOD, TSS, and nitrate-nitrogen]) on a five sample per year basis in (a) January or February, (b) April or May, (c) June, (d) September, and (e) October or November, from a once per month basis in the previous licensing action, and
   d) establishing the requirement to sample for certain metals on a once per five (5) year basis.
2. With respect to spray irrigation/snowmaking;
   a) Expanding the spray irrigation season from May 1st thru November 1st to April 15th thru November 15th (depending on weather and site conditions) of each year to be consistent with other similar types of facilities,
   b) Requiring the submission of a *Spray Irrigation Performance Report* as an exhibit to the be submitted to the Department annually as well as maintaining an up-to-date *Operations & Maintenance (O&M) Plan* (this requirement replaces the Operational Monitoring requirements established in the previous licensing action since the items required by the Operational Monitoring requirements are or will be contained in Spray Irrigation Performance Report and O&M manual), and
   c) modifying the restriction against spray irrigation if there had been rainfall or precipitation, (exceeding one-half [0.5] inch) within the previous eight-hour period preceding the planned spray event, to a restriction against spraying if there has been more than one (1.0) inch of precipitation within the preceding 24 hour period.
3. With respect to ground water monitoring wells;
   a) modifying the sampling of ground water wells from a monthly basis during April through and including November, to twice per year basis in May and October,
   b) eliminating the sampling requirements for chloride, total dissolved solids and alkalinity, but adding well sampling for TSS on a twice per year basis, and
   c) establishing the requirement to measure for certain metals on a once per five (5) year frequency.
4. With respect to the lagoon underdrain;
   a) eliminating the monitoring requirement for chloride but adding the requirement to measure flow at the underdrain sampling port, and
   b) reducing the sampling frequency from once per calendar quarter to once per year in May.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated March 26, 2007, 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 (including ground 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 M.R.S.A., Section 464(4)(F), will be met, in that:

   (a) Existing in-stream 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 national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body (including ground water) 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

   (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 TOWN OF RANGELEY, to treat waste water generated at a average daily flow rate of 0.15 million gallons per day and to operate a surface waste water disposal (spray irrigation) system that uses spray irrigation to discharge up to 2.5 inches (67,882 gallons) per acre (in fields #1, 2, or 3) and 4.5 inches (122,186 gallons) per acre (in fields #6 and 7), per week of treated sanitary waste water during the spring, summer and fall seasons, and to discharge a maximum of 29 MG of freeze crystallized waste water [snow making] during the winter season to the snow making application area (fields #4 to receive no more than 15 MG, and field #5 to receive no more than 14 MG) annually, to the soil above ground water resources of the state, Class GW-A, 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 expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 2ND DAY OF May, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
David P. Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 22, 2006

Date of application acceptance: May 26, 2006

FILED
MAY 3 - 2007
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection _____

This Order prepared by David Silver, BUREAU OF LAND & WATER QUALITY
W80865LBR 26MAR07

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. The licensee is authorized to operate a surface waste water treatment and disposal system. The **LAGOON EFFLUENT[1] (OUTFALL #002)** shall be limited and monitored as specified below.

	Monthly Average	Daily Maximum	Minimum Measurement Frequency	Sample Type
Lagoon Influent Flow *[50050]*	Report, gal/week *[8G]*	Report, gal/day *[07]*	1/Day *[01/01]*	Meter *[MT]*
Lagoon Effluent Depth *(in the storage lagoon)* *[85327]*		Report, Feet[1]	1/Week *[01/07]*	Measure *[MS]*
Biochemical Oxygen Demand *[00310]*	---	100 mg/L *[19]*	1/Month[2] *[01/30]*	Grab *[GR]*
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]*
Specific Conductance *[00095]*	---	Report *[11]*	1/Month[2] *[01/30]*	Grab *[GR]*
Temperature (°C) *[00011]*	---	Report (°C) *[15]*	1/Month[2] *[01/30]*	Grab *[GR]*
pH (Standard Units)[1a] *[00400]*	---	6.0 – 9.0	---	---
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: Refer to page 11 for other applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

2. The **SPRAY IRRIGATION AREAS (SF1, SF2, SF3, SF6, & SF7)** shall be limited and monitored as specified below for land application between April 15th and November 15th of each year: It is noted that construction of SF1 or SF3 have not been completed as of this date (SF #1 is expected to be activated in 2008).

	Monthly Total	Weekly Maximum	Minimum Measurement Frequency	Sample Type
Application Rate [4] Fields #1, 2, & 3	---	67,882 gallons per acre[5] (2.5 inches/acre)	1/Week	Measure
[51125]		*[8B]*	*[01/07]*	*[MS]*
Flow – Total Gallons (collectively for fields #1, 2, and 3)	Report (Gallons)	---	1/Month	Calculate
[82220]	*[80]*		*[01/30]*	*[CA]*
Application Rate [4] Fields #6, & 7	---	122,186 gallons per acre[5] (4.5 inches/acre)	1/Week	Measure
[51125]		*[8B]*	*[01/07]*	*[MS]*
Flow – Total Gallons (collectively for fields #6 & #7)	Report (Gallons)	---	1/Month	Calculate
[82220]	*[80]*		*[01/30]*	*[CA]*

FOOTNOTES: Refer to page 11 for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

3. The **SNOWMAKING AREAS (Field #4 & 5)** shall be limited and monitored as specified below:
-Applies from November 15th of one year to April 30th of the following year

	Monthly Total as specified	**Year to Date Total** as specified	**Minimum Measurement Frequency** as specified	**Sample Type** as specified
Flow – Total Gallons Field #4 *[82220]*	Report (Gallons) *[80]*	---	1/Month *[01/30]*	Measure *[MS]*
Flow – Total Gallons Field #4 *[82220]*	---	15 million gallons *[57]*	1/Month *[01/30]*	Calculate *[CA]*
Flow – Total Gallons Field #5 *[82220]*	Report (Gallons) *[80]*	---	1/Month *[01/30]*	Measure *[MS]*
Flow – Total Gallons Field #5 *[82220]*	---	14 million gallons *[57]*	1/Month *[01/30]*	Calculate *[CA]*

**Note: The maximum amount of treated effluent that may be applied to the Snowmaking Field #4 is 15 MG and to Field #5 the maximum is 14 MG. Note: An insulating snow cover that is maintained over the snowmaking field during the fall and winter snowmaking period enhances snowmelt infiltration to the soil.

FOOTNOTES: Refer to page 11 for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

4. GROUND WATER MONITORING WELLS[6]; MW1-MW10 AND PZ-19, PZ-20 AND PZ-21 (including four (e) new monitoring wells to be installed:
(1) between spray field SF1 & SF2 before November 30, 2007 and to be designated **MW10**, and (2) down gradient from the snow making field #4 to be designated **MW5** and (3) down gradient from the snow field #5 to be designated **MW6**

	Daily Maximum as specified	Minimum Measurement Frequency	Sample Type
Depth to Water Level Below Land Surface *[72019]*	Report (feet) *[27]*	2/Year *[02/YR]*	Measure *[MS]*
Nitrate-Nitrogen *[00620]*	10 mg/L *[19]*	2/Year *[02/YR]*	Grab *[GR]*
Specific Conductance *[00095]*	Report (umhos/cm) *[11]*	2/Year *[02/YR]*	Grab *[GR]*
Temperature (°C) *[00010]*	Report (°C) *[15]*	2/Year *[02/YR]*	Grab *[GR]*
pH (Standard Units) *[00400]*	Report (S.U.) *[12]*	2/Year *[02/YR]*	Grab *[GR]*
Total Suspended Solids *[00530]*	Report (mg/L) *[19]*	2/Year *[02/YR]*	Grab *[GR]*
Metals[3] (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 *[01/5Y]*	Grab *[GR]*

Note: MW5, and MW6 will replace three piezometers (PZ-19, PZ-20 and PZ-21). Those piezometers are no longer required to be sampled when MW5 and MW6 are installed and available to be sampled under this license. It is noted that the proposed location of MW5 and MW6 had been previously designated as suitable monitoring locations but had not been constructed. The licensee shall notify the Department's facility inspector at least thirty days prior to the installation of the new wells.

FOOTNOTES: Refer to page 11 for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

5. Sampling of **LAGOON UNDERDRAIN SYSTEM** shall be conducted as specified below.

Outfall #003 –Underdrain beneath the treatment lagoons.

	Daily Maximum as specified	**Minimum Measurement Frequency** as specified	**Sample Type** as specified
Flow Rate *[00058]*	Report GPM *[78]*	1/Year(7) *[01/YR]*	Measure *[MS]*
Fecal Coliform Bacteria *[31616]*	Report, #/100 ml *[13]*	1/Year(7) *[01/YR]*	Grab *[GR]*
Specific Conductance *[00095]*	Report (umhos/cm) *[11]*	1/Year(7) *[01/YR]*	Measure *[MS]*
Temperature (°C) *[00010]*	Report (°C) *[15]*	1/Year(7) *[01/YR]*	Measure *[MS]*
Nitrate-Nitrogen *[00620]*	Report mg/L *[19]*	1/Year(7) *[01/YR]*	Grab *[GR]*
pH (Standard Units) *[00400]*	Report (S.U.) *[12]*	1/Year(7) *[01/YR]*	Measure *[MS]*

FOOTNOTES: Refer to page 11 for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

Footnotes – [Special Condition A(1), A(2), A(3), A(4), and A(5)]

Effluent sampling for all parameters shall be after the last treatment process year-round.

Sampling: Sampling and analysis must be conducted in accordance with; a) methods approved by 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.

(1) Lagoon effluent depth shall be measured and recorded weekly for the storage lagoon. Storage lagoon effluent shall be sampled at a point after the pump in the distribution line prior to being pumped to the spray field(s) and shall be representative of what is actually being applied to the fields. Any change in sampling location must be approved by the Department in writing. Note: Lagoon effluent depth level at 26 feet is the equivalent of three feet of freeboard. In the event that freeboard levels in any lagoon are three feet or less, then the Licensee shall notify the Compliance Inspector of the elevation(s); report freeboard levels on a daily basis, and provide a proposal to lower lagoon levels.

(1a) Licensee is required to maintain lagoon effluent between 6.0-9.0 standard units at any time. This licensing action does not require sampling and reporting of pH, however the licensee may be required to demonstrate compliance with this pH range at any time upon request from Department staff.

(2) Lagoon effluent sampling shall occur monthly. In the event that no wastewater is disposed of via the spray irrigation system during the month, the licensee is not required to sample for effluent monitoring.

(3) Metals testing shall be done in the twelve-month period prior to the license expiration date.

(4) Weekly is defined as Sunday through Saturday. A field's daily or weekly application rate is the total gallons sprayed over the applicable period of time divided by the size of the wetted area of the field(s) utilized. Note: 27,152 gallons is equivalent to one acre-inch. 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.

(5) For Discharge Monitoring Report (DMR) reporting purposes, the licensee shall report the highest 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(2), A(3), A(4), and A(5)]

(6) Monitoring wells shall be sampled during the months of May and October of each year. Depth to water level shall be measured to the nearest one-hundredth ($1/100^{th}$) of a foot as referenced from the surface of the ground at the base of the monitoring well. Specific conductance (calibrated to 25.0° C), temperature, and pH are considered to be "field" parameters, and are to be measured in the field via instrumentation. The licensee is required to test for these parameters whether waste water was disposed of via the spray-irrigation system or not. Specific Conductance values greater than 275 umhos/cm, consistent trends approaching 275 umhos/cm or sudden spikes from previous levels shall be reported immediately to the Department, and may necessitate the need for additional ground-water testing requirements.

(7) Lagoon underdrain sampling shall be conducted in the month of April, May, or June (during period of maximum flow).

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain materials in concentrations or combinations which would impair the uses designated by the classification of the ground water.
2. The effluent must not lower the quality of any classified body of water (ground water is a classified body of water under Title 38, Section 465-C) below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate [or a Maine Professional Engineer (P.E.) with qualifications to operate a waste water treatement plant] pursuant to Title 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.

D. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department **and shall be postmarked by the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department by the fifteenth (15th) day of the month following the completed reporting period.** A signed copy of the DMR and all other reports required herein shall be submitted, unless otherwise specified, to the Department's facility inspector at:

Maine Department of Environmental Protection
Division of Water Quality Management
State House Station #17
Augusta, Maine 04333

E. AUTHORIZED DISCHARGES

The licensee is authorized to discharge treated sanitary waste water only in accordance with the terms and conditions of this WDL and only to the spray irrigation / snowmaking disposal fields identified in the Waste Discharge License application. Discharge of waste water to any other location or from sources other than those indicated on said application requires written authorization from the Department. 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 written authorization from the Department.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENT

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

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; 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.

G. GENERAL OPERATIONAL CONSTRAINTS

1. All waste waters shall receive biological treatment through a properly designed, operated and maintained lagoon system prior to disposal via spray irrigation or snow making.
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. Spray nozzles must be calibrated annually in order to assure proper spray irrigation rates (see Section 5.d of the Fact Sheet for more information on this).
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. § 2601.

   In the event the ground water monitoring results indicate adverse effects, 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, or ceasing operation of the system until the ground water 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, etc, 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.

SPECIAL CONDITIONS

G. GENERAL OPERATIONAL CONSTRAINTS (CONT'D)

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 system identifier in all logs and reports.

7. 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. **Within one hour after start-up of the spray-irrigation system**, the licensee shall inspect the spray-irrigation site ***or*** have other means to check the system for leakage in the piping system and determine if individual sprayheads and pump(s) are functioning as designed, and verify that application rates are appropriate for the existing site conditions. The procedures used to determine the system is functioning as designed shall be described in the facility's O&M manual. Should significant malfunctions or leaks be detected, the licensee must shut down the malfunctioning/leaking sections 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). The licensee shall field calibrate equipment to ensure proper and uniform spray applications when operating. Calibration involves collecting and measuring application rate at different locations within the application area. A description of the calibration procedures and a log sheet that have been used for recording calibration results shall be included as part of the Operations & Maintenance manual.

8. **The licensee shall maintain a daily log** of all spray irrigation (and snowmaking operations) 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, Spray Application Report by Week, and Depth to Groundwater* for each month shall be submitted to the Department as an attachment to the monthly Discharge Monitoring Reports (DMR's) 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. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS, LOGS AND REPORTS

1. Suitable vegetative cover shall be maintained. Waste water (as liquid spray irrigation) shall 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. The licensee shall have an updated facilities management plan that includes provisions for maintaining the spray irrigation area in optimum condition for the uptake of nutrients and moisture holding capacity.
2. At least 10 inches of separation from the ground surface to the ground water table shall be present prior to spray irrigation. At least 30 days prior to spray irrigation the licensee shall notify the Department Compliance Inspector of the location and installation details (construction techniques, depth, screened interval, etc.) of the new wells installed downgradient from spray irrigation field #2 and shall provide plans indicating those details.
3. No waste water shall be spray irrigated as liquid 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 as spray irrigation (liquid) where there is snow present on the surface of the ground or when there is any evidence of frost or frozen ground within the upper 10 inches of the soil profile.
5. No traffic or equipment shall be allowed in the spray-irrigation field area except where installation occurs or where normal operations and maintenance are performed (this shall include forest management operations).
6. Prior to the commencement of spray irrigation for the season, the licensee shall notify the Department's compliance inspector that they have verified that soil conditions are appropriate (absence of frozen ground, soil conditions, moisture, etc.) for spray irrigation.
7. The licensee shall install the equivalent of one ground water level inspection well per spray field to verify that 10 inches of separation from the ground surface to the observed ground water level is present prior to spraying. Depths to ground water shall be recorded in accordance with the general format of *"Depth to Groundwater"* provided as Attachment "C" of this license or other format as approved by the Department.

SPECIAL CONDITIONS

I. SNOWMAKING OPERATIONAL CONSTRAINTS, LOGS AND REPORTS

The licensee shall have an updated facilities management plan that includes provisions for maintaining the snowmaking area in optimum condition for the uptake of nutrients and moisture holding capacity.

1. No traffic or equipment shall be allowed in the snowmaking area area except where installation occurs or where normal operations and maintenance are performed (this shall include facility management operations).
2. Prior to the commencement of snowmaking for the season, the licensee shall notify the Department's compliance inspector that they have verified that site conditions are appropriate.
3. Snowmaking activities shall occur such that a substantially even application of snow is deposited in the snowmaking area at the beginning of the snowmaking season.
4. The licensee shall maintain logs and submit a summary of the amount of snow making waste water that has been discharged to the snowmaking area each month.

J. LAGOON MAINTENANCE

1. The banks of the lagoons shall be inspected periodically during the operating season (at least two times per year) 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. 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.

3 The licensee shall maintain the freeboard at a level no higher than design levels or no less than three (3) feet.

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

K. 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, septic tanks, lagoons, spray apparatus, and pipes. At a minimum, the logs shall include the unique identifier [see Special Condition G(6)], the date of maintenance, type of maintenance performed, names or person performing the maintenance, and other relevant system observations.

SPECIAL CONDITIONS

L. WET WEATHER FLOW MANAGEMENT PLAN

On or before July 1, 2007, the licensee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan ***[PCS Code 06799]*** that conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures, and provide a written operating and maintenance procedures during the events. The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

The licensee shall review the plan at least annually and record any necessary changes to keep the plan up-to-date. Any changes shall be submitted to the Department for review and approval.

M. GROUND WATER MONITORING WELLS AND WATER QUALITY MONITORING PLAN DETAILS

1. As an exhibit to the next application for license renewal ***[PCS Code 05799]***, the licensee shall submit to the Department for review and approval, a ground water quality monitoring plan prepared by a professional qualified in water chemistry or ground water flow interpretation to summarize, evaluate, and provide recommendations on the monitoring results that is and has been submitted to the Department, unless a problem is evident, in which case the Department is to be notified immediately. The report shall include historical as well as the most recent year's monitoring data for each monitoring point, represented in tabular and graphical form and shall be submitted to the facility Department's compliance inspector electronically and in paper form. Refer to Attachment "1" of this Fact Sheet for more information.

2. 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 in order to insure representative samples of ground water quality.

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

N. SPRAY IRRIGATION & SNOWMAKING PERFORMANCE REPORT

As an exhibit to the next application for license renewal, the licensee shall submit to the Department a report of the treatment system's performance covering the previous five calendar years ***[PCS Code 90199]***. The report shall be dated and signed by the operator in responsible charge of the system.

The report shall include, but is not necessarily limited to, an updated source description, an updated schematic and narrative of the treatment system and distribution system, a summary of the past performance demonstrating compliance with all terms and conditions of the effective license, a description of any proposed changes in the overall system or operation of the system, and if applicable, proposed changes in the effective license.

O. 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. Of particular importance is the management of the spray application sites such that the spray / snowmaking sites are given ample periods of rest to prevent over application, as well as providing a substantially even application of effluent subject to freeze crystallization (snow) over the snowmaking area. It is acknowledged that the operator has limited control over the distribution of the snow made using the freeze crystallization process as winds and weather conditions may exceed the operators ability to completely evenly distribute the snow – effluent over the snowmaking area.

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.

P. 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 sites 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.

Q. REOPENING OF LICENSE

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.

SPECIAL CONDITIONS

R. SCHEDULE OF COMPLIANCE

On or before August 30, 2007 ***[PCS Code 01299]*** the licensee shall submit to the Department plans and details on the ground water monitoring well (MW10) to be installed between spray irrigation field SF#1 and SF#2 and the plan for deepening or replacing ground water monitoring wells #8 and #9 (which have been chronically shallow and not able to provide suitable ground water samples in the past). In addition, the licensee shall provide by this same date, a schedule for the replacement of PZ-19, PZ-20, and PZ-21 with new wells #5 and #6. The plans and details shall include information on the geology of the site and the proposed wells construction details (including screened interval, depth proposed, construction materials) based on site specific investigations.

On or before December 31, 2007 ***[PCS Code 01299]*** the licensee shall have installed the new ground water monitoring well between spray irrigation field SF#1 and SF#2 and have deepened or replaced well #8 and #9. The licensee shall have details of the as-built wells and revised site plans showing the location of the wells as well as an updated map of the facility showing the well locations and any other modified structure.

S. 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 the 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.

Monthly Operations Log **Attachment A** **(Month/Year) _____)**

WDL #W-008086-5L-B-R; Fields #_____ Weekly Application Rate: _____ gallons/acre (_____ inches)

	A	B	C	D	E	F	G	H	I	J	K
Day	DATE	PRECIP Inches	TEMP	WEATHER	WIND- Direction Speed	Soil Moisture	Quanity- Total Gallons Pumped	Name of Field(s) Used	Acres Sprayed (Sum of Col H x Area of Each Field)	Gallons/Acre (inches) (Col G divided by I)	Total Inches
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
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	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										
Monthly Total =											

Spray Application Report by Week **Attachment B** **Facility Name**_____;

WDL # W-008086-5L-B-R; (Month _____, Year _____) Weekly Application Rate _____ gallons/acre _____ inches)

Field Name/#	Effective Spray Area (Acres)	Weekly Limit (Gallons/Acre)	Actual Spray Application Rates (Gallons per Acre)					Number of Exceptions to Weekly Limit	Monthly Average
			Week 1	Week 2	Week 3	Week 4	Week 5		

Note: 1 acre-inch is equivalent to 27,150 gallons of liquid
27,150 gallons per acre is equivalent to 1.0 inch

Total Number of Exceptions

A spray-field's weekly application rate if the total gallons sprayed (Sunday through Saturday) divided by the size of the spray-field in acres or the size in acres of that portion of the spray field utilized.

Signature of Responsible Official: _____, Date _____

Depth to Groundwater (Hundredths of Feet) **Attachment C** (Month _____, Year _____)

Facility Name: Town of Rangeley, Chick Hill Pollution Control Facility; W-008086-5L-B-R

Field Name/#	Monitoring Location	2. Depth to Groundwater (Measured From Ground Surface in Tenths of Feet)					Number of Exceptions	Monthly Average Depth
		Week 1	Week 2	Week 3	Week 4	Week 5		
						Total Number of Exceptions		

Note: Special Condition H of the License requires that a depth of 10 inches from the ground surface to the groundwater table must be present prior to spraying.

Signature of Responsible Offical: _____, Date _____

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **March 26, 2007**

PERMIT NUMBER: **MEU508086**
LICENSE NUMBER: **W008086-5L-B-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF RANGELEY
Chick Hill Pollution Control Facility
P.O. Box 632
Rangeley, Maine 04970

COUNTY: **Franklin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

231 Chick Hill Drive
Rangeley, Maine 04970

RECEIVING WATER/CLASSIFICATION: **Ground Water/Class GW-A**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Jerome Guevremont**
Superintendent
(207) 864-3542

1. APPLICATION SUMMARY

The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W008086-5L-A-N, that was issued on April 27, 2001 and has expired on April 27, 2006. In 2006, the Town of Rangeley served 448 customer connections including commercial facilities primarily associated with the downtown district of town (10 additional connections are anticipated annually since that time). The Town operates the Chick Hill Pollution Control Facility, a spray irrigation / snow making waste water treatment and disposal facility. Treated waste water may be land applied via spray irrigation equipment from April 15th through and including November 15th of any year, depending on weather and site conditions. Snowmaking may occur between November 15th through and including April 30th of the following year also depending on weather and site conditions.

The spray irrigation system currently disposes of treated waste water at three distinct areas, Field Area #2, Area #6 and #7 (other previously approved spray areas [#1, #3] are not currently online (i.e., cleared of vegetation, upgraded with piping and discharge nozzles or other ancillary improvements). Previously approved (but not yet utilized) spray area #1 is scheduled to be online in 2008. The snow making applications currently occur in two distinct areas, Field Area #4 and #5. The snow-making area consists of 7 spray nozzles with 5 nozzles along the easterly-most area and 2 on the westerly area (more nozzles are planned but not installed at this time). At the facility there are two aerated lagoons, one storage lagoon, an operations building, and the spray irrigation and snowmaking areas. The storage lagoon has a waste water capacity of 25 MG during normal operating conditions. The two aerated lagoons each have a water capacity of gallons of 2.5 MG for a total holding capacity of 30 MG.

1. APPLICATION SUMMARY (CONT'D)

Spray irrigation area (SF2) currently covers approximately 12 acres and SF6 and SF7 covers 15 acres, whereas snow making area #4 currently covers 20 acres and snow making area #5 currently covers 20 acres. The spray irrigation system includes two pumps, distribution laterals, and spray nozzles at the spray irrigation fields. The snow making system includes an effluent pump, a 75 hp air compressor, an air dryer, and seven (7) existing (and four [4] proposed) snow making towers that distribute the made snow across the snow making fields. When the additional towers are installed the snow making area will be enlarged and the amount of waste water that can be applied to the areas will also be increased.

The Town of Rangeley anticipates an annual waste water generation of 71.5 MG (with 18.4 MG of that total annual generated during the snow making season). Using the spray irrigation areas, the Town can discharge up to 106 MG annually under ideal conditions. However, it is noted that operational constraints prevent spray irrigation about 75% of the time, thus resulting in a typical discharge capability of 77 MG annually. The design capacity of the treatment facility is 0.15 MG per day (daily average) with a peak capacity of 0.74 MG per day (daily maximum). Using the snow making areas, the Town can discharge 29 MG per year. The total amount of waste water that can be discharged under typical conditions is 77 + 29 MG or 106 MG thus providing adequate flexibility to dispose of the waste water generated by the town. The facility has been assigned number MEU508086 in the Department's permit compliance system (PCS) for data acquisition and data management.

2. PERMIT SUMMARY

a. History: The most recent permitting/licensing actions include the following:

April 27, 2001 – The Department issued WDL #W008086-5L-A-N to the Town of Rangeley for the Chick Hill Pollution Control Facility to discharge sanitary wastewater generated by customers in the town at the spray irrigation and snow making facility.

October 21, 2003 – The Department issued an Administrative Modification to the April 27, 2001 license that changed certain conditions to more accurately reflect operations at the facility.

May 23, 2005 – The Department issued another Administrative Modification to address certain errors in the license.

May 22, 2006 – The Town of Rangeley submitted an application to the Department for the renewal of the April 27, 2001 WDL.

May 26, 2006 – The Department accepted the application for processing that was submitted by the Town of Rangeley for the renewal of the April 27, 2001 WDL.

b. Source Description: The waste waters treated and discharged by the Town of Rangeley consists of sanitary and commercial flows from sanitary sewer collection area. The area is rapidly growing and the district has added over 50 new connections within the past 5 years to the collection system (a level of growth anticipated to continue at that rate). The applicant proposes to continue to dispose of treated waste water via an existing spray irrigation and freeze crystalization process (snowmaking).

2. PERMIT SUMMARY (Cont'd)

c. Waste Water Treatment: Slow rate land irrigation and snowmaking are environmentally sound and appropriate technology for best practicable treatment and disposal of sanitary waste water. The soil and vegetation within the spray irrigation and snowmaking area will provide adequate filtration and adsorption of waste water to preserve the integrity of the soil and both surface and ground water resources in the area. Snowmaking is appropriate technology for the area which generates the greatest volume of sanitary waste water during the months when snow can be generated.

Raw sewage is pumped into aeration lagoon #1 and flows by gravity into aeration lagoon #2 which discharges to the storage lagoon prior to spraying. The storage lagoon has a capacity of 27 million gallons (MG), and the aerated lagoons have a capacity of 2.5 MG each for a total storage volume of 32 MG. The lagoons are constructed by elevated earthen berms with synthetic liners that are all underlain by a single collection system that enables assessment of the integrity of the liner.

The lagoon effluent is pumped periodically to a land-based, spray irrigation disposal area and snowmaking area consisting of a slow rate sprinkler irrigation system and freeze crystallization (snowmaking) process. The spray irrigation and snowmaking areas are characterized as moderately sloped Telos-Chesuncook soils, that range between somewhat poorly drained to somewhat excessively drained. The soils in the land application areas are suitable for the discharge of waste water to the land. The lagoons, operations building, surface disposal spray irrigation and snow making area are located on a 400-acre parcel of land. There are three existing spray irrigation areas (fields #2, 7, & 8) and two snowmaking areas (fields #4, & 5). Also contained on the 400-acre parcel are two future spray irrigation fields (#1 and 3), a separately licensed septage disposal area, various ground water monitoring wells, and other ancillary components.

Each spray irrigation area covers approximately 12 acres, whereas snow making area #4 currently covers 20 acre and snow making area #5 currently covers 20 acres. The spray irrigation system includes two pumps, distribution laterals, and spray nozzles at the spray irrigation fields. The snow making system includes an effluent pump, a 75 hp air compressor, an air dryer, and seven (7) existing (and four [4] proposed) snow making towers that distribute the made snow across the snow making fields. When the additional towers are installed the snow making area will be enlarged and the amount of waste water that can be applied to the areas will also be increased.

3. CONDITIONS OF THE LICENSE

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, 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. In addition, Maine law, 38 M.R.S.A., Section 420, and Department Regulation Chapter 530, *Surface Water Toxics Control Program* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

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. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Monitoring Parameters – Lagoon effluent monitoring parameters are being modified in this licensing action to eliminate the requirement to sample and report concentration values for Ammonia, Chlorides, and TKN and will now include only BOD, TSS, Nitrate-Nitrogen, specific conductivity, temperature, pH (all on a monthly basis, except for pH) and, on a once per five year frequency for certain metals. Monitoring for these parameters yields an indication of the effectiveness of the lagoon treatment process and the condition of the waste water being applied. Lagoon effluent monitoring is being required monthly when wastewater is disposed of via the spray irrigation system. Testing for specific metals in the effluent from the storage lagoon is only required to be performed in the twelve-month period prior to the expiration date of the license. Well monitoring is required at the frequency specified in this licensing action, whether or not spray irrigation occurs.

Biochemical Oxygen Demand (BOD) - Monitoring for BOD yields an indication the condition of the waste water being applied from the lagoon, of the degree of loading of organic material and the effectiveness of the spray-irrigation treatment process. The limit of 100 mg/L established in the previous license as a best practicable treatment (BPT) standard is being carried forward in this licensing action. During the past five years the lagoon effluent has generally measured between 2.4 to 68 mg/L (with one value at 125 mg/L). The average value is 38.7 over the same time period.

Total Suspended Solids (TSS) - TSS in the groundwater yields an indication of the integrity of the monitoring wells and of the treatment efficiency. The Department has carried forward the previous limit of 100 mg/L as it has been determined to be BPT for this type of facility. During the past five years, lagoon effluent has measured between 17 to 56 mg/L. The average value has been 32 mg/L over the same time period.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONT'D)

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 a human health concern. The limit of 10 mg/L is a National Primary Drinking Water standard. During the past five years effluent nitrate quality has ranged between 0.053 to 5.3 mg/L with a mean value of 4.5 mg/L.

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. These parameters are considered as surveillance level monitoring parameters and are used as an early-warning indicators of potential groundwater contamination when there exists a trend in the data (or in the case of specific conductance, values over 275 umhos/cm, consistent trends approaching 275 umhos/cm or sudden spikes from previous levels). Temperature data is important in calibrating the conductance measurements. Effluent conductance has ranged between 170 to 230 umhos/cm, with an average value of 210 umhos/cm. Whereas, ground water monitoring well conductance values have ranged between 4 to 386 umhos/cm. The average conductance value reported from all of the wells is 182 umhos/cm. The high end conductance value was measured in MW7 which is a well located upgradient from the lagoons and is being investigated by the Department for the reason for the high end sample value.

Fecal Coliform Bacteria – This licensing action is carrying forward the requirement to measure the concentration of fecal coliform bacteria at the underdrain sampling port. This licensing action carries forward, from the previous licensing action, a "report" requirement on a once per year monitoring frequency. Values of fecal coliform bacteria from the underdrain sampling port have ranged over the past three years between 0 to 100, with an average value of 34 colonies per 100 ml.

b. Spray Irrigation Application Rates – Based on the history of the spray applications and information from the applicant, the spray fields are capable of treating and assimilating a weekly maximum application rates of (a) 67,882 gallons (2.5 inches) per acre, or (b) 122,186 gallons (4.5 inches) per acre per week for the following spray irrigation areas: (a) fields #1, #2, and #3, or (b) fields #6, and #7, respectively. This licensing action is carrying forward the existing application rate for the existing spray irrigation areas. 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. Regardless of the calculated rate, the system operator shall monitor each waste application to verify adequate infiltration of the waste into the soil and a spray irrigation cycle must be stopped if runoff outside of the designated spray application field site occurs. The Department finds that the over-application of waste water to certain land may exceed the long term acceptance rate of the soils ability to treat and attenuate the wastes. However, given the General Operational Constraints (Section G of this license) and the Spray Irrigation / Snowmaking Operational Constraints (Section H of this license) the likelihood of over-applications is slight.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONT'D)

c. Ground Water Monitoring Wells --Nine ground water monitoring wells and piezometers had been monitored on the site, in the past, and are shown on Attachment of this Fact Sheet. Five of the existing wells or piezometers have not provided representative ground water data because they are dry for a portion of the year or are outside of the area of interest for evaluating ground water plumes and are being replaced or sampling no longer required (wells #MW8, MW9, PZ19, PZ20, and PZ21). The wells and piezometers that have been sampled in the past are identified below in bold and italicized print, with the four other wells to be installed as supplemental or replacement sampling points:

Well Designation	Location
#MW1	***West of storage lagoon***
MW2	***East of Lagoons***
MW3	***South of spray irrigation area #2***
MW4**	To be installed southerly of spray irrigation field #3 when field #3 becomes activated in the future (long-term).
MW5*	To be installed northerly of snowmaking area #4
MW6*	To be installed northerly of snowmaking area #5
MW7	***Upgradient from lagoons***
MW8	***Southwest of snow making areas #7***
MW9	***Southwest of snow making area #6***
MW10*	To be installed southerly of spray field #2 and northerly of field #1
PZ19	***To be discontinued***
PZ20	***Piezometer to be replaced with MW6***
PZ21	***Piezometer to be replaced with MW5***

d. Groundwater Monitoring and Lagoon Underdrain - Monitoring parameters in this license is being modified from the previous sampling and reporting requirements of ground water elevation on a monthly basis between April through November (inclusive), and twice per year (during the months of April and November) for specific conductance, temperature, pH, Chloride, total nitrate-nitrogen, TKN, total dissolved solids, total manganese, and total iron. The modified sampling and reporting requirements included in this licensing action include depth to the water level below the land surface, nitrate-nitrogen, specific conductance, temperature, pH, and TSS on a twice per year basis during the months of May and October. Also required is the sampling and reporting of certain metals on a once per five year basis (during the twelve-month period prior to the expiration date of the license). The lagoon underdrain is also sampled to determine leakage rates from the structure once per year during April, May, or June (at peak flow).

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONT'D)

The monitoring parameters are being modified subsequent to Departmental review of historic data collected during the past five (5) years. The Department review of this data indicates no significant impacts to the ground water quality as measured in the existing monitoring wells as a result of the spray irrigation and snowmaking process conducted by the Town. 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 (resulting in increased ponding). For these reasons, the licensee shall field calibrate their equipment on a regular basis to ensure proper application and uniformity, and when operating conditions are changed from the assumed design. See Attachment "2" of this Fact Sheet for use as a guidance document that may be used and describes an appropriate methodology for calibration. Calibration involves collecting and measuring flow at several locations in the application area (typically a grid pattern of containers with uniform diameters).

6. 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.

7. PUBLIC COMMENTS

Public notice of this application was made in the Original Irregular, a local newspaper with circulation around the project area on or about April 5, 2006. 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.

8. DEPARTMENT CONTACTS:

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

David Silver
Division of Water Quality Management
Bureau of Land and Water Quality
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Telephone (207) 287-3901

Example Spray Irrigation Field Calibration Report Form Attachment "2"

Background Data

Describe the reasons for system re-calibration (example annual calibration or change in operating conditions). When there has been a change in operating conditions list the specific changes such as new components (pumps, spray heads, size or type of pipes, etc.) or previously approved design changes.

Describe the current method for estimating the flow of wastewater to the irrigation area, ie, meter or pump calibration data. When using pump calibration data list the estimated flow rate of the pump for the existing site conditions (example gallons per minute). Also note the assumed diameter of coverage for the individual spray heads and the resulting area of application (acreage). Based on this information what is the assumed application rate in inches per hour and gallons per acre. Note: 1 acre-inch equals 27,150 gallons.

System Calibration

Describe or attach illustrations of the system calibration procedure, ie, grid layout or rain gauge or other uniform containers.

List the actual radius of spray coverage of the individual spray heads as measured during the field calibration and note any application uniformity problems such as noticeable ponding or uneven applications.

Calculate the acreage of the application based on the actual radius of coverage measured in the field. Show calculations.

Example: (27,150 gallons/acre/week)(1.5 inch/week)(1.3 acres) = 52,942 gallons/week

Calculate the estimated hourly application rate in inches per hour and gallons per acre obtained during the above calibration. Show calculations.

New Calibration Data

What changes to the estimates of wastewater flow are proposed, if any and why? And are the licensed application rates satisfied?

Any adjustments to improve uniformity of spray applications?

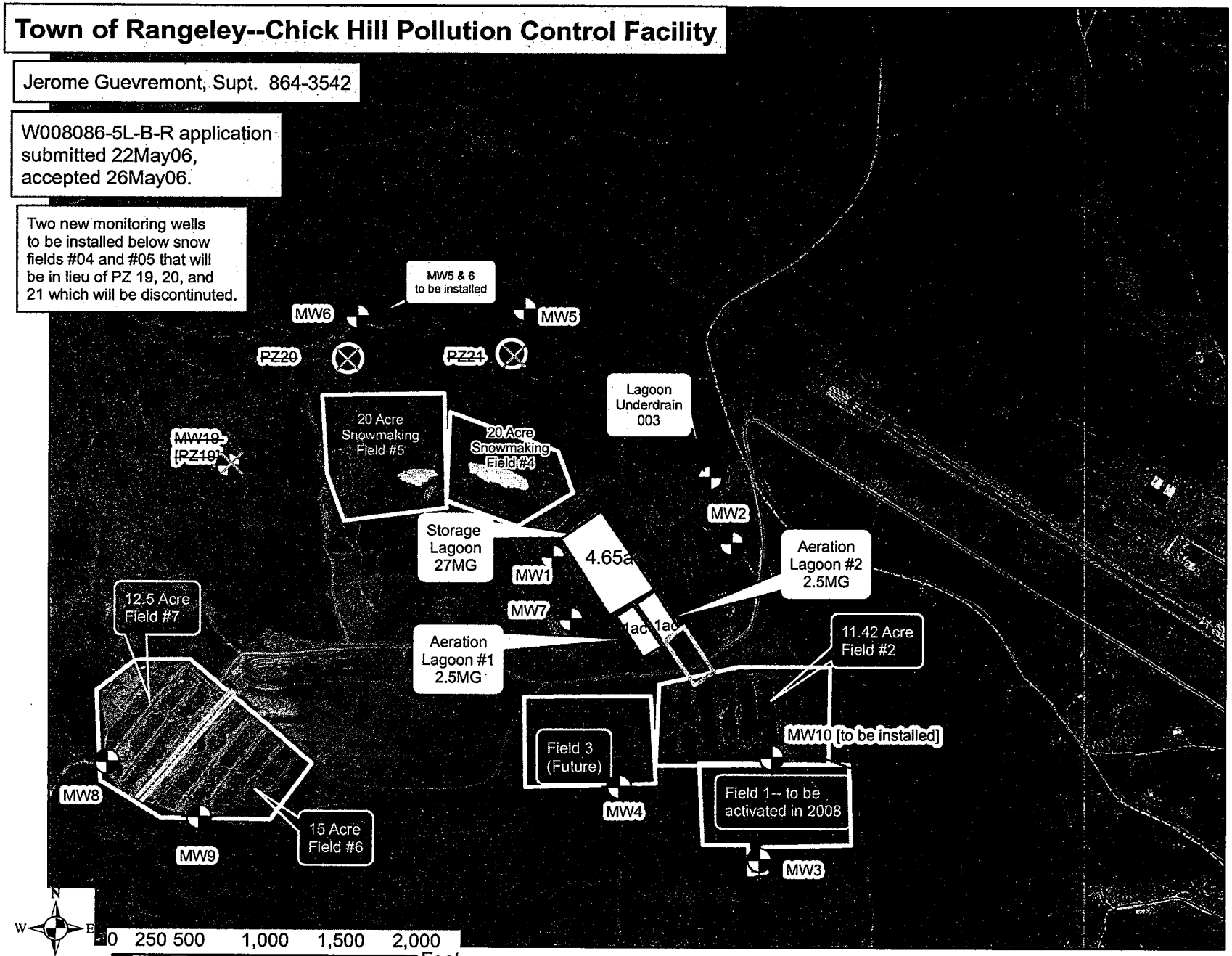
Submitted by: Signature of Operator in Responsible Charge	On Date:
Reviewed by: Signature of Operator in Responsible Charge	On Date:

Town of Rangeley--Chick Hill Pollution Control Facility

Jerome Guevremont, Supt. 864-3542

W008086-5L-B-R application submitted 22May06, accepted 26May06.

Two new monitoring wells to be installed below snow fields #04 and #05 that will be in lieu of PZ 19, 20, and 21 which will be discontinuted.



Map prepared by MeDEP 12/18/06