STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

City of Presque Isle
Attn: Dana Fowler, Solid Waste Director
12 Second Street
Presque Isle, Maine 04769

July 18, 2006

RE: Compliance System Tracking Number # MEU508088
Maine Waste Discharge License (WDL) Application # W008088-5L-C-R
Final License

Dear Mr. Fowler:

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 the matter, please feel free to call me at 287-7658.

Sincerely,

David Silver /CPO

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

Enc. Bill Sheehan, DEP/NMRO
Sandy Lao, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF PRESQUE ISLE	)	PROTECTION AND IMPROVEMENT
PRESQUE ISLE, AROOSTOOK COUNTY, MAINE	)	OF WATERS
SURFACE WASTEWATER DISPOSAL SYSTEM	)	
MEU508088	)	WASTE DISCHARGE LICENSE
#W008088-5L-C-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 CITY OF PRESQUE ISLE (PRESQUE ISLE) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied for a renewal of Waste Discharge License (WDL) #W008088-5L-A-N and which was issued on July 5, 2000 and subsequently modified on May 26, 2004. The WDL expired on July 5, 2005. The application is for the continuing operation of a surface wastewater disposal (spray-irrigation) system for the treatment and seasonal disposal of landfill leachate wastewater to land in Presque Isle, Maine.

The landfill is located on a 634-acre parcel of land located 10 miles southwest of the center of Presque Isle and serves seven communities with a population of approximately 15,000 people. The landfill consists of 13.25 acres designated for the disposal of municipal solid waste, an adjacent 5.3-acre construction/demolition debris landfill, a waste tire storage area, wood debris storage, intermediate cover material storage area, used metal storage area, compost storage area, a stormwater basin, two leachate lagoon storage basins, and the surface waste water disposal (spray irrigation) system.

The surface waste water disposal system was originally designed to distribute waste water over six (6) spray irrigation areas (denoted areas #1, 2, 3, 4, 5, and 6 on Attachment A of the Fact Sheet). Spray irrigation areas are dosed at a rate not to exceed 1.0 inch per acre (27,150 gallons) per week, (The northwest half of spray irrigation area #6 is no longer used). Each spray irrigation area consists of a circular area with a diameter of 415 feet (or 3.1 acres) with a center pivot spray nozzle that casts waste water in an even distribution over each spray irrigation area.

The total area that is used for spray irrigation, at a rate of 1"/week, is 17 acres (3.1 acres per spray area multiplied by 5.5 spray areas [half of spray area #6 is not used]). Therefore, the amount of wastewater that can be spray irrigated is 17 acres multiplied by 27,150 gallons per acre, or a total of 461,550 gallons per week. Since this licensing action is expanding the spray irrigation season to be consistent with other similar facilities to a total of 30 weeks, the total amount of wastewater that could be applied to the site under ideal conditions is 13.8 million gallons. With annual leachate production of about 5.0 million gallons, the spray irrigation system is sufficiently sized and provides ample flexibility to treat and dispose of the amount of wastewater generated.

RENEWAL SUMMARY

The facility has been assigned number MEU508088 for license compliance tracking purposes in the Permit Compliance System (PCS). By this renewal the Department is:

- Expanding the authorized spray irrigation season, in order to be consistent with other facilities, from May 1st until October 30th to April 15th until November 15th of any given year;
- Modifying the existing soils monitoring program for the spray-irrigation site by reducing the measurement frequency for certain parameters, including eliminating the existing soil moisture content sampling using gypsum block gauging equipment in lieu of the standardized operational constraints consistent with other spray irrigation facilities (refer to Section H);
- Requiring an evaluation of soils monitoring results once during the license term;
- Correcting a clerical error associated with the numeric limitation of Benzoic Acid monitoring from 0.12 ug/L to 0.12 mg/L (to be consistent with the Federal Standard associated with leachate monitoring at landfill sites);
- Modifying the spray irrigation application rate to spray area #2 at the request of the licensee in order to enhance spray application efficiency and ease of operations.
- Maintaining all other limitations and monitoring requirements for the spray-irrigation fields and groundwater monitoring along with certain operational constraints in order to provide consistency across similar facilities now licensed by the Department.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 21, 2005, revised on January 18, 2006 and March 28, 2006, 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 national 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
   (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 CITY OF PRESQUE ISLE, to operate a surface wastewater disposal system for the spray irrigation discharge of up to 461,550 gallons per week, 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 21st DAY OF July, 2006.

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: June 13, 2005
Date of application acceptance: June 14, 2005

FILED
JUL 24 2006
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

Heavy Spray Template-a.doc 10JUL06

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 wastewater treatment and disposal system. The **LAGOON EFFLUENT (OUTFALL #001 IS THE CONICAL LAGOON [SAMPLING LOCATION IS THE OUTLET PUMP PIPELINE], OUTFALL 002 IS THE RECTANGULAR LAGOON)** [(1)] shall be limited and monitored as specified below.

Minimum Monitoring Requirements (as specified)

	Weekly Maximum	Daily Maximum	Measurement Frequency	Sample Type
Flow *[74076]*	Report, Gallons/Week *[8G]*	Report, Gallons/Day *[07]*	1/Day *[01/01]*	Meter *[MT]*
Lagoon Level (Freeboard)[(2)]				
Rectangular Storage Lagoon *[82564]*	---	Report, Feet *[27]*	1/Week[(3)] *[01/07]*	Measure *[MS]*
Conical Lagoon *[82564]*	---	Report, Feet *[27]*	1/Week[(3)] *[01/07]*	Measure *[MS]*
Biochemical Oxygen Demand *[00310]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Suspended Solids*[00530]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Specific Conductivity *[00095]*	---	Report, umhos/cm *[11]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Phosphorus *[00665]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Aluminum *[01105]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Arsenic *[01002]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Cadmium *[01027]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Copper *[01042]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Lead *[01051]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Nickel *[01067]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
Total Zinc *[01092]*	---	Report, mg/L *[19]*	1/Month[(1)] *[01/30]*	Grab*[GR]*
pH (Standard Units) *[00400]*	---	Report S.U. *[12]*	1/Month[(1)] *[01/30]*	Grab*[GR]*

Footnotes:

(1) During April, May, June, July, August, September, October, and November of each year if land application takes place in that month.

(2) For the purpose of reporting in operational logs as required by Special Condition I of this licensing action, report freeboard as the number of feet (nearest 0.1 feet) between the lagoon water level and the lowest elevation for each of the two storage lagoon berms. For the purpose of reporting on the monthly DMRs, report the minimum freeboard recorded for each lagoon.

(3) When the lagoon levels are less than three feet, the frequency of measurement shall be increased to once per day.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (Cont'd)

2. The **SEDIMENTATION POND (SW-B)**shall be limited and monitored as specified below.

	Discharge Limitations	**Minimum Monitoring Requirements (as specified)**	
	Daily Maximum	**Measurement Frequency**	**Sample Type**
Visual Inspection (1)	---	Daily	---
Specific Conductivity *[00095]*	Report, uhmos/cm(2) *[11]*	1/Week(3) *[01/07]*	Measure *[MS]*
Biochemical Oxygen Demand *[00310]*	140 mg/L *[19]*	Contingent(4) *[77/77]*	Grab *[GR]*
Total Suspended Solids *[00610]*	88 mg/L *[19]*	Contingent(4) *[77/77]*	Grab *[GR]*
Ammonia as N *[00610]*	10 mg/L *[19]*	Contingent(4) *[77/77]*	Grab *[GR]*
α–Terpineol *[51031]*	33 ug/L *[28]*	Contingent(4) *[77/77]*	Grab *[GR]*
Benzoic Acid *[77247]*	0.12 mg/L *[28]*	Contingent(4) *[77/77]*	Grab *[GR]*
ρ-Cresol *[79778]*	25 ug/L *[28]*	Contingent(4) *[77/77]*	Grab *[GR]*
Phenol *[46000]*	26 ug/L *[28]*	Contingent(4) *[77/77]*	Grab *[GR]*
Total Zinc *[01092]*	200 ug/L *[28]*	Contingent(4) *[77/77]*	Grab *[GR]*
pH *[00400]*	6.0-9.0 SU *[12]*	Contingent(4) *[77/77]*	Grab *[GR]*

Footnotes:

(1) During the months of April, May, June, July, August, September, October, and November daily visual inspections of the landfill perimeter to identify potential leachate seeps shall be conducted by the applicant. The licensee shall maintain a written daily log of said inspection that must be submitted along with the Discharge Monitoring Reports. If leachate seep(s) are observed from the landfill, the licensee shall notify the Department within one working day and isolate the seep(s) as soon as practical in accordance with the approved Operations Manual.

(2) Measured in the field. If conductivity exceeds 500 uhmos/cm at any time, the licensee shall cease the discharge immediately and verbally notify the Department within 24 hours of the conductivity measurement.

(3) During the months of April, May, June, July, August, September, October, and November of each year, and any time leachate is observed being conveyed to the sedimentation basin.

(4) Sampling contingent upon the conductivity reading. If the conductivity is greater than 500 uhmos/cm then within 24-hours the permittee shall sample the water in the sedimentation pond (top 12 inches) for the parameters in the table above. If the results are below the limitations established above, the permittee is authorized to commence discharging (regardless of the conductivity). If any of the results exceed the limits established above, the permittee is prohibited from discharging until such time that additional sampling for all of the parameters listed above are below the limitations and conductivity is less than or equal to 500 uhmos/cm.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (Cont'd)

3. The **SPRAY IRRIGATION AREA.** Application rates for the spray irrigation areas shall be limited and monitored as specified below. See Attachment A to the Fact Sheet for a site plan illustrating the configuration of the spray irrigation area.

	Discharge Limitations		Minimum Monitoring Requirements (as specified)	
	Daily Maximum	Weekly Maximum	Measurement Frequency[2]	Sample Type
Application Rate *[01287]*				
Spray Areas #1, 2, 3, 4, 5, & 6		1.0 Inch / Week [1,2] *[91]* (27,150 gallons per week)	1/Day *[01/01]*	Pump Log[3] *[PL]*

Footnotes:

(1) Equivalent to 27,150 gallons per acre. The application rate shall not exceed 0.25 inches per hour.

(2) During the months of April May, June, July, August, September, October, November of each year if land application takes place during the month. Weekly is defined as Sunday through Saturday. A field's weekly application rate is the total gallons sprayed (Sunday through Saturday), divided by the size of the spray-irrigation field in acres (as defined in this license) or the size in acres of that portion of the field utilized. 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. The licensee shall measure the flow of wastewater to the irrigation area by the use of a flow measuring device that is calibrated at least once per year.

(3) As recorded in the pump log for the spray pumps.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (Cont'd)

4. During the period beginning the effective date of the license and lasting through the license expiration date, the **GROUND WATER MONITORING WELL(S) MW9, MW101, AND MW102** shall be limited and monitored as specified below.

	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Depth to Water Level Below Landsurface *[72019]*	Report (feet)[1] *[27]*	3/Year[2, 5] *[03/YR]*	Measure *[MS]*
Ground Water Elevation *[72009]*	Report (feet)[1] *[27]*	3/Year[2, 5] *[03/YR]*	Measure *[MS]*
Specific Conductivity*[00094]*	Report, umhos/cm *[11]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Temperature *[00011]*	Report, degrees (F) *[15]*	3/Year[2] *[03/YR]*	Grab *[GR]*
pH *[00400]*	Report (S.U.) *[12]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Chloride *[00940]*	250 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Dissolved Solids *[70296]*	500 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Aluminum *[01105]*	Report, mg/L *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Arsenic *[01002]*	0.05 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Cadmium *[01027]*	0.005 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Copper *[01042]*	1.0 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Lead *[01051*	0.015 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Nickel *[01067]*	Report, mg/L *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*
Total Zinc *[01092]*	5.0 mg/L [3] *[19]*	3/Year[2] *[03/YR]*	Grab *[GR]*

Refer to page 9 of this license for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (Cont'd)

4. GROUND WATER MONITORING WELL(S) MW9, MW101, AND MW102 (Cont'd)

	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type as specified
Total Kjedahl Nitrogen *[00625]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Biochemical Oxygen Demand *[00310]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Calcium *[00916]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Chemical Oxygen Demand *[81017]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Iron *[01045]*	Report, mg/L *[19]*(3)	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Magnesium *[00927]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Manganese *[01055]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Nitrate-Nitrogen *[00620]*	10 mg/L *[19]*(3)	3/Year(2) *[03/YR]*	Grab *[GR]*
Total Sodium *[00929]*	20 mg/L *[19]*(4)	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Sulfate *[81020]*	250 mg/L *[19]*(3)	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Total Coliform Bacteria *[74056]*	Report, #/100 ml *[19]*	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Total Organic Carbon *[00680]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Total Phosphorus *[00665]*	Report, mg/L*[19]*	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Total Suspended Solids *[00530]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*
Total Hardness (CaCO3) *[00900]*	Report, mg/L *[19]*	3/Year(2) *[03/YR]*	3/Year(2) *[03/YR]*

FOOTNOTES:

(1) Report the depth in feet to the nearest 0.1 foot from the surface of the ground adjacent to the monitoring well casing to the water table in the monitoring well. In addition, report the elevation to the nearest tenth of a foot as referenced to an established on-site benchmark.
(2) In the months of May, August and November of each year.
(3) State and Federal Primary or Secondary Drinking Water Standards.
(4) Maine Department of Human Services, Bureau of Health, Maximum Exposure Guidelines.
(5) At least 14 days between any two ground water elevation measurements in any calendar month.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (Cont'd)

5.**Sampling of Soils in the Spray Irrigation Area** at locations B-4, B-5, B-6, C-1, and C-6 shall be conducted as specified below.

	Daily Maximum as specified	Minimum Measurement Frequency as specified	Sample Type [2] as specified
pH *[00400]*	Report (S.U.) *[12]*	1/ Year *[01/YR]*	Composite *[CP]*
Cation Exchange Capacity *[81356]*	Report, meq./100 grams *[2V]*	1/ Year *[01/YR]*	Composite *[CP]*
Potassium (Total) *[00937]*	Report, mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Arsenic (Total) *[01002]*	73 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Cadmium (Total) *[01027]*	39 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Chromium (Total) *[01034]*	3,000 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Copper (Total) *[01042]*	1,500 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Iron (Total) *[01045]*	1.0 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Lead (Total) *[01051]*	300 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Manganese (Total) *[01055]*	Report, mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Nickel (Total) *[01067]*	130 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*
Zinc (Total) *[01092]*	2,800 mg/kg *[69]*	1/5 Year *[01/5YR]* [1]	Composite *[CP]*

FOOTNOTES: -

(1) Once in year five of this license (ie, final year prior to expiration).

(2) Two representative composite soil samples (one sample per three acres) shall be collected from the spray irrigation sites at the interval specified above. Each composite sample shall contain at least one-half pint of soil thoroughly mixed and consisting of at least five (5) smaller equally-sized sub-samples. Samples shall be taken from between a depth of three (3) to six (6) inches and should be free of surface litter, grass, humus, roots, and/or stones or rocks. Monitoring results shall be submitted to the Department with the Discharge Monitoring Report (DMR) for the months of October of each year.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Footnotes – [Special Conditions A(1-5)]. Samples shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services and 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.

B. TREATMENT PLANT OPERATOR

The waste water treatment facility must be operated under the direction of a person holding a minimum of a **Grade II** certificate [or Maine Professional Engineer (PE) certificate] 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 permittee may engage the services of the contract operator.

C. MONITORING AND REPORTING

Monitoring results (April – November) shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Forms provide by the Department and **postmarked on or before 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 on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the Discharge Monitoring Report and all other reports required herein, unless otherwise specified, shall be submitted to the Department assigned compliance inspector at the following address:

Maine Department of Environmental Protection
Division of Water Quality Management
Northern Maine Regional Office
1235 Central Drive , Skyway Park
Presque Isle, Maine 04769

D. AUTHORIZED DISCHARGES

The licensee is authorized to discharge treated landfill leachate waste water only in accordance with the terms and conditions of this license and only to the existing spray-irrigation fields (Fields #1-5 and half of #6) and from those sources as indicated in the Waste Discharge License Application. Discharge of wastewater from any other location or from sources other than those indicated on said application requires formal modification of this license.

E. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain materials in concentrations or combinations which would impair the usages designated by the classification of the groundwater.

2. Notwithstanding specific conditions of this license the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D (5), the licensee shall notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system. For the purposes of this section, adequate notice shall include information on:

(a) the quality and quantity of wastewater introduced to the wastewater treatment system; and

(b) any anticipated impact of the change in the quantity or quality of the wastewater to be discharged from the treatment system.

G. GENERAL OPERATIONAL CONSTRAINTS

1. All wastewater shall receive pretreatment through a properly designed, operated and maintained lagoon system prior to land irrigation. 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 groundwater which will render it unsatisfactory for normal usage as a public drinking water supply.

2. The surface wastewater disposal system shall not be the cause of lowering of the quality of the groundwater, as measured in the groundwater 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.

3. In the event that groundwater monitoring results indicate lowering of the existing 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, groundwater 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 wastewater, or any malfunction that threatens the proper operation of the system. Notification shall include actions taken to repair/correct, and prevent recurrence. Notification shall be made in accordance with the attached Standard Conditions of this license.

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. The site plan(s) shall include, but not be limited to showing the location of the lagoon(s), ground water monitoring wells, observation pits, spray irrigation pump station(s), layout of the mainline and lateral piping distribution system, individual spray heads, soil types, and contour lines at 20 foot intervals or less. Also, any property boundary or surface water within 500 feet of the lagoon or spray irrigation field. System components shall be identified by unique alphanumeric identifiers. Maps shall be suitable for reproduction on 11" x 17" paper.

SPECIAL CONDITIONS

G. GENERAL OPERATIONAL CONSTRAINTS (CONT'D)

6. System components including conveyance 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.

H. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS

1. The licensee shall be limited by and monitor the spray irrigation system for the parameters in the table titled "Effluent Limitations and Monitoring Requirements" Special Condition A of this license at the monitoring frequencies specified.
2. The weekly maximum wastewater application rate shall not exceed:

   - 27,150 gallons per acre (1.0 inches per week);

   Note: 1 acre-inch is equivalent to 27,150 gallons
   Note: A spray-field's weekly application rate is the total gallons sprayed (Sunday through Saturday) divided by the size of the spray-irrigation field in acres (as defined in this license) or the size in acres of that portion of the field utilized.
3. Irrigation shall be limited to the time period between **April 15 and November 15** each calendar year. Compliance with other operational constraints must be maintained at all times.
4. A suitable year round vegetative cover shall be maintained. Wastewater may not be applied to areas without established vegetation or ground cover (organic matter) covering at least 75% of the surface of the ground.
5. Irrigation events should be scheduled, timed and interrupted so that:

   - No surface runoff occurs outside the designated spray irrigation area;
   - The root zone is not completely saturated at the conclusion of irrigation;
   - And, evaporation from the soil and transpiration by plants (evapo-transpiration) as influenced by the temperature of the soil and air, by wind, by relative humidity and by sunlight are maximized.

   Note: At least 10 inches of separation from the ground surface to the groundwater table shall be present prior to spraying.
6. The licensee shall manage irrigation to prevent surface water runoff and shall not irrigate land areas where water is ponded on the land surface and takes longer than 15 minutes to dissipate.
7. No wastewater shall be applied to the site following a rainfall accumulation exceeding 1.0 inches within the previous 24-hour period. A rain gauge shall be located on site to monitor daily precipitation.

SPECIAL CONDITIONS

H. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS (CONT'D)

8. No wastewater shall be applied where there is snow present on the surface of the ground.
9. No wastewater shall be applied when there is any evidence of frost or frozen ground within the upper 18 inches of the soil profile.
10. No traffic or equipment shall be allowed in the spray-irrigation field except where installation occurs or where normal maintenance is performed.

I. SPRAY IRRIGATION OPERATIONAL PROCEDURES, LOGS AND REPORTS

1. **Each year**, the licensee shall notify the Department Facility Inspector prior to the commencement of spray-irrigation operations and verify that site conditions are appropriate (frozen ground, soil moisture etc).
2. **Each day prior to irrigating**, the licensee shall visually inspect the spray irrigation site to be sprayed to determine if the soil moisture conditions are appropriate for spraying and that all the operational constraints listed above are met.

   Observations may include:
   - The level of free water in an auger hole, a nearby well, or observation pit;
   - Methods for estimating the amount of water present in the soil, either by feel or soil moisture measurement devices; current and past weather conditions, such as, when and how much precipitation has occurred, potential for evapo-transpiration as influenced by temperature, wind, and relative humidity.

   Depths to groundwater shall be recorded in accordance with the format of "Depth to Groundwater" provided as Attachment "C" of this license.
3. **After start-up of the spray-irrigation system**, the licensee shall walk 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.

   Should significant malfunctions or leaks be detected, the licensee must shut down malfunctioning section of the spray system and make necessary repairs before resuming operation. An irrigation cycle shall be stopped if runoff outside the designed spray irrigation areas occurs or ponding occurs.

SPECIAL CONDITIONS

I. SPRAY IRRIGATION PROCEDURES, LOGS AND REPORTS (CONT'D)

4. **The licensee shall maintain a daily log** of all spray irrigation operations which records, date, weather and soil conditions, 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 format of the "Monthly Operations Log" provided as Attachment "A" of this license.

   Weekly spray application rates shall be reported in accordance with the format of the "Spray Application Report by Week" provided as Attachment "B" of this license.
   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). Copies will also be maintained on site for Department review and for license operation maintenance purposes.

J. VEGETATION MANAGEMENT

1. The licensee shall maximize the removal of nutrients from the site by periodic harvesting and removal of vegetation.
2. The licensee shall remove vegetation in the spray-irrigation areas as necessary so as not to impair the operation of the spray-irrigation system and to ensure uniform distribution of wastewater over the desired application area.
3. 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.

K. LAGOON MAINTENANCE

1. The banks of the lagoons shall be inspected weekly during the operating season and properly maintained. There shall be no overflow through or over the banks. Any signs of leaks, destructive animal activity or soil erosion of the berms shall be repaired immediately. The Department shall be notified by phone immediately and then in writing within five (5) days of such incidents documenting the corrective action(s) that were taken to eliminate the overflow.
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 berm 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 lagoons shall be dredged as necessary to maintain the proper operating depths in all 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.

SPECIAL CONDITIONS

K. LAGOON MAINTENANCE (CONT'D)

5. At the end of each spray season, the lagoons shall be lowered to a level sufficient to allow for the storage of all influent wastewater and any precipitation and/or infiltration that directly enters the lagoon system during the period the spray system is not being used and/or operated.
6. The licensee shall maintain lagoon freeboard at design levels or at least two (2) feet whichever is greater.

L. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

The licensee is prohibited from accepting septage for disposal into any part or parts of the wastewater disposal system. Septage shall mean any waste, refuse, effluent, sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added.

M. INSPECTIONS AND MAINTENANCE

1. All inspections shall identify any repair, upgrades, pumping, operational and/or maintenance needs.

2. The inspection report or log shall include the date of the inspection, the names of the person performing the inspection, and other relevant system information.

3. 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 log shall include the alphanumeric ID, the date of maintenance, type of maintenance performed, names or person performing the maintenance, and other relevant system observations.

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

1. **By September 15, 2006 [PCS Code 85539],** the licensee shall submit to the Department for review and approval an updated groundwater quality monitoring plan that shall include a 11" x 17" topographic map(s) showing: the location and identity of each monitoring well, the location of the waste disposal system (lagoon and spray-irrigation field(s), the location of property boundaries within 500 feet, and the relative elevation of the surface of the ground at the base of the monitoring well.

SPECIAL CONDITIONS

N. GROUND WATER MONITORING WELLS AND WATER QUALITY MONITORING PLAN DETAILS (CONT'D)

The plan shall also include provisions for the annual review of groundwater monitoring results by a professional qualified in groundwater chemistry or other qualified person approved by the Department. The qualified person shall summarize, evaluate, and provide recommendations on the groundwater monitoring results. Reports shall include historical, as well as the most recent calendar year's monitoring data for each monitoring point, and be presented in tabular format. The integrity of the monitoring wells shall also be verified in the annual report. The reports shall be submitted to the Department by January 31st of each calendar year, unless a problem is evident, in which case the Department is to be notified immediately.

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.

3. 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.

O. SOILS MONITORING

The existing soil monitoring program as specified in Special Condition A.5 (that provides information on the nutrient availability in the upper part of the soil profile for agronomic purposes) shall be continued for pH and Cation Exchange Capacity annually and for other parameters during the final year of this licensing action (2010 growing season). Soils shall be monitored to determine the impacts of spray irrigation in accordance with current technology and advancements in methodology in order to determine the leaching potential from the spray irrigation after treatment through the soils and the potential impact to groundwater resources.

P. 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 January 31st 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.

Q. PUBLIC ACCESS TO LAND APPLICATION SITES AND SIGNAGE

Public access to the land application sites shall be controlled during the season of active site use. Such controls shall include the posting of signs describing the activities being conducted at each site. The licensee shall install signs measuring at least 8 ½" x 11" around the spray irrigation site that inform the general public that the area is being used to dispose of leachate wastewaters. Each sign must be placed such that at least two other signs (one left, one right) may be seen from any one posted sign. The signs must be constructed of materials that are weather resistant.

The licensee must walk the perimeter of the lagoon and spray site prior to the beginning of each spray season and make any necessary repairs to the signage to comply with this condition.

R. REOPENING OF PERMIT 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.

S. SEVERABILITY

In the event that any provison, 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 #8088-5L-C-R; Fields # _____ Weekly Application Rate: 27,150 gallons/acre/week (1.0 inch/acre/week)

	A	B	C	D	E	F	G	H	I	J	K
Day	DATE	PRECIP Inches	TEMP	WEATHER	WIND- Direction Speed	Soil Moisture	- 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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	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										
Monthly Total =											

Spray Application Report by Week Attachment B Facility Name_____;

WDL #W8088-5L-C-R;(Month _____, Year _____) Weekly Application Rate 27,150 gallons/acre/week [1.0 inch])

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 (Tenths of Feet) Attachment C (Month _____, Year _____)

Facility Name: City of Presque Isle Landfill, Lathrop Road, Aroostook County; WDL #W8088-5L-C-R;

Field Name/#	Monitoring Location	1. 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 Official: _____, Date _____

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: November 21, 2005

Revised: January 18, 2006 and March 28, 2006

PERMIT COMPLIANCE SYSTEM TRACKING NUMBER: **PCS #MEU508088**

LICENSE NUMBER: **WDL# W008088-5L-C-R**

NAME AND MAILING ADDRESS OF APPLICANT:

City of Presque Isle
Attn: Dana Fowler
12 Second Street
Presque Isle, Maine 04769

COUNTY: **Aroostook County**

NAME AND ADDRESS OF FACILITY:

202 Lathrop Road
Presque Isle, Maine

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

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Dana Fowler**
(207) 764-2507

A. APPLICATION SUMMARY:

1. Application: The applicant has applied for a renewal of Waste Discharge License (WDL) #W008088-5L-A-N and which was issued on July 5, 2000 and subsequently modified on May 26, 2004. The WDL expired on July 5, 2005. The application is for the continuing operation of a surface wastewater disposal (spray-irrigation) system for the treatment and seasonal disposal of landfill leachate wastewater to land in Presque Isle, Maine.

The landfill is located on a 634-acre parcel of land located 10 miles southwest of the center of Presque Isle and serves seven communities with a population of approximately 15,000 people. The landfill consists of 13.25 acres designated for the disposal of municipal solid waste, an adjacent 5.3-acre construction/demolition debris landfill, a waste tire storage area, wood debris storage, intermediate cover material storage area, used metal storage area, compost storage area, a stormwater basin, two leachate lagoon storage basins, and the surface waste water disposal (spray irrigation) system.

The surface waste water disposal system was originally designed to distribute waste water over six (6) spray irrigation areas (denoted areas #1, 2, 3, 4, 5, and 6 on Attachment A of the Fact Sheet). Spray irrigation areas are dosed at a rate not to exceed 1.0 inch per acre (27,150 gallons) per week, (The northwest half of spray irrigation area #6 is no longer used). Each spray irrigation area consists of a circular area with a diameter of 415 feet (or 3.1 acres) with a center pivot spray nozzle that casts waste water in an even distribution over each spray irrigation area.

The total area that is used for spray irrigation, at a rate of 1"/week, is 17 acres (5.5 spray areas multiplied by 3.1 acres per spray area). Therefore, the amount of wastewater that can be spray irrigated is 17 acres multiplied by 27,150 gallons per acre, or a total of 461,550 gallons per week. Since this licensing action is expanding the spray irrigation season to be consistent with other similar facilities to a total of 30 weeks, the total amount of wastewater that could be applied to the site under ideal conditions is 13.8 million gallons. With annual leachate production of about 5.0 million gallons, the spray irrigation system is sufficiently sized and provides ample flexibility to treat and dispose of the amount of wastewater generated.

A. APPLICATION SUMMARY (CONT'D)

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

September 23, 1981	-	The Department issued Site Location and Solid Waste Order #07-7501-03530 to the City of Presque Isle for the construction of a secure landfill. The Order indicates that at the time of the issuance, plans for the treatment and disposal of landfill leachate were not finalized. It is noted that the design plans for the landfill, approved by the Board of Environmental Protection in 1981, provided for landfill leachate to be spray irrigated on the top of the landfill
August 20, 1984	-	The Department issued Site Location and Solid Waste Order #L-007501-07-C-M that approved the two year operation of the spray irrigation system on a 6.5 acre parcel of land located southerly of the landfill. The Order found that "...plans provided for spray irrigation on top of the landfill at an application rate of 0.12"/day for 10 days/year (20,000 gallons) resulting in a removal of 200,000 gallons/year of leachate."
October 6, 1994	-	The Department issued Solid Waste Order Renewal #S-07501-WC-N-R for the landfill and the ancillary features including the two leachate storage lagoons, sedimentation or stormwater basin, and the 6.5 acre leachate spray irrigation area.
July 5, 2000	-	The Department issued WDL #008088-5L-A-N, which authorized the discharge of treated landfill leachate and lagoon underdrain discharges from the municipal landfill facility. The WDL expired on July 5, 2005.
May 26, 2004	-	The Department issued WDL #008088-5L-B-M that modified the July 5, 2000 WDL by changing the limitations for soil moisture content, conductivity and daily maximum limits for certain parameters. The modification also incorporated the discharge from an underdrain associated with the leachate lagoon.
June 14, 2005	-	The City of Presque Isle's application for renewal was accepted by the Department for processing.

3. Source Description: The landfill consists of a 13.25 acre municipal solid waste area, an adjacent construction / demolition debris landfill, a waste tire storage area, wood debris storage, intermediate cover material storage, used metal storage area, a compost area, a stormwater basin, two leachate storage basin lagoons, and the leachate spray irrigation area. Leachate is generated by the decomposition of putrescible materials in the landfill and by precipitation leaching out nutrients and metals from the material.

A. APPLICATION SUMMARY (CONT'D)

4. Wastewater Treatment: The material to be land applied, by slow rate spray irrigation, is the liquid leachate collected from the landfill underdrain system. The leachate is conveyed to the on-site lagoon by underground pipe conduits. The leachate is directed to one of two leachate storage lagoons (one conical in shape and the second rectangular). The leachate resides in the storage lagoons until conditions are favorable to final treatment in the soil via the spray irrigation system. There are a maximum of 30 weeks of available time to spray irrigate the leachate material depending on weather and soil conditions.

B. 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 Water Classification System.

C. 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.

D. 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.

E. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Design Flow:

The yearly maximum design flow of the treatment system is 13.8 million gallons. The landfill generates approximately 5.0 million gallons per year. Therefore, an excess capacity to treat the leachate generated exists and the system provides ample flexibility to treat and dispose of the amount of wastewater generated.

Lagoon Effluent:

Monitoring parameters include *Flow, Lagoon Level (Freeboard), Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Specific Conductivity, Total Phosphorus, Total Aluminum, Total Arsenic, Total Cadmium, Total Copper, Total Lead, Total Nickel, Total Zinc, and pH.*

Monitoring for these parameters yields an indication of the effectiveness of the lagoon treatment process and the condition of the wastewater being applied. Report requirements for these parameters enable a statistical analysis of the effectiveness of the treatment system over time and provide an opportunity to evaluate sudden trends or changes to the treatment process or characteristics of the leachate generated. Monitoring is required in the months of April through November when spray irrigation occurs.

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

Spray Irrigation Application Rates

The weekly maximum rates of 27,150 gallons per acre (1.0 inches/week) and is being carried forward from the previous licensing actions weekly limits and is being established over the spray irrigation field #2 at the request of the applicant for ease of management. 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 an irrigation cycle must be stopped if runoff or ponding start to occur.

Summary of Spray Irrigation System	
Sprayfields	5.5
Effective Area	3.1 acres each
Sprayheads	1 per sprayfield

Groundwater Monitoring Wells

During the previous licensing period three (3) groundwater monitoring wells were monitored and their approximate locations within the spray-irrigation fields are shown on an attachment to this Fact Sheet. The three wells are:

Monitoring Wells	PCS Code	Location
MW9	MW9A	Westerly of the secure landfill and west-north-west of spray area #4. (Background well).
MW101	MW101	Easterly, and downgradient, of the secure landfill and easterly of spray area #6. (Compliance well).
MW102	MW102	Southwesterly of secure landfill and westerly of spray area #1 (Compliance well)

The same three monitoring wells shall be monitored in this licensing action.

Groundwater Monitoring

The Department is carrying forward the previously existing groundwater monitoring parameters in order to provide consistency over time and allow a comparison of the treatment efficiency. Monitoring parameters include *Groundwater Depth, Groundwater Elevation, Specific Conductivity, Temperature, pH, Chloride, Total Dissolved Solids, Total Aluminum, Total Arsenic, Total Cadmium, Total Copper, Total Lead, Total Nickel, Total Zinc, Total Kjedahl Nitrogen, Biochemical Oxygen Demand, Total Calcium, Chemical Oxygen Demand, Total Iron, Total Magnesium, Total Manganese, Total Nitrate-Nitrogen, Total Sodium, Sulfate, Total Coliform Bacteria, Total Organic Carbon, Total Phosphorus, Total Suspended Solids, and Total Hardness expressed as CaCO3.* These parameters were specified to enable a comparison with the parameters that are sampled from the lagoon effluent as well as include those parameters that were identified and sampled under the Solid Waste License for the facility.

G. SOILS MONITORING

Spray-irrigation is being conducted to provide for treatment and disposal of wastewater in accordance with commonly accepted practices in the wastewater disposal and agricultural industries. Nutrient loading from spray applications shall not exceed agronomic uptake rates in order to prevent or minimize the amount of excess nutrients from running off the spray irrigation site or seeping into groundwater resources. The long-term ability of soils to treat and attenuate wastewater has not been defined, however, sampling of soils over time may provide a measure of treatment efficiency that is achieved at the site. The previously existing soil sampling program, as originally designed, is best used in assessing nutrient application rates to optimize plant/crop growth. The previously existing soil sampling program has been maintained in this licensing action for the next five (5) alternating years to provide a degree of assessment and for consistency purposes.

Existing Soil Sampling Program

One representative composite soil sample shall be taken from each spray area (with the exception of area #6) identified as soil sampling areas #1-5 as depicted on the attached plan. The licensee shall collect samples from areas C-1 (spray area #1), C-6 (spray area #2), B-4 (spray area #4), B-5 (spray area #3), and B-6 (spray area #5). Soil samples shall be collected in accordance with the protocols established in the section entitled *Soil Sampling Methods, Sample Collection* of *Presque Isle Landfill Leachate Spray Irrigation Soil Sampling Plan*, dated January 21, 2000 prepared by Emery & Garrett Groundwater, Inc. and submitted to the Department.

H. 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 (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. Calibration involves collecting and measuring flow at several locations in the application area (typically a grid pattern of containers with uniform diameters). Rain gauges work best because they already have a graduated scale from which to read the application amount without having to perform additional calculations.

I. 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.

J. PUBLIC COMMENTS

Public notice of this application was made in the Star Herald newspaper on or about June 8, 2005. 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.

K. DEPARTMENT CONTACTS

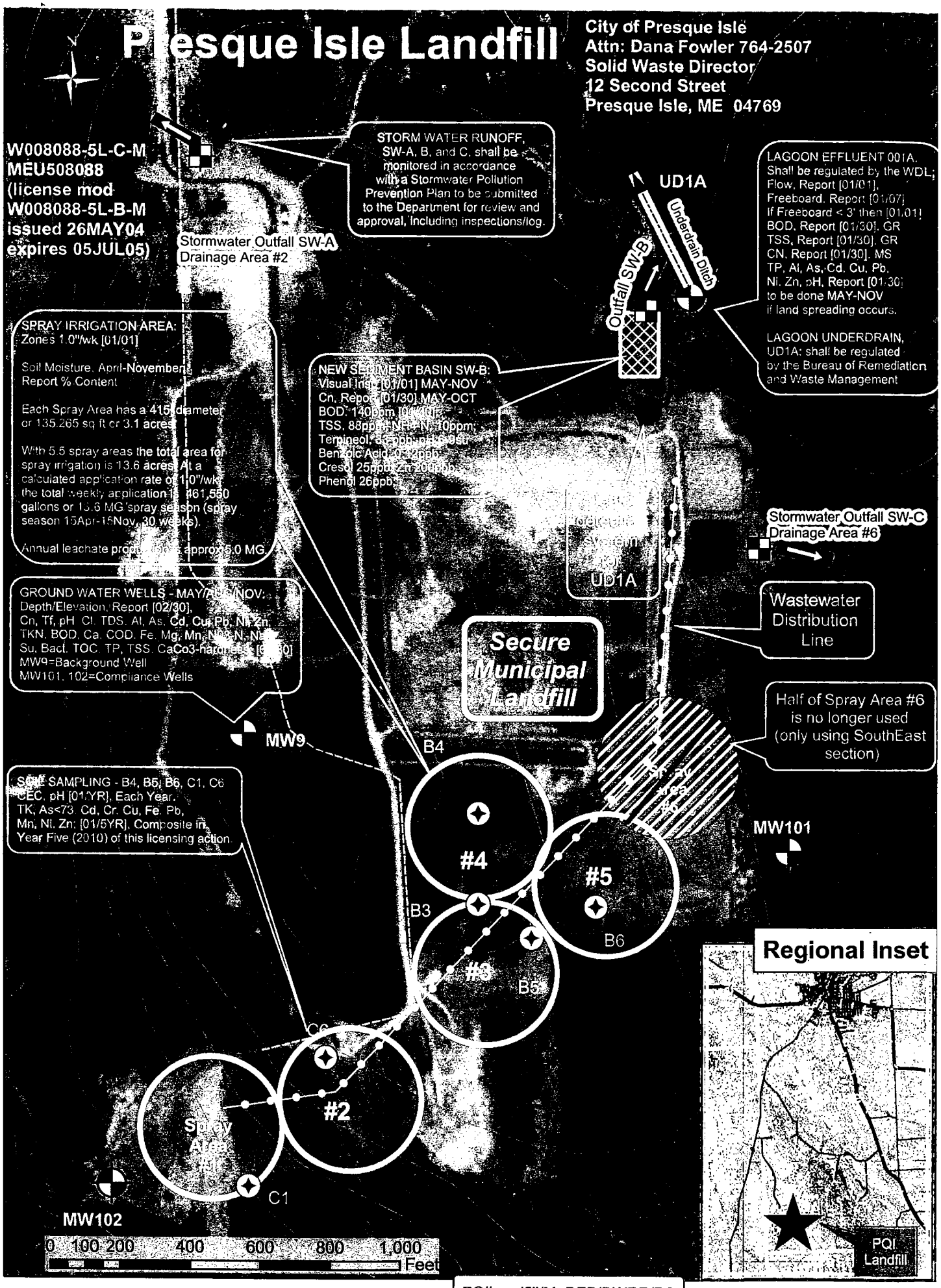
Additional information concerning this licensing action may be obtained from and written comments should be sent to:

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

L. RESPONSE TO COMMENTS

The licensee originally requested inclusion of stormwater runoff discharges from the landfill area as well as the leachate lagoon underdrain discharge and monitoring to be included in the Waste Discharge License. After a series of meetings and discussions between the licensee, consultants and the Department, the stormwater runoff and leachate lagoon underdrain were omitted from this document as it was determined that direct authorization for those discharges would be more appropriately covered under the particular Department program that administers and reviews those aspects of the landfill operation (stormwater runoff program and the Bureau of Hazardous Materials and Solid Waste Control) for regulatory purposes.

No other substantive comments on the license have been received by the Department, therefore no other response to comments have been prepared as part of the final license document.


Presque Isle Landfill
City of Presque Isle
Attn: Dana Fowler 764-2507
Solid Waste Director
12 Second Street
Presque Isle, ME 04769
W008088-5L-C-M
MEU508088
(license mod
W008088-5L-B-M
issued 26MAY04
expires 05JUL05)
STORM WATER RUNOFF, SW-A, B, and C, shall be monitored in accordance with a Stormwater Pollution Prevention Plan to be submitted to the Department for review and approval, including inspections/log.
Stormwater Outfall SW-A
Drainage Area #2
UD1A
Underdrain Ditch
Outfall SW-B
LAGOON EFFLUENT 001A. Shall be regulated by the WDL; Flow, Report [01/01], Freeboard, Report [01/07] If Freeboard < 3' then [01/01] BOD, Report [01/30], GR TSS, Report [01/30], GR CN, Report [01/30], MS TP, Al, As, Cd, Cu, Pb, Ni, Zn, pH, Report [01/30] to be done MAY-NOV if land spreading occurs.
LAGOON UNDERDRAIN, UD1A: shall be regulated by the Bureau of Remediation and Waste Management
SPRAY IRRIGATION AREA: Zones 1.0"/wk [01/01]
Soil Moisture, April-November, Report % Content
Each Spray Area has a 415' diameter or 135,265 sq ft or 3.1 acres
With 5.5 spray areas the total area for spray irrigation is 13.6 acres. At a calculated application rate of 1.0"/wk the total weekly application is 461,550 gallons or 13.6 MG spray season (spray season 15Apr-15Nov, 30 weeks).
Annual leachate production approx 5.0 MG
NEW SEDIMENT BASIN SW-B:
Visual Insp. [01/01] MAY-NOV
Cn, Report [01/30] MAY-OCT
BOD, 140ppm [01/30]
TSS, 88ppm; NH3-N, 10ppm;
Terpineol, 8.5ppb; pH 6.9su
Benzoic Acid 20-42ppb
Cresol 25ppb; Zn 30-60ppb
Phenol 26ppb
Stormwater Outfall SW-C
Drainage Area #6
Wastewater Distribution Line
GROUND WATER WELLS - MAY/AUG/NOV: Depth/Elevation, Report [02/30], Cn, Tf, pH, Cl, TDS, Al, As, Cd, Cu, Pb, Ni, Zn, TKN, BOD, Ca, COD, Fe, Mg, Mn, NH3-N, Na, Su, Bact, TOC, TP, TSS, CaCO3-hardness [02/30]
MW9=Background Well
MW101, 102=Compliance Wells
Secure Municipal Landfill
MW9
B4
Half of Spray Area #6 is no longer used (only using SouthEast section)
SOIL SAMPLING - B4, B5, B6, C1, C6 CEC, pH [01/YR], Each Year, TK, As<73, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Zn; [01/5YR], Composite in Year Five (2010) of this licensing action
MW101
#4
#5
B3
B6
#3
B5
C6
#2
Spray Area #1
C1
MW102
0 100 200 400 600 800 1,000 Feet
Regional Inset
PQI Landfill
PQILandfill/MeDEP/DWRR/DS
Attachment A