Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Alfred Hub
2015 Lajoie Street, Box 252
Lefaivre, Ontario K0B 1J0
Tel: (613)679-4631 / Fax: (613) 679-4735

March 20, 2003

Mr. Brian Ward
Regional Director
Ministry of the Environment
Eastern Region
133 Dalton Avenue, Box 820
Kingston, Ontario
K7L 4X6

RE: Village of Limoges Wastewater Works
2002 Annual Performance Report

Dear Mr. Ward:

The following summary is complied based on Conditions 4.(a) through (g) of the Certificate of Approval #3-1820-97-986 (C of A) for the Village of Limoges Wastewater Treatment Facility (Waste Stabilization Ponds) for 2002.

Executive Summary:

The average day raw flow of 388 m^3/day reaching the facility in 2002 represents approximately 36% of the 1,073 Design Capacity. The Sewage Treatment Facility completed it's first full year of operation in 2002 in which, two seasonal discharges were performed Spring (March) and Fall October/November). All C of A effluent quality compliance objectives were achieved during both discharge periods. Although 3 leaks were discovered around Cell No. 2 in September of 2002, the leaks were repaired by Novenmber 30, 2002 and an engineering report issued by Lecompte Engineering Ltd. An MOE Compliance Inspection Report dated Janaury 20, 2003 concluded that no negative environmental damage was caused by the leaks.

a) Interpretation of the Flow Monitoring Data:

In 2002, raw flow entering the sewage treatment facility averaged 388 m^3/day, with a maximum day flow of 700 m^3 recorded in the month June. The average day flow of 388 m^3 represents 36.1% of the 1,073 m^3/day Average Day Flow (ADF) design criteria, while the maximum day flow of 700 m^3, represent 65.2% of the Maximum Day Flow (MDF) design criteria. In March of 2002 approximately 56,650 m^3 of effluent was discharged while in October/November 113,821 m3 of effluent was released. Appendix I: 2002 PAR summarizes the various flows outlined above.

b) Monitoring of Analytical Data:

Throughout 2002 samples were collected as required by the C of A and submitted monthly on the raw influent and on the effluent during the Spring and Fall discharge periods for BOD_5, Suspended Solids, Total Phosphorus and Total Kjeldahl Nitrogen. The 2002 Performance Assessment Report (PAR) included in Appendix I, appears to indicate that Fall effluent Suspended Solids quality exceeded the C of A Seasonal Criteria of 40 mg/L. In fact the Fall average Suspended Solids which is based on 5 samples during October and 1 sample in November was actually 22.3 mg/L and therefore in Compliance with the C of A requirement. The actual Seasonal and Annual Effluent Concentration and Loadings are summarized in a table found in Appendix II. This issue was discussed in great detail in a March 03, 2003 letter prepared by OCWA and included in Appendix III.

c) Effluent Quality:

As mentioned above the Limoges Waste Stabilization Pond (Lagoon) effluent quality remained in compliance with the C of A requirements during 2002. Adequate retention time, continuous Aluminium Sulphate dosage and favourable weather conditions were contributing factors in achieving good quality effluent from this facility in 2002. Appendix IV: Annual Chemical Usage, summarizes the aluminium Sulphate utilized in 2002 to assist in phosphorus removal.

d) Maintenance:

During the course of 2002 various break down and preventive maintenance work was performed on the equipment within the limoges Wastewater Treatment Facility. A summary of the major activities is provided in Appendix V.

e) Operating Problems:

On September 30, 2002 Operators of the Limoges Lagoon met at the Lagoon site with Mr.Gaetan Beauchesne, P Eng. For Lecompte Engineering Ltd, who was the consulting engineer retained by the Nation Municipality for the construction of the Lagoon . Operators at that time identified three (3) locations around Cell No.2 were the cell was suspected of leaking. The repairs were co-ordinated and supervised by Lecompte Engineering and carried out by Cruickshank Construction Ltd. and Marathon Drilling Co. The repairs were completed by November 30, 2003 and an engineering report was issued February 06, 2003 by Lecompte Engineering. For your convenience a summary of the report is provided in Appendix VI. A recent MOE Compliance inspection report dated January 20, 2003 concluded that no negative environmental damage was caused by the leaking cell.

f) Proposed Alterations/Extensions:

The construction of a new sewage collection system and pumping station to service the Limoges Industrial Park on Route No. 300 is now complete and in service. Commissioning of the new facility was conducted in November of 2002 under the supervision of the project consulting engineer, Levac Robichaud Leclerc Associates Ltd.

g) Calibrations and Maintenance Procedures:

Calibration of the flow metering devices as per Condition 2.1 (a) of the Cof A and as specified by the manufacturer was carried out on December 04, 2002 and provided in Appendix VII.

Trusting this satisfies condition 4:4(a) through (g) of the Certificate of Approval. Should you have any questions concerning the contents of this report, please contact me at (613) 679-4631.

Yours truly,

Jean-Pierre Gélinas

Jean-Pierre Gélinas
Process & Compliance Technician, OCWA
Alfred Hub

Attachment:
- Appendix I: 2002 Performance Assessment Report
- Appendix II Seasonal & Annual Effluent Concentrations & Loadings
- Appendix II: March 04, 2003 OCWA Letter - Compliance Inspection Report
- Appendix IV: 2002 Annual Chemical Usage
- Appendix V: 2002 Maintenance Activities
- Appendix VI: Lagoon Leak Repair Report - February 06, 2003 by Lecompte
- Appendix VII: 2002 Calibration Record

cc: Ms. Mary McCuaig, Nation Township
Jacques Breen, Operations Manger, OCWA, Alfred Hub
Cindy Spencer, Compliance Advisor, OCWA, Eastern Area

Appendix I

Ontario Clean Water Agency
Performance Assessment Report - Wastewater Lagoon

Municipality: The Nation municipality
Project: [5202] - Limoges Sewage
Project Number: 3-1820-97-986
Works Number:
Description: Two cell waste stabilization pound

Year: 2002
Receiver: Castor river
Design Avg Day Flow(m³): 1,073.0
Raw Flow Group Selected:
Effluent Group Selected:

	<<< --- Flows --- >>>					< BioChemical O2 Demand > <<< - Suspended Solids - >>> <<< --- Phosphorus --- >>> <<< --- Nitrogen Series --- >>> < H2S > <<< --- Loading --- >>>															
	<---------- Raw ---------->																					
Month	Total Flow m³	Avg Day m³	Max Day m³	Effluent m³	Discharge Duration days	Avg Raw BOD mg/L	Avg Eff BOD mg/L	Percent Removal	Avg Raw SS mg/L	Avg Eff SS mg/L	Percent Removal	Avg Raw Phos. mg/L	Avg Eff Phos. mg/L	Percent Removal	Avg Eff NH3+NH4 mg/L	Avg Eff Nitrate mg/L	Avg Eff Nitrite mg/L	Avg Eff H2S mg/L	BOD kg/d	SS kg/d	TP kg/d	NH4+NH3 kg/d	H2S kg/d
JAN	10,920	352	366			65.0			124.0			1.25										
FEB	10,220	365	413			113.0			200.0			6.69										
MAR	9,579	309	309	56,650	4.0	116.0	2.8	97.59	228.0	8.8	96.14	7.90	0.6	91.80					39.7	124.6	9.2	
APR	11,985	400	400			80.0			142.0			4.68										
MAY	14,018	452	518			62.0			162.0			3.67										
JUN	16,256	542	700			140.0			220.0			6.80										
JUL	13,804	445	513			59.0			172.0			3.45										
AUG	11,777	380	522			170.0			288.0			6.04										
SEP	9,351	312	417			119.0			150.0			4.23										
OCT	9,702	313	336	105,325	29.7	107.0	1.6	98.50	144.0	6.0	95.83	5.03	0.0	99.05					5.7	21.3	0.2	
NOV	11,662	389	431	8,496	3.3	49.0	7.0	85.71	102.0	104.0	-1.96	1.33	0.5	62.41					17.8	265.1	1.3	
DEC	12,189	393	397			151.0			94.0			3.11										
Total:	141,463			170,471	37.0																	
AVG:		388		56,824	12.3	102.6	3.8	93.94	168.8	39.6	63.34	4.52	0.40	84.42					21.1	137.0	3.5	
MAX:			700	105,325	29.7	170.0	7.0		288.0	104.0		7.90	0.65									
Criteria:																						

	Actual	Criteria
Start Date(mm/dd/yy):		
End Date(mm/dd/yy):		

LEGEND:

Raw Flow Group Selected:

Effluent Group Selected:

NOTE: -1 Analysis result less than detectable limit

Appendix II

LIMOGES LAGOON SEASONAL & ANNUAL EFFLUENT CONCENTRATIONS & LOADINGS YEAR: 2002

Seasonal Disch.	Volume Disch. (m3)	Duration of Disch. (Days)	Paramater Avg. Cont. (mg/L)					Daily Loadings (kg)					Seasonal Loadings (kg)				
			BOD	S.S.	T.P.	T.A.	H2S	BOD	S.S.	T.P.	T.A.	H2S	BOD	S.S.	T.P.	T.A.	H2S
Spring (Mar)	56,650	4	2.8	8.8	0.65	0.11	0	39.66	124.63	9.21	1.56	0	158.62	498.52	36.82	6.23	0
Fall (Oct-Nov)	113,821	33	2.7	22.3	0.12	0.33	0	9.31	76.92	0.41	1.14	0	307.32	2,538.21	13.66	37.56	0
Non-Compliance Seasonal Conc.			31	40	1	20/4	0.01	Total Annual Loadings					465.94	3,036.73	50.48	43.79	0
								Non-Compliance Annual Loadings					11,749	15,666	392	n/a	n/a

Appendix III

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Alfred Hub
2015 Lajoie Street, Box 252
Lefaivre, Ontario K0B 1J0
Tel: (613)679-4631 / Fax: (613) 679-4735

March 04, 2003

Mr. Micheal Seguin
Area Manager
Ministry of the Environment
Abatement Cornwall Area Office
Kingston District
113 Amelia St. (2nd Floor)
Cornwall Ontario,
K6H 3P1

Re: Limoges Lagoon
Compliance Inspection Report - January 30, 2003

Dear Mr. Seguin:

Subsequent to the review of the Limoges Sewage Treatment Facility inspection report, dated January 30, 2003 prepared by Mr. Marc Robert Senior Environmental Officer, OCWA has the following comments to offer concerning the findings of the inspection contained in the report under Section 5.0 " Action(s) Required" and Section 6.0 "Other Inspection Findings".

Section 5.0 Action(s) Required

"The owner/operator of the Village of Limoges sewage works must take steps to ensure full compliance with the effluent quality requirements of the works' Certificate of Approval."

The issue of "Effluent Quality Assessment" identified under items 1 to 5 of Section 2.2 of the inspection report will be addressed individually.

1. The Limoges Lagoon was commissioned in April of 2001, and as indicated on the 2001 Performance Assessment Report (PAR) the lagoon received approximately 76,635 m3 (33.7%) of raw sewage in it's first partial year of operation. Based on the capacity of the two (2) cell lagoon capable of accepting 227,330 m3 no lagoon discharge was required or performed that year.

2. The average concentration of Suspended Solids during the 2002 treated effluent discharge did not exceed the non-compliance concentrations outlined in Section 1.5 (a) of Certificate of Approval Number 3-1820-97-986 (c of A) which reads as follows:

> " Non-Compliance with respect to concentration of BOD 5, Suspended Solids, Total Phosphorous and Total Ammonia in the effluent is deemed to have occurred when the seasonal average concentration of any of the parameters, as defined in this certificate, based on all grab samples taken in accordance with condition 2.1, supplemented by spot sampling by Ministry's staff as necessary, during any single discharge season, exeeds its corresponding concentration in effluent specified above in condition 1.4".

Unfortunately, the Suspended Solids results outlined in the PAR and used by the officer to calculate the average suspended solids concentration during the fall discharge of 2002, provides monthly averages and does not take into consideration the duration of the discharge period should the discharge period be carried out over a two month period as this one was. The 2002 Fall discharge period was from October 2, 2002 to November 4, 2002 inclusive. A total number of 6 samples were collected with the following Suspended Solids Concentrations:.

- Oct 2, 2002 - 12 mg/L
- Oct 7, 2002 - 7 mg/L
- Oct 15, 2002 - 1 mg/L
- Oct 21, 2002 - 2 mg/L
- Oct 28, 2002 - 8 mg/L
- Nov 4, 2002 - 104 mg/L

The seasonal average based on these results is 22.3 mg/L and is well within the Maximum allowable concentration of 40 mg/L specified in the C of A.

3. The Performance Assessment Report (PAR) that is submitted for a particular facility which summarizes the overall performance of the facility, is a very important operational document that is constantly altered and modified in an attempt to incorporate as much relevant or necessary information as possible.

Parameters from the Limoges Lagoon "PAR", that were identified as "not provided" under items 3 to 5 of Section 2.2 of the inspection report have been brought forward to the attention of OCWA's Compliance Advisory committee and will be reviewed in the near future. Meanwhile, please find attached to this report a Summary of the Limoges Lagoon Annual Loadings for 2002 which includes the information that was not provided to the Provincial Officer at the time of the Inspection. Please note that the facility remained in compliance with the C of A Effluent concentration and Annual Loadings.

4. A final report issued by Lecompte Engineering Ltd. concerning the findings and repair procedures carried out on the leaking Limoges Lagoon was received at our Hub office on February 7, 2003. It si our understanding that a copy of the report was also forwarded to the attention of Mr. Marc Robert, Senior Environmental Officer at the MOE Cornwall office. Since the repairs have been completed frequent routine inspection of the facility are carried out by OCWA personnel to ensure that the facility stays within compliance.

Should you have any questions concerning the content of this inspection reply please feel free to contact me at (613) 679-4631.

Yours truly,

Jean-Pierre Gelinas
Process & Compliance Technician (PCT)
Alfred Hub

Attachment: Limoges Lagoon Annual Loadings 2002

cc: Mary McCuaig, The Nation Municipality
Dr. Bourdeau, Medical Officer of Health, EOHU
Jacques Breen Manager OCWA Alfred Hub
Cindy Spencer, Compliance Advisor OCWA Eastern Area
Daniel Lafleche Mechanic/Operator OCWA Alfred Hub

LIMOGES LAGOON SEASONAL & ANNUAL EFFLUENT CONCENTRATIONS & LOADINGS YEAR: 2002

Seasonal Disch.	Volume Disch. (m3)	Duration of Disch. (Days)	Paramater Avg. Cont. (mg/L)					Daily Loadings (kg)					Seasonal Loadings (kg)				
			BOD	S.S.	T.P.	T.A.	H2S	BOD	S.S.	T.P.	T.A.	H2S	BOD	S.S.	T.P.	T.A.	H2S
Spring (Mar)	56,650	4	2.8	8.8	0.65	0.11	0	39.66	124.63	9.21	1.56	0	158.62	498.52	36.82	6.23	0
Fall (Oct-Nov)	113,821	33	2.7	22.3	0.12	0.33	0	9.31	76.92	0.41	1.14	0	307.32	2,538.21	13.66	37.56	0
Non-Compliance Seasonal Conc.			**31**	**40**	**1**	**20/4**	**0.01**	**Total Annual Loadings**					465.94	3,036.73	50.48	43.79	0
								Non-Compliance Annual Loadings					**11,749**	**15,666**	**392**	**n/a**	**n/a**

Appendix IV

Ontario Clean Water Agency
Monthly Process Data Report

Municipality: The Nation municipality
Project: [5202] - Limoges Sewage
Project Number: 3-1820-97-986
Work Number
Description: Two cell waste stabilization pound

Year: 2002
Water Source/Receiver: Castor river
Design Avg Day Flow(m^3): 1,073

Parameter		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Summary
Phosphorus Removal/Chem. Add														
Coagulant (m3)														
	Avg:	.035	.035	.04	.047	.038	.048	.026	.01	.028	.029	.035	.036	.034
	Sum:	1.095	.992	1.225	1.41	1.189	1.452	.81	.301	.839	.884	1.048	1.122	12.367
Dosage (mg/L)														
	Avg:	100.265	97.197	127.832	117.647	87.76	90.459	57.483	82.495	90.184	91.211	90.024	92.011	93.714
	Min:	98.204	84.807	127.832	117.647	77.71	70.714	42.105	62.644	63.07	79.939	85.751	87.5	42.105
	Max:	107.821	108.108	127.832	117.647	109.266	131.935	109.404	112.709	94.774	95.667	98.204	95.718	131.935

Appendix V

Limoges Wastewater Treatment Facility
2002 Maintenance Activities

- ✓ *January 2002 * Sewage Pumping Station No. 1 Motor Control Replacement.*
- ✓ *January 2002 * Sewage Pumping Station No. 1 modification to the pump suction line, (Completed by Lecompte engineering Ltd.) & Cleaning of SPS No. 1.*
- ✓ *January 2002 * Mechanical Seal Repair on SPS Pump No.2.*
- ✓ *February 2002 * Main fuse replacement at SPS No.1.*
- ✓ *March 2002 * SPS No.1 Main Panel wiring modification performed by G. Mida P. Eng.*
- ✓ *March 2002 * Second Mechanical Seal replacement to Pump No.2.*
- ✓ *June 2002 * Repair to the Odor Control Blower intake line (Lecompte Eng.).*
  ** Carbon Filters fitting modifications (Lecompte Eng.).*
  ** Flash mixer removal From the Splitter box (Lecompte Eng.).*
- ✓ *June 2002 * Cleaning of SPS No.1,2,3 and the Lagoon Splitter Box.*
- ✓ *July 2002 * Installation of an exhaust fan at the HCR Building.*
- ✓ *August 2002 * Alum Pumps PLC Control Programming.*
- ✓ *September 2002 * Clean Up along the Lagoon fence line.*
- ✓ *October 2002 * Mechanical Seal repair on SPS Pump No.1.*
- ✓ *November 2002 * Repaired Five (5) Manholes Located on Main St.*
- ✓ *November 2002 * Lagoon Leak Repair completed Nov. 30 (Lecompte Eng.)*
- ✓ *December 2002 * Cleaned SPS No.1.*

Appendix VI

LECOMPTE ENGINEERING LTD.

CONSULTING ENGINEERS - INGÉNIEURS CONSEILS

February 6, 2003
Our File : 52054

The Nation Municipality
958 Route 500 West
RR#3
Casselman, Ontario
K0A 1M0

Attention: **Mary McCuaig, Clerk**

Re : **Village of Limoges**
Report of Repairs to Leaks in the Limoges Sewage Lagoons

Mr. Mayor and Members of Council,

Please find enclosed a copy of our engineering report for the above.

Our firm has coordinated and supervised the repairs carried out by Cruickshank Construction Ltd. and Marathon Drilling Co. Ltd. The repairs were completed on November 30th, 2002 as described in Appendix 6 and since then no subsequent leaks have been observed.

The monitoring of the performance of the lagoons shall continue with the Ontario Clean Water Agency operation staff.

Sincerely,
LECOMPTE ENGINEERING LTD.

Jacques Lecompte, P.Eng.

JL/sk

c.c. Jacques Breen, Operations Manager, OCWA
Marc Robert, Senior Environmental Officer, MOE Cornwall
Joseph Rybak, P.Eng., Project Manager, OCWA

52054-ltr.rpt

1.0 INTRODUCTION

On September 30th, 2002 J.P. Gélinas and D. Laflèche, OCWA Operators, met on the lagoon site with Gaëtan Beauchesne, P.Eng. of Lecompte Engineering Ltd. At this time they identified three (3) possible leaks: the first being near the outfall chamber, the second near the connection pipe between cell no. 2 and the future east cell and third along the future concrete connecting pipe to the outfall of the future cell.

Following this meeting Lecompte Engineering Ltd. advised Jacques Breen, OCWA Operations Manager, that the period of maintenance had expired on June 13th, 2002. Therefore we were of the opinion that the cost involved for any repair works after the warranty period should be done under the maintenance budget.

On October 1st, 2002, Mr. Bill McCallum from OCWA Toronto, visited the lagoon site. Mr. McCallums' report is included herewith along with various correspondance.

On October 7th, 2002, our firm met with the following personnel from these various agencies :

Jacques Breen, OCWA Manager
J.P. Gélinas, OCWA Operator
Daniel Laflèche, OCWA Operator
Marc Robert, MOE Cornwall
Mark Lecompte, Technician, Lecompte Engineering Ltd.
Gaëtan Beauchesne, P.Eng., Lecompte Engineering Ltd.

This meeting took place to discuss the most appropriate solution to repair these leaks.

On October 3rd, 2002 it was agreed upon that our firm would be in charge of coordinating the necessary works to correct the present leaks. This mandate was confirmed at a later date by the Council of the Nation Municipality. Refer to the attached resolution no. 671-2002.

2.0 THE TEAM AND SOLUTION

It was agreed upon with Council that Lecompte Engineering Ltd. would coordinate the work between the various sub-contractors to repair the leaks.

Mike and Bruce Casselman from Cruickshank Construction Ltd. were assigned to locate the leaks. They installed dykes in front of each leak, lowered the liquid level and observed the direction in which the liquid was flowing. The liquid was following along the connecting pipes and coming back under the polyethylene liner. It was evident to conclude that the pipes had been previously lifted by the frost leaving a free passage underneath them. The polyethylene membrane was not disturbed around the connecting pipes and no leaks were noticed at this location.

For the second operation, we hired Marathon Drilling Co. Ltd. to inject a pressure grouting material in the voids in order to impermeate the granular material and create a consolidated bentonite plug.

Twenty four (24) hours after this operation OCWA Operators refilled cell no. 2 with the incoming liquid as well as the liquid from cell no. 1.

3.0 REHABILITATION

1- The pipe from the outlet box located at cell no.2 to outlet chamber.

As shown on the attached photographs had a portion of the pipe lifted from its original position due to the formation of ice inside the pipe.

The grade of the pipe was properly restored by removing the soil underneath and then by placing two (2) concrete ballasts of $3m^3$, 25mPa with a pumper truck over the existing pipe.

2- The incoming concrete pipe from the future cell to the existing outlet chamber.

Three (3) sections were removed and stored at 10 meters away along the enclosure fence for future use. The end pipe was sealed tight by means of a concrete cap secured with galvanized steel angles and anchor bolts. Also a 0.95m of earth was placed over the pipe for frost protection.

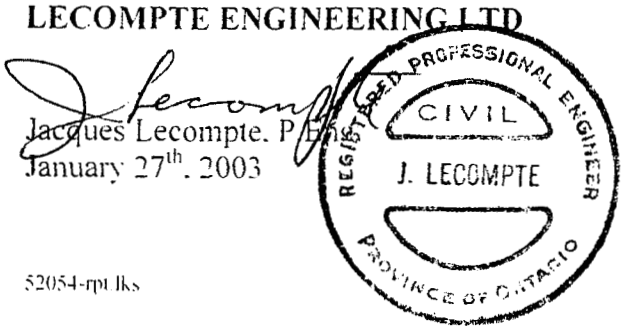
4.0 CONCLUSION

Since the Maintenance Warranty had expired we respectively request that the cost involved to repair the leaks and associated work be carried out under the maintenance budget.

Most of the correctional work was carried out at cost with the exception of the bentonite injection.

A few weeks since these operations took place. inspections of the site revealed that these corrections and repair works seem to be adequate and no subsequent leaks have been observed. The monitoring of the lagoon shall continue.

Prepared by :
LECOMPTE ENGINEERING LTD



Jacques Lecompte, P.Eng.
January 27th, 2003

52054-rpt.lks

Appendix VII

Ontario Clean Water Agency
1 Yonge Street, Suite 1700
Toronto, ON M5E-1E5
(416)314-5600 Fax (416)314-8300

Equipment Work Order

Report Date	11/12/2002 12:41 PM	Submitted By	STEPHANE BARBARIE	

Work Order #	431544	Activity	H8020A	METER FLOW

Equipment ID	0000178020	Description	METER FLOW PS #1

Site	FAC	5202	Description	LIMOGES SEWAGE	
Subunit Of					
Area	2	EASTERN REGION	Sub-area	ALFR	ALFRED LEFAIVRE HUB
District	ALPL	TOWNSHIP OF ALFRED/PLANTAGENET	Loc	COLL	WASTE WATER COLLECTION
Loc Qualifier	LIMOGES SEWAGE: PS#1 SOUTH WALL				
Equipment Type	INSTRU	INSTRUMENTATION	Manufacturer	FISH	FISHER & PORTER (CANADA) LTD
Building	PS	PUMPING STATION BUILDING	Building Level	S01	UNDERGROUND LEVEL 1
Service Status			Expected Life	25	
Avg Monthly Usage	0.00		Total Usage	720.00	
Model #	50XE43AAABDBB10C2		Warranty Expires	27/06/2002	MTBF 0
Serial #	453487 02 01		Purchase Date	27/06/2001	Purchase Cost 5730.45
Budget #					

Initiated By			Initiated Date	19/09/2002	Scheduled 01/08/2002 00:00
Assigned To			Service #		Due

Authorization				
Budget #				
Crew				
Maint Type				
Priority				
Problem				
Project	5202	LIMOGES SEWAGE	Out of Service	☐
Source			Potential Service Request	☐
Last Activity	H8020A	METER FLOW	Last Activity Completed	04/12/2002

Work Order Comments
ANNUAL INSPECTION & CALIBRATION COMPLETED

Logs

Log Type	Description	Log Date	To	Entered By	Comments
There are no logs for this work order					

Task H8020A METER FLOW

Job Class	Crew Type	Description	Std Hrs	Pay Type	Hrs Worked
INST		INSTRUMENT	1.00		
Tool	**Description**			**Qty Reqd**	**Qty Used**
CALIBC	CERTIFIED CALIBRATION EQUIP.			1.00	

Safety Procedures

Message	Description	Activity	Comments
ANNUAL	ANNUAL PREVENTATIVE MTCE	H8020A	INTRODUCTION:

This Preventative Maintenance Procedure has been developed to aid field personnel in the care and maintenance of the specified equipment. However, maintenance personnel are expected to look for and correct defects which are not anticipated in this procedure. This document will not provide all the technical information that may be required, and it may be necessary to refer to the manufacturer's manual for further details.

Ontario Clean Water Agency
1 Yonge Street, Suite 1700
Toronto, ON M5E-1E5
(416)314-5600 Fax (416)314-8300

Equipment Work Order

Safety Procedures Message	Description	Activity	Comments
			The "As Found" and "As Left" readings, as well as any abnormalities found and any repairs carried out, are to be recorded on the Hansen Feedback Sheet.
			RUNNING CHECKS:
			N/A
			MAINTENANCE PROCEDURE:
			1) Have a qualified technician calibrate the unit, following the manufacturers recommended calibration procedure.
JSP	JOB SAFETY PLANNING		TAKE TIME TO IDENTIFY HAZARDS AND PLAN HOW EACH HAZARD WILL BE ELIMINATED OR CONTROLLED. WORK PRACTICES MUST BE IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT AND THE ONTARIO CLEAN WATER AGENCY SAFETY MANUAL.
WPROT	WORK PROTECTION		ISOLATE AND DE-ENERGIZE THE EQUIPMENT IN ACCORDANCE WITH THE LOCK-OUT PROCEDURE

Comments	

Started				Completed					
Date	04/12/2002	Time	07:00	By	00060	Date	04/12/2002	Time	09:00	Hours	2.00

Result	COMPLET	Condition	A	Quantity		Unit of Meas	

Total Usage	

Data Group		Sign-off	Stephane Barbarie