Onsite Sewerage System

Company Name:		
Planners Name:		
Address:		
Phone #:	E-mail:	
	Type:	
	System:	
	Designed for	
	Client name:	
	Located at:	
Civic Address:		
Legal Description: _		
	Designed on Date:	

Property Owner's Declaration

Property Informat	tion			
Legal description				
Common Address		L	_ot Size:	hectares/acres
Property Tax Informat	/ PROVINCE / POSTAL CODE	=		
P.I.D. #		Folio. # _	TAX ASSESSM	MENT ROLL NUMBER
Owner Informatio	n			
Legal owner's name Owner's mailing addre		EET NAME		
Owner's Phone Work: ()_ Residence: ()_		Fax: (_		
Building Informat	ion			
Type of Facility (ched	ck one): Res	idence Othe	er (describe)	
Size of Building:	Residence FEET ²	Living Area M ²	Other Fac	cility (Total Area)
Basement				
Main floor				
2nd Floor				
3rd Floor				
Total area				
# of bedrooms				

Pl	anned Uses			
1.	If the basement is unfinished, what is its in	tended use?		
2.	Does the basement have plumbing or elect a separate living suite?	etrical provisions to add	Yes	☐ No
3.	Do you plan on having a Bed and Breakfar If yes, please provide details:		Yes	□ No
4.	Do you plan on having an in-sink garbage	disposal unit?	Yes	☐ No
5.	Do you plan on having a water softener?		Yes	☐ No
0	ther Information			
Do	or will you have a well?		Yes	☐ No
If I	No, source of domestic drinking water is: _			
lf `	es, what is its location:			
Lo	cation of neighbouring wells:			
Ar	e there any covenants or easements on pro	pperty:	☐ Yes	☐ No
Ite	ems to be Provided by Owner			
	e following items are to be provided by the d the Owner agrees herein to supply them a supply and specifications of building, sit and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to authorize planner to a supply and the contract to a supply and the contract to a supply a supply a supply and the contract to a supply a supply a supply and the contract to a supply a supp	at their expense: e access and landscaping begin work enants or easements		
D	eclaration Statement			
an de an "aı 32	We, the undersigned declare that I/we are lead the information given above is true and acsigning, constructing and maintaining a Severy changes, alterations or amendment to this athorized person," as defined in the B.C. He 4/2004, in writing immediately prior to any interest of the severe and the severe are severe.	occurate for the purpose of werage System for said properties above information will be ealth Act, Sewerage Systemstallation of a sewerage	f planning roperty, a e provide em Regula system.	nd that d to the ation
Si	gnature of Owner(s)	Date of Declaration:		
PRI	NT NAME	SIGNATURE		
PRI	NT NAME	SIGNATURE		

Contract Between Home Owner and Authorized Person to (Plan/Install, etc.)

(Health Authority)

Filing of Sewerage System Document

General Summary of the Sewage System

	L	Jate:	
Civic address:			
Legal Description:			
Site Assessment and	Soil Evaluation Resul	lts	
Total Flow Rate: G.P	P.D., L.P.D Base	d on (Description)):
# of Bedrooms Total	al floor area max.	_ sq ft,	sq m
Slope of site (at dispersal ar	rea): % Restrictive lay	er depth:	inches, cm
Restrictive layer:	GH WATER TABLE, LOW PERMEABILITY SOIL, OR	BEDROCK)	
Perk Rate Average:	min./inch, /2.5 cm	n OR	K(fs) mm/day
Soil at depth of infiltration tre	enches (depth 0 to 30 cm f	for sand mound)):
Soil texture:	Structure:	· · · · · · · · · · · · · · · · · · ·	
Consistence (rupture resista	ance):		
Site constraints (S.C. 1-4):		<u></u>	
General System I	Design Paramete	rs	
Tankage (Treatment M. System to be: Type,	•		
Septic (trash) tank to be:	Imp. Gallons,	Litres.	
Pump Chamber to be:	Imp. Gallons,	Litres.	
Treatment Plant to be: Manufacturer:	Model:		
Treatment capacity:	Imp. G.P.D., L.P.D.		

Distribution Method

Depth of ASTM C33 sand below in	filtration surfac	e to be :	inches,	cm.
Total vertical separation: I.S. to res	strictive layer: _	inche	s, cm.	
Hydraulic Loading Rate (HLR) = T	ype syste	em / G	/ sq ft/day, L	/sq m/day
AIS = Flow Rate L.P.D. divid	ed by HLR	_ L/sq m/da	ay = sq m	
AIS = Flow Rate G.P.D. divid	led by HLR	G/sq ft/da	ay = sq ft	
Distribution area to be:	laterals of	L ft,	L m	
total being L ft,	L	_ m		
Width of trenches to be: inc	hes (ft), _	cm		
Trenches to be on ft,	m centres, an	d centre/end	d (circle one) feed	
Total Area of Infiltration Surface (A	NS) =	_ sq ft,	sq m	
Pump to be: Manufacturer:	Mod	del:	Voltage):
Orifice Sizing to be:				
Orifice Spacing to be on:	centr	es		
Piping: Laterals to be:				
Manifold to be:				
Force Main to be:				
Total Flow Rate:	U.S. G.P.M	. or	L.P.M.	
Lateral Flow Rate:	U.S. G.P.N	Л. or	L.P.M.	
Design Rationale:				

Observed Soil Conditions

Test Pit Logs

Date	e*:		Site:				Logged	by:	
TP#		Pit Loc	ation:				Slop	e:	
			Soil Hori	zons (depth	s measured ir	n cm/m/in	/ ft)		
De from	pth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
Not			T	I	- Donatorio	0	D I.		T
from	pth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
Not	es								

Based on USDA *Field Book for Describing and Sampling Soils* (2002). * Date water table measured

Observed Soil Conditions

Test Pit Logs

Date	e*:		Site:				Logged	by:	
TP#		Pit Loc	ation:				Slop	e:	
			Soil Hori	zons (depth	s measured ir	n cm/m/in	/ ft)		
De from	pth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
Not			T	I	- Donatorio	0	D I.		T
from	pth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
Not	es								

Based on USDA *Field Book for Describing and Sampling Soils* (2002). * Date water table measured

Percolation Tests

Civic Address:	Date:			
Legal Address:				
Holes pre	e-soaked for hrs.			
Perc. hole #	Perc. hole #			
Location:	Location:			
min. / inch	min. / inch			
min. / inch	min. / inch			
min. / inch	min. / inch			
min. / inch	min. / inch			
Depth: inches, cm	Depth: inches, cm			
Perc. hole #	Perc. hole #			
Location:	Location:			
min. / inch	min. / inch			
min. / inch	min. / inch			
min. / inch	min. / inch			
min. / inch	min. / inch			
Depth: inches, cm	Depth: inches, cm			

Average Perc. Rate: ____ min/inch or 2.5 cm

Permeameter Tests Summary

Client:									
Subjec	ct Prop	erty Ado	dress: _					 	
Perme	amete	r Size:	2"	4"	D	ate of T	Test:	 	
Perme	amete	r Tube I	Diamete	er:	cm C	Conduct	ed by: _	 	
Test #		ger Hole ia. (cm)		r Hole h (cm)	Stable Ra Fall (mm		CSS Soi Factor	K(fs) nm/day)	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
Line up Lowest	Line up tests results in order from Lowest K(fs) to Highest K(fs) Lowest Highest								

Circle the selected representative K(fs) for design purposes.

Note: Be careful about your units. Some SPM values are in cm/day while others are in mm/day. To convert from mm/day

to cm/day: divide your result by 10.

Plot Plan Drawing

Dispersal Area Detail Drawing

Dispersal Area

(trench/bed/mound, etc.)

Side View (Cross Section) Drawing

Specifications of the Sewage System

(For Type 1 systems, refer to General Summary of the Sewerage System)

HERE

Please advise homeowner in specifications that dispersal area needs to be protected at all times:

- No soils added;
- No soils removed;
- No soils disturbed; and
- No one to drive or park on designated area.

Please note that this is critical.

As Built Drawing

Planner's Summary of Design Adjustments to Original Design (Gravity Distribution)

Jilent Name:		Date:	
			_
Adjustments made to origin	al design:		
	, Distribution:		
Design Flow Rate:	U.S. G.P.D. or	L.P.D.	
Package Treatment Plant: _			
Width of Trenches:			
	face (A.I.S.):		
System on:			

Planner's Summary of Design Adjustments to Original Design (Pressure Distribution)

Client Name:			Date:	
Civic Address:				
Legal Description:				
Adjustments made to				
System to be: Type _	, Distrib	oution:		
Design Flow Rate:		_U.S. G.P.D. or	l	L.P.D.
Package Treatment P	lant:			
Distribution Area:				
Width of Trenches: _				
Total Area of Infiltratio	n Surface (A.I.S	5.):		
System on:	centres.			
Pump Installed:				
	MAKE		MODEL	
Voltage	_Amperage		Horsepower:	
System Total Dynamic	Head (TDH): _			
Lateral Flow Rate:		U.S. G.P.M.		
Total Flow Rate:		U.S. G.P.M.		
Dose Volume Set at:		U.S. Gallons		
Dose Cycle Time:	min s	sec.		
Pump Test Performed	: res	idual head achie	eved.	
Pump Float Off Position	on:			
High Float Alarm Off F	Position:			

Planner's Installation Review Report (Gravity Distribution)

CIVIC Address:
Legal Description:
Final Construction Review
A final construction review of the installed Sewerage System was completed on (date). This review included visual observation of the system components and measuring setback distances. Tanks were tested for leaks. No leaks were found in tanks.
Speed leveler in distribution box has been adjusted and set using water test.
Observations:
Installer to complete the following list: 1. Backfill system as per original design. 2
3
4. Provide Planner with Installer's Letter of Certification when this list is complete.
Based on the results of this review and the completion of the above list by, the above
system has been installed and operates in accordance with the design specifications of the BC Sewerage System Standard Practice Manual.
Respectfully Submitted,
, R.O.W.P.
PRINT NAME

Planner's Installation Review Report (Pressure Distribution)

Civic Address:					
Legal Description: _					
Final Construction	on Review				
A final construction review of the installed Sewerage System was completed on (date). This review included visual observation of the system					on em
components, testing tested for leaks and p per dose. Pump run	of the pump sy no leaks were	/stem and me found. Floats	asuring setback were set to achie	distances. 7	Γanks were
Observations:					
Installer to complete 1. Backfill system as	per original de	esign.			
2 3					
s 4. Provide Planner w			cation when this	list is comp	
Based on the results system has been ins the BC Sewerage Sy	R.O. talled and oper	.W.P. Installer	ofdance with the de	,	
Note: Visual observation of the adequately. However, it is the rather BC Electrical Code for wet	esponsibility of the qu	alified electrician wh			
Pump Installed:	MAKE		MODEL		
Voltage:			MODEL MORSEPOW	er:	
Residual Head Achie	eved:				
Pump Float Off Posit	tion:				
Pump Draw Down: _					
Dose Volume:					
Pump Chamber: High Float Alarm Off	•		•		.S. G./inch
Respectfully Submitt					
· •		, R.O.W.F			
	-	*	DDI	NIT NIANE	

Sewerage System: Registered Practitioner's Installer's Letter of Certification

	Date:
	(Authorized Person — ROWP — Planner or Professional)
	(Filing or Folio #)
	Civic address
	Legal description
m:	(Registered Practitioner — Installer)
	(Business Name)
per	be advised that the installation of the sewerage system on the above described ty and filing document was completed on(DATE), including etion of all listed requirements in the Planner's Installation Review Report.
l wa	as responsible for performing the installation work except for the items being:
	1. Electrical permits, wiring, connections and energizing the sewerage system
	2

- I, the undersigned, am a registered practitioner as defined in the Sewerage System Regulation, BC Reg. 326/2004 and certify that:
 - 1. The above sewerage system has been installed in accordance with standard practice for installation; and,
 - 2. The above sewerage system has been installed substantially in accordance with the plans and specifications provided to me and any written instructions received from the planner/professional subsequent to the original accepted filing document.

Sewerage System Operation and Maintenance Plan

Part 1: Operation Plan for Owners and Operators

Introduction

Civic Address:	_
_egal Description:	_
System completed on (date):	

Onsite wastewater systems require proper operation and maintenance to ensure adequate performance, service life expectancy, and protection of public health and the environment. Pursuant to section 10 of the *BC Sewerage Regulation 326/2004* the owner/user of an onsite wastewater system must ensure it is operated and maintained in accordance with the operation/maintenance plan provided by the designer/planner. In addition, the owner/user is required to keep records of the system inspections and maintenance performed on the system.

The operations and maintenance plan: system inspection and maintenance schedule, contact lists, and system dos and don'ts.

IMPORTANT: This system has been designed to service a residence as listed on the general specifications of sewerage system. Therefore, addition of a bedroom or any additional square footage added to house, a suite or use as a bed and breakfast will require alterations to the onsite wastewater system that must be designed by an Authorized Person and filed with the Health Authority.

System Operation

Under the laws of BC, the sewage system that has been installed on the above listed property must be maintained by a Registered Maintenance Provider in accordance with the specifications outlined in this Operations and Maintenance Plan.

Cautions and Warnings

- Garbage disposal unit is NOT to be used with septic systems. A garborator will overload the septic tank, degrade wastewater treatment and decrease drain field life.
- No water softeners, floor drains, roof drains or perimeter drains to drain into wastewater system.
- Irrigation over mound or drain field should be closely monitored. Excessive irrigation infiltrates into and hydraulically overloads system. Hydraulic overload will cause failure in system.
- Structures, roads, paths, parking, swimming pools, and any impervious materials are prohibited from being placed on drain fields. Any of these will cause failure of system.
- Gases within septic tank and pump chamber can be explosive and/or cause asphyxiation. DO NOT enter tank risers or tanks at any time. Lids are to be secured at all times.

Dos and Don'ts for Successful Operation

- DO NOT introduce or put any non-biodegradable substances into the system such as:
 - Chemicals, including paint (do not wash paint brushes inside house)
 - Solvents, antifreeze, gas, herbicides, pesticides
 - Coffee grounds
 - Cigarette butts
 - Disposable diapers
 - Feminine hygiene products
 - Condoms
 - Paper towel, facial tissue, sanitary wipes
 - Cat litter
 - Hair

- DO NOT discharge from water treatment devices including water softeners into system.
- DO NOT use powdered laundry detergent or dish washer soap, liquid soap is acceptable.
- DO NOT flush anything (e.g., Condoms, Q-tips) into system that does not pass through the human body with the only exception being toilet paper.
- DO NOT introduce excessive amounts of fats, oils or grease into system.
- DO NOT drive on disposal system, piping, distribution box or tanks at any time.
- MINIMIZE the use of bleach and cleaning solvents.
- DO NOT use commercial septic tank additives: they are unnecessary, expensive and can impair system performance.
- DO NOT stress system with multiple laundry loads on one day spread laundry throughout the week.
- DO practice water conservation and ensure that fixtures do not leak.
- DO check toilets for leaks annually by placing dye in tank (food coloring) and leaving it for several hours. The dye should not appear in the toilet bowl.
- DO have a maintenance provider in place to maintain and monitor system.
- DO keep maintenance/ service records at all times. These records are to stay with system (and passed to new owners if property changes ownership).

Please note that a full updated list of registered Maintenance Providers can be obtained from your local Health Authority.

Part 2: Maintenance Plan for Maintenance Providers

	Introduction Design Flow Rate:				
Тур	Type of System (description): The Maintenance Provider is to perform the maintenance outlined below as required:				
The					
YES	TANKS: Measure sludge and scum levels in septic tanks and pump chamber. Pump-out and clean as required. Clean floats and pump as needed.				
	CONTROL SYSTEM, AND HOUSING: Test pump on/off float, the high level alarm float and the audible/ visual alarm to ensure they are operating properly. The pump on/off float is set to provide a pump draw down of inches. The alarm float is set inches above the pump "on" float position. Adjust floats if and when necessary.				
\boxtimes	FILTERS: Check effluent filters and clean when required. Replace filters as needed.				
	DISPERSAL FIELD: PRESSURIZED Check operation, cycle, test residual head. Lateral lines to be opened at clean out ends and flushed as required. Initial frequency is once every months. Inspect observation ports. Check pipelines for signs of leakage.				
	DISPERSAL FIELD: GRAVITY Inspect observation ports. Inspect distribution box (Adjust flow/speed levelers as needed) Ensure that surface of dispersal field area is not collecting surface water Inspect diversion valve Inspect observation ports bi-annually (Observation Port is to observe biomat formation and effluent ponding at the zone of infiltration within the dispersal trench or bed.)				

YES VALVES: ☐ Check Hydrotek valve operation.			
DISCHARGE MONITORING: Record flow data, accumulated run time.			
Septic (Trash) Tanks (All Systems) Septic tank pump out intervals projected to be years, with effluent filter inspection and cleaning intervals expected to be year(s) (months for the first two years), depending on use and influent quality. Tank sludge/ scum depth should be assessed annually at time of effluent filter cleaning.			
Pump, Floats and Alarms PRESSURE SYSTEMS ONLY Annual pump check to include visual inspection, measurement of running amperage, record of run time per standard dose. Visual inspection of floats and manual test of alarm/float operation. Visual Inspection of pump chamber and cleaning as required.			
Commissioning run time mins, amperage amps. Pump chamber "V" value inches of depth per U.S. gallon.			
Annual flow check to include record of pump starts (from counter) and run time (from pump hour meter) and manual check of counter operation.			
Package Treatment Plants Treatment plants, operations as per manufacture manual specifications.			
R.O.W.P. Disclaimer: I hereby certify that the information provided in this report is accurate and true to the best of my knowledge. I waive any and all responsibility and/or liability for the system problems malfunctions or health hazards that arise from any faulty system components, improper installation, damage resulting from misuse and/or failure to operate and maintain the system in accordance with the operation/maintenance plan.			
Respectfully Submitted,			
, R.O.W.P.			
PRINT NAME			

Operation and Maintenance Plan: Source Control Policy

(for Residential Systems with Design Flow Rate of 550 Imperial Gallons/Day or Less)

Effluent Quantity/Quality Guidelines

Ga the	the residence is permitted to discharge up to a design flow rate Imperial callons per day of effluent into the system at a peak flow; however, the average flow to be system over any week period must not exceed Imperial Gallons per day 0% of design flow rate).
rec ow ow dis	e system is intended for use with normal residential effluent. There are various quality quirements for the effluent discharged from the home to the system, and it is the mer's responsibility to ensure that these are complied with. It is recommended that mers ensure that their liability insurance covers them for liability associated with scharge of effluent that causes damage to the environment. The following should not discharged:
1.	Any sewage in a volume or flow rate greater than shown above;
2.	Any sewage in flow rate exceeding 15.4 Imp. Gallons per minute;
3.	Any sewage in flow rate exceeding Imp. Gallons per hour (8 times daily design flow rate per hour, e.g., $550/24 \times 8 = 183 IG/hr$);
4.	Any liquid or vapor having an average temperature higher than 50°C;
5.	Any flammable or explosive material;
6.	Any garbage;
7.	Any metal, plastic, wood or other solid or viscous substance capable of causing obstruction or interference with the proper operation of the sewerage system or treatment process:

B.O.D.5	300 mg/L
Suspended solids	350 mg/L
Total sulfide expressed as H2	5 mg/L
Phenolic compounds	2 mg/L
Oil and grease	100 mg/L

8. Any sewage or industrial waste having a pH limit less than six (6.0) or greater than

9. Any sewage or industrial waste containing any of the following materials in excess of

nine and a half (9.5);

the indicated concentrations:

Total cyanide expressed as HCN	0.2 mg/L
Total copper expressed as Cu	1.0 mg/L
Total chromium expressed as Cr	1.0 mg/L
Total nickel expressed as Ni	1.0 mg/L
Total lead expressed as Pb	1.0 mg/L
Total zinc expressed as Zn	1.0 mg/L
Total cadmium expressed as Cd	.05 mg/L
Total phosphorus expressed as P	15.0 mg/L
Total arsenic	0.5 mg/L
Total mercury	.006mg/L
Total silver	1.0 mg/L

"B.O.D.5" (denoting biochemical oxygen demand) means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20°C, expressed in milligrams per liter.

"pH" means the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution and denotes alkalinity or acidity.

- 10. Any water or waste containing a toxic or poisonous substance capable of constituting a hazard to humans or animals, or any water or waste containing substances in such concentrations that are not amenable to treatment or reduction by the sewage treatment process employed, or are amenable to treatment only to such a degree that the sewage treatment plant effluent and sludge cannot meet the requirements of any other agency having jurisdiction over discharges from the system, or which would damage the dispersal field soils (this would include such items as excess chlorine bleach, excess sodium, disinfectant cleaners, drain cleaner, photochemicals etc);
- 11. Any substance that when concentrated in sewage treatment plant, effluent disposal fields, or in sludge, could result in a contaminated site (this would include paints and solvents);
- 12. Rainwater runoff from the surface or from roofs etc, storm or surface water, water from swimming pools or hot tubs;
- 13. Grease, oil, solvents etc;
- 14. Flushing water from water softeners;
- 15. Output from Garburators; and,
- 16. It is recommended that owners refer to the information in regard of Onsite wastewater systems, attached.

Contact List

R.O.W.P. Maintenance Provider			
Company Name:			
Contact:			
Address:			
Phone #:			
Tank, pump out, filter cleaning, under drain line pump out, lateral line flushing, or general service and maintenance of the system.			
R.O.W.P. Installer			
Company Name:			
Contact:			
Address:			
Phone #:			
Questions or concerns pertaining to installation.			
Package Treatment Plant Supplier			
Company Name:			
Contact:			
Address:			
Phone #:			
Maintenance and servicing of package treatment plants.			

Electrician
Company Name:
Contact:
Address:
Phone #:
Questions or concerns regarding electrical components of septic system.
Tank/Pump Chamber Supplier
Company Name:
Contact:
Address:
Phone #:
Questions or concerns regarding concrete septic tanks, pump chambers, risers or distribution boxes.
Pump and Materials Supplier
Company Name:
Contact:
Address:
Phone #:
Questions or concerns regarding pumps, high float alarm or system components. This is the parts supplier.

Record of Maintenance and System Testing: Results

Insert date at top of column and results in column. Attach additional notes as necessary.

		Г	II.	
Date				
Septic Tank				
Pump chamber valves, etc.: Visual inspection, test				
Pump chamber: Clean floats/pumps				
Control system and housings, etc.: Visual inspection, check and operate alarms, pumps				
Effluent filter: Visual inspection				
Effluent filter: clean				
Effluent filter: Replace media				
Disposal field: Check operation, check inspection ports for biomat				
Disposal field: Check of Hydrotek valve operation				
Check pipelines for signs of leakage				
Discharge monitoring: Record Flow and accumulated run time				
Renew equipment				
Notes				

Manufacturers' Manuals and Warranties

(Warranties for package treatment plants, pumps, floats, valves, etc.)

Extra Information and Brochures

(Example: CRD "Septic Savvy" "How to care for your residential Septic system" Brochure)

Health Authority Letter of Certification

Acknowledgement by Owner

I/We the undersigned are the legal prop	erty owners of land and buildings located at
Civic/Common Address:	
	Or,
Legal Description:	
	the following items from the Authorized Person as Regulation 326/2004 pursuant to the construction of tion:
 Drawings and specifications of se Letter of Certification as filed with Operation and Maintenance Plan 	•
plan and do hereby agree to operate an	and understood the operation and Maintenance d maintain the sewerage system as specified in accordance to the filing documents submitted to
	ilding(s) will be used in accordance with filing ration will not be conducted without written titioner.
	er of the property to another person, we shall not details of the Operation and Maintenance Plan.
PRINT OWNER'S NAME	PRINT OWNER'S NAME
OWNER'S SIGNATURE	OWNER'S SIGNATURE
DATE:	