

SRCL Limited

Licence Register No. W0055-02

Annual Environmental Report 2011

March 2012

Appendices

Appendix 1 EPA AER Templates

Appendix 2 PRTR Reporting Workbook

Appendix 3 Process Verification Report

Appendix 1 EPA AER Templates

Facility Information Summary

Licence Register Number	W0055-02
Name of site	SRCL Ltd
Site Location	420-430 Beech Rd, Western Industrial Estate, Naas Road, Dublin 12
NACE Code	3821
Class of Activity	Treatment and disposal on non-hazardous waste
RBME risk category	C1
National Grid Reference (6E, 6 N)	-6.3626 53.3218

A brief description of the activities/process at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance improvements which were measured during the reporting year;

The activities carried out at the facility involve the treatment of healthcare and related wastes through shredding and sterilisation. There was no significant change in production during the reporting period when compared to the previous year.

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

Signature Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	Date

AER summary template-AIR emissions

Additional information

1 Does your site have licensed air emissions? If yes please complete table 1, 2 and 3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table 5 and 6) you **only** need to complete table 1 fugitive emissions on site below

Yes	
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Table 1 Fugitive emissions

Parameter /Substance	Annual fugitive emission (kg/annum)	Quantificaton method M/C/E
SELECT	None	SELECT

Periodic/Non-Continuous Monitoring

2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of Table 2 below

No	
Yes	

3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist?

[Basic air monitoring checklist](#) [AGN2](#)

Table 2: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Date of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	% change in mass load from previous year +/-	Comments
A2.1	Volume flow rate	05/07/2011	700	100 % of values < ELV	795	m ³ /h	Yes	BS EN 13649:3002	NA	NA	
A2.1	Total VOCs	05/07/2011	0.1	100 % of values < ELV	0.0005	Kg/h	Yes	BS EN 13649:3002	2.08	208	2010 0.01kg
A2.2	Volume flow rate	05/07/2011	500	100 % of values < ELV	292	m ³ /h	Yes	BS EN 13649:3002	NA	NA	

A2.2	Total VOCs	05/07/2011	0.1	100 % of values < ELV	0.0002	Kg/h	Yes	BS EN 13649:3002	0.83	492	2010 0.14kg
A2.3	Mass flow rate	05/07/2011	700	100 % of values < ELV	550	m³/h	Yes	BS EN 13649:3002	NA	NA	
A2.3	Total VOCs	05/07/2011	0.1	100 % of values < ELV	0.0004	Kg/h	Yes	BS EN 13649:3002	1.66	16500	2010 0.01kg
A2.1	TVC	19-7-2011	2000	100 % of values < ELV	100	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.1	Fungal spores	19-7-2011	2000	100 % of values < ELV	157	cfu/m³	Yes	Air sampler, ISO21527-1 2008			
A2.2	TVC	19-7-2011	2000	100 % of values < ELV	92	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.2	Fungal spores	19-7-2011	2000	100 % of values < ELV	175	cfu/m³	Yes	Air sampler, ISO21527-1 2008			
A2.3	TVC	19-7-2011	2000	100 % of values < ELV	54	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.3	Fungal spores	19-7-2011	2000	100 % of values < ELV	54	cfu/m³	Yes	Air sampler, ISO21527-1 2008			
A2.5	TVC	19-7-2011	2000	100 % of values < ELV	75	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.5	Fungal spores	19-7-2011	2000	100 % of values < ELV	157	cfu/m³	Yes	Air sampler, ISO21527-1 2008			

Emission reference no:	Parameter/ Substance	Date of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	% change in mass load from previous year +/-	Comments
A2.1	TVC	17-1-2012	2000	100 % of values < ELV	100	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.1	Fungal spores	17-1-2012	2000	100 % of values < ELV	142	cfu/m³	Yes	Air sampler, ISO21527-1 2008			
A2.2	TVC	17-1-2012	2000	100 % of values < ELV	167	cfu/m³	Yes	Air sampler, ISO4833.2003			
A2.2	Fungal spores	17-1-2012	2000	100 % of values < ELV	179	cfu/m³	Yes	Air sampler, ISO21527-1 2008			
A2.3	TVC	17-1-2012	2000	100 % of values < ELV	408	cfu/m³	Yes	Air sampler, ISO4833.2003			

A2.3	Fungal spores	17-1-2012	2000	100 % of values < ELV	133	cfu/m ³	Yes	Air sampler, ISO21527-1 2008			
A2.5	TVC	17-1-2012	2000	100 % of values < ELV	867	cfu/m ³	Yes	Air sampler, ISO4833.2003			
A2.5	Fungal spores	17-1-2012	2000	100 % of values < ELV	517	cfu/m ³	Yes	Air sampler, ISO21527-1 2008			
A2.1	Volume Flow Rate	8-2-2012	700	100 % of values < ELV	546	m ³ /h	Yes	BS EN 13649:2002			
A2.1	Total VOC	8-2-2012	0.1	100 % of values < ELV	<167	mg/Nm ³	Yes	BS EN 13649:2002			
A2.2	Volume Flow Rate	8-2-2012	500	100 % of values < ELV	254	m ³ /h	Yes	BS EN 13649:2002			
A2.2	Total VOC	8-2-2012	0.1	100 % of values < ELV	<167	mg/Nm ³	Yes	BS EN 13649:2002			
A2.3	Volume Flow Rate	8-2-2012	700	100 % of values < ELV	697	m ³ /h	Yes	BS EN 13649:2002			
A2.3	Total VOC	8-2-2012	0.1	100 % of values < ELV	<167	mg/Nm ³	Yes	BS EN 13649:2002			

Note 1: Volumetric flow shall be included as a reportable parameter

Continuous Monitoring

4 Does your site carry out continuous air emissions monitoring?

No	
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If yes please review your continuous monitoring data and report the required fields below in Table 3 and compare it to its relevant Emission Limit Value (ELV)

5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table 3 below

SELECT	
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6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?

SELECT	
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7 Did your site experience any abatement system bypasses? If yes please detail them in table 4 below

SELECT	
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Table 3: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	% compliance current reporting year	Comments
	SELECT			SELECT	SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table 4: Abatement system bypass reporting table [Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out table 5

SELECT	
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Table 5: Solvent Management Plan Summary			Please refer to linked solvent regulations to complete table 5 and 6		
Total VOC Emission limit value					
Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance
					SELECT
					SELECT

Table 6: Solvent Mass Balance summary								
	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in waste gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g. incineration(kg)	Total emission of Solvent to air (kg)
							Total	

Table 3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ Substance>Note 1	Type of sample	Date of Monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	% change in mass load from previous year +/-	Comments
SE-1	Sewer	volumetric flow	composite	January	24 hour	20	All results < 1.2	18.6	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers			
SE-1	Sewer	pH	composite	January	24 hour	6.0 - 10.0	within range	6.4-6.8	units	Yes	Other (please describe)	pH Meter	Manufacturers			
SE-1	Sewer	Temperature	composite	January	24 hour	42	<	9.7 - 18.0	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers			
SE-1	Sewer	BOD	composite	January	24 hour	1000	All results < 1.2 x ELV	148	mg/L	Yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA "Standard Methods"	MEWAM 1988 APHA 5210+4500C,2005	1262.7	11.7	
SE-1	Sewer	COD	composite	January	24 hour	3000	All results < 1.2	1280	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D,2005	4696.4	15.5	
SE-1	Sewer	Suspended Solids	composite	January	24 hour	500	All results < 1.2 x ELV	378	mg/L	Yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	APHA 5520D,2005	1022.2	1.1	
SE-1	Sewer	MBAS	composite	January	24 hour	100	All results < 1.2 x ELV	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2	<0.01	0	
SE-1	Sewer	OFG	composite	January	24 hour	100	All results < 1.2 x ELV	23.2	mg/L	Yes	Gravimetry	APHA / AWWA "Standard Methods"	MEWAM 1980 APHA 2540D	133.9	80.2	
SE-1	Sewer	Total Coliforms	composite	January	Grab	none	none	12000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006			
SE-1	Sewer	Faecal Coliforms	composite	January	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201			
SE-1	Sewer	Enterococci	composite	January	Grab	none	none	2000	cfu/100ml	na	Selective medium	Practical Food Microbiology p.160				
SE-1	Sewer	Pseudomonas	composite	January	Grab	none	none	3000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006			
SE-1	Sewer	Staphylococcus aureus	composite	January	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999			
SE-1	Sewer	volumetric flow	composite	February	24 hour	20	All results < 1.2	16.7	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers			
SE-1	Sewer	pH	composite	February	24 hour	6.0 - 10.0	within range	6.7-9.0	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers			
SE-1	Sewer	Temperature	composite	February	24 hour	42	<	10.0-30.9	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers			
SE-1	Sewer	BOD	composite	February	24 hour	1000	All results < 1.2	252	mg/L	Yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA	APHA			
SE-1	Sewer	COD	composite	February	24 hour	3000	All results < 1.2	586	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D,2005			
SE-1	Sewer	Suspended Solids	composite	February	24 hour	500	All results < 1.2	97	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005			
SE-1	Sewer	MBAS	composite	February	24 hour	100	<	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2			
SE-1	Sewer	OFG	composite	February	24 hour	100	All results < 1.2	20	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980			
SE-1	Sewer	Total Coliforms	composite	February	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006			
SE-1	Sewer	Faecal Coliforms	composite	February	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201			
SE-1	Sewer	Enterococci	composite	February	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology p.160				
SE-1	Sewer	Pseudomonas	composite	February	Grab	none	none	>100000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006			
SE-1	Sewer	Staphylococcus aureus	composite	February	Grab	none	none	<200	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999			
SE-1	Sewer	volumetric flow	composite	March	24 hour	20	All results < 1.2	19.4	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers			
SE-1	Sewer	pH	composite	March	24 hour	6.0 - 10.0	within range	6.7 - 7.0	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers			
SE-1	Sewer	Temperature	composite	March	24 hour	42	<	10.9 - 37.1	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers			
SE-1	Sewer	BOD	composite	March	24 hour	1000	All results < 1.2	154	mg/L	Yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA	APHA			
SE-1	Sewer	COD	composite	March	24 hour	3000	All results < 1.2	520	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D,2005			
SE-1	Sewer	Suspended Solids	composite	March	24 hour	500	All results < 1.2	114	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005			
SE-1	Sewer	MBAS	composite	March	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2			
SE-1	Sewer	OFG	composite	March	24 hour	100	All results < 1.2	8	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980			
SE-1	Sewer	Total Coliforms	composite	March	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006			
SE-1	Sewer	Faecal Coliforms	composite	March	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201			
SE-1	Sewer	Enterococci	composite	March	Grab	none	none	8000	cfu/100ml	na	Selective medium	Practical Food Microbiology p.160				
SE-1	Sewer	Pseudomonas	composite	March	Grab	none	none	>100000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006			
SE-1	Sewer	Staphylococcus aureus	composite	March	Grab	none	none	3300	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999			
SE-1	Sewer	volumetric flow	composite	April	24 hour	20	All results < 1.2	21.5	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers			
SE-1	Sewer	pH	composite	April	24 hour	6.0 - 10.0	within range	6.5 - 7.3	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers			
SE-1	Sewer	Temperature	composite	April	24 hour	42	<	10.0 - 19.1	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers			
SE-1	Sewer	BOD	composite	April	24 hour	1000	All results < 1.2	225	mg/L	Yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA	APHA			

SE-1	Sewer	COD	composite	April	24 hour	3000	All results < 1.2	770	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005					
SE-1	Sewer	Suspended Solids	composite	April	24 hour	500	All results < 1.2	96	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005					
SE-1	Sewer	Total Coliforms	composite	April	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2					
SE-1	Sewer		OFG	composite	April	24 hour	100	All results < 1.2	10.4	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer		Faecal Coliforms	composite	April	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer		Enterococci	composite	April	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Pseudomonas	composite	April	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer		Staphylococcus aureus	composite	April	Grab	none	none	<200	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer		volumetric flow	composite	May	24 hour	20	All results < 1.2	16	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer		pH	composite	May	24 hour	6.0 - 10.0	within range	6.6 - 7.8	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer		Temperature	composite	May	24 hour	42	<	9.7 - 30.6	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	May	24 hour	1000	All results < 1.2	128	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA					
SE-1	Sewer	COD	composite	May	24 hour	3000	All results < 1.2	346	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005					
SE-1	Sewer	Suspended Solids	composite	May	24 hour	500	All results < 1.2	98	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005					
SE-1	Sewer	Total Coliforms	composite	May	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2					
SE-1	Sewer		OFG	composite	May	24 hour	100	All results < 1.2	8.6	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer		Faecal Coliforms	composite	May	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer		Enterococci	composite	May	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Pseudomonas	composite	May	Grab	none	none	11000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer		Staphylococcus aureus	composite	May	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer		volumetric flow	composite	June	24 hour	20	All results < 1.2	15.9	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer		pH	composite	June	24 hour	6.0 - 10.0	within range	6.1-7.9	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer		Temperature	composite	June	24 hour	42	<	10.7 - 15.8	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	June	24 hour	1000	All results < 1.2	138	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA					
SE-1	Sewer	COD	composite	June	24 hour	3000	All results < 1.2	370	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005					
SE-1	Sewer	Suspended Solids	composite	June	24 hour	500	All results < 1.2	110	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005					
SE-1	Sewer	Total Coliforms	composite	June	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2					
SE-1	Sewer		OFG	composite	June	24 hour	100	All results < 1.2	27.6	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer		Faecal Coliforms	composite	June	Grab	none	none	>1000000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer		Enterococci	composite	June	Grab	none	none	4000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Pseudomonas	composite	June	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Staphylococcus aureus	composite	June	Grab	none	none	89000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer		volumetric flow	composite	June	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer		pH	composite	July	24 hour	20	All results < 1.2	17	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer		pH	composite	July	24 hour	6.0 - 10.0	within range	6.5-8.0	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	July	24 hour	42	<	17.2-37.3	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers					
SE-1	Sewer	BOD	composite	July	24 hour	1000	All results < 1.2	126	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA					
SE-1	Sewer	COD	composite	July	24 hour	3000	All results < 1.2	1030	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005					
SE-1	Sewer	Suspended Solids	composite	July	24 hour	500	All results < 1.2	141	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005					
SE-1	Sewer	Total Coliforms	composite	July	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2					
SE-1	Sewer		OFG	composite	July	24 hour	100	All results < 1.2	9.8	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer		Faecal Coliforms	composite	July	Grab	none	none	330000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer		Enterococci	composite	July	Grab	none	none	1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Pseudomonas	composite	July	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer		Staphylococcus aureus	composite	July	Grab	none	none	1000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer		volumetric flow	composite	July	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer		pH	composite	August	24 hour	20	All results < 1.2	16.6	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer		pH	composite	August	24 hour	6.0 - 10.0	within range	6.6-9.1	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	August	24 hour	42	<	18.2-36.8	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers					
SE-1	Sewer	BOD	composite	August	24 hour	1000	All results < 1.2	323	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA					
SE-1	Sewer	COD	composite	August	24 hour	3000	All results < 1.2	1510	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005					
SE-1	Sewer	Suspended Solids	composite	August	24 hour	500	All results < 1.2	384	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005					
SE-1	Sewer	Total Coliforms	composite	August	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2					
SE-1	Sewer		OFG	composite	August	24 hour	100	All results < 1.2	99.4	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer		Total Coliforms	composite	August	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				

SE-1	Sewer	Faecal Coliforms	composite	August	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer	Enterococci	composite	August	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology 7th ed p 160					
SE-1	Sewer	Pseudomonas	composite	August	Grab	none	none	>100000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer	Staphylococcus aureus	composite	August	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer	volumetric flow	composite	September	24 hour	20	All results < 1.2	18.6	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer	pH	composite	September	24 hour	6.0 - 10.0	within range	6.8-8.4	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	September	24 hour	42	<	16.9-34.9	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	September	24 hour	1000	All results < 1.2	153	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA				
SE-1	Sewer	COD	composite	September	24 hour	3000	All results < 1.2	352	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005				
SE-1	Sewer	Suspended Solids	composite	September	24 hour	500	All results < 1.2	56	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005				
SE-1	Sewer	MBAS	composite	September	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2				
SE-1	Sewer	OFG	composite	September	24 hour	100	All results < 1.2	8.8	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer	Total Coliforms	composite	September	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer	Faecal Coliforms	composite	September	Grab	none	none	<1000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer	Enterococci	composite	September	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology 7th ed p 160					
SE-1	Sewer	Pseudomonas	composite	September	Grab	none	none	>100000	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer	Staphylococcus aureus	composite	September	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer	volumetric flow	composite	October	24 hour	20	All results < 1.2	17	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer	pH	composite	October	24 hour	6.0 - 10.0	within range	6.9-7.6	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	October	24 hour	42	<	16-30	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	October	24 hour	1000	All results < 1.2	225	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA				
SE-1	Sewer	COD	composite	October	24 hour	3000	All results < 1.2	593	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005				
SE-1	Sewer	Suspended Solids	composite	October	24 hour	500	All results < 1.2	37	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005				
SE-1	Sewer	MBAS	composite	October	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2				
SE-1	Sewer	OFG	composite	October	24 hour	100	All results < 1.2	9.4	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer	Total Coliforms	composite	October	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer	Faecal Coliforms	composite	October	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer	Enterococci	composite	October	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology 7th ed p 160					
SE-1	Sewer	Pseudomonas	composite	October	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer	Staphylococcus aureus	composite	October	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer	volumetric flow	composite	November	24 hour	20	All results < 1.2	14.3	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer	pH	composite	November	24 hour	6.0 - 10.0	within range	6.9-8.0	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	November	24 hour	42	<	7 - 33	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	November	24 hour	1000	All results < 1.2	393	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA				
SE-1	Sewer	COD	composite	November	24 hour	3000	All results < 1.2	1540	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005				
SE-1	Sewer	Suspended Solids	composite	November	24 hour	500	All results < 1.2	357	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005				
SE-1	Sewer	MBAS	composite	November	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2				
SE-1	Sewer	OFG	composite	November	24 hour	100	All results < 1.2	27	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer	Total Coliforms	composite	November	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer	Faecal Coliforms	composite	November	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer	Enterococci	composite	November	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology 7th ed p 160					
SE-1	Sewer	Pseudomonas	composite	November	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer	Staphylococcus aureus	composite	November	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				
SE-1	Sewer	volumetric flow	composite	December	24 hour	20	All results < 1.2	17.6	m ³ /day	Yes	Other (please describe)	Water meter	Manufacturers				
SE-1	Sewer	pH	composite	December	24 hour	6.0 - 10.0	within range	6.7-7.2	units	Yes	Other (please describe)	pH Meter (Electrode)	Manufacturers				
SE-1	Sewer	Temperature	composite	December	24 hour	42	<	10-23	°C	Yes	Other (please describe)	Temp. Probe	Manufacturers				
SE-1	Sewer	BOD	composite	December	24 hour	1000	All results < 1.2	800	mg/L	Yes	Red Oxygen Meter (Electrode)	APHA / AWWA	APHA				
SE-1	Sewer	COD	composite	December	24 hour	3000	All results < 1.2	2400	mg/L	Yes	Titration	APHA / AWWA	APHA 5520D 2005				
SE-1	Sewer	Suspended Solids	composite	December	24 hour	500	All results < 1.2	400	mg/L	Yes	Gravimetric analysis	APHA / AWWA	APHA 5520D,2005				
SE-1	Sewer	MBAS	composite	December	24 hour	100	All results < 1.2	<0.2	mg/L	Yes	Colorimetry	Hach Kit	Hach Kit De-2				
SE-1	Sewer	OFG	composite	December	24 hour	100	All results < 1.2	3.2	mg/L	Yes	Gravimetry	APHA / AWWA	MEWAM 1980				
SE-1	Sewer	Total Coliforms	composite	December	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 4832:2006	ISO 4832:2006				
SE-1	Sewer	Faecal Coliforms	composite	December	Grab	none	none	300000	cfu/100ml	na	Selective medium	ISO 16649-201	ISO 16649-201				
SE-1	Sewer	Enterococci	composite	December	Grab	none	none	<100	cfu/100ml	na	Selective medium	Practical Food Microbiology 7th ed p 160					
SE-1	Sewer	Pseudomonas	composite	December	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO16266:2006	ISO16266:2006				
SE-1	Sewer	Staphylococcus aureus	composite	December	Grab	none	none	<100	cfu/100ml	na	Selective medium	ISO6888-1:1999	ISO6888-1:1999				

Continuous monitoring

5 Does your site carry out continuous emissions to water/sewer monitoring? Additional Information

Yes	
-----	--

If yes please summarise your continuous monitoring data below in Table 4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table 4 below

No	
----	--

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

Yes	
-----	--

8 Did abatement system bypass occur during the reporting year? If yes please complete table 5 below

No	
----	--

Table 4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	% compliance current reporting year	Comments
SE1	Wastewater/ Sewer	volumetric flow	<20	Monthly	All values < ELV	m3/day	6365000	65	Nil	100	New water meter installed
SE1	Wastewater/ Sewer	pH	6 - 10		No pH value shall deviate from the specified range	pH units	All results within range	NA		100	
SE1	Wastewater/ Sewer	Temperature	<42		No temperature value shall exceed the limit value.	degrees C	All results below limit	NA		100	

note 1: Volumetric flow shall be included as a reportable parameter.

Table 5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

Bund testing

dropdown menu click to see options

Additional information

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table 1 below listing all bunds and containment structures on site

2 Please provide integrity testing frequency period

Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)

Yes	
3 years	
Yes	

Table 1: Summary details of bund integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of Integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
Bund 1B/9147	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass		SELECT	14/04/2014	
Bund 2A/10149	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass			14/04/2014	
Bund 2B/10148	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass			14/04/2014	
Bund 1A/9147	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass			14/04/2014	
Bund 1C/9146	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass			14/04/2014	
Bund 2C/10147	prefabricated	moulded	Drummed liquids	250L	220L (110%)	Hydraulic test		08/11/2011	Yes	Pass			14/04/2014	
Bund 4 (Cabinet)	prefabricated	steel welded	Liquids in cans/bottles	29L	29L (110%)	Hydraulic test		14/4/2011	Yes	Pass			14/04/2014	
Bund 5	prefabricated	steel welded	Liquids in cans/bottles	257L	27.5L (110%)	Hydraulic test		14/4/2011	Yes	Pass			14/04/2014	

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

5 Are channels/transfer systems to remote containment systems tested?

6 Are channels/transfer systems compliant in both integrity and available volume?

7 Do all sumps and chambers have high level liquid alarms?

8 If yes to Q7 are these failsafe systems included in a maintenance and testing programme?

[bundings and storage guidelines](#)

Commentary	
Yes	EPA: IPPC Guidance Note Storage and Transfer of Materials for Scheduled
N/A	
N/A	
N/A	
N/A	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site

2 Please provide integrity testing frequency period

Yes	
5 years	

Table 2: Summary details of underground structures/pipeline integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
Storm water drains	Storm	polypropylene	No	N/A	CCTV	Yes	Pass	Tested 2008, some leaks found.	Repairs completed and systems passed retest in 2009	2014	
Foul water sewer	Foul	polypropylene	No	N/A	CCTV	Yes	Pass	Tested 2008, some leaks found.	Repairs completed and systems passed retest in 2009	2014	

Please use commentary for additional details not answered by tables/ questions above

Environmental Liability Risk Assessment

		Commentary	
1	Is it a requirement of your licence to complete an ELRA?	Yes	
2	Has an initial ELRA been submitted to and approved by the Agency?	Yes	
3	Please enter the date of submission of the initial ELRA	2000	
4	Date of most recent substantial ELRA update	2011	
5	What financial instrument/s do you have in place to cover unknown liabilities?	Insurance	
6	Has this financial instrument/s been verified by the Agency?	Yes	
7	What is the date of expiry of this financial instrument?	Annual	
8	Date of next required review of the ELRA?	2012	Costs reviewed annually
9	Please list the top 10 risks assessed on your site in table 1 below		

Table 1 ELRA summary information

Risk ID	Potential hazards	Environmental effect	Previous risk score	Mitigation measures to reduce risk			ELRA		Does the current financial provision (FP) cover the risk score?
				Action	Date of implementation of mitigation measures	Comment	Revised Risk score for current reporting year	ELRA costing	
Process Plant failure	Contamination of treatment plant as a result of treatment plant failure or fire	Surface water contamination	3	Operational controls	2006	Treatment plant regularly cleaned and maintained. Clinical waste spilled or removed during maintenance or plant closure is recovered and reprocessed	1	<14,500,000	Yes
Process Plant failure	Release of unsterilised waste	Air/Surface water /soil/groundwater contamination	1	Operational controls	2011	Routine checks of equipment performance and product sterility. Process Line 1 rebuilt during year	1	<14,500,000	Yes
Process Plant failure	Release of contaminated effluent	Water contamination	3	Operational controls	2011	Routine checks of equipment performance and product sterility. Process effluent and contamination-risk surface water discharged to foul sewer. Yard drainage improved.	1	<14,500,000	Yes
Storage of Untreated Waste	Spread of infection, nuisance	Spread of infection, nuisance	1	Operational controls	2000	Retention of untreated waste restricted by licence. Plan for alternative treatment of waste in place.	1	<14,500,000	Yes
Inadvertent release of treated waste	Drain blockage, nuisance	Drain blockage and effluent escape	3	Operational controls	2009	All waste handling areas enclosed. Released waste immediately cleaned up. Regular litter patrols round site.	1	<14,500,000	Yes
Emissions to sewer	Release of contaminated effluent	Contamination of wastewater due to treatment plant failure or fire	5	Infrastructural improvements	2011	Parametric monitoring of flow, pH and temp.	2	<14,500,000	Yes
Inadvertent release of treated waste	Untreated waste released	Contamination of groundwater	5	Operational controls	2000	All waste subject to positive release	1	<14,500,000	Yes
SELECT			SELECT	SELECT			SELECT		SELECT
SELECT			SELECT	SELECT			SELECT		SELECT
SELECT			SELECT	SELECT			SELECT		SELECT
SELECT			SELECT	SELECT			SELECT		SELECT
Total			SELECT	SELECT			SELECT		SELECT

e.g

1	Was a closure or restoration plan a requirement of the licence?	Yes
2	Has a closure plan submission been approved by the Agency?	Yes
3	What is the timescale for submission?	Submitted with 2010 AER
4	What financial instrument do you have in place to cover known liabilities?	Insurance
5	What is the date of expiry of this financial instrument?	8.11.2012
6	What is the status of implementation of the plan?	Not implemented.

Table 2 CRAMP summary information (NON Landfill)

Date of submission of plan	Risk category	Closure plan in place	Clean closure	Restoration Aftercare Management Plan	Change in Risk category since previous year	Increase in risk category	Does the current financial provision cover the risk score?	Value of current financial provision for site
2011	2	Yes	Yes	N/A	No	No	Yes	€27,306.00

Environmental Management Programme (EMP)/Continuous Improvement Programme

Highlighted cells contain dropdown menu click to view		Additional Information
1	Do you maintain an Environmental Mangement System for the site. If yes, please detail in additional information	Yes EMS accredited to ISO 14001.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Aspect 2. Reduction of emissions to Wastewater	Extension of parametric monitoring to effluent pH and Temp recording	100	Complete	Individual	Reduced emissions
Aspect 5. Collection/Transport/Treatment of waste	Improve environmental training.	100	Carry out environmental training.	Individual	Improved Environmental Management Practices
Aspect 7. Energy Usage	Reduce energy usage by 5%.	30	Software program installed which will allow full visibility of real-time electricity usage. Energy intensive areas can be investigated and improved on.	Section Head	Improved Environmental Management Practices
Aspect 4. Releases to Land	Increase annual diversion rate from landfill (target 75% diversion).	50	Additional recovery facility, Indaver, has been added to SRCL's approved destination list.	Section Head	Reduced emissions

Noise Monitoring Report Summary

1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table 1 noise summary below

Yes

2 Was noise monitoring carried out using the EPA Guidance note including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?

[Draft Noise Guidance](#)

Yes

3 Does your site have a noise reduction plan

No

4 When was the noise reduction plan last updated?

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

No

Table 1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
05.07.2011	08:12 - 08:42	B4		61.1	54.6	63.3		No	No	Low level plant noise, local traffic	Yes
05.07.2011	08:46 - 09:16	B3		59.3	51.2	61.9		No	No	Noise from adjacent facility, local traffic	Yes
05.07.2011	09:27 - 09:57	B2		59.8	54.2	61.7		No	No	Local industrial noise, facility, forklift movements	Yes
05.07.2011	10:06 - 10:36	B1		58.5	49.7	60.1		No	No	Industrial noise and local traffic	Yes
05.07.2011	22:07 - 22:22	B4		54.1	48.9	55.3		No	No	Low level plant noise, local traffic	Yes
05.07.2011	22:26 - 22:41	B3		52.1	43.5	54.4		No	No	Low level plant noise, local traffic	Yes
05.07.2011	22:46 - 23:01	B2		47.6	43.8	49.4		No	No	Mainly local traffic	Yes
05.07.2011	23:04 - 23:19	B1		52.6	44.3	54.3		No	No	Noise from facility, local traffic	Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

SELECT

** please explain the reason for not taking action/resolution of noise issues?

Any additional comments? (less than 200 words)

Resource usage/ Energy Efficiency

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
[SEAI - Large](#)
 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information [Industry Energy Network \(LIEN\)](#)
- 2 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information
- 3

Additional information

2007	
no	
SELECT	Not applicable.

Table 1 Energy usage on site

Energy Use	Previous year kWh	Current year kWh	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total	2400000	2518856	-1.5	6.50%
Electricity	512000	493647	-1.5	-2.10%
Fossil Fuels:				
Heavy Fuel Oil				
Light Fuel Oil				
Natural gas	1888000	2025209	-1.5	8.50%
Coal/Solid fuel				
Renewable energy generated on site				

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table 2 Water usage on site

Water use	Previous year m3/yr.	Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Groundwater				
Surface water				
Public supply	3852	6364	-1.5	65.2
Total	3852	6364		

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table 3: Energy Audit finding recommendations

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
13.04.2007	Review treatment process for potential inefficiencies / % reductions in use.	Refurbishment of Line 1 to prevent steam loss.	energy audit	Unknown	Q1 2008	General Manager	Q1 2008	Complete.
			SELECT					
			SELECT					

SECTION A-PRTR WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

PRTR facility login

dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

Were any wastes **accepted onto** your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)

If yes please enter details in table 1 below

Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

Additional Information

Yes	
-----	--

SELECT	
SELECT	

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/Increase over previous year +/- %	Reason for reduction/increase from previous reporting year	Packaging Content (%) only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	European Waste Catalogue EWC codes					#DIV/0!					
15000	180101-04, 180201-03	18- WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)	hazardous waste for treatment	8514.75	8644		1.5% reduction in waste generated by customers.	0%	D9-Physico-Chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means D1 to D12	0	
2000	180102-03, 180206-09, 180202, 180205-08	18- WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)	hazardous waste for transfer only	0	0						
1000	150102	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	non-hazardous waste	0	0						
		SELECT					#DIV/0!		SELECT		
		SELECT					#DIV/0!		SELECT		

E.g.
E.g.

SECTION C- TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite

Yes	
SELECT	
Yes	

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

Yes	
Yes	
N/A	

6 Does your facility have relevant nuisance controls in place?
 7 Do you have an odour management system in place for your facility? If no why?
 8 Do you maintain a sludge register on site?

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments
e.g. Household (residual)	30,000	22,000		
e.g. Industrial non hazardous solids	500	60	120,000	

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
Cell 8													

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments

..+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?
 10 Is leachate released to surface water? If yes please complete leachate mass load information below

SELECT
SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / kWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Appendix 2 PRTR Reporting Workbook



[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.13

REFERENCE YEAR 2011

1. FACILITY IDENTIFICATION

Parent Company Name	SRCL Limited
Facility Name	SRCL Limited
PRTR Identification Number	W0055
Licence Number	W0055-02

Waste or IPPC Classes of Activity

No.	class_name
3.7	#####
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.
4.13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
4.9	Use of any waste principally as a fuel or other means to generate energy.
Address 1	420-430 Beech Road
Address 2	Western Industrial Estate
Address 3	Naas Road
Address 4	Dublin 12
	Dublin
Country	Ireland
Coordinates of Location	-6.3626 53.3218
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Rachel Griffith
AER Returns Contact Email Address	rgriffith@srcl.com
AER Returns Contact Position	Environmental Officer
AER Returns Contact Telephone Number	01 4659125
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
5(c)	Installations for the disposal of non-hazardous waste
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

{ PRTR# : W0055 | Facility Name : SRCL Limited | Filename : W0055_2011(1).xls | Return Year : 2011 }

26/03/2012 15:51

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
Name		Method Used			Emission Point 1			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
Name		Method Used			Emission Point 1			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

POLLUTANT		METHOD			QUANTITY					
Name		Method Used			Emission Point 1					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	A2.1	A2.2	A2.3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
237	Volatle organic compounds (as TOC)	M	ALT	EN12619	2.08	0.83	1.66	4.57	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	SRCL Limited			
	T (Total) kg/Year	M/C/E	Method Code	Designation or Description
Total estimated methane generation (as per site model)	0.0			Facility Total Capacity m3 per hour N/A
Methane flared	0.0			0.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0			N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0055 | Facility Name : SRCL Limited | Filename : W0055_2011(1).xls | Return Year : 2011 |

29/03/2012 15:52

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
			Method Code	Designation or Description					
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
			Method Code	Designation or Description					
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs				
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
			Method Code	Designation or Description					
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0055 | Facility Name : SRCL Limited | Filename : W0055_2011(1).xls | Return Year : 2011 | 29/03/2012 15:54

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs				
POLLUTANT			METHOD		QUANTITY				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	SE-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
76	Total organic carbon (TOC) (as total C or COD/3)	M	ALT	HACH Method		1565.5	1565.5	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs				
POLLUTANT			METHOD		QUANTITY				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	SE-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
303	BOD	M	ALT	Dissolved Oxygen Meter (Electrode)		1262.7	1262.7	0.0	0.0
306	COD	M	ALT	HACH Method		4696.4	4696.4	0.0	0.0
240	Suspended Solids	M	ALT	Gravimetric Analysis		1022.2	1022.2	0.0	0.0
308	Detergents (as MBAS)	M	ALT	HACH Test Kit		0.0	0.0	0.0	0.0
314	Fats, Oils and Greases	M	ALT	Soxhlet Method		133.9	133.9	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0055 | Facility Name : SRCL Limited | Filename : W0055_2011(1).xls | Return Year : 2011 |

29/03/2012 15:54

SECTION A : PRTR POLLUTANTS

POLLUTANT		METHOD		Please enter all quantities in this section in KGs		
RELEASERS TO LAND		METHOD USED		QUANTITY		
No. Annex II	Name	M/C/E	Method Code Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
				0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

POLLUTANT		METHOD		Please enter all quantities in this section in KGs		
RELEASERS TO LAND		METHOD USED		QUANTITY		
Pollutant No.	Name	M/C/E	Method Code Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
				0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# W0055 | Facility Name SRCL Limited | Filename W0055_2011(1).xls | Return Year 2011 |

29/03/2012 15:54

Please enter all quantities on this sheet in Tonnes

7

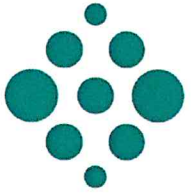
Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Non	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste : Address of Recover/Disposer						
Within the Country	19 02 03	No	2091.2	premixed wastes composed only of non-hazardous wastes	D5	M	Weighed	Offsite in Ireland	Greenstar Ballynagran Landfill,W0165-01		Coolbeg ,,,,Co. Wicklow ,Ireland		
Within the Country	19 02 03	No	144.36	premixed wastes composed only of non-hazardous wastes	D5	M	Weighed	Offsite in Ireland	Wicklow County Council Rampere Landfill,W0066-02		Ballinglass ,,,,Co. Wicklow ,Ireland		
Within the Country	19 02 03	No	343.4	premixed wastes composed only of non-hazardous wastes	D15	M	Weighed	Offsite in Ireland	Panda (formerly Greenstar),W0039-02		Ballymount Cross ,,,,Dublin 22,Ireland		
Within the Country	19 02 03	No	347.44	premixed wastes composed only of non-hazardous wastes	D15	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd.,W0208-01		Merrywell Industrial Estate,Ballymount Road Lower ,Dublin 22,Ireland		
Within the Country	19 02 03	No	486.28	premixed wastes composed only of non-hazardous wastes	D5	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-03		Carbury ,,,,Co. Kildare,Ireland		
Within the Country	19 02 03	No	5643.8	premixed wastes composed only of non-hazardous wastes	R1	M	Weighed	Offsite in Ireland	Lagan Cement,P0487-05		Killaskillen Road ,Kinegad,Co. Meath,Ireland		
Within the Country	19 02 03	No	39.4	premixed wastes composed only of non-hazardous wastes	R1	M	Weighed	Offsite in Ireland	Indaver Ltd.,W0167-02		Carranstown ,,,,Co. Meath,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

Appendix 3 Process Verification Report



SRCL[®]
Protecting People. Reducing Risk.™

Process Verification Report Waste Licence W0055-02

SRCL

AER 2011

1. Introduction.

The performance of the STI Model 2000 is tested in accordance with Schedule C4 of the Waste Licence by means of two microbiological tests, data logger and parametric monitoring.

The procedures for Process Verification (Efficacy) Testing are set out in Appendix C.4 of the Waste Licence.

2. Monthly random grab samples of processed waste.

The grab sample involves testing a sample of treated waste for the presence of three indicator organisms - *Staphylococcus aureus*, *Salmonella typhimurium* and *Streptococcus faecalis*. These tests are carried out by AMS Laboratories in accordance with their procedures ESGM/M/307, EGSM/M/515 & IML33 respectively. If these tests show that the three indicator organisms are not detected in the sample, then this is interpreted as a pass.

Results are reported to the EPA on a quarterly basis as part of the Processed Waste Monitoring Reports and are available for inspection at the facility.

3. Challenge testing for spore forming organisms.

The spore test involves introduction of a spore strip to demonstrate 6 log reduction in *Bacillus atrophaeus* spores. Spores are put through each processing line and then added to 10ml sterile Tryptone Soya Broth (TSB). They are incubated at 37°C for 48 hours. The 25ml screw-top bottles containing the spores and TSB are then visually inspected. If the broth remains clear, this indicates a pass. If the broth appears cloudy, this indicates bacterial growth and therefore a fail. The AMS procedure reference is AMS100 and is available on request.

Results are reported to the EPA on a quarterly basis as part of the Processed Waste Monitoring Reports and are available for inspection at the facility.

4. Waste within treatment units.

Temperature and residence time are checked on each Treatment Line every month by data logger. All readings are within appropriate temperature range and residence time.

The results for the year are attached.

5. Parametric monitoring.

Lower and Upper Clav temperature probes record the temperature inside the auger every 5 minutes. Auger rotation speed (measured as Hz) is also recorded. Results are saved as monthly files and are available on site.

All records are within the appropriate range. It is not possible to process waste should temperatures drop from the appropriate range. The auger on both lines is programmed to shut off at a set point of 93°C.

Line 1 Data Logger Reports 2011

Data logger line 1

(1)

Report

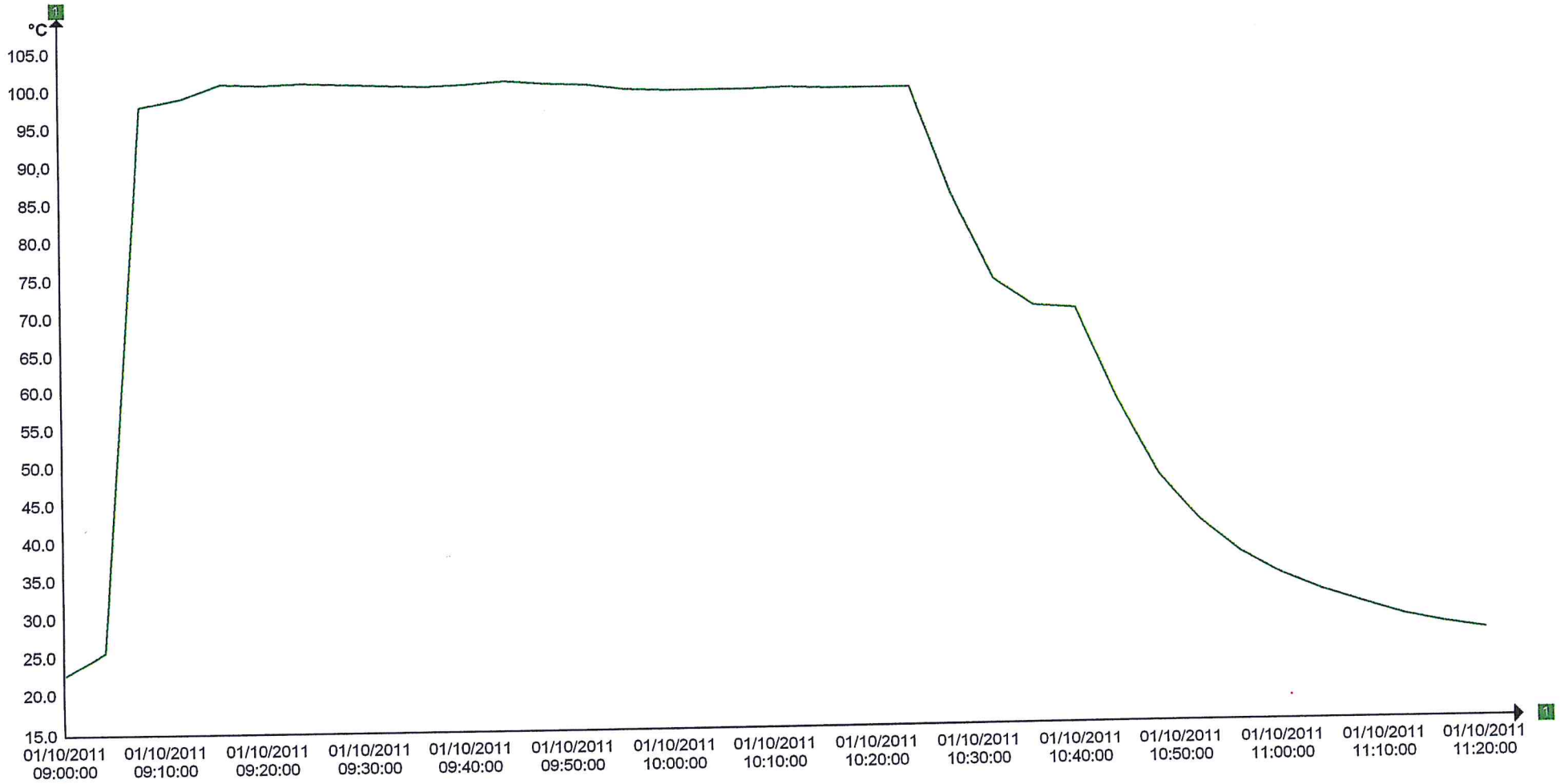
Checked Eme
10/01/2011

Winlog.pro

10/01/2011

(2)

Chart



Delta-X: 10min
Untitled

Report

Winlog.pro

10/01/2011

Logger #10419372 - EBI1

Measurement

StartDate: 10/01/2011 09:00:00
Interval: 240s
Values: 36

Logger information

Logger description:
Owner:
Location:
Description:

Channels

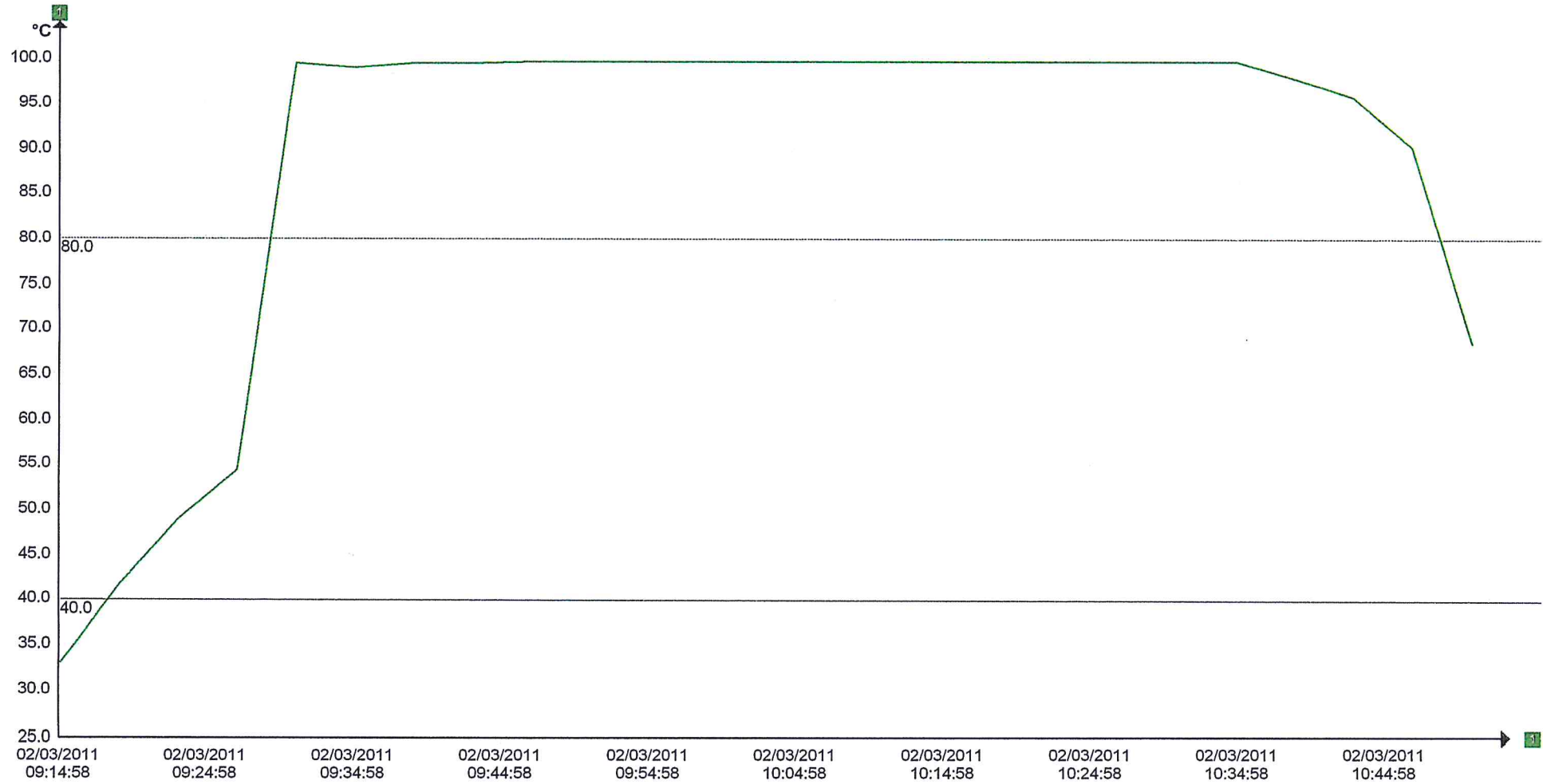
Curve	Index	Type	Unit	Name	Min	Max	Mean	MKT	Std. Dev.	Variance	MinLimit	MaxLimit
1	1	Temperature	°C		22.60	101.00	75.25	72.44	31.05	963.84	0.00	0.00

Logger #10419372 - EBI1 - date:10/01/2011 09:00:00

Channel 1 [°C]

Timestamp	Value	Timestamp	Value	Timestamp	Value	Timestamp	Value
09:00:00	22.6	09:04:00	25.6	09:08:00	98.0	09:12:00	99.1
09:16:00	101.0	09:20:00	100.7	09:24:00	100.9	09:28:00	100.8
09:32:00	100.5	09:36:00	100.3	09:40:00	100.6	09:44:00	100.9
09:48:00	100.4	09:52:00	100.2	09:56:00	99.6	10:00:00	99.5
10:04:00	99.5	10:08:00	99.5	10:12:00	99.6	10:16:00	99.5
10:20:00	99.5	10:24:00	99.4	10:28:00	85.0	10:32:00	73.7
10:36:00	70.1	10:40:00	69.7	10:44:00	57.8	10:48:00	47.6
10:52:00	41.4	10:56:00	37.1	11:00:00	34.1	11:04:00	31.9
11:08:00	30.1	11:12:00	28.6	11:16:00	27.5	11:20:00	26.6

Chart



Report

Winlog.pro

03/02/2011

Logger #10142052 - EBI1

Measurement

StartDate: 03/02/2011 09:15:00

Interval: 240s

Values: 25

Logger information

Logger description:

Owner:

Location:

Description:

Channels

Curve	Index	Type	Unit	Name	Min	Max	Mean	MKT	Std. Dev.	Variance	MinLimit	MaxLimit
1	1	Temperature	°C		33.00	99.80	89.00	87.71	21.09	444.84	40.00	80.00

Logger #10142052 - EBI1 - date:03/02/2011 09:15:00

Channel 1 [°C]

Timestamp	Value	Timestamp	Value	Timestamp	Value	Timestamp	Value
09:15:00	33.0	09:19:00	41.6	09:23:00	48.9	09:27:00	54.4
09:31:00	99.5	09:35:00	99.1	09:39:00	99.6	09:43:00	99.6
09:47:00	99.7	09:51:00	99.7	09:55:00	99.7	09:59:00	99.8
10:03:00	99.8	10:07:00	99.8	10:11:00	99.8	10:15:00	99.7
10:19:00	99.8	10:23:00	99.7	10:27:00	99.8	10:31:00	99.8
10:35:00	99.8	10:39:00	97.9	10:43:00	95.7	10:47:00	90.2
10:51:00	68.5						

Logger data

Document : Ebro 04 03 11

04/03/2011 12:37:39

1/1

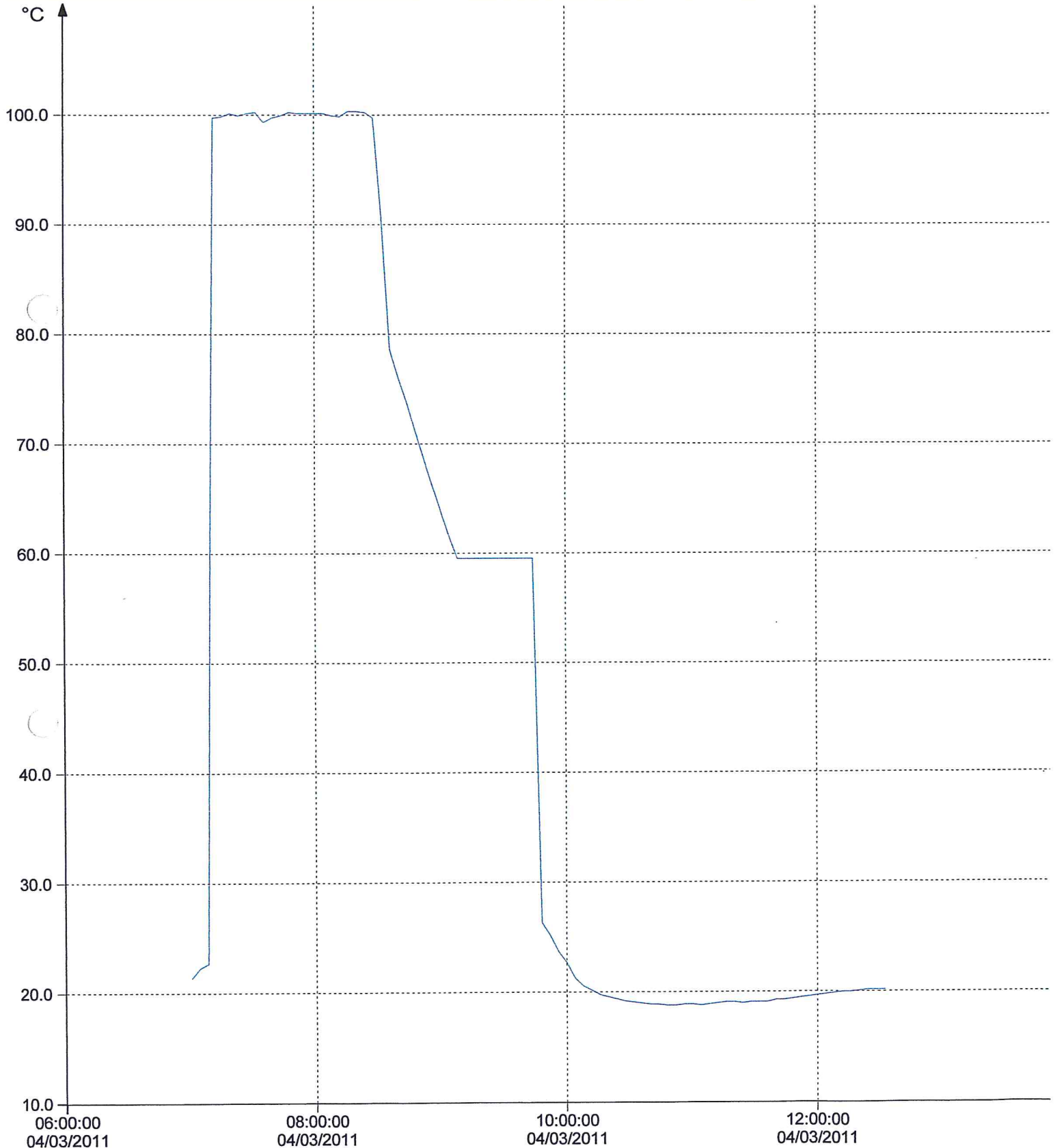
Company name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

(1)

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	84	240 Sec.	04/03/2011 07:00:00	04/03/2011 12:32:00	00 Days, 05:32:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	91	100	18.8	100.4	49.4	1163.6	34.1	81.6	0 02:32:00	0 00:44:00	0 04:16:00



Data

Document : ebro chart 04 03 11

04/03/2011 12:45:18

1/

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	86	240 Sec.	04/03/2011 07:00:00	04/03/2011 12:40:00	00 Days, 05:40:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	91	100	18.8	100.4	48.8	1155.9	34.0	81.6	0 02:32:00	0 00:44:00	0 04:24:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1
07:00:00 04/03/2011	21.4	07:04:00 04/03/2011	22.3	07:08:00 04/03/2011	22.7	07:12:00 04/03/2011	99.8	07:16:00 04/03/2011	99.9	07:20:00 04/03/2011	100.0
07:24:00 04/03/2011	100.0	07:28:00 04/03/2011	100.2	07:32:00 04/03/2011	100.3	07:36:00 04/03/2011	99.4	07:40:00 04/03/2011	99.8	07:44:00 04/03/2011	100.0
07:48:00 04/03/2011	100.3	07:52:00 04/03/2011	100.2	07:56:00 04/03/2011	100.2	08:00:00 04/03/2011	100.2	08:04:00 04/03/2011	100.2	08:08:00 04/03/2011	100.0
08:12:00 04/03/2011	99.9	08:16:00 04/03/2011	100.4	08:20:00 04/03/2011	100.4	08:24:00 04/03/2011	100.3	08:28:00 04/03/2011	99.8	08:32:00 04/03/2011	99.9
08:36:00 04/03/2011	78.7	08:40:00 04/03/2011	76.1	08:44:00 04/03/2011	73.9	08:48:00 04/03/2011	71.3	08:52:00 04/03/2011	68.8	08:56:00 04/03/2011	66.1
09:00:00 04/03/2011	64.0	09:04:00 04/03/2011	61.7	09:08:00 04/03/2011	59.6	09:12:00 04/03/2011	59.6	09:16:00 04/03/2011	59.6	09:20:00 04/03/2011	59.6
09:24:00 04/03/2011	59.6	09:28:00 04/03/2011	59.6	09:32:00 04/03/2011	59.6	09:36:00 04/03/2011	59.6	09:40:00 04/03/2011	59.6	09:44:00 04/03/2011	59.6
09:48:00 04/03/2011	26.4	09:52:00 04/03/2011	25.2	09:56:00 04/03/2011	23.7	10:00:00 04/03/2011	22.7	10:04:00 04/03/2011	21.3	10:08:00 04/03/2011	20.2
10:12:00 04/03/2011	20.2	10:16:00 04/03/2011	19.8	10:20:00 04/03/2011	19.6	10:24:00 04/03/2011	19.4	10:28:00 04/03/2011	19.2	10:32:00 04/03/2011	19.0
10:36:00 04/03/2011	19.0	10:40:00 04/03/2011	18.9	10:44:00 04/03/2011	18.9	10:48:00 04/03/2011	18.8	10:52:00 04/03/2011	18.8	10:56:00 04/03/2011	18.8
11:00:00 04/03/2011	18.9	11:04:00 04/03/2011	18.8	11:08:00 04/03/2011	18.9	11:12:00 04/03/2011	19.0	11:16:00 04/03/2011	19.1	11:20:00 04/03/2011	19.1
11:24:00 04/03/2011	19.0	11:28:00 04/03/2011	19.1	11:32:00 04/03/2011	19.1	11:36:00 04/03/2011	19.1	11:40:00 04/03/2011	19.3	11:44:00 04/03/2011	19.3
11:48:00 04/03/2011	19.4	11:52:00 04/03/2011	19.5	11:56:00 04/03/2011	19.6	12:00:00 04/03/2011	19.7	12:04:00 04/03/2011	19.8	12:08:00 04/03/2011	19.8
12:12:00 04/03/2011	20.0	12:16:00 04/03/2011	20.0	12:20:00 04/03/2011	20.1	12:24:00 04/03/2011	20.2	12:28:00 04/03/2011	20.2	12:32:00 04/03/2011	20.2
12:36:00 04/03/2011	20.2	12:40:00 04/03/2011	20.2								

Logger data

Document : 7

06/04/2011 08:39:13

1/1

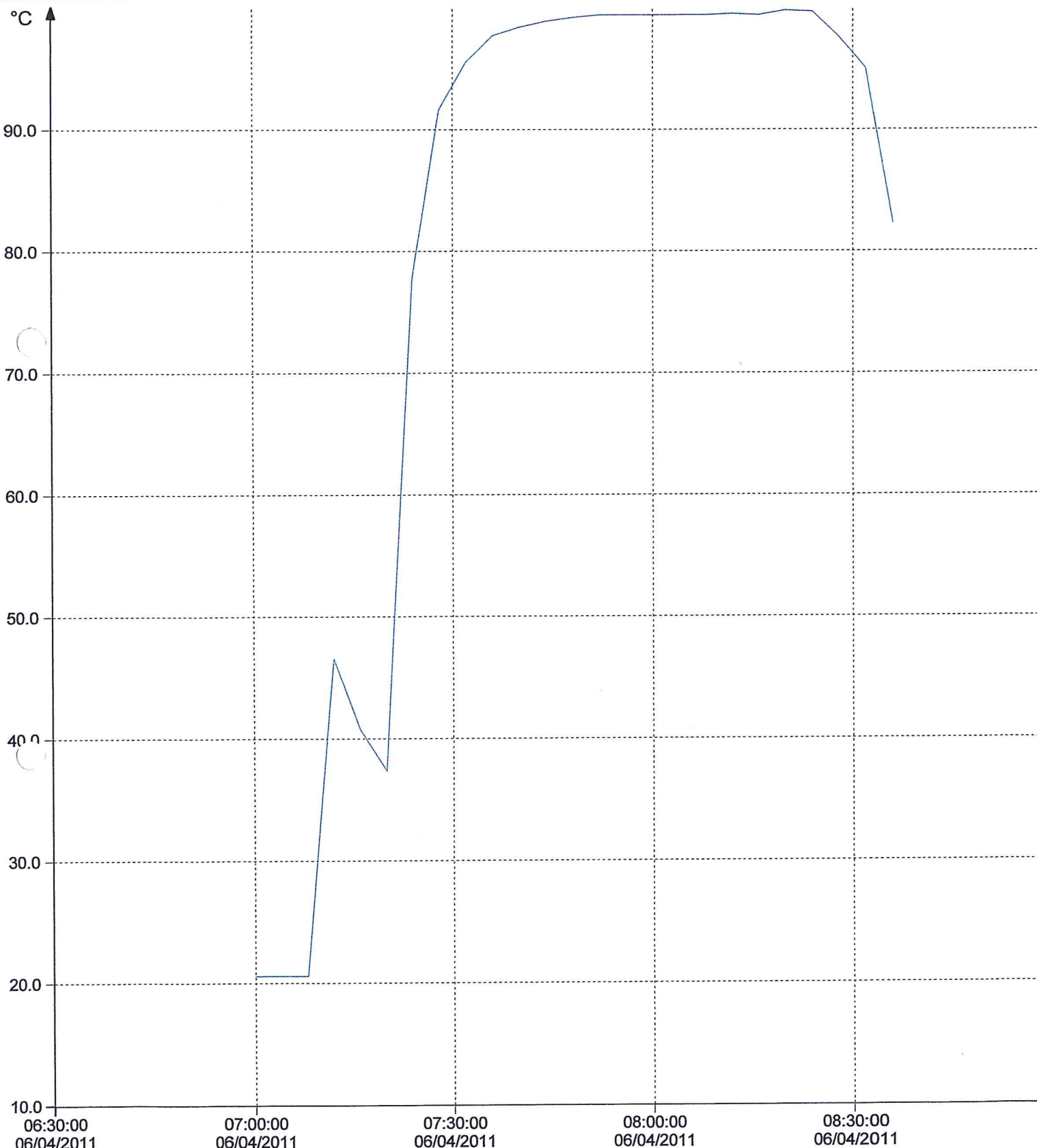
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	25	240 Sec.	06/04/2011 07:00:00	06/04/2011 08:36:00	00 Days, 01:36:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	20.6	99.9	80.7	867.4	29.5	79.3	0 01:20:00	0 00:00:00	0 00:32:00



Data

Document : 7

06/04/2011 08:39:25

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	25	240 Sec.	06/04/2011 07:00:00	06/04/2011 08:36:00	00 Days, 01:36:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	20.6	99.9	80.7	867.4	29.5	79.3	0 01:20:00	0 00:00:00	0 00:32:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
07:00:00 06/04/2011	20.6	07:04:00 06/04/2011	20.6	07:08:00 06/04/2011	20.6	07:12:00 06/04/2011	46.6	07:16:00 06/04/2011	40.8	07:20:00 06/04/2011	3
07:24:00 06/04/2011	77.8	07:28:00 06/04/2011	91.7	07:32:00 06/04/2011	95.6	07:36:00 06/04/2011	97.8	07:40:00 06/04/2011	98.5	07:44:00 06/04/2011	9
07:48:00 06/04/2011	99.3	07:52:00 06/04/2011	99.5	07:56:00 06/04/2011	99.5	08:00:00 06/04/2011	99.5	08:04:00 06/04/2011	99.5	08:08:00 06/04/2011	9
08:12:00 06/04/2011	99.6	08:16:00 06/04/2011	99.5	08:20:00 06/04/2011	99.9	08:24:00 06/04/2011	99.8	08:28:00 06/04/2011	97.7	08:32:00 06/04/2011	9
08:36:00 06/04/2011	82.3										

Logger data

Document : 9

04/05/2011 10:27:10

1/1

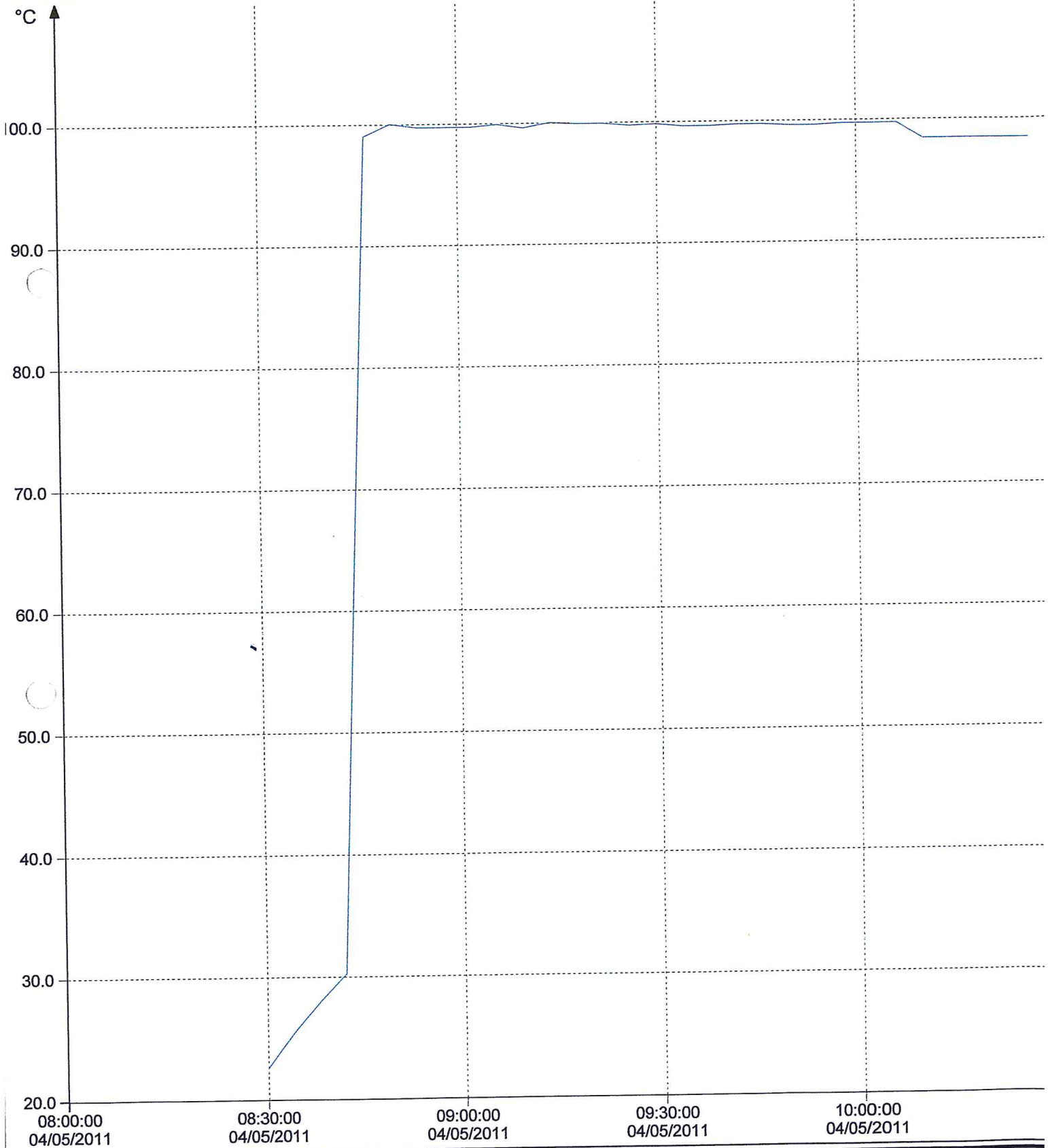
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

①

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	30	240 Sec.	04/05/2011 08:30:00	04/05/2011 10:26:00	00 Days, 01:56:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below mi
1 (Temperature)	90	100	22.6	100.1	89.8	637.6	25.3	77.5	0 00:20:00	0 00:08:00	0 00:16:00



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	30	240 Sec.	04/05/2011 08:30:00	04/05/2011 10:26:00	00 Days, 01:56:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below mi
1 (Temperature)	90	100	22.6	100.1	89.8	637.6	25.3	77.5	0 00:20:00	0 00:08:00	0 00:16:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
8:30:00 04/05/2011	22.6	08:34:00 04/05/2011	25.5	08:38:00 04/05/2011	28.0	08:42:00 04/05/2011	30.3	08:46:00 04/05/2011	99.1	08:50:00 04/05/2011	100.0
8:54:00 04/05/2011	99.8	08:58:00 04/05/2011	99.8	09:02:00 04/05/2011	99.8	09:06:00 04/05/2011	100.0	09:10:00 04/05/2011	99.7	09:14:00 04/05/2011	100.0
9:18:00 04/05/2011	100.0	09:22:00 04/05/2011	100.0	09:26:00 04/05/2011	99.8	09:30:00 04/05/2011	99.9	09:34:00 04/05/2011	99.7	09:38:00 04/05/2011	99.8
9:42:00 04/05/2011	99.8	09:46:00 04/05/2011	99.8	09:50:00 04/05/2011	99.7	09:54:00 04/05/2011	99.7	09:58:00 04/05/2011	99.8	10:02:00 04/05/2011	99.8
10:06:00 04/05/2011	99.8	10:10:00 04/05/2011	98.5	10:14:00 04/05/2011	98.5	10:18:00 04/05/2011	98.5	10:22:00 04/05/2011	98.5	10:26:00 04/05/2011	98.5

Logger data

Document : 11

08/06/2011 09:03:25

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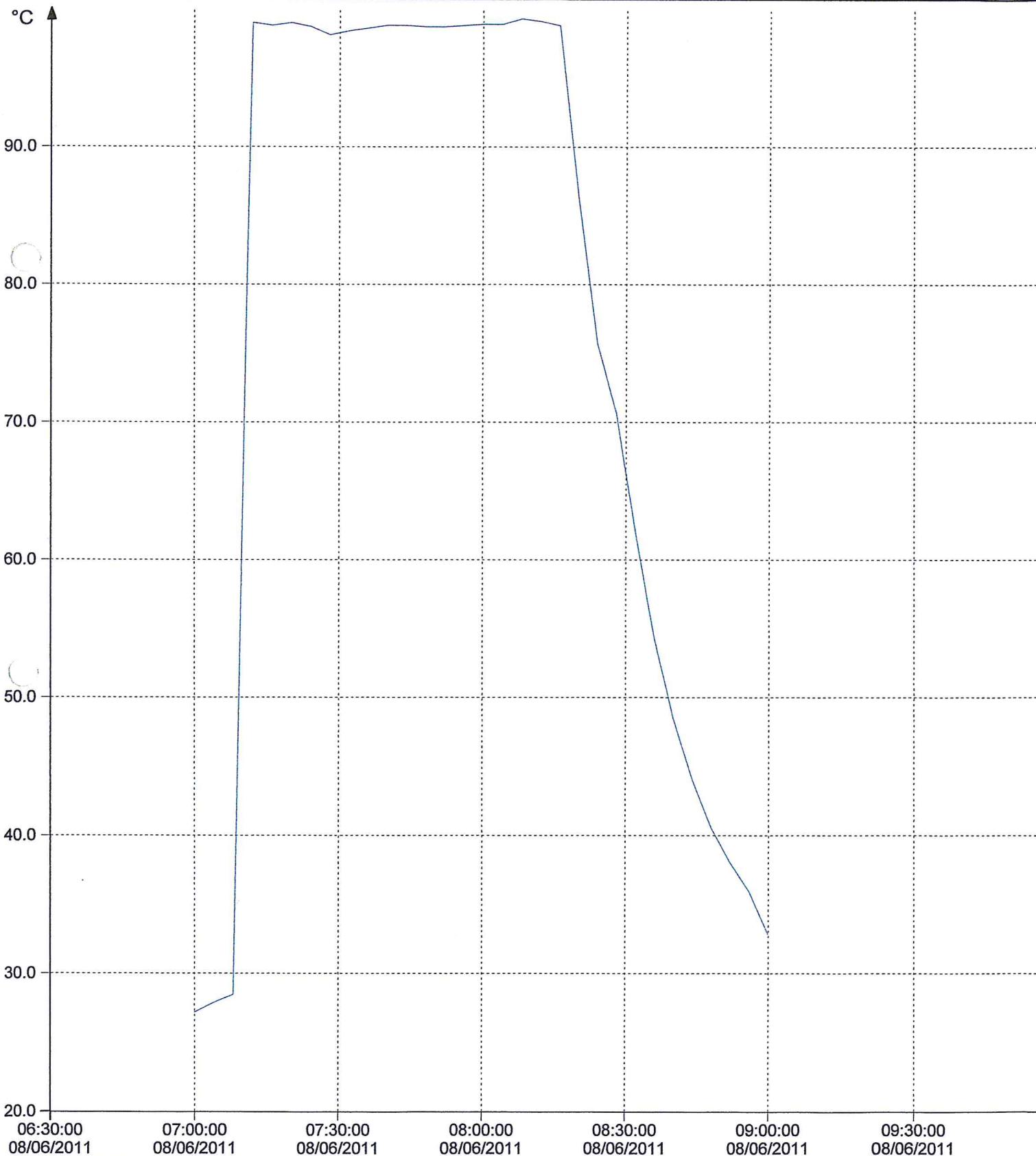
Company Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	31	240 Sec.	08/06/2011 07:00:00	08/06/2011 09:00:00	00 Days, 02:00:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below
1 (Temperature)	90	100	27.2	99.4	75.9	819.2	28.6	72.2	0 01:08:00	0 00:00:00	0 00:56:00



Data

Document : 11

08/06/2011 09:04:28

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	31	240 Sec.	08/06/2011 07:00:00	08/06/2011 09:00:00	00 Days, 02:00:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below
1 (Temperature)	90	100	27.2	99.4	75.9	819.2	28.6	72.2	0 01:08:00	0 00:00:00	0 00:56:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
07:00:00 08/06/2011	27.2	07:04:00 08/06/2011	27.9	07:08:00 08/06/2011	28.5	07:12:00 08/06/2011	99.1	07:16:00 08/06/2011	98.9	07:20:00 08/06/2011	98.9
07:24:00 08/06/2011	98.8	07:28:00 08/06/2011	98.2	07:32:00 08/06/2011	98.5	07:36:00 08/06/2011	98.7	07:40:00 08/06/2011	98.9	07:44:00 08/06/2011	98.9
07:48:00 08/06/2011	98.8	07:52:00 08/06/2011	98.8	07:56:00 08/06/2011	98.9	08:00:00 08/06/2011	99.0	08:04:00 08/06/2011	99.0	08:08:00 08/06/2011	99.0
08:12:00 08/06/2011	99.2	08:16:00 08/06/2011	98.9	08:20:00 08/06/2011	86.5	08:24:00 08/06/2011	75.8	08:28:00 08/06/2011	70.7	08:32:00 08/06/2011	70.7
08:36:00 08/06/2011	54.4	08:40:00 08/06/2011	48.5	08:44:00 08/06/2011	44.1	08:48:00 08/06/2011	40.6	08:52:00 08/06/2011	38.1	08:56:00 08/06/2011	38.1
09:00:00 08/06/2011	32.9										

Line 1 Data Logger
Checked Rf.
09/06/11

Logger data

Document : 10

06/07/2011 11:07:51

1/1

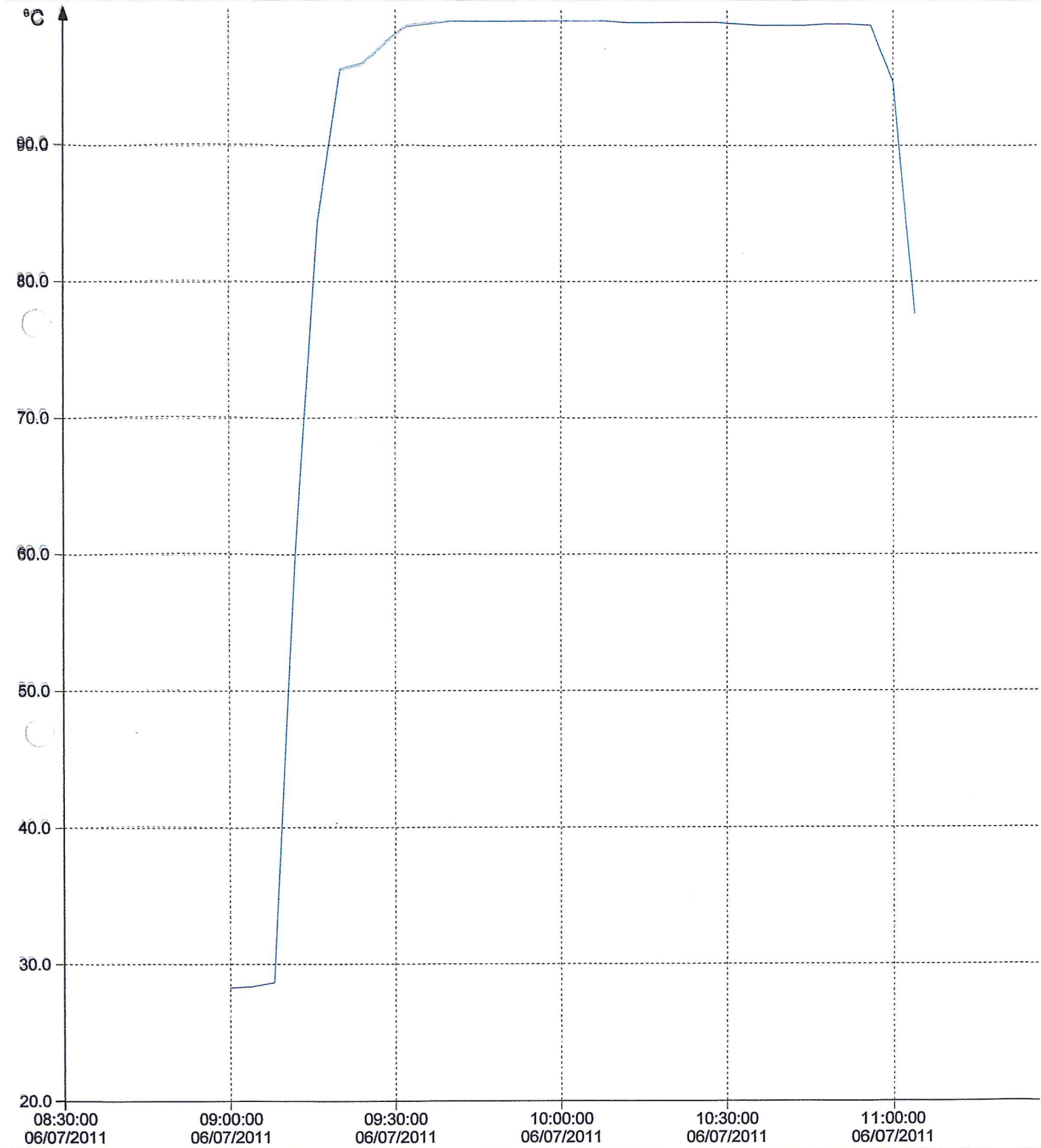
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

(1)

Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
10419372	32	240 Sec.	06/07/2011 09:00:00	06/07/2011 11:04:00	00 Days, 02:04:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	90	100	28.3	99.2	89.7	463.8	21.5	70.9	0 00:40:00	0 00:00:00	0 00:24:00



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
0419372	33	240 Sec.	06/07/2011 09:00:00	06/07/2011 11:08:00	00 Days, 02:08:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min.
1 (Temperature)	90	100	28.3	99.2	89.4	453.6	21.3	70.9	0 00:40:00	0 00:00:00	0 00:28:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
00:00 06/07/2011	28.3	09:04:00 06/07/2011	28.4	09:08:00 06/07/2011	28.7	09:12:00 06/07/2011	60.3	09:16:00 06/07/2011	84.4	09:20:00 06/07/2011	95.6
04:00 06/07/2011	96.0	09:28:00 06/07/2011	97.5	09:32:00 06/07/2011	98.8	09:36:00 06/07/2011	99.0	09:40:00 06/07/2011	99.2	09:44:00 06/07/2011	99.2
08:00 06/07/2011	99.2	09:52:00 06/07/2011	99.2	09:56:00 06/07/2011	99.2	10:00:00 06/07/2011	99.2	10:04:00 06/07/2011	99.2	10:08:00 06/07/2011	99.2
12:00 06/07/2011	99.1	10:16:00 06/07/2011	99.1	10:20:00 06/07/2011	99.1	10:24:00 06/07/2011	99.1	10:28:00 06/07/2011	99.1	10:32:00 06/07/2011	99.0
16:00 06/07/2011	98.9	10:40:00 06/07/2011	98.9	10:44:00 06/07/2011	98.9	10:48:00 06/07/2011	99.0	10:52:00 06/07/2011	99.0	10:56:00 06/07/2011	98.9
20:00 06/07/2011	94.7	11:04:00 06/07/2011	77.7	11:08:00 06/07/2011	77.7						

*Line 1 Data Logger
Checked by Joe White
06/07/11*

Logger data

Document: 18

02/08/2011 13:13:22

1/1

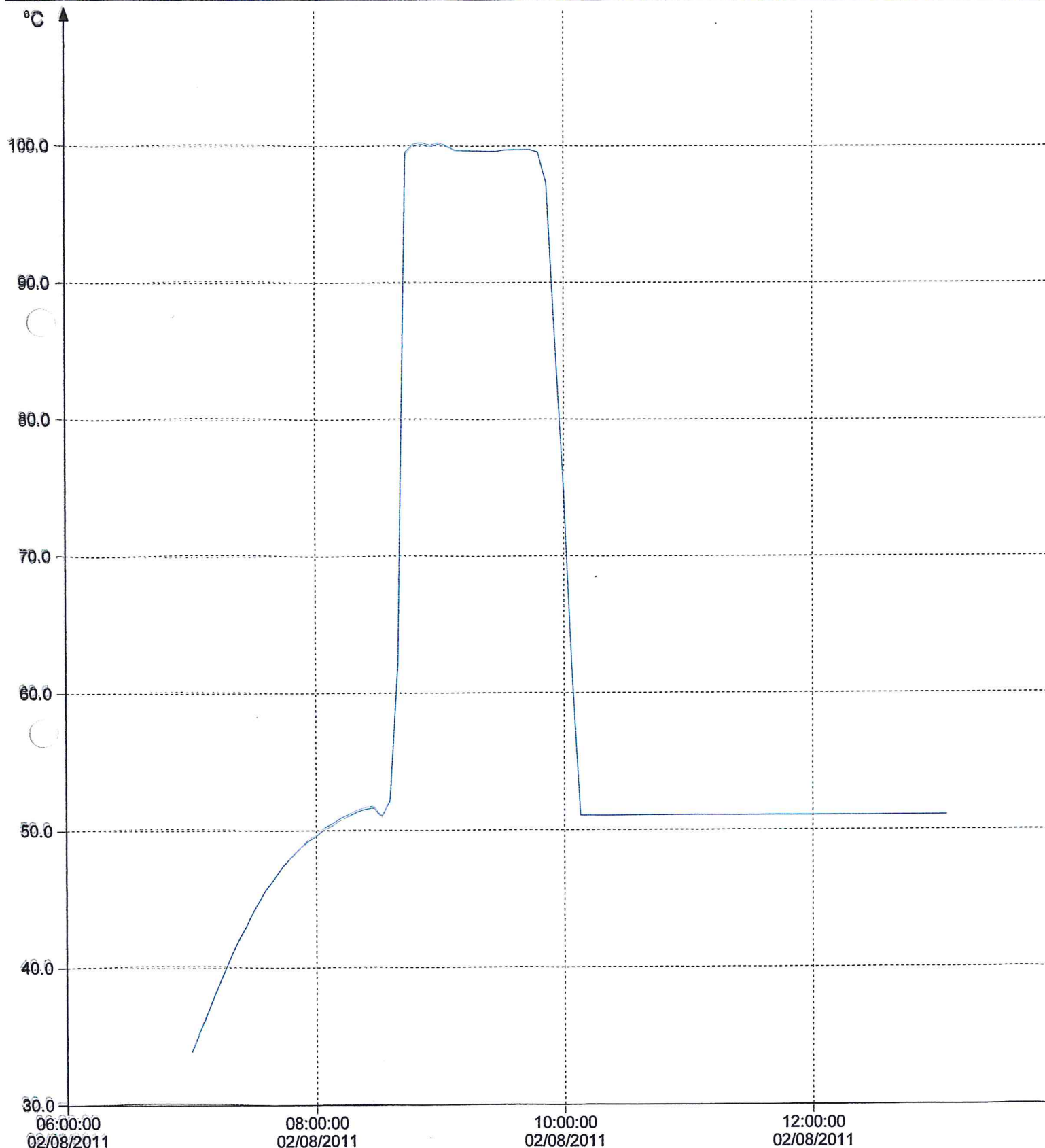
Company name:
 Street:
 City/State/Zip:
 Phone:
 Fax:

Info text 1:
 Info text 2:
 Internal ID:
 Serial number 10419372



Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
10419372	92	240 Sec.	02/08/2011 07:00:00	02/08/2011 13:04:00	00 Days, 06:04:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	33.8	100.2	60.1	422.9	20.8	66.4	0 01:52:00	0 00:12:00	0 04:56:00



Data

Document: 18

02/08/2011 13:16:25

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Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	02	240 Sec.	02/08/2011 07:00:00	02/08/2011 13:04:00	00 Days, 06:04:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	99	100	33.8	100.2	60.1	422.9	20.6	66.4	0 01:52:00	0 00:12:00	0 04:56:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1
07:00:00 02/08/2011	33.8	07:04:00 02/08/2011	35.3	07:08:00 02/08/2011	36.8	07:12:00 02/08/2011	38.3	07:16:00 02/08/2011	39.7	07:20:00 02/08/2011	4
07:24:00 02/08/2011	42.4	07:28:00 02/08/2011	43.6	07:32:00 02/08/2011	44.7	07:36:00 02/08/2011	45.7	07:40:00 02/08/2011	46.5	07:44:00 02/08/2011	4
07:48:00 02/08/2011	48.0	07:52:00 02/08/2011	48.6	07:56:00 02/08/2011	49.2	08:00:00 02/08/2011	49.6	08:04:00 02/08/2011	50.1	08:08:00 02/08/2011	4
08:12:00 02/08/2011	50.8	08:16:00 02/08/2011	51.1	08:20:00 02/08/2011	51.4	08:24:00 02/08/2011	51.6	08:28:00 02/08/2011	51.7	08:32:00 02/08/2011	4
08:36:00 02/08/2011	52.2	08:40:00 02/08/2011	62.3	08:44:00 02/08/2011	99.5	08:48:00 02/08/2011	100.1	08:52:00 02/08/2011	100.2	08:56:00 02/08/2011	10
09:00:00 02/08/2011	100.2	09:04:00 02/08/2011	100.0	09:08:00 02/08/2011	99.7	09:12:00 02/08/2011	99.7	09:16:00 02/08/2011	99.7	09:20:00 02/08/2011	9
09:24:00 02/08/2011	99.7	09:28:00 02/08/2011	99.7	09:32:00 02/08/2011	99.8	09:36:00 02/08/2011	99.8	09:40:00 02/08/2011	99.8	09:44:00 02/08/2011	9
09:48:00 02/08/2011	99.6	09:52:00 02/08/2011	97.3	09:56:00 02/08/2011	86.0	10:00:00 02/08/2011	75.6	10:04:00 02/08/2011	62.1	10:08:00 02/08/2011	4
10:12:00 02/08/2011	51.1	10:16:00 02/08/2011	51.1	10:20:00 02/08/2011	51.1	10:24:00 02/08/2011	51.1	10:28:00 02/08/2011	51.1	10:32:00 02/08/2011	4
10:36:00 02/08/2011	51.1	10:40:00 02/08/2011	51.1	10:44:00 02/08/2011	51.1	10:48:00 02/08/2011	51.1	10:52:00 02/08/2011	51.1	10:56:00 02/08/2011	4
11:00:00 02/08/2011	51.1	11:04:00 02/08/2011	51.1	11:08:00 02/08/2011	51.1	11:12:00 02/08/2011	51.1	11:16:00 02/08/2011	51.1	11:20:00 02/08/2011	4
11:24:00 02/08/2011	51.1	11:28:00 02/08/2011	51.1	11:32:00 02/08/2011	51.1	11:36:00 02/08/2011	51.1	11:40:00 02/08/2011	51.1	11:44:00 02/08/2011	4
11:48:00 02/08/2011	51.1	11:52:00 02/08/2011	51.1	11:56:00 02/08/2011	51.1	12:00:00 02/08/2011	51.1	12:04:00 02/08/2011	51.1	12:08:00 02/08/2011	4
12:12:00 02/08/2011	51.1	12:16:00 02/08/2011	51.1	12:20:00 02/08/2011	51.1	12:24:00 02/08/2011	51.1	12:28:00 02/08/2011	51.1	12:32:00 02/08/2011	4
12:36:00 02/08/2011	51.1	12:40:00 02/08/2011	51.1	12:44:00 02/08/2011	51.1	12:48:00 02/08/2011	51.1	12:52:00 02/08/2011	51.1	12:56:00 02/08/2011	4
13:00:00 02/08/2011	51.1	13:04:00 02/08/2011	51.1								

*Line 1 Data Logger
Checked Rg 02/08/11*

Logger data

Document : 22

07/09/2011 09:00:34

1/1

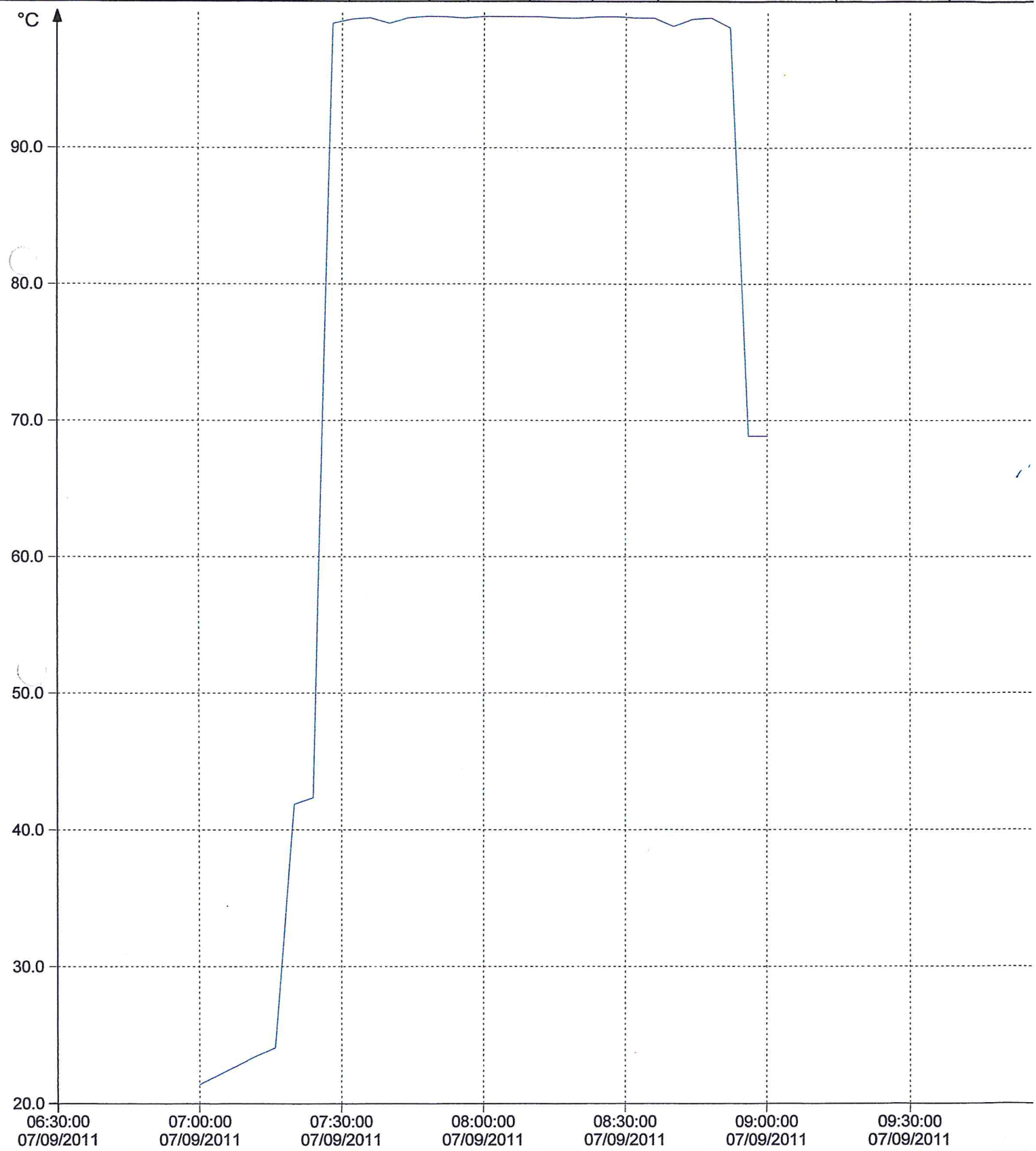
Company Name
 Street
 City/State/Zip
 Phone
 Fax

Info text 1
 Info text 2
 Internal ID
 Serial number 10419372

(1)

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	31	240 Sec.	07/09/2011 07:00:00	07/09/2011 09:00:00	00 Days, 02:00:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	90	100	21.4	99.7	81.5	927.1	30.4	78.3	0 00:48:00	0 00:00:00	0 00:36:00



Data

Document : 22

07/09/2011 09:01:19

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	31	240 Sec.	07/09/2011 07:00:00	07/09/2011 09:00:00	00 Days, 02:00:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below i
1 (Temperature)	90	100	21.4	99.7	81.5	927.1	30.4	78.3	0 00:48:00	0 00:00:00	0 00:36:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
07:00:00 07/09/2011	21.4	07:04:00 07/09/2011	22.1	07:08:00 07/09/2011	22.8	07:12:00 07/09/2011	23.5	07:16:00 07/09/2011	24.1	07:20:00 07/09/2011	24.8
07:24:00 07/09/2011	42.4	07:28:00 07/09/2011	99.2	07:32:00 07/09/2011	99.5	07:36:00 07/09/2011	99.6	07:40:00 07/09/2011	99.2	07:44:00 07/09/2011	99.5
07:48:00 07/09/2011	99.7	07:52:00 07/09/2011	99.7	07:56:00 07/09/2011	99.6	08:00:00 07/09/2011	99.7	08:04:00 07/09/2011	99.7	08:08:00 07/09/2011	99.7
08:12:00 07/09/2011	99.7	08:16:00 07/09/2011	99.6	08:20:00 07/09/2011	99.6	08:24:00 07/09/2011	99.7	08:28:00 07/09/2011	99.7	08:32:00 07/09/2011	99.7
08:36:00 07/09/2011	99.6	08:40:00 07/09/2011	99.0	08:44:00 07/09/2011	99.5	08:48:00 07/09/2011	99.6	08:52:00 07/09/2011	98.9	08:56:00 07/09/2011	98.9
09:00:00 07/09/2011	68.9										

*Line 1 Data Logger
Checked RJ 07/09/11*

Logger data

Document : 24

06/10/2011 09:59:57

1/1

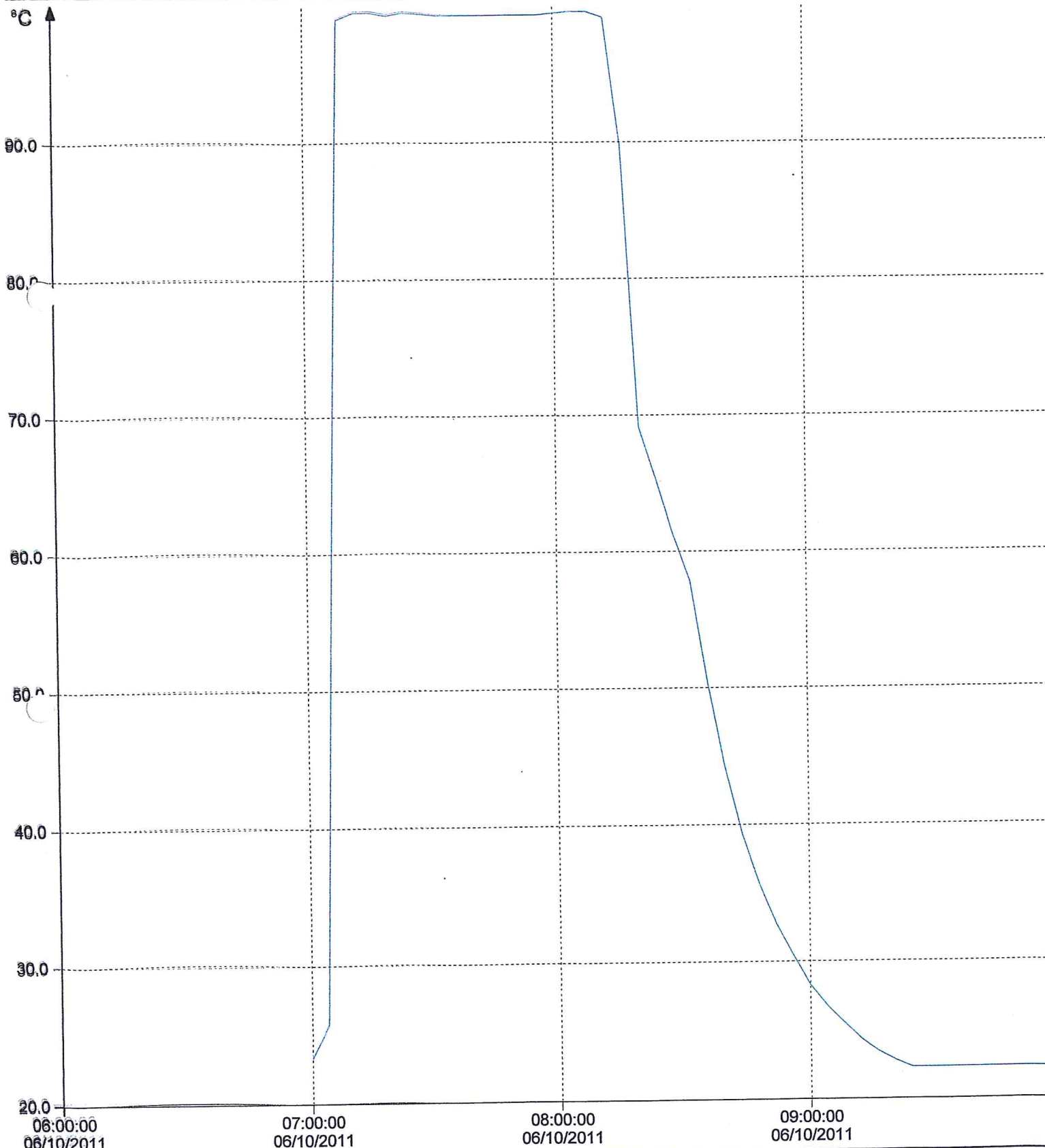
Company
 Name
 Address
 City/State/Zip
 Phone

Info text 1
 Info text 2
 Internal ID
 Serial number 15051827



Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
15051827	45	240 Sec.	06/10/2011 07:00:00	06/10/2011 09:56:00	00 Days, 02:56:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	90	100	22.3	99.6	59.3	1204.1	34.7	77.3	0 02:12:00	0 00:00:00	0 01:52:00



Data

Document : 24

06/10/2011 10:01:49

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
5051827	45	240 Sec.	06/10/2011 07:00:00	06/10/2011 09:56:00	00 Days, 02:56:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min.
T (temperature)	90	100	22.3	99.6	59.3	1204.1	34.7	77.3	0 02:12:00	0 00:00:00	0 01:52:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
00:00 06/10/2011	23.3	07:04:00 06/10/2011	25.7	07:08:00 06/10/2011	99.1	07:12:00 06/10/2011	99.6	07:16:00 06/10/2011	99.6	07:20:00 06/10/2011	99.4
04:24:00 06/10/2011	99.6	07:28:00 06/10/2011	99.5	07:32:00 06/10/2011	99.4	07:36:00 06/10/2011	99.4	07:40:00 06/10/2011	99.4	07:44:00 06/10/2011	99.4
08:48:00 06/10/2011	99.4	07:52:00 06/10/2011	99.4	07:56:00 06/10/2011	99.4	08:00:00 06/10/2011	99.5	08:04:00 06/10/2011	99.6	08:08:00 06/10/2011	99.6
12:12:00 06/10/2011	99.2	08:16:00 06/10/2011	89.8	08:20:00 06/10/2011	69.2	08:24:00 06/10/2011	65.4	08:28:00 06/10/2011	61.3	08:32:00 06/10/2011	57.3
16:36:00 06/10/2011	50.6	08:40:00 06/10/2011	44.3	08:44:00 06/10/2011	39.4	08:48:00 06/10/2011	35.7	08:52:00 06/10/2011	32.8	08:56:00 06/10/2011	30.1
20:00:00 06/10/2011	28.3	09:04:00 06/10/2011	26.8	09:08:00 06/10/2011	25.6	09:12:00 06/10/2011	24.4	09:16:00 06/10/2011	23.5	09:20:00 06/10/2011	22.1
24:24:00 06/10/2011	22.3	09:28:00 06/10/2011	22.3	09:32:00 06/10/2011	22.3	09:36:00 06/10/2011	22.3	09:40:00 06/10/2011	22.3	09:44:00 06/10/2011	22.3
28:48:00 06/10/2011	22.3	09:52:00 06/10/2011	22.3	09:56:00 06/10/2011	22.3						

*Line 1 Data Logger
Checked by 06/10/11*

Logger data

Document : 01 11 11

01/11/2011 11:57:40

1/1

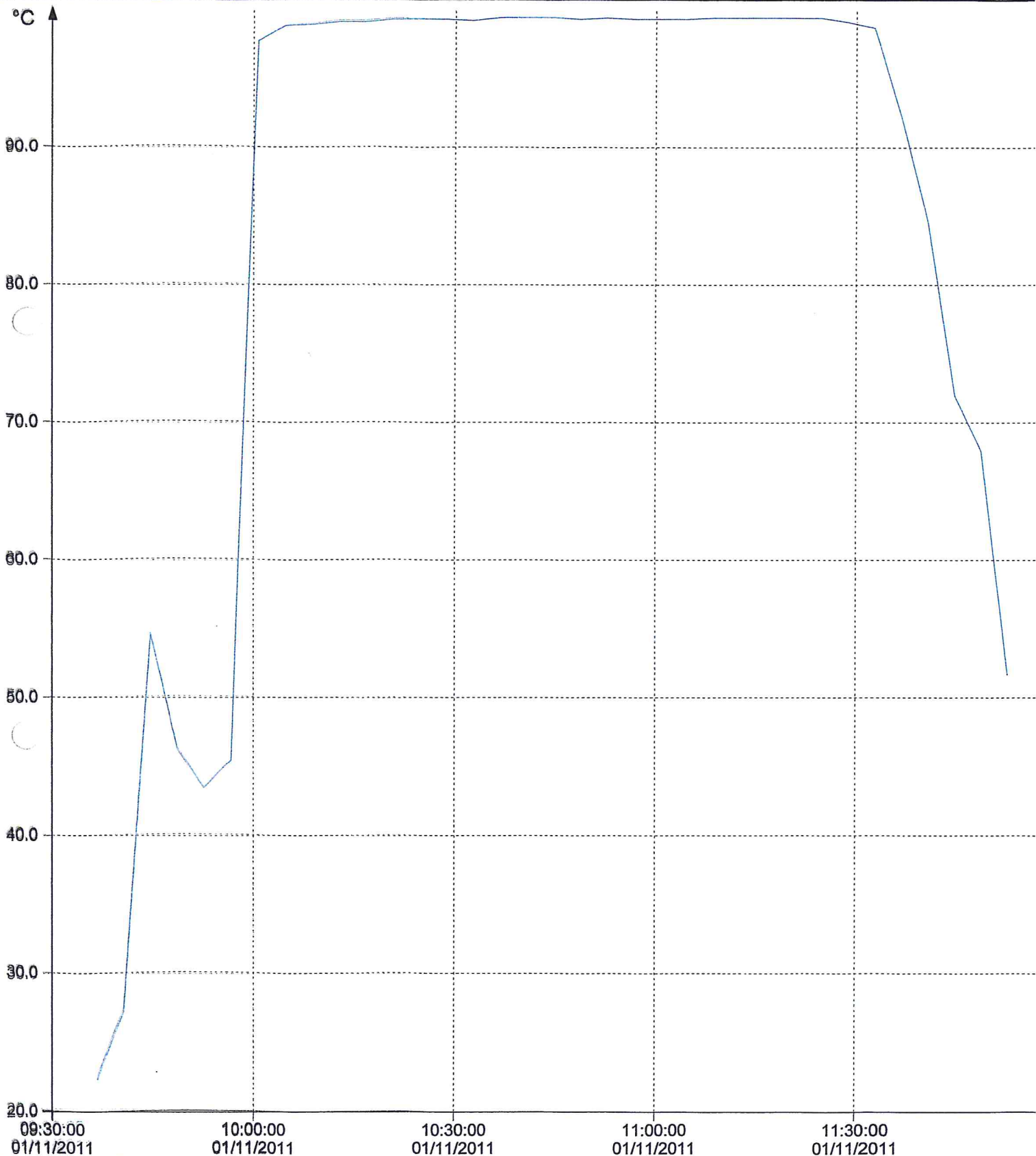
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 15051827



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
15051827	95	240 Sec.	01/11/2011 09:36:41	01/11/2011 11:52:41	00 Days, 02:16:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below
1 (Temperature)	90	100	22.3	99.5	85.5	572.8	23.9	77.2	0 01:00:00	0 00:00:00	0 00:40:00



Data

Document : 01 11 11

01/11/2011 12:02:25

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
15051827	35	240 Sec.	01/11/2011 09:36:41	01/11/2011 11:52:41	00 Days, 02:16:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below i
1 (Temperature)	90	100	22.3	99.5	85.5	572.8	23.9	77.2	0 01:00:00	0 00:00:00	0 00:40:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
09:36:41 01/11/2011	22.3	09:40:41 01/11/2011	27.3	09:44:41 01/11/2011	54.6	09:48:41 01/11/2011	46.3	09:52:41 01/11/2011	43.5	09:56:41 01/11/2011	
10:00:41 01/11/2011	97.8	10:04:41 01/11/2011	98.9	10:08:41 01/11/2011	99.0	10:12:41 01/11/2011	99.2	10:16:41 01/11/2011	99.2	10:20:41 01/11/2011	
10:24:41 01/11/2011	99.4	10:28:41 01/11/2011	99.4	10:32:41 01/11/2011	99.3	10:36:41 01/11/2011	99.5	10:40:41 01/11/2011	99.5	10:44:41 01/11/2011	
10:48:41 01/11/2011	99.4	10:52:41 01/11/2011	99.5	10:56:41 01/11/2011	99.4	11:00:41 01/11/2011	99.4	11:04:41 01/11/2011	99.4	11:08:41 01/11/2011	
11:12:41 01/11/2011	99.5	11:16:41 01/11/2011	99.5	11:20:41 01/11/2011	99.5	11:24:41 01/11/2011	99.5	11:28:41 01/11/2011	99.2	11:32:41 01/11/2011	
11:36:41 01/11/2011	92.3	11:40:41 01/11/2011	84.6	11:44:41 01/11/2011	72.0	11:48:41 01/11/2011	68.0	11:52:41 01/11/2011	51.7		

*Line 1 Data Logger
Checked by 01/11/11*

Logger data

Document : 29

05/12/2011 11:00:06

1/1

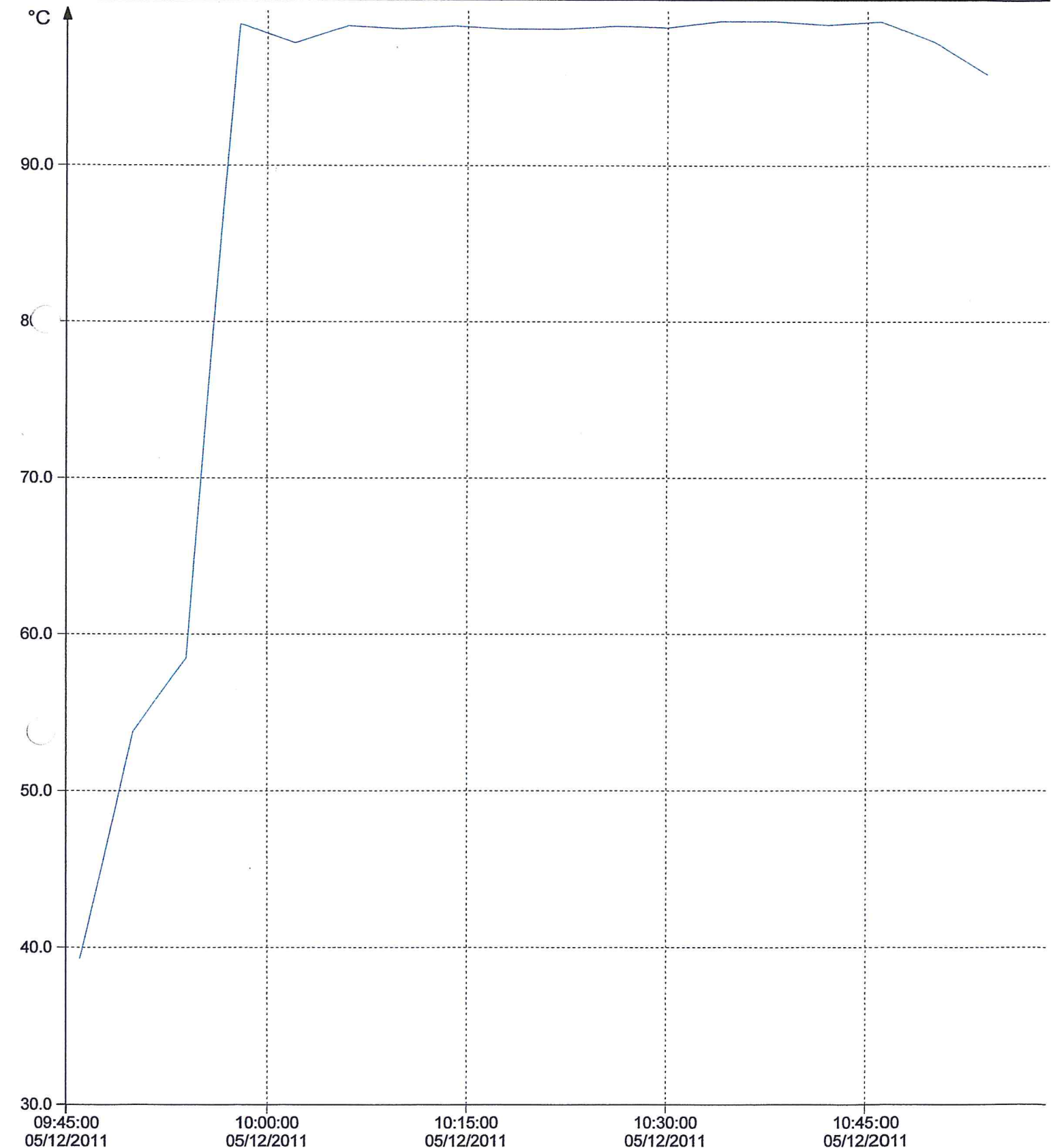
Company Name:
Street:
City/State/Zip:
Phone:
Fax:

Info text 1:
Info text 2:
Internal ID:
Serial number 10419372



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	18	240 Sec.	05/12/2011 09:46:00	05/12/2011 10:54:00	00 Days, 01:08:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	90	100	39.3	99.3	90.7	353.3	18.8	60.0	0 00:48:00	0 00:00:00	0 00:12:00



Data

Document : 29

05/12/2011 11:01:09

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
1C19372	18	240 Sec.	05/12/2011 09:46:00	05/12/2011 10:54:00	00 Days, 01:08:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
T (temperature)	90	100	39.3	99.3	90.7	353.3	18.8	60.0	0 00:48:00	0 00:00:00	0 00:12:00
Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)
09:46:00 05/12/2011	39.3	09:50:00 05/12/2011	53.8	09:54:00 05/12/2011	58.5	09:58:00 05/12/2011	99.1	10:02:00 05/12/2011	97.9	10:06:00 05/12/2011	99.1
10:10:00 05/12/2011	98.8	10:14:00 05/12/2011	99.0	10:18:00 05/12/2011	98.8	10:22:00 05/12/2011	98.8	10:26:00 05/12/2011	99.0	10:30:00 05/12/2011	99.0
10:34:00 05/12/2011	99.3	10:38:00 05/12/2011	99.3	10:42:00 05/12/2011	99.1	10:46:00 05/12/2011	99.3	10:50:00 05/12/2011	98.0	10:54:00 05/12/2011	99.1

for Winlog
05/12/11

9.50 - 11-00



Line 2 Data Logger Reports 2011

Line 2 Data Logger
Checked EML
12/1/2011

(2)

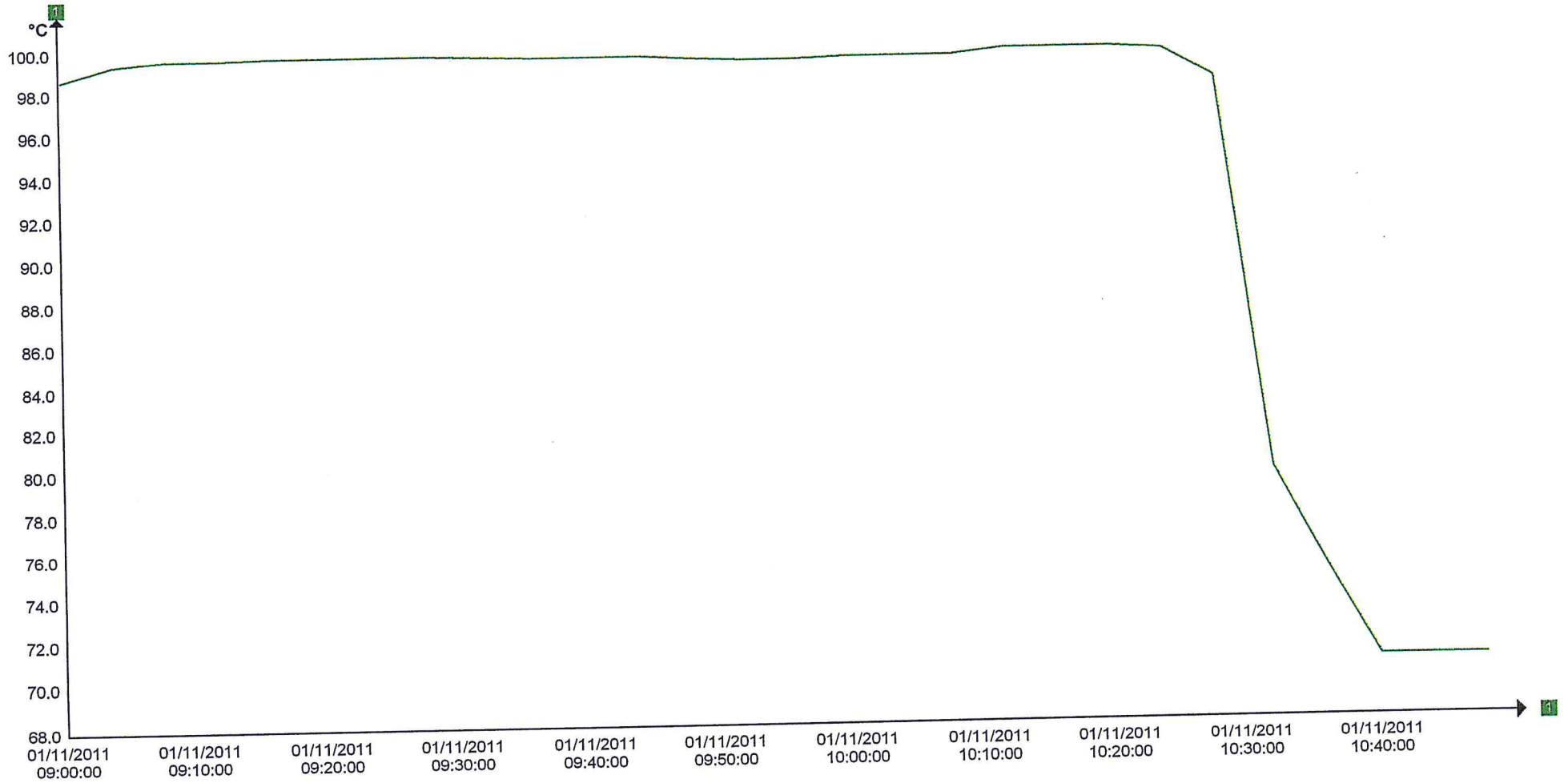
Report

Winlog.pro

11/01/2011

(12)

Chart



Delta-X: 10min
Untitled

Report

Winlog.pro

11/01/2011

Logger #10419372 - EBI1

Measurement

StartDate: 11/01/2011 09:00:00
Interval: 240s
Values: 28

Logger information

Logger description:
Owner:
Location:
Description:

Channels

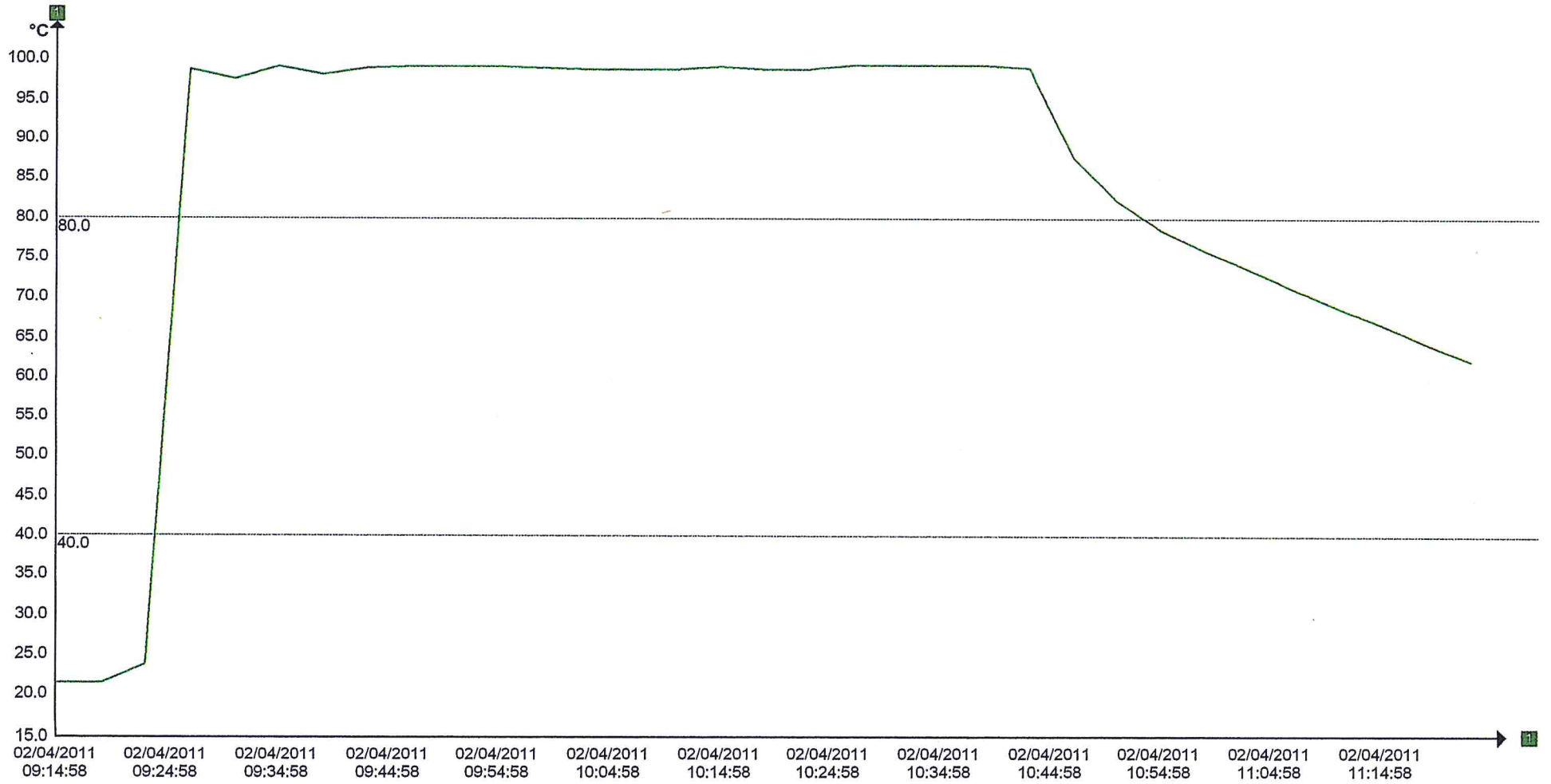
Curve	Index	Type	Unit	Name	Min	Max	Mean	MKT	Std. Dev.	Variance	MinLimit	MaxLimit
1	1	Temperature	°C		70.80	99.70	94.80	94.51	10.26	105.29	0.00	0.00

Logger #10419372 - EBI1 - date:11/01/2011 09:00:00

Channel 1 [°C]

Timestamp	Value	Timestamp	Value	Timestamp	Value	Timestamp	Value
09:00:00	98.7	09:04:00	99.4	09:08:00	99.6	09:12:00	99.6
09:16:00	99.7	09:20:00	99.7	09:24:00	99.7	09:28:00	99.7
09:32:00	99.6	09:36:00	99.5	09:40:00	99.5	09:44:00	99.5
09:48:00	99.4	09:52:00	99.3	09:56:00	99.3	10:00:00	99.4
10:04:00	99.4	10:08:00	99.4	10:12:00	99.7	10:16:00	99.7
10:20:00	99.7	10:24:00	99.5	10:28:00	98.2	10:32:00	79.7
10:36:00	75.1	10:40:00	70.8	10:44:00	70.8	10:48:00	70.8

Chart



Report

Winlog.pro

04/02/2011

Logger #10142052 - EBI1

Measurement

StartDate: 04/02/2011 09:15:00
Interval: 240s
Values: 33

Logger information

Logger description:
Owner:
Location:
Description:

Channels

Curve	Index	Type	Unit	Name	Min	Max	Mean	MKT	Std. Dev.	Variance	MinLimit	MaxLimit
1	1	Temperature	°C		21.40	99.30	84.11	82.45	23.51	552.67	40.00	80.00

Logger #10142052 - EBI1 - date:04/02/2011 09:15:00**Channel 1 [°C]**

Timestamp	Value
09:15:00	21.4
09:31:00	97.6
09:47:00	99.1
10:03:00	98.7
10:19:00	98.8
10:35:00	99.3
10:51:00	82.1
11:07:00	71.2
11:23:00	62.2

Timestamp	Value
09:19:00	21.5
09:35:00	99.1
09:51:00	99.1
10:07:00	98.7
10:23:00	98.8
10:39:00	99.3
10:55:00	78.6
11:11:00	68.8

Timestamp	Value
09:23:00	23.7
09:39:00	98.1
09:55:00	99.1
10:11:00	98.8
10:27:00	99.3
10:43:00	99.0
10:59:00	75.9
11:15:00	66.6

Timestamp	Value
09:27:00	98.8
09:43:00	99.0
09:59:00	99.0
10:15:00	99.1
10:31:00	99.3
10:47:00	87.7
11:03:00	73.6
11:19:00	64.3

Logger data

Document : 1

07/03/2011 10:43:59

1/1

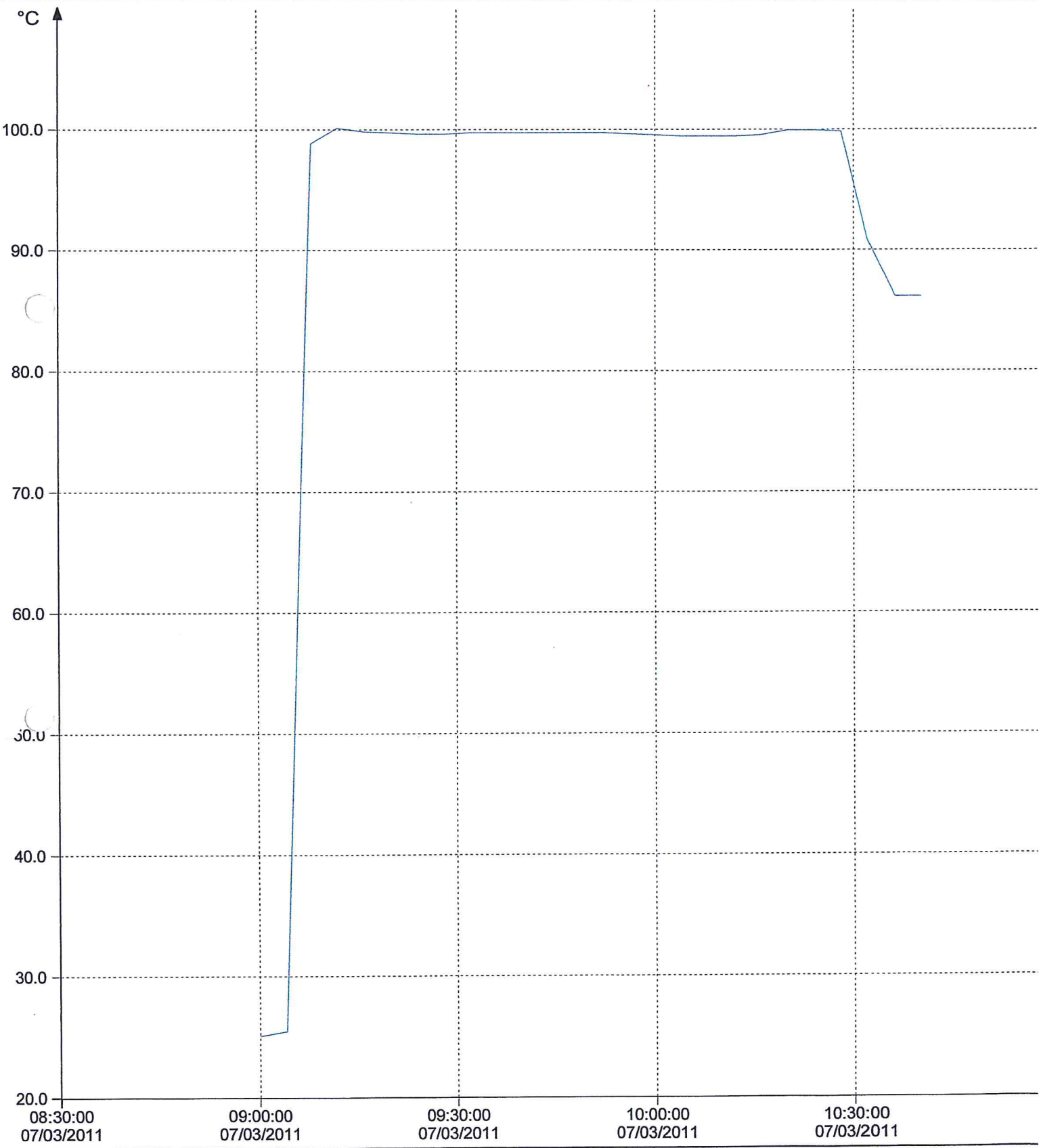
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372



Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	26	240 Sec.	07/03/2011 09:00:00	07/03/2011 10:40:00	00 Days, 01:40:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	25.1	100.2	92.6	408.5	20.2	75.1	0 00:12:00	0 00:04:00	0 00:16:00



Data

Document : 3

07/03/2011 10:46:33

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	27	240 Sec.	07/03/2011 09:00:00	07/03/2011 10:44:00	00 Days, 01:44:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below r
1 (Temperature)	90	100	25.1	100.2	92.4	394.3	19.9	75.1	0 00:12:00	0 00:04:00	0 00:20:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1
09:00:00 07/03/2011	25.1	09:04:00 07/03/2011	25.5	09:08:00 07/03/2011	98.9	09:12:00 07/03/2011	100.2	09:16:00 07/03/2011	99.9	09:20:00 07/03/2011	9
09:24:00 07/03/2011	99.7	09:28:00 07/03/2011	99.7	09:32:00 07/03/2011	99.8	09:36:00 07/03/2011	99.8	09:40:00 07/03/2011	99.8	09:44:00 07/03/2011	9
09:48:00 07/03/2011	99.8	09:52:00 07/03/2011	99.8	09:56:00 07/03/2011	99.7	10:00:00 07/03/2011	99.6	10:04:00 07/03/2011	99.5	10:08:00 07/03/2011	9
10:12:00 07/03/2011	99.5	10:16:00 07/03/2011	99.6	10:20:00 07/03/2011	100.0	10:24:00 07/03/2011	100.0	10:28:00 07/03/2011	99.9	10:32:00 07/03/2011	9
10:36:00 07/03/2011	86.2	10:40:00 07/03/2011	86.2	10:44:00 07/03/2011	86.2						

Logger data

Document : 6

05/04/2011 10:54:53

1/1

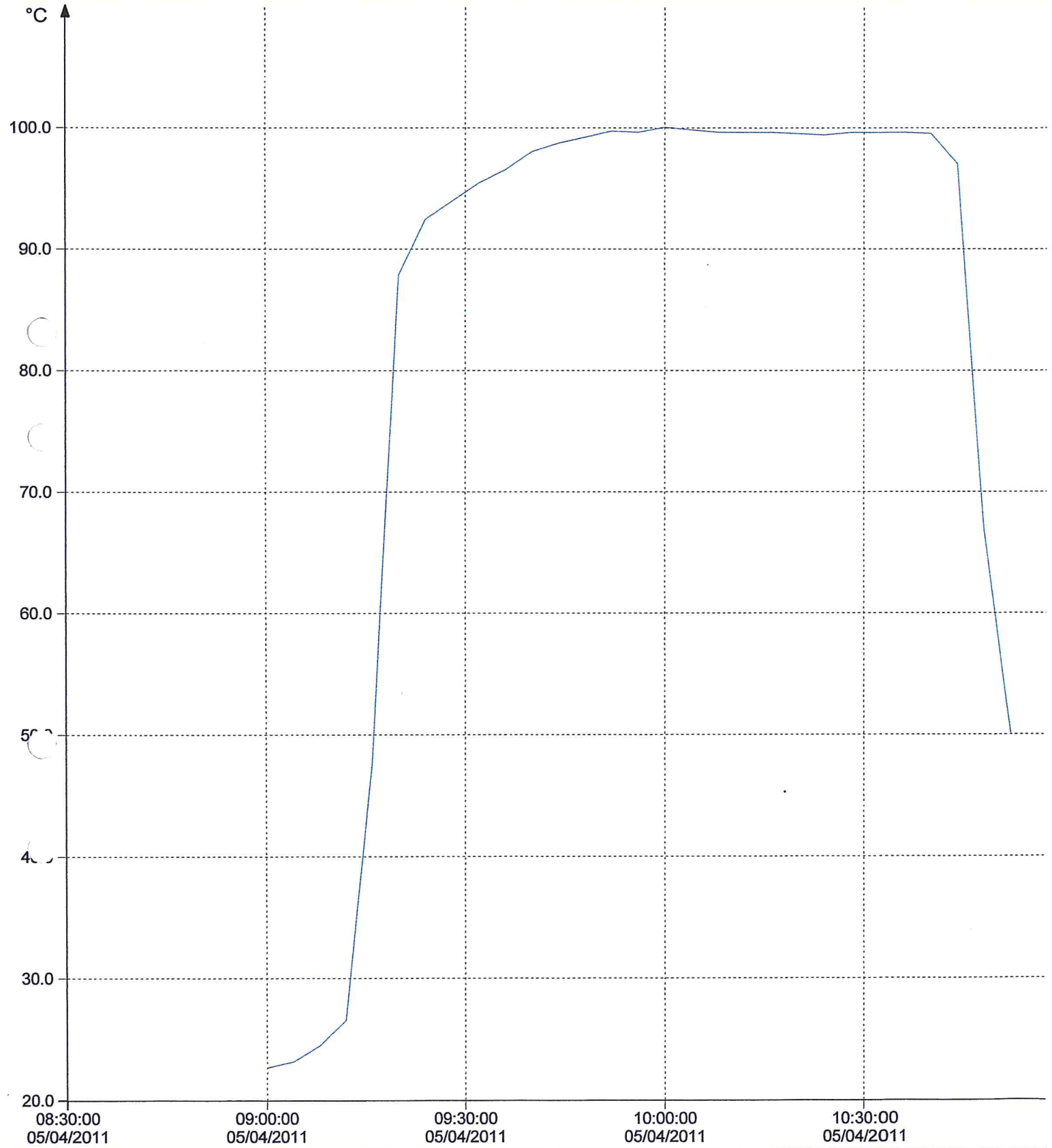
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	29	240 Sec.	05/04/2011 09:00:00	05/04/2011 10:52:00	00 Days, 01:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	90	100	22.7	100.1	83.4	769.9	27.7	77.4	0 01:00:00	0 00:04:00	0 00:32:00



Data

Document : 6

05/04/2011 10:55:44

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419072	29	240 Sec.	05/04/2011 09:00:00	05/04/2011 10:52:00	00 Days, 01:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
1 (Temperature)	90	100	22.7	100.1	83.4	769.9	27.7	77.4	0 01:00:00	0 00:04:00	0 00:32:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
09:00:00 05/04/2011	22.7	09:04:00 05/04/2011	23.2	09:08:00 05/04/2011	24.5	09:12:00 05/04/2011	26.6	09:16:00 05/04/2011	47.6	09:20:00 05/04/2011	8
09:24:00 05/04/2011	92.5	09:28:00 05/04/2011	94.0	09:32:00 05/04/2011	95.5	09:36:00 05/04/2011	96.6	09:40:00 05/04/2011	98.1	09:44:00 05/04/2011	9
09:48:00 05/04/2011	99.3	09:52:00 05/04/2011	99.8	09:56:00 05/04/2011	99.7	10:00:00 05/04/2011	100.1	10:04:00 05/04/2011	99.9	10:08:00 05/04/2011	9
10:12:00 05/04/2011	99.7	10:16:00 05/04/2011	99.7	10:20:00 05/04/2011	99.6	10:24:00 05/04/2011	99.5	10:28:00 05/04/2011	99.7	10:32:00 05/04/2011	9
10:36:00 05/04/2011	99.7	10:40:00 05/04/2011	99.6	10:44:00 05/04/2011	97.1	10:48:00 05/04/2011	67.0	10:52:00 05/04/2011	50.1		

Logger data

Document : 8

03/05/2011 10:42:44

1/1

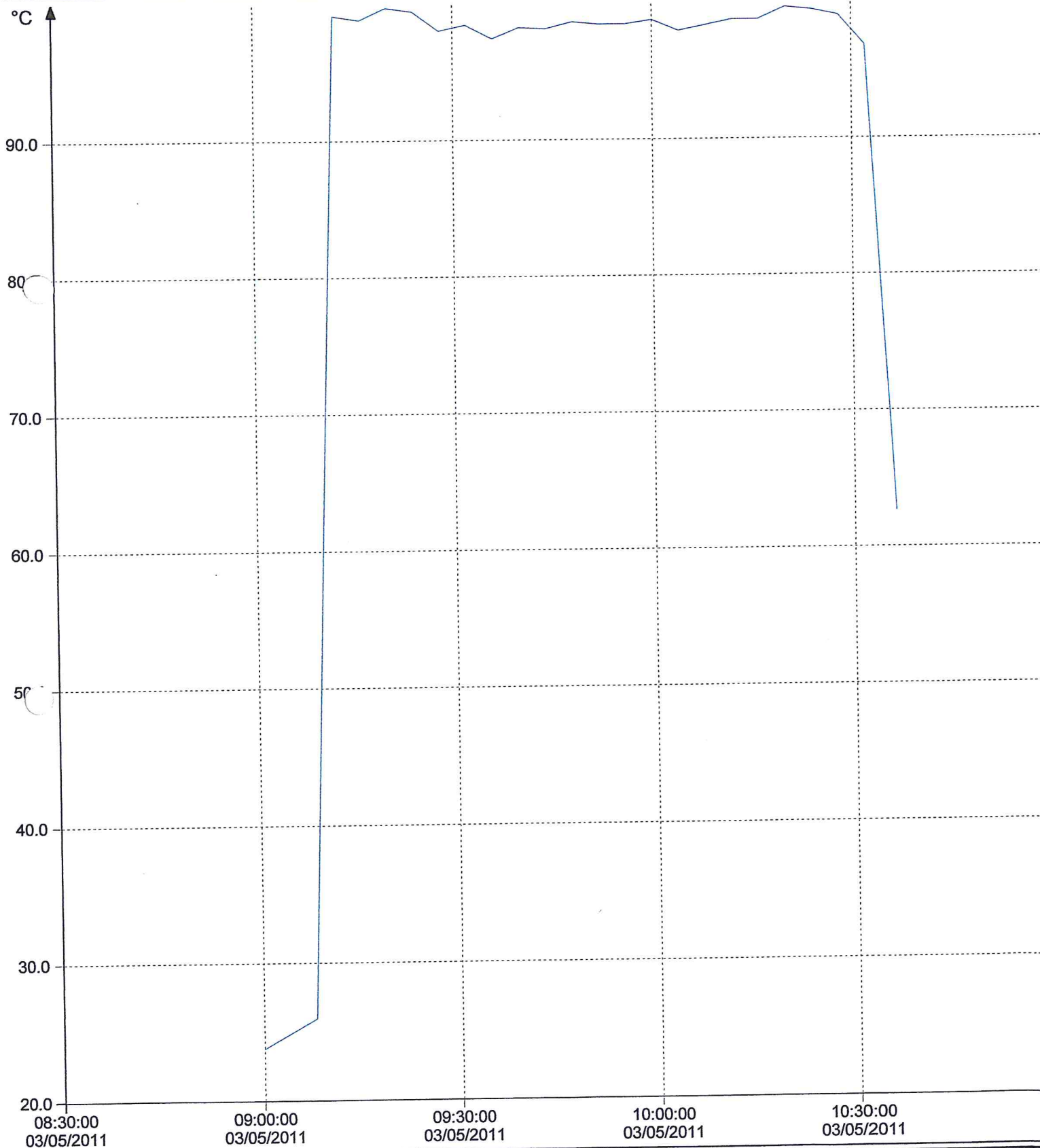
Company
 Name
 Address
 City/State/Zip
 Phone

Info text 1
 Info text 2
 Internal ID
 Serial number 10419372

(2)

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	25	240 Sec.	03/05/2011 09:00:00	03/05/2011 10:36:00	00 Days, 01:36:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below mi
1 (Temperature)	90	100	23.8	99.8	88.4	624.0	25.0	76.0	0 00:20:00	0 00:00:00	0 00:16:00



Data

Document : 8

03/05/2011 10:43:14

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	25	240 Sec.	03/05/2011 09:00:00	03/05/2011 10:36:00	00 Days, 01:36:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below mi
1 (Temperature)	90	100	23.8	99.8	88.4	624.0	25.0	76.0	0 00:20:00	0 00:00:00	0 00:16:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
09:00:00 03/05/2011	23.8	09:04:00 03/05/2011	24.9	09:08:00 03/05/2011	26.0	09:12:00 03/05/2011	99.2	09:16:00 03/05/2011	98.9	09:20:00 03/05/2011	99.9
09:24:00 03/05/2011	99.5	09:28:00 03/05/2011	98.1	09:32:00 03/05/2011	98.5	09:36:00 03/05/2011	97.5	09:40:00 03/05/2011	98.3	09:44:00 03/05/2011	98.8
09:48:00 03/05/2011	98.7	09:52:00 03/05/2011	98.5	09:56:00 03/05/2011	98.5	10:00:00 03/05/2011	98.8	10:04:00 03/05/2011	98.0	10:08:00 03/05/2011	98.8
10:12:00 03/05/2011	98.8	10:16:00 03/05/2011	98.8	10:20:00 03/05/2011	99.7	10:24:00 03/05/2011	99.5	10:28:00 03/05/2011	99.1	10:32:00 03/05/2011	98.8
10:36:00 03/05/2011	62.7										

* Smoothed curve ** Calculate

Logger data

Document : 10

07/06/2011 10:34:26

1/1

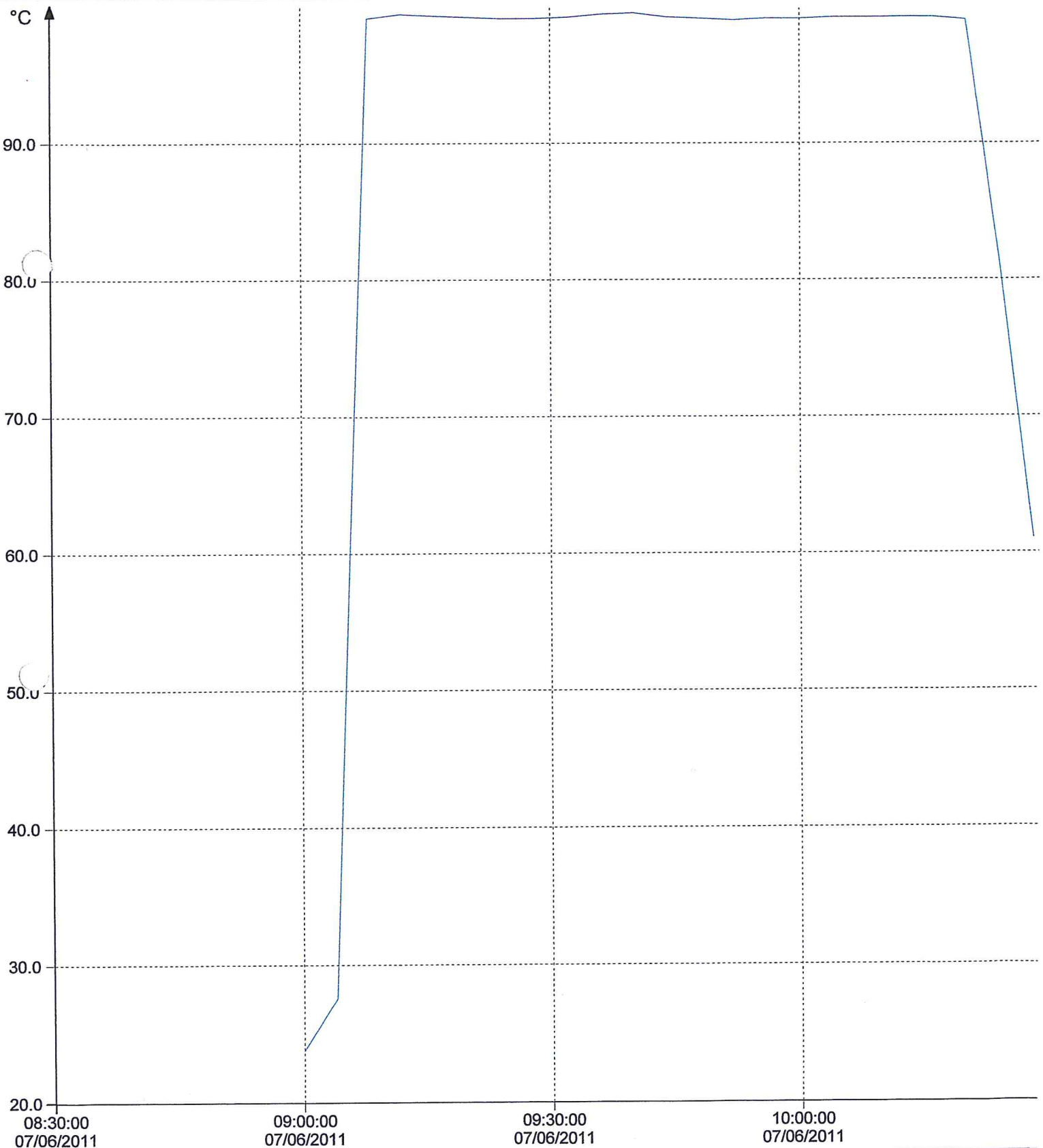
Company
 Name
 Street
 City/State/Zip
 Phone
 Fax

Info text 1
 Info text 2
 Internal ID
 Serial number 10419372

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	23	240 Sec.	07/06/2011 09:00:00	07/06/2011 10:28:00	00 Days, 01:28:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	90	100	23.8	99.6	90.5	491.7	22.2	75.8	0 00:40:00	0 00:00:00	0 00:16:00



Data

Document : 10

07/06/2011 10:34:40

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	23	240 Sec.	07/06/2011 09:00:00	07/06/2011 10:28:00	00 Days, 01:28:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	90	100	23.8	99.6	90.5	491.7	22.2	75.8	0 00:40:00	0 00:00:00	0 00:16:00

Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
9:00:00 07/06/2011	23.8	09:04:00 07/06/2011	27.6	09:08:00 07/06/2011	99.2	09:12:00 07/06/2011	99.5	09:16:00 07/06/2011	99.4
9:24:00 07/06/2011	99.2	09:28:00 07/06/2011	99.2	09:32:00 07/06/2011	99.3	09:36:00 07/06/2011	99.5	09:40:00 07/06/2011	99.6
9:48:00 07/06/2011	99.2	09:52:00 07/06/2011	99.1	09:56:00 07/06/2011	99.2	10:00:00 07/06/2011	99.2	10:04:00 07/06/2011	99.3
0:12:00 07/06/2011	99.3	10:16:00 07/06/2011	99.3	10:20:00 07/06/2011	99.1	10:24:00 07/06/2011	81.6	10:28:00 07/06/2011	61.1

Line 2 Data Logger
 Checked RY
 07.06.11

Logger data

Document : 15

05/07/2011 08:50:07

1/1

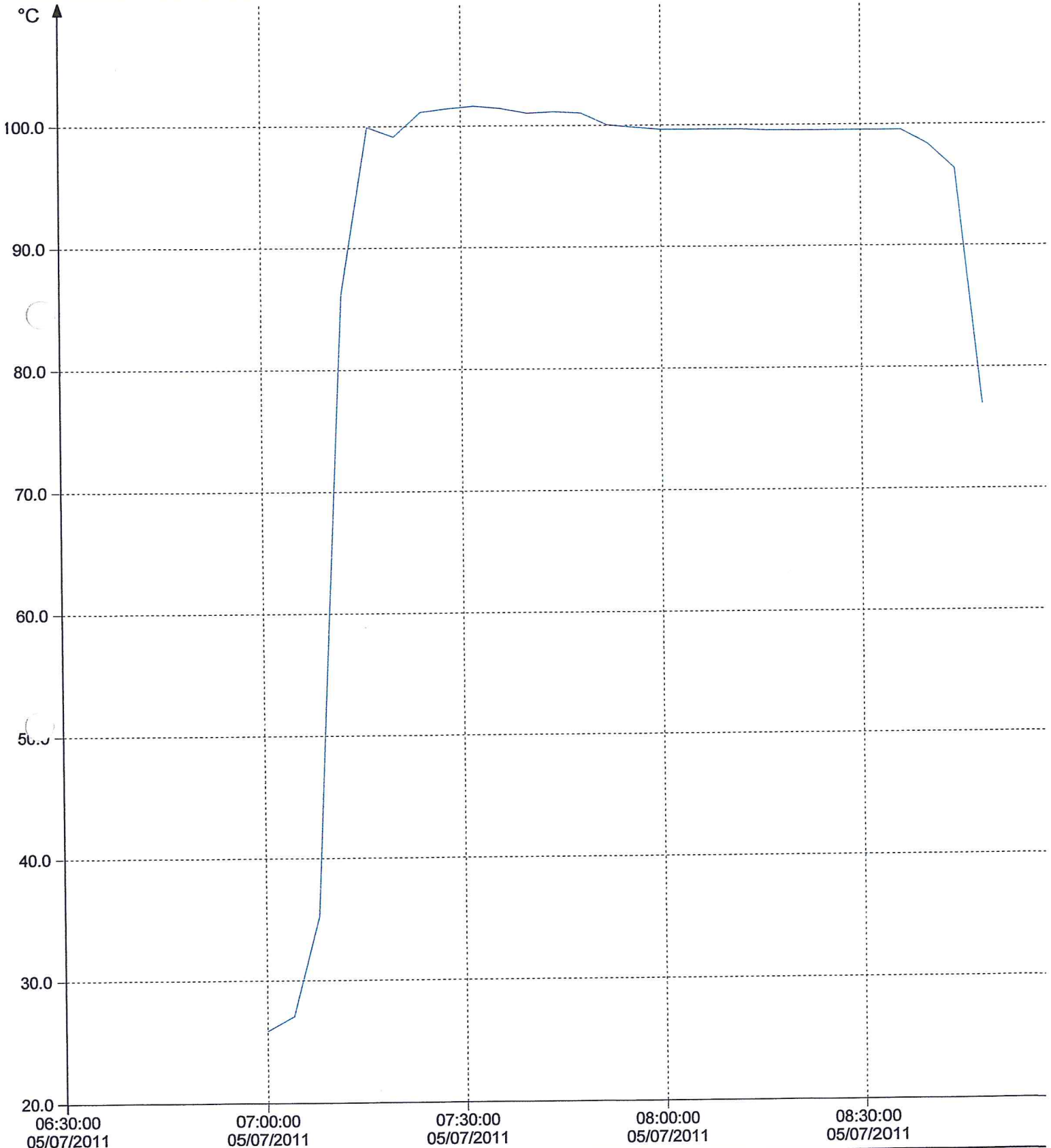
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

(2)

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	28	240 Sec.	05/07/2011 07:00:00	05/07/2011 08:48:00	00 Days, 01:48:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	25.9	101.7	91.1	501.1	22.4	75.8	0 00:32:00	0 00:32:00	0 00:20:00



Data

Document : 15

05/07/2011 08:51:33

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	28	240 Sec.	05/07/2011 07:00:00	05/07/2011 08:48:00	00 Days, 01:48:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	25.9	101.7	91.1	501.1	22.4	75.8	0 00:32:00	0 00:32:00	0 00:20:00

Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
07:00:00 05/07/2011	25.9	07:04:00 05/07/2011	27.1	07:08:00 05/07/2011	35.3	07:12:00 05/07/2011	86.3	07:16:00 05/07/2011	100.0	07:20:00 05/07/2011	99.7
07:24:00 05/07/2011	101.2	07:28:00 05/07/2011	101.5	07:32:00 05/07/2011	101.7	07:36:00 05/07/2011	101.5	07:40:00 05/07/2011	101.1	07:44:00 05/07/2011	101.1
07:48:00 05/07/2011	101.1	07:52:00 05/07/2011	100.1	07:56:00 05/07/2011	99.9	08:00:00 05/07/2011	99.7	08:04:00 05/07/2011	99.7	08:08:00 05/07/2011	99.7
08:12:00 05/07/2011	99.7	08:16:00 05/07/2011	99.6	08:20:00 05/07/2011	99.6	08:24:00 05/07/2011	99.6	08:28:00 05/07/2011	99.6	08:32:00 05/07/2011	99.6
08:36:00 05/07/2011	99.6	08:40:00 05/07/2011	98.4	08:44:00 05/07/2011	96.4	08:48:00 05/07/2011	77.0				

*Line 2 Data Logger
Checked Rly.
05.07.11*

Logger data

Document: 19

03/08/2011 10:46:10

1/1

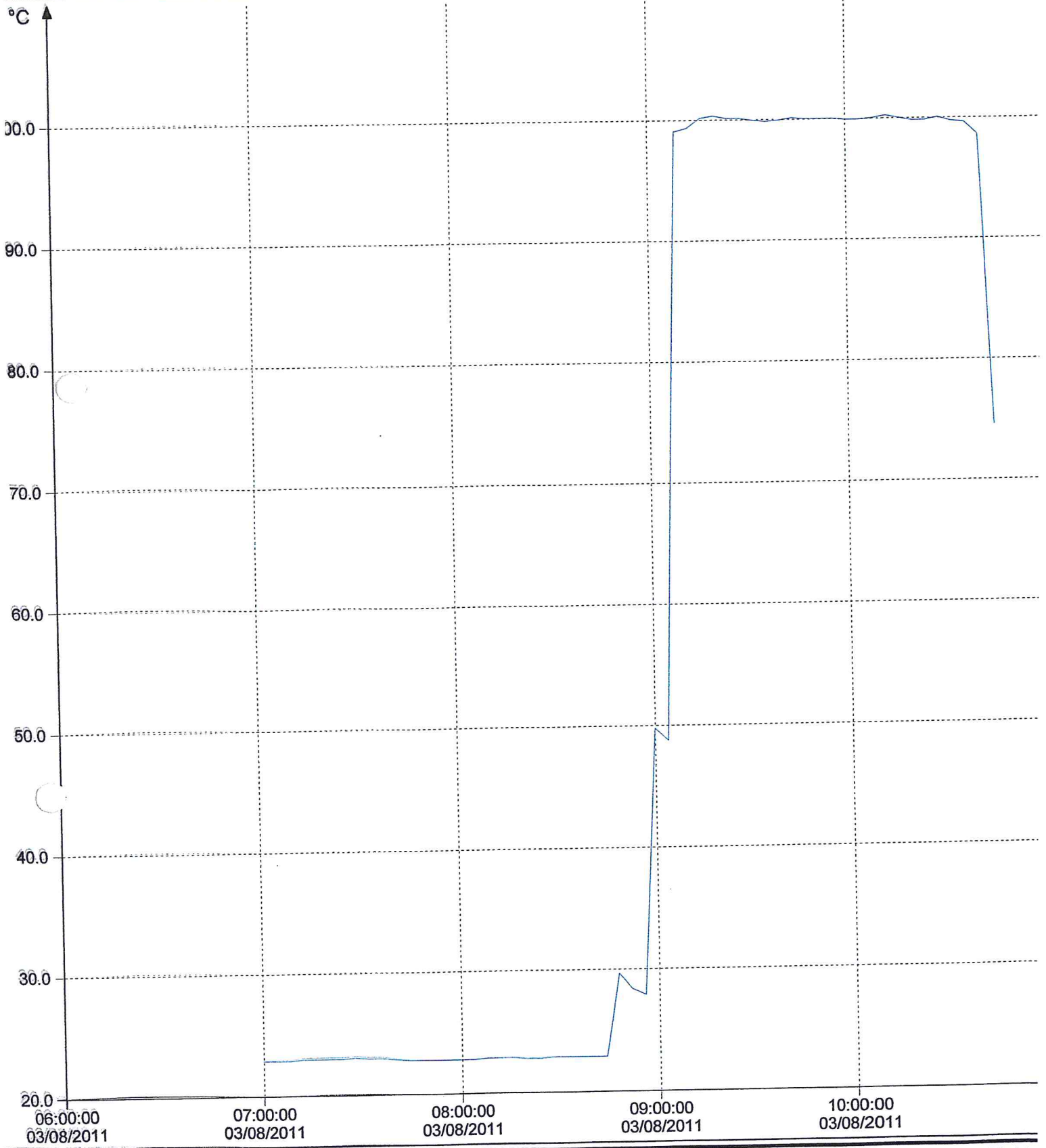
ipary
ie
et
State/Zip
ne

Info text 1
Info text 2
Internal ID
Serial number 10419372

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
0419372	57	240 Sec.	03/08/2011 07:00:00	03/08/2011 10:44:00	00 Days, 03:44:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min.
T (Temperature)	90	100	22.8	100.4	57.5	1401.3	37.4	77.6	0 01:36:00	0 00:48:00	0 02:12:00



Data

Document : 19

03/08/2011 10:46:53

1/1

Company
Name
Address
City/State/Zip
Phone

Info text 1
Info text 2
Internal ID
Serial number 10419372

Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
10419372	67	240 Sec.	03/08/2011 07:00:00	03/08/2011 10:44:00	00 Days, 03:44:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	80	100	22.8	100.4	57.5	1401.3	37.4	77.6	0 01:36:00	0 00:48:00	0 02:12:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
7:00:00 03/08/2011	22.9	07:04:00 03/08/2011	22.9	07:08:00 03/08/2011	22.9	07:12:00 03/08/2011	23.0	07:16:00 03/08/2011	23.0	07:20:00 03/08/2011	23.0
7:24:00 03/08/2011	23.0	07:28:00 03/08/2011	23.1	07:32:00 03/08/2011	23.0	07:36:00 03/08/2011	23.0	07:40:00 03/08/2011	22.9	07:44:00 03/08/2011	22.0
7:48:00 03/08/2011	22.8	07:52:00 03/08/2011	22.8	07:56:00 03/08/2011	22.8	08:00:00 03/08/2011	22.8	08:04:00 03/08/2011	22.8	08:08:00 03/08/2011	22.0
8:12:00 03/08/2011	22.9	08:16:00 03/08/2011	22.9	08:20:00 03/08/2011	22.8	08:24:00 03/08/2011	22.8	08:28:00 03/08/2011	22.9	08:32:00 03/08/2011	22.0
8:36:00 03/08/2011	22.9	08:40:00 03/08/2011	22.9	08:44:00 03/08/2011	22.9	08:48:00 03/08/2011	29.7	08:52:00 03/08/2011	28.4	08:56:00 03/08/2011	27.0
9:00:00 03/08/2011	49.8	09:04:00 03/08/2011	48.8	09:08:00 03/08/2011	99.1	09:12:00 03/08/2011	99.4	09:16:00 03/08/2011	100.2	09:20:00 03/08/2011	100.0
9:24:00 03/08/2011	100.2	09:28:00 03/08/2011	100.2	09:32:00 03/08/2011	100.0	09:36:00 03/08/2011	99.9	09:40:00 03/08/2011	100.0	09:44:00 03/08/2011	100.0
9:48:00 03/08/2011	100.1	09:52:00 03/08/2011	100.1	09:56:00 03/08/2011	100.1	10:00:00 03/08/2011	100.0	10:04:00 03/08/2011	100.0	10:08:00 03/08/2011	100.0
10:12:00 03/08/2011	100.3	10:16:00 03/08/2011	100.1	10:20:00 03/08/2011	99.9	10:24:00 03/08/2011	99.9	10:28:00 03/08/2011	100.1	10:32:00 03/08/2011	99.0
10:36:00 03/08/2011	99.7	10:40:00 03/08/2011	98.7	10:44:00 03/08/2011	74.6						

*Line 2 Data Logger
Checked Rg
03.08.11*

Logger data

Document : 20

06/09/2011 10:54:18

1/1

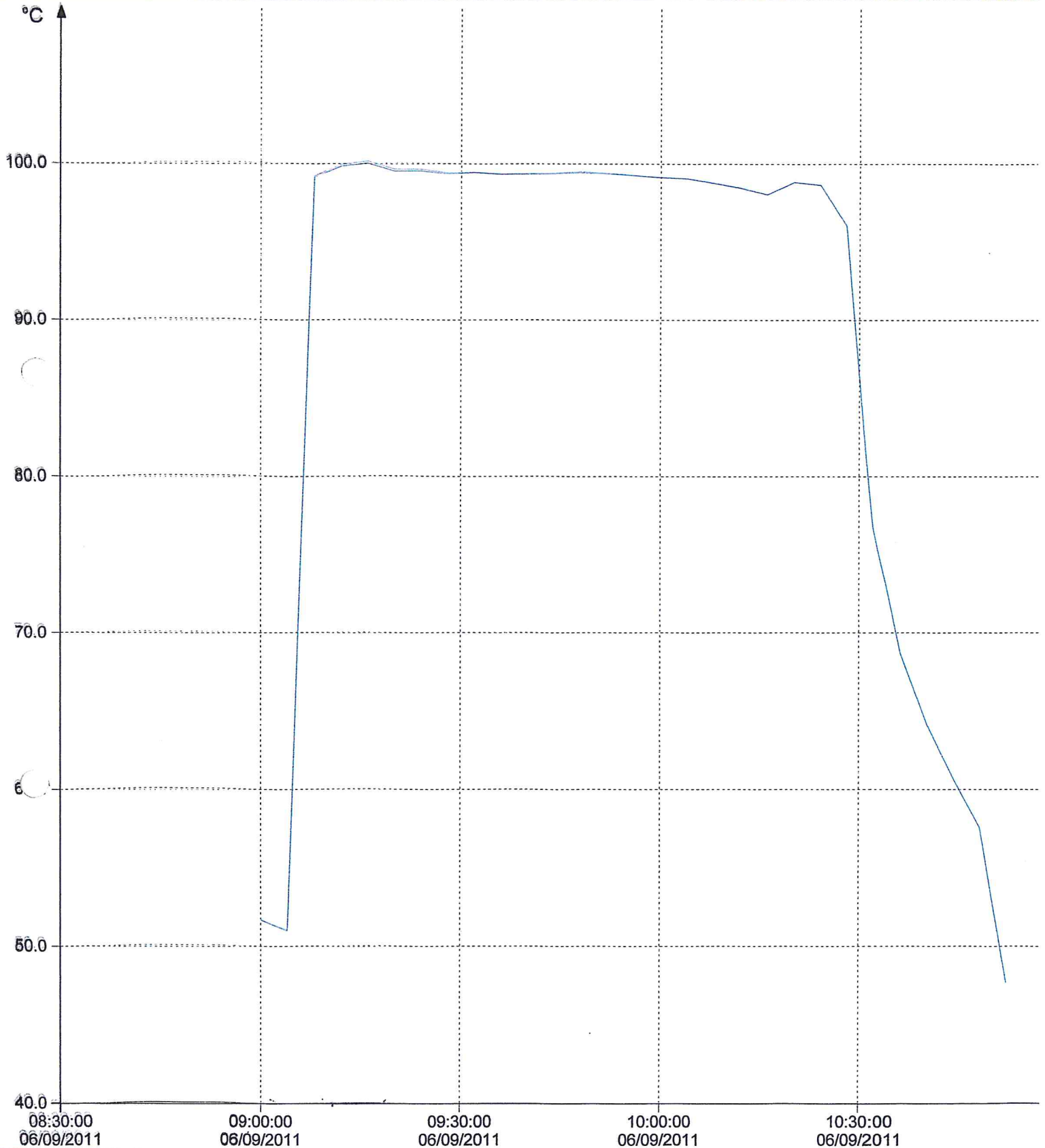
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	20	240 Sec.	06/09/2011 09:00:00	06/09/2011 10:52:00	00 Days, 01:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below
1 (Temperature)	90	100	47.7	100.1	88.3	344.4	18.6	52.4	0 01:36:00	0 00:04:00	0 00:32:00



Data

Document : 21

06/09/2011 10:56:04

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	29	240 Sec.	06/09/2011 09:00:00	06/09/2011 10:52:00	00 Days, 01:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below n
T (temperature)	90	100	47.7	100.1	88.3	344.4	18.6	52.4	0 01:36:00	0 00:04:00	0 00:32:00
Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)
09:00:00 06/09/2011	81.7	09:04:00 06/09/2011	51.0	09:08:00 06/09/2011	99.2	09:12:00 06/09/2011	99.9	09:16:00 06/09/2011	100.1	09:20:00 06/09/2011	99.4
09:24:00 06/09/2011	99.8	09:28:00 06/09/2011	99.4	09:32:00 06/09/2011	99.5	09:36:00 06/09/2011	99.4	09:40:00 06/09/2011	99.4	09:44:00 06/09/2011	99.4
09:48:00 06/09/2011	99.5	09:52:00 06/09/2011	99.4	09:56:00 06/09/2011	99.3	10:00:00 06/09/2011	99.2	10:04:00 06/09/2011	99.1	10:08:00 06/09/2011	99.1
10:12:00 06/09/2011	98.5	10:16:00 06/09/2011	98.1	10:20:00 06/09/2011	98.9	10:24:00 06/09/2011	98.7	10:28:00 06/09/2011	96.1	10:32:00 06/09/2011	96.1
10:36:00 06/09/2011	68.7	10:40:00 06/09/2011	64.2	10:44:00 06/09/2011	60.7	10:48:00 06/09/2011	57.6	10:52:00 06/09/2011	47.7		

*Line 2 Data Logger
Checked by. 06/09/11*

Logger data

Document : 23

05/10/2011 10:54:44

1/1

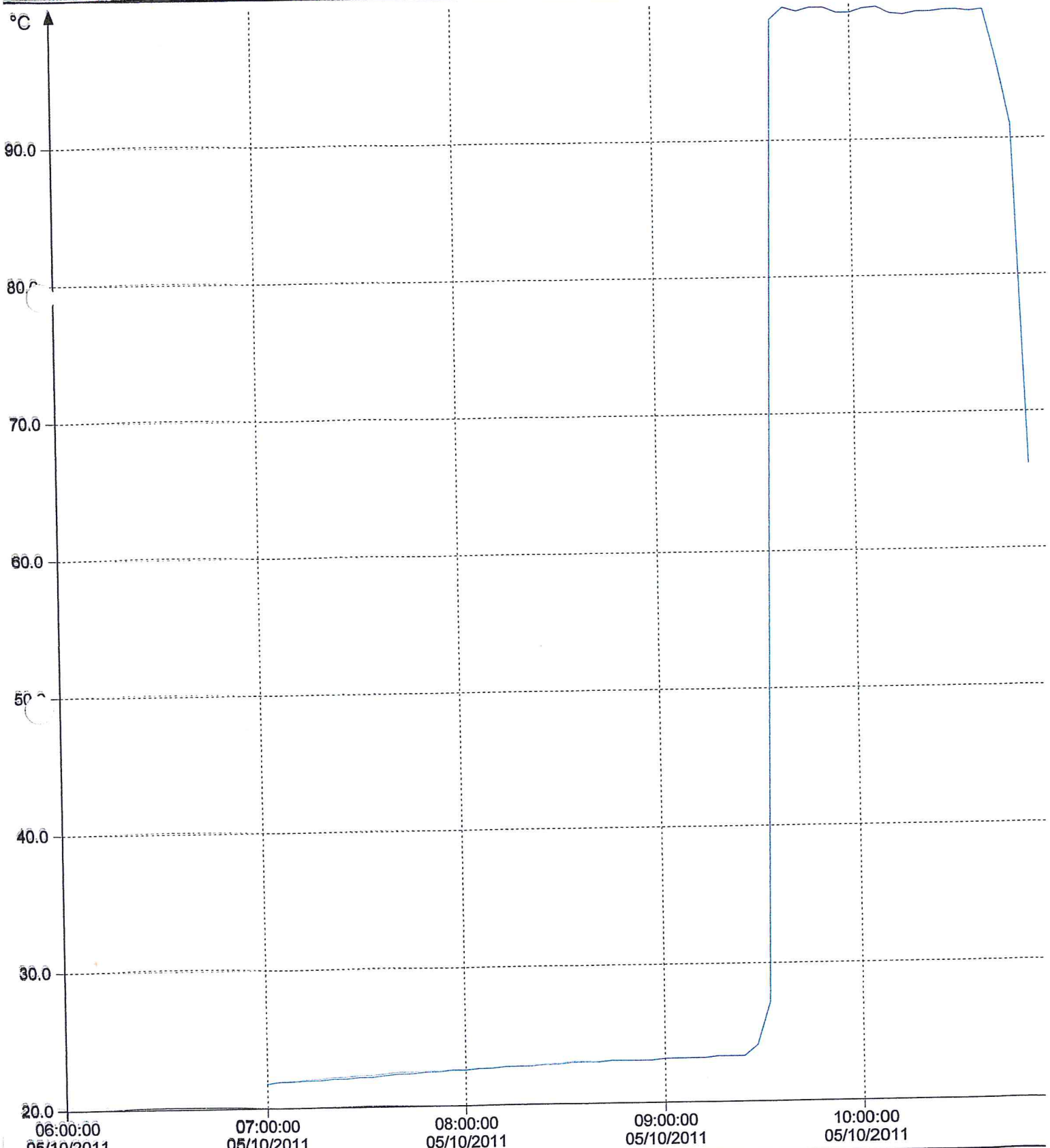
Company
Name
Address
City/State/Zip
Phone

Info text 1
Info text 2
Internal ID
Serial number 15051827

2

Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
15051827	88	240 Sec.	05/10/2011 07:00:00	05/10/2011 10:52:00	00 Days, 03:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min
1 (Temperature)	5	100	21.8	99.8	48.0	1280.4	35.8	78.0	0 02:40:00	0 00:00:00	0 00:00:00



* Smoothed curve ** Calculated

Data

05/10/2011 10:55:38

1/1

Document : 23

Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
15051827	59	240 Sec.	05/10/2011 07:00:00	05/10/2011 10:52:00	00 Days, 03:52:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below min.
T (temperature)	5	100	21.8	99.8	48.0	1280.4	35.8	78.0	0 02:40:00	0 00:00:00	0 00:00:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
7:00:00 05/10/2011	21.8	07:04:00 05/10/2011	21.9	07:08:00 05/10/2011	21.9	07:12:00 05/10/2011	22.0	07:16:00 05/10/2011	22.0	07:20:00 05/10/2011	22.1
7:24:00 05/10/2011	22.1	07:28:00 05/10/2011	22.2	07:32:00 05/10/2011	22.2	07:36:00 05/10/2011	22.3	07:40:00 05/10/2011	22.4	07:44:00 05/10/2011	22.4
7:48:00 05/10/2011	22.5	07:52:00 05/10/2011	22.5	07:56:00 05/10/2011	22.6	08:00:00 05/10/2011	22.6	08:04:00 05/10/2011	22.7	08:08:00 05/10/2011	22.7
8:12:00 05/10/2011	22.8	08:16:00 05/10/2011	22.8	08:20:00 05/10/2011	22.8	08:24:00 05/10/2011	22.9	08:28:00 05/10/2011	22.9	08:32:00 05/10/2011	23.1
8:36:00 05/10/2011	23.0	08:40:00 05/10/2011	23.0	08:44:00 05/10/2011	23.1	08:48:00 05/10/2011	23.1	08:52:00 05/10/2011	23.1	08:56:00 05/10/2011	23.1
9:00:00 05/10/2011	23.2	09:04:00 05/10/2011	23.2	09:08:00 05/10/2011	23.2	09:12:00 05/10/2011	23.2	09:16:00 05/10/2011	23.3	09:20:00 05/10/2011	23.3
9:24:00 05/10/2011	23.3	09:28:00 05/10/2011	24.1	09:32:00 05/10/2011	27.2	09:36:00 05/10/2011	98.9	09:40:00 05/10/2011	99.8	09:44:00 05/10/2011	99.8
9:48:00 05/10/2011	99.8	09:52:00 05/10/2011	99.8	09:56:00 05/10/2011	99.4	10:00:00 05/10/2011	99.4	10:04:00 05/10/2011	99.7	10:08:00 05/10/2011	99.7
10:12:00 05/10/2011	99.3	10:16:00 05/10/2011	99.2	10:20:00 05/10/2011	99.4	10:24:00 05/10/2011	99.4	10:28:00 05/10/2011	99.5	10:32:00 05/10/2011	99.5
10:36:00 05/10/2011	99.4	10:40:00 05/10/2011	99.5	10:44:00 05/10/2011	95.7	10:48:00 05/10/2011	91.1	10:52:00 05/10/2011	66.2		

*Line 2 Data Logger
Checked ref. 06/09/11*

Logger data

Document : 27

03/11/2011 08:39:09

1/1

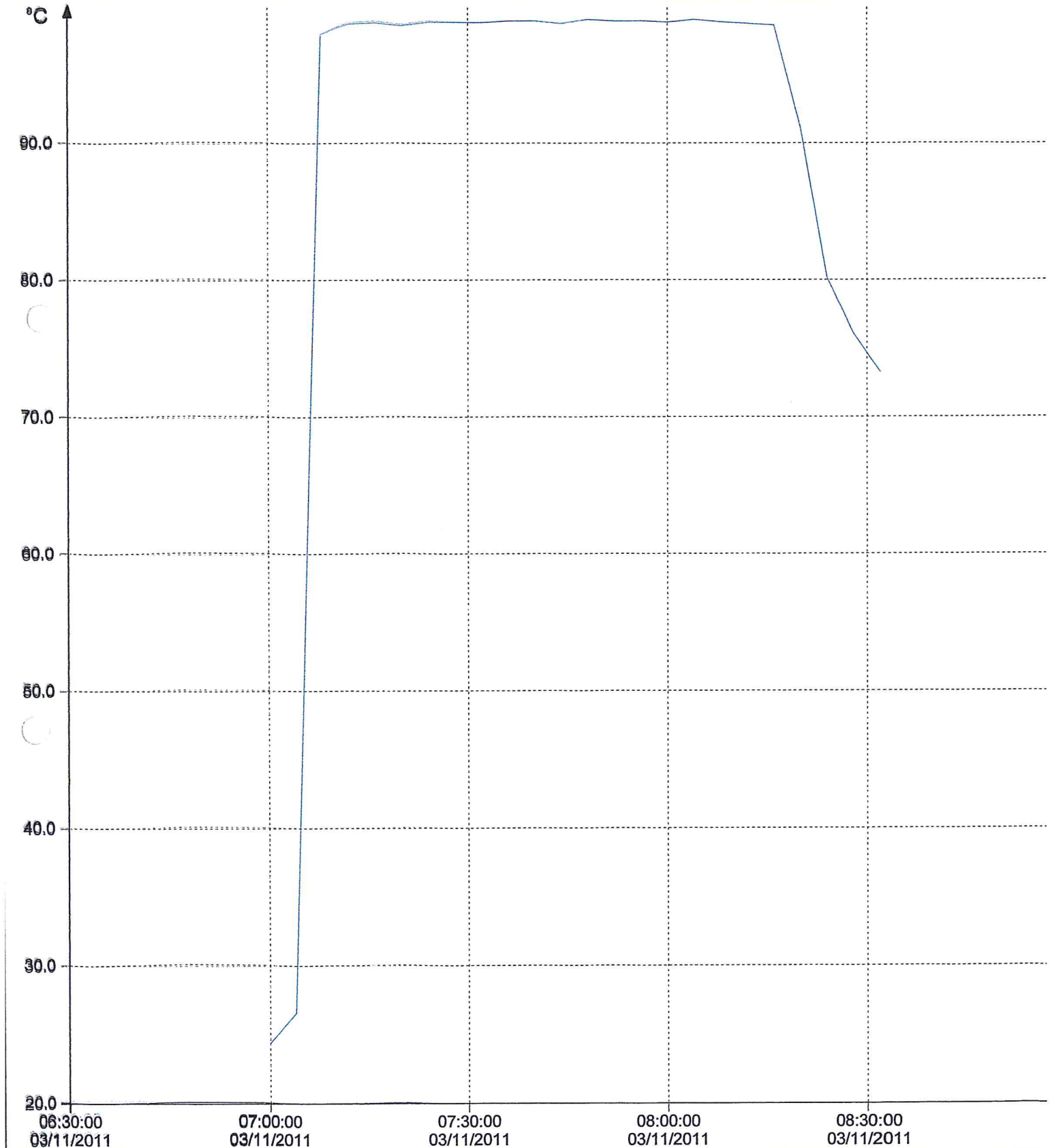
Company
Name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 15051827

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
15051827	24	240 Sec.	03/11/2011 07:00:00	03/11/2011 08:32:00	00 Days, 01:32:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below r
1 (Temperature)	90	100	24.4	99.1	89.6	447.9	21.2	74.7	0 00:48:00	0 00:00:00	0 00:20:00



Data

Document : 27

03/11/2011 08:40:10

1/1

Logger #	Measured values	Sampling rate (Interval)	From	Until	Time period
15051827	24	240 Sec.	03/11/2011 07:00:00	03/11/2011 08:32:00	00 Days, 01:32:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below
T (Temperature)	90	100	24.4	99.1	89.6	447.9	21.2	74.7	0 00:48:00	0 00:00:00	0 00:20:00
Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)	Date / Time	T (°C)
07:00:00 03/11/2011	24.4	07:04:00 03/11/2011	26.6	07:08:00 03/11/2011	98.0	07:12:00 03/11/2011	98.8	07:16:00 03/11/2011	98.9	07:20:00 03/11/2011	98.9
07:24:00 03/11/2011	98.9	07:28:00 03/11/2011	98.9	07:32:00 03/11/2011	98.9	07:36:00 03/11/2011	99.0	07:40:00 03/11/2011	99.0	07:44:00 03/11/2011	99.0
07:48:00 03/11/2011	99.1	07:52:00 03/11/2011	99.0	07:56:00 03/11/2011	99.0	08:00:00 03/11/2011	98.9	08:04:00 03/11/2011	99.1	08:08:00 03/11/2011	99.1
08:12:00 03/11/2011	98.8	08:16:00 03/11/2011	98.7	08:20:00 03/11/2011	91.2	08:24:00 03/11/2011	80.2	08:28:00 03/11/2011	76.1	08:32:00 03/11/2011	76.1

*Line 2 Data Logger
Checked RJ 01/11/11*

Logger data

Document : 30

06/12/2011 10:19:37

1/1

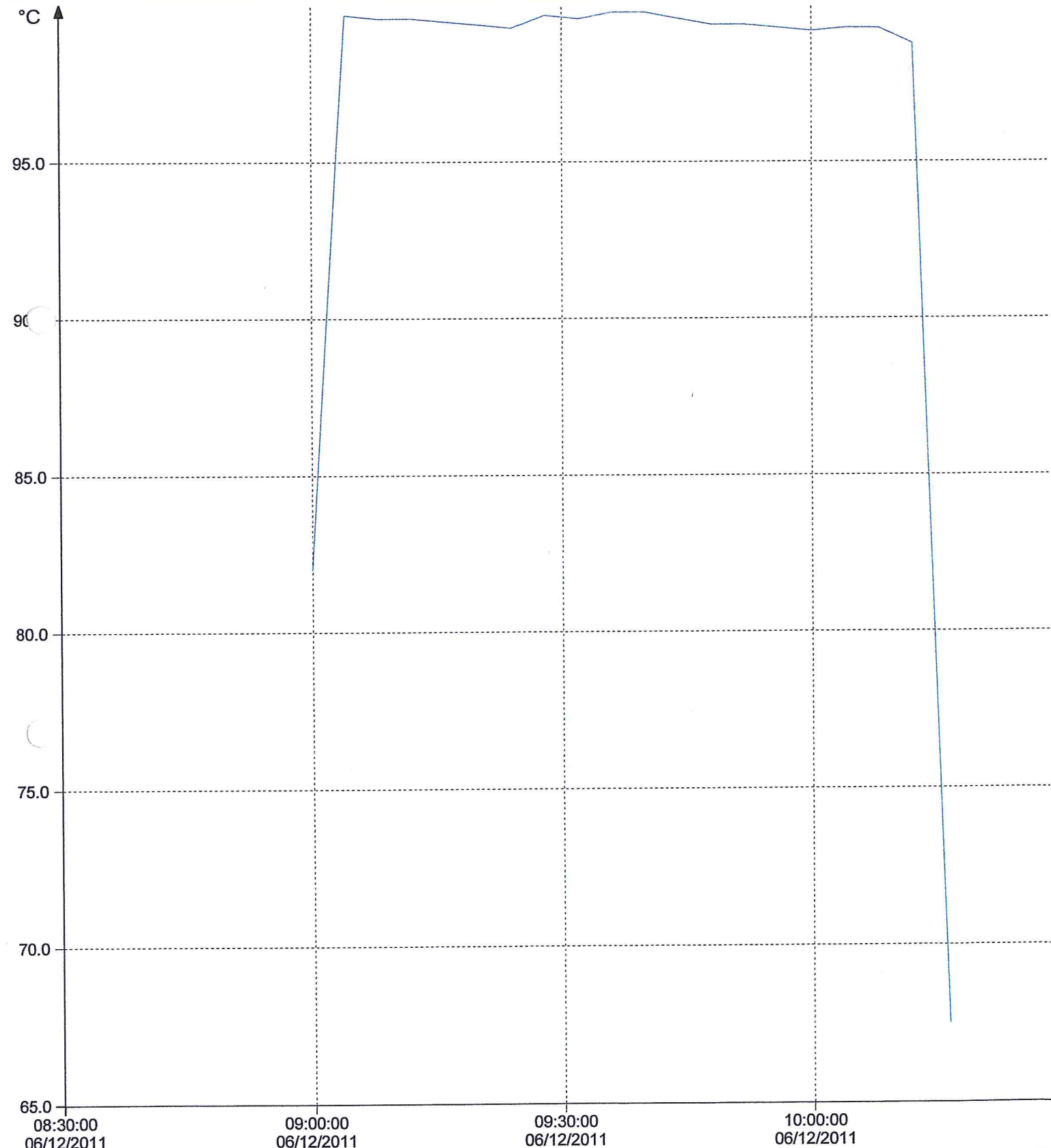
Company name
Street
City/State/Zip
Phone
Fax

Info text 1
Info text 2
Internal ID
Serial number 10419372

2

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	20	240 Sec.	06/12/2011 09:00:00	06/12/2011 10:16:00	00 Days, 01:16:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	67.5	99.8	97.0	63.4	8.0	32.3	0 00:40:00	0 00:00:00	0 00:08:00



Data

Document : 30

06/12/2011 10:21:30

1/1

Logger #	Measured values	Sampling rate (interval)	From	Until	Time period
10419372	20	240 Sec.	06/12/2011 09:00:00	06/12/2011 10:16:00	00 Days, 01:16:00

Channel	Low limit	High limit	Min value	Max value	Mean	Variance	Std. Dev.	Max. Diff.	Time period (Max.change)	Time above max	Time below m
1 (Temperature)	90	100	67.5	99.8	97.0	63.4	8.0	32.3	0 00:40:00	0 00:00:00	0 00:08:00
Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)	Date / Time	1 (°C)
09:00:00 06/12/2011	82.0	09:04:00 06/12/2011	99.7	09:08:00 06/12/2011	99.6	09:12:00 06/12/2011	99.6	09:16:00 06/12/2011	99.5	09:20:00 06/12/2011	9
09:24:00 06/12/2011	99.3	09:28:00 06/12/2011	99.7	09:32:00 06/12/2011	99.6	09:36:00 06/12/2011	99.8	09:40:00 06/12/2011	99.8	09:44:00 06/12/2011	9
09:48:00 06/12/2011	99.4	09:52:00 06/12/2011	99.4	09:56:00 06/12/2011	99.3	10:00:00 06/12/2011	99.2	10:04:00 06/12/2011	99.3	10:08:00 06/12/2011	9
10:12:00 06/12/2011	98.8	10:16:00 06/12/2011	67.5								

9-00 - 10-15

06-12-11

Joe White