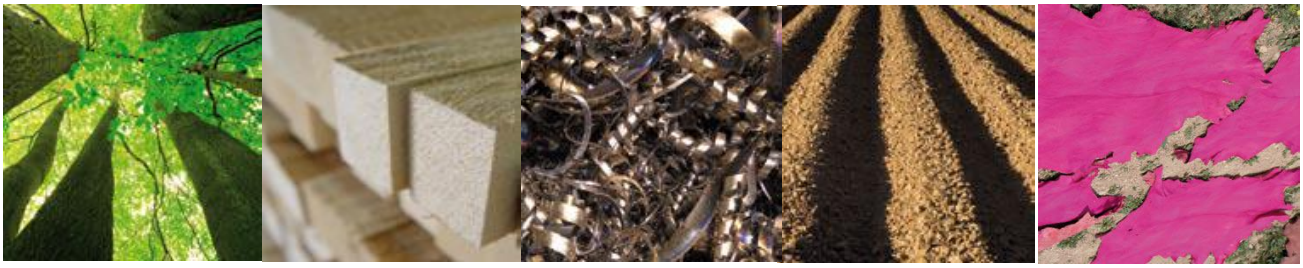

CIP Eco-innovation
First application and market replication projects
Call 2011

Call Identifier: CIP-EIP-Eco-Innovation-2011

Deliverable D 4.4a

Expert meeting minutes

water reuse 3.0

Agreement number ECO/11/304469

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20/02/2015

Project coordinator: **André Reigersman, RWB Water Services B.V.**

Project website: **www.iwec-water-reuse.eu**

A collaboration between: Rwb Vitens EUROSTEEL Supported by: Co-funded by the Eco-innovation Initiative of the European Union

EXPERT MEETING MINUTES

Meeting:	Expert meeting 1 IWEC-water reuse
Meeting	2015-1
	Egbert Dubbelink
	Februari 19, 2015
	Minutes
	Final
	WP4 Operation and monitoring
Rapporteur:	
Meeting	
Document type:	
Status:	

Present:	CC:
Martijn Tas (Vitens)	Klaas Wiersma (Vitens)
Frits Dekker (Vitens)	Andre Reigersman (RWB-Waterservices)
Egbert Dubbelink (RWB-Waterservices)	Bas Brouwer (RWB-Waterservices)
	Fokko Borre (RWB-Waterservices)

1.1 Introduction

The water reuse plant is commissioned after erection in December 2015. January 2015 the Operation and Monitoring activities started, during the first weeks tuning and optimizing of the plant was realized.

1.2 Optimization

The feed of the reuse plant is stored in the former settling tank (BZT1) of the WTP. This settling tank is equipped with two submersible mixers to guarantee a homogeneous feed of the reuse plant. The minimum mixing level is 44 %, below this level mixing stops and the plant stays operating until the level of 10 % was reached. During week 5 and 6 the level of BZT1 was controlled between approx. 10 and approx. 50%, this relative low level resulted in a minimum mixing time and precipitation of suspended matter. This suspended solids concentration became too high in the feed of the reuse plant and disturbed the filtration process.

During week 7 the level of BZT1 was controlled at a level of > 44 % to keep the feed homogeneous. This resulted in a stable operation.

A consequence of the higher level in BZT1 is a higher mixing energy consumption.

1.3 Water quality

Chemical and bacterial analyses show that the reuse plant runs within specification see table below.

Sampling date	Kolony 22 °C [#/ml]			Fe [mg/l]	Turbidity [FTE]
	Feed	Permeate at discharge reuse plant	Permeate at process recycle point	Permeate	Permeate
Target	-	-	-	<0,03	<0,3
26-01-15	20	130	180	-	-
05-02-15	30	20	20	<0,01	<0,1
10-02-15	20	10	20	<0,01	0,14
13-02-15	20	10	30	<0,01	<0,1

Bacterial analyses of 26-01-2015 show a higher colony number at the permeate side of the membranes. This can be caused by the vent of the permeate tank, the dearation of the backwash tank and suction of the compressor which provides the air for a backwash and forward flush.

1.4 Actions and discussions.

nr	date	Description	Action by	Status
1	19-2-2015	Research will be done to find an optimum between stable operation and energy consumption (see par. 1.2)	FDe,MTa, EDu	Open
2	19-2-2015	Analyses of necessity to provide open connections equipment with filters to provide bacteria contamination.	MTa	Open
3	19-2-2015	To compare the amount and concentration of suspended solids in the waste stream before and after start-up of the re-use system. It is proposed to empty the waste buffer. Martijn will check the possibilities.	MTa	Open
4	19-2-2015	Weekly datalogs to Vitens	EDu	Open
5	19-2-2015	Test at max. capacity, after stable operation.	FDe,MTa EDu	Open