

SCD Probiotics

Case Study Summary – Łowiczu, Poland

Wastewater - Sludge Reduction and Cost Savings

Industry: Łowiczu City Government, Public Works
Application: Improving the efficiency of urban wastewater treatment facility
Customer: Zakład Usług Komunalnych Urzędu Miasta
Where: Łowiczu, Poland
When: Since 2006
Products: Customized solution using SCD Bio Klean™
SCD Licensee: ProBiotics Polska

Goals

The goals at the Wastewater Treatment Facility in Łowicz included:

- Suppress application of coagulant agent (iron III sulphate)
- Improve sludge composting time
- Reduce sludge production
- Improve outflow parameters (see Table I)
- Financial savings from increased operational efficiencies

Table I: Mean wastewater characteristics (2005) prior to SCD Probiotics Applications

Daily inflow [m ³ /day]	Production [m ³ /day]			Inflow [mg/dm ³]				
	Screenings	Sand	Sludge	TSS	COD	BOD	P	N
8653	80.5	175	9006	394	1315	628	5.37	50.6
				Outflow [mg/dm ³]				
				TSS	COD	BOD	P	N
				52	76.6	13.2	1.18	8.56

Methodology

SCD Bio Klean™ was added to sludge separated from the system. A fraction of amended sludge was re-circulated in the general system to improve the characteristic of the outflow water.

Results

All goals were achieved.

Significant improvement in all outflow parameters (except Nitrogen content) occurred after the SCD Probiotics applications, as evidenced in **Table II** below.

The following benefits also were achieved as a result of the SCD Probiotics application, having a positive impact on the operational and financial performance of the wastewater treatment facility.

1. Elimination of PIX application (a coagulation agent).
2. A 25% reduction in overall sludge production.
3. Cost reductions:
 - 200.000 PLN from disposal cost reduction per annum
 - 30.000 PLN savings on environmental fees caused by decreased water contamination per annum

Table II: Mean wastewater characteristics (2008) after SCD Probiotics Technology Application

Daily inflow [m ³ /day]	Production [m ³ /day]			Inflow [mg/dm ³]				
	Screenings	Sand	Sludge	TSS	COD	BOD	P	N
9625	65	133	7955.5	219	822	341	6.82	44.2
				Outflow [mg/dm ³]				
				TSS	COD	BOD	P	N
				15	64.5	7.37	0.69	9.55

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