




Safety
Health
Environment

2005



«Siegfried has launched a long-term safety program to reduce the number of accidents.»

Douglas C. Günthardt, CEO



As a manufacturer of pharmaceutical substances and finished formulas with high quality and compliance standards, Siegfried is actively involved in the areas of safety, health and environment.

Over the past ten years, we have made enormous investments in this area. We actively participated in the modernization and expansion of the waste water purification plant in Oftringen, opened the Siegfried Recycling Center (SRC) and installed a very modern thermal oxidizer. The results are evident. Further progress depends on various factors that include the personal involvement of our employees, whom we continually school and involve directly in the program, and, of course, the quantities produced.

However, our efforts to find environmentally compatible and sustainable processes are limited by client and official registration requirements. Any changes are only possible after a time-consuming approval procedure. In addition, the controversy between quality assurance and environmental protection remains unresolved for many issues. For example, multiple-stage syntheses and costly cleansing procedures need greater amounts of solvents and water, which leads to greater quantities of waste. Further, regulatory requirements for recycling solvents are becoming increasingly restrictive. But where no opposing interests exist, as with VOC emissions (volatile organic compounds), the ready availability of thermal air purification systems has kept emissions low.

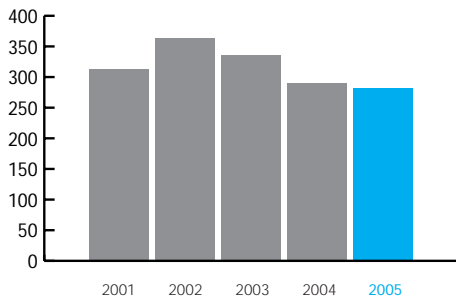
This report profiles Siegfried's performance in the areas of safety, health and environment in the year 2005. For the years to come we have, once again, set ourselves new, ambitious goals. We will continue to reduce the use of resources and focus on increased safety at the workplace. The Siegfried Safety Program (SSP) was recently launched to achieve a significant reduction in the number of accidents.

Safety, health and environment, along with quality and compliance, are key elements of our success.

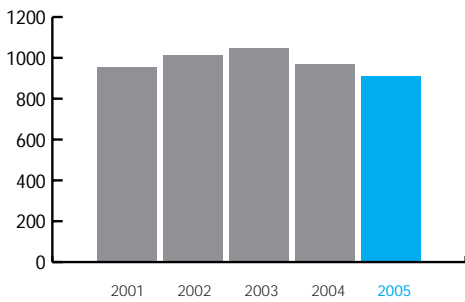
Douglas C. Günthardt
CEO Siegfried Ltd

Key Company Figures

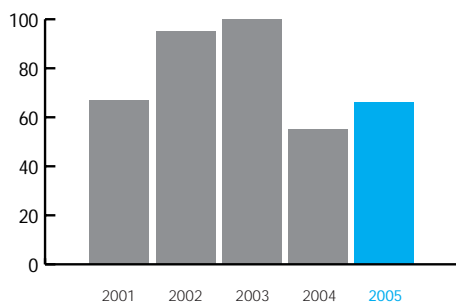
Siegfried Division Revenue (CHF)



Workforce



SHE Audits (Number)



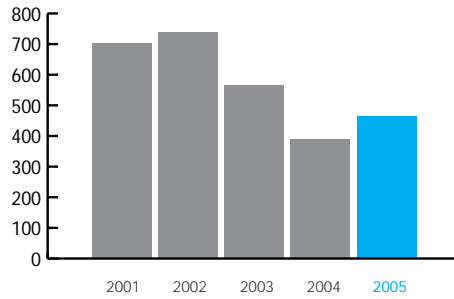
«We want to meet our responsibilities to our customers, the environment and the public each and every day.»

Douglas C. Günthardt, CEO

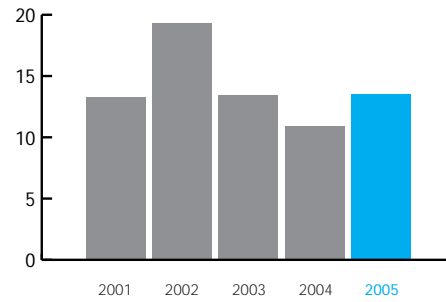


Emissions

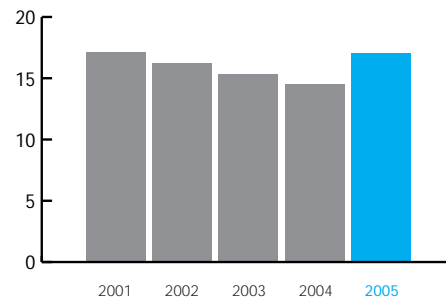
Industrial waste water Zofingen (1,000 m³)



Chemical waste excluding sludge (1,000 tons)



CO₂ emissions (1,000 tons)

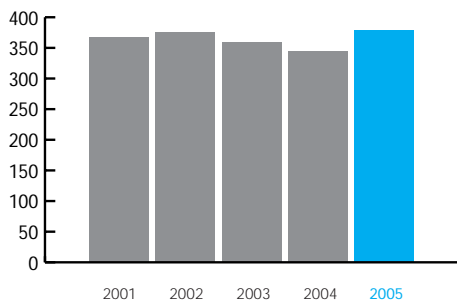


See Glossary for explanation of expressions Page 11

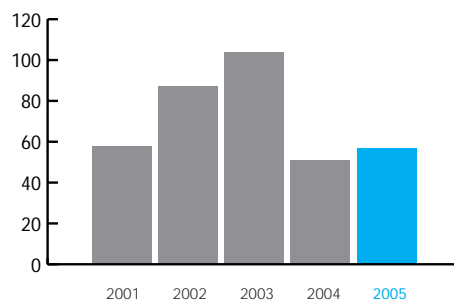


Resources

Total energy consumption (in 1,000 Giga Joules)



VOC emissions (tons)



	Units	2001	2002	2003	2004	2005
Total energy consumption	GJ	368'000	375'000	360'000	344'000	379'000
Natural gas	GJ	202'000	220'000	198'000	191'000	186'500
Heating oil	GJ	30'000	12'000	18'000	11'000	13'000
Alternative fuels (Solvents) TAR	GJ	25'000	23'000	22'000	27'000	57'000
Electricity	GJ	107'000	122'000	117'000	110'000	119'000
Water	GJ	1'896'000	2'507'000	1'887'100	1'437'100	1'761'000



We succeeded in reducing the consumption of natural gas and heating oil at the Zofingen plant through consistent use of alternative fuels.



6

Comments

The goals to reduce the use of resources and to promote «sustainable development» were only partially achieved. The in-house use of liquid solvent waste as a source of energy more than doubled. The overall energy consumption (fossil fuels and electricity) rose by about 10%, mainly due to greater utilization of chemical production capacity. At the Zofingen plant, the use of natural gas and heating oil decreased as a result of the consistent use of alternative fuels.

The increase in water consumption is directly related to the significantly higher degree of utilization of the chemical production facilities at Zofingen. At Pennsville, water consumption decreased slightly.

Goals 2006

Zofingen

Implement energy saving measures and initiate further projects:

- Optimize use of alternative fuels as substitutes for oil and gas
- Stabilize water consumption

Pennsville

Identify 5 recycling opportunities for the site. Formulate the rationale and implementation schedules for at least one of these opportunities.

	Unit	2001	2002	2003	2004	2005
Chemical waste, excluding sludge	Tons	13'300	19'300	13'400	10'900	13'500
Industrial waste water						
Zofingen	m ³	649'000	676'000	504'000	330'000	412'400
Pennsville	m ³	55'100	64'600	62'800	59'100	53'500
CO ₂ emissions	Tons	17'100	16'200	15'300	14'453	17'011
VOC emissions	Tons	58	87	104	51	57



The Thermal Air Purification plant (TAR) in Zofingen continued to keep VOC emissions at a low level.

Comments

The higher figures compared to the previous year reflect an increase in chemical production, which led to an increase in the consumption of waste solvents. Due to regulatory requirements, it is often necessary to use new solvents in the production of active pharmaceutical ingredients (API). The recycling potential is therefore limited.

Carbon dioxide: In accordance with the increased energy consumption, the CO₂ emissions also rose. The increase of over 18% in CO₂ emissions is due to the higher proportion of C in alternative fuels than in natural gas.

VOC: At the Zofingen site, the emissions of volatile organic compounds remained at a low level, thanks to the thermal air purification plant (TAR). In the past years, emissions were reduced by almost half, especially at the Pennsville plant (USA). In 2005 we observed a slight increase in emissions due to the higher degree of utilization in chemical production.

7

Goals 2006

Zofingen

Identify measures to save resources and initiate further projects:

- Increasing solvent recycling
- Optimizing waste water disposal

Pennsville

Identify 5 recycling possibilities at the site. Formulate the rationale and implementation schedule for at least one of these opportunities.

Work Accidents 2001 – 2005

Accidents per 1,000 employees	2001	2002	2003	2004	2005
Zofingen	17	30	16	15	18
Pennsville	9	13	9	6	44

Comments

Zofingen

Our goal of less than 12 accidents (resulting in lost hours) per 1,000 employees was not met. The implementation of adequate counter measures has already begun in Zofingen, by introducing a tailor-made safety program (see p. 9) as well as Key Performance Indicators (KPI, as of 2006). With 127 absences (and most only of short duration) we achieved our partial goal of less than 200 absence days per 1,000 employees, a figure we have appraised for the first time in 2005. Thus, a comparison with the previous year is not yet possible.

Pennsville

Neither the Injury/Illness Rate (OSHA) of <3.4, nor the DART Rate (see Glossary) of <1.7 were achieved. The actual results were: an Injury/Illness Rate of 7.3 and a DART Rate of 5.3.

8

Goals 2006

Zofingen and Pennsville

- Less than 13 lost-time work accidents per 1,000 employees or less than 200 days lost to work accidents per 1,000 employees.
- Less than 40 total work accidents per 1,000 employees.



The partial goal of less than 200 absence days per 1,000 employees was clearly achieved.

The SSP is not a one-time activity, but a long-term program dedicated to raising safety awareness.

Siegfried Safety Program (SSP)



«We want to create a culture with zero tolerance for accidents.» Based on this vision, the Siegfried Safety Program (SSP) was launched in 2005 by CEO Douglas C. Günthardt.

It is impossible to avoid all accidents involving personal injury and property damage. It is essential, however, to detect weaknesses in the system and consistently eliminate them. Already in 1992, Siegfried committed itself to the Responsible Care Program (s. Glossary) – to appropriately deal with safety, health and environmental issues and to bring about sustainable improvement.

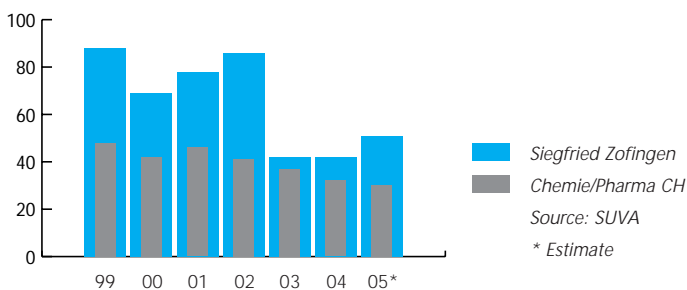
Change in safety awareness

The Siegfried Safety Program focuses on the safety awareness of each and every employee. The SSP is not an isolated string of measures but an itinerary spanning several years, aiming to raise safety awareness and improve measures and standards.

The program will be implemented in Zofingen and Pennsville and consists of the following elements:

- Safety workshops and workplace inspections in very small groups supported by an experienced safety trainer
- Safety and health campaigns
- Quarterly publications and initiatives on seasonal and safety-related issues, such as icy surfaces, escape routes, bicycles, hot surfaces, etc.
- Comprehensive accident records and evaluations, (including incidents), supplemented by individual information campaigns.
- More frequent SHE audits
- Consistent risk analyses in regard to processes and workplaces in development and production

Work accidents per 1,000 full-time employees



The management fully supports the SSP. However, each and every employee is responsible for continuous improvement in safety at his or her work place. This is the only way we can make our vision of «no accidents» a reality.



Glossary

WA/1000 positions	Number of lost-time units due to work injuries per 1,000 full-time units
Chemical Waste	Includes waste solvents, filter residues, distillation residues and other fluid and solid chemical waste
CO ₂ -emissions	Calculated amount of CO ₂ (in metric tons) produced through the thermal use of fossil fuels (heating oils, solvents, natural gas)
Compliance	Adherence to environmental laws and regulations in regard to maintaining specified limits
DART	Days Away from work, Restricted work or activity and job Transfers – Key figures of lost work time according to OSHA (Occupational, Safety and Health Administration, USA)
Energy	The energy mix consists of electricity, natural gas, heating oil, paper, wood, cardboard, and alternative fuels (solvents)
GMP	Good Manufacturing Practice – regulatory instructions to ensure safety and quality in conjunction with the production of pharmaceutical products
Industrial waste water	Water originating from chemical and cleaning processes which is drained off into a separate waste water system
Injury/Illness Frequency	Key figures for the consequences and frequencies of lost-workday injuries, according to OSHA (USA)
Sustainable Development	Compliance with the needs of today's populace without jeopardizing the options of future generations to meet their own needs
Recycling	Bringing reusable wastes (by-products, intermediates and end products) back into production and consumer cycles
Responsible Care	A voluntary worldwide initiative of the chemical industry to achieve and document continuous improvement in safety, health and environmental protection
SHE-Audits	Safety, Health and Environment – systematic and documented internal inspections of safety, health and environmental aspects
Synthesis	A chemical process to produce a complex active ingredient from simple (raw) materials
TAR	Thermal Air Purification plant for the environmentally responsible treatment of solvent-bearing waste air resulting from chemical manufacture
VOC	Volatile Organic Compounds can promote the formation of smog and ozone

Siegfried

when substance matters

Siegfried Ltd
Untere Brühlstrasse 4
CH-4800 Zofingen

Phone +41 62 746 12 12
Fax +41 62 746 14 01
info@siegfried.ch
www.siegfried.ch

This report is also available in German.