

# **Nalco 2010 Sustainability Report Detailed Appendix and Additional Information July 2011**

Nalco's 2010 Sustainability Report is designed to provide information for general readers on the Company's sustainability efforts, both for its customers and in its own operations. In the interest of supporting the level of specific information that many organizations request to measure progress, this document provides the detailed information that supports Nalco's 2010 Sustainability Report. It also includes added information about Nalco Company.

Comments and questions about this detail and Nalco's 2010 Sustainability Report should be addressed to [sustainability@nalco.com](mailto:sustainability@nalco.com).

## Safety Metrics

### Total Recordable Injury Rate (LA 7) (per 100 full-time workers in a year)

Year	TRIR Rate
2006	0.88
2007	0.85
2008	0.55
2009	0.56
2010	0.57

Change from 2009: +1.8%

Change 2006-2010: -35.2%

### Total Vehicle Accident Rate (LA 7) (per million miles driven)

Year	TVAR Rate
2006	4.2
2007	4
2008	4.2
2009	3.3
2010	2.3

Change from 2009: -30.3%

Change 2006-2010: -45.2%

### Severe Vehicle Accident Rate (LA 7)

Year	SVAR Rate
2008	0.6
2009	0.3
2010	0.24

Change from 2009: -20.0%

Change 2008-2010: -60.0%

## Environmental Metrics

### Direct Energy Used\* (EN 3)

Year	Thousands of gigajoules
2006	1,914.7
2007	1,945.3
2008	1,861.2
2009	1,618.4
2010	1,700.0

Change from previous year: +5.0%

Change 2006-2010: -11.2%

\*Note: Does not include mobile sources

### Indirect Energy Used (EN4)

Year	Thousands of gigajoules
2006	601.1
2007	561.0
2008	578.7
2009	522.2
2010	552.8

Change from previous year: +5.9%

Change 2006-2010: -8.0%

### Total Energy Used

Year	Thousands of gigajoules	Gigajoules per ton produced
2006	2,515.8	2.33
2007	2,506.3	2.29
2008	2,440.0	2.11
2009	2,140.6	2.16
2010	2,252.8	1.91

Change from previous year: +5.2%, -11.4%

Change 2006-2010: -10.5%, -17.9%

2012 target: 2,255.6

### Water (EN 8)

Year	Thousands of cubic meters	Cubic meters per ton produced
2006	4,646.2	4.3
2007	4,568.7	4.2
2008	4,571.8	4.0
2009	3,912.0	4.0
2010	4,924.9	4.2

Change from previous year: +25.9%, +5.0%

Change 2006-2010: +6.0%, -2.3%

### Wastewater (EN 21)

Year	Thousands of cubic meters	Cubic meters per ton produced
2006	3,969.3	3.7
2007	3,897.3	3.6
2008	3,852.5	3.3
2009	3,350.8	3.4
2010	4,289.8	3.6

Change from previous year: +28.0%, +5.9%  
Change 2006-2010: +8.1%, -2.7%

### Total Waste (EN 22)

Year	In metric tons	Metric tons of waste per metric ton produced
2006	25,055.9	.0232
2007	26,225.6	.0240
2008	24,660.3	.0213
2009	22,475.0	.0227
2010	24,365.3	.0207

Change from previous year: +8.4%, -8.8%  
Change 2006-2010: -2.8%, -10.8%

### Total Greenhouse Gases\* (EN 16)

Year	Thousands of metric tons	Metric tons of GHG per metric ton produced
2006	184.4	0.171
2007	177.6	0.162
2008	176.5	0.153
2009	156.9	0.159
2010	165.8	0.141

Change from previous year: +5.7%, -11.3%  
Change 2006-2010: -10.1%, -17.5%

\*Note: Does not include mobile sources

### Nalco Production

Year	Thousands of metric tons
2006	1,079.7
2007	1,093.0
2008	1,155.2
2009	989.1
2010	1,176.6

Change from previous year: +19.0%  
Change 2006-2010: +9.0%

### Total NOx and SOx Emissions (EN 20)

Year	NOx In metric tons	SOx In metric tons
2006	84.7	10.6
2007	85.0	7.3
2008	81.2	6.5
2009	70.8	6.3
2010	74.6	7.4

Change from previous year: +5.4%, +17.9%  
Change 2006-2010: -12.0%, -30.0%

### NOx and SOx Intensity

Year	NOx in tons per 100,000 tons produced	SOx in tons per 100,000 tons produced
2006	7.8	1.0
2007	7.8	0.7
2008	7.0	0.6
2009	7.2	0.6
2010	6.3	0.6

Change from previous year: -12.5%, --  
Change 2006-2010: -19.2%, -40%

### **EN5: Energy saved due to conservation and efficiency projects in 2010**

Throughout 2010, Nalco plants and major facilities were engaged in identifying and implementing 163 energy reduction activities and projects around the globe.

These involved activities such as increasing employee awareness as well as changing operating and maintenance procedures to reduce or more effectively utilize energy including the effort to reduce steam line losses at Botany, Australia; the reduction of unnecessary boiler blow down and increased condensate return at Cisterna, Italy and the updating of reactor cleanup procedures to reduce heating time at the Soledad, Colombia plant.

Energy reduction projects ranged from the investment in lighting, such as the installation of energy efficient warehouse lighting fixtures and/or sky lights at Ellwood City, Carson, Texarkana, Sugar Land and Naperville in the United States as well as Kwinana, Australia and Anaco, Venezuela.

Process equipment and systems to improvements involving upgrading to energy efficient air compressors and pumps at Garyville and Montgomery in the U.S., Singapore, Suzhou, China and Suzano, Brazil, as well as, in building energy efficiencies which included high speed doors at Burlington, Canada and Vancouver in the U.S., heating upgrades, increased insulation and steam trap upgrades at Clearing and Freeport in the U.S. and Celra, Spain.

These collective 2010 energy reduction efforts are estimated to contribute 111, 608 gigajoules in energy use reduction on an annual basis.

### **EN18: Initiatives to reduce Greenhouse Gases (GHG) and reduction achieved**

Efforts to reduce energy consumption by the Nalco plants and major facilities, as indicated in EN5, had a favorable impact on associated greenhouse gas emissions. Despite an increase in production levels from 2009 and the associated energy demand, the global greenhouse gas intensity was reduced from 0.159 metric tons of GHG CO<sub>2</sub>-e per metric ton produced in 2009 to 0.141 in 2010.

## Nalco Overview

### Water Services

Our customers, across a broad range of industries, use our water treatment programs to extend the useful life of their assets, minimize downtime of their facilities, conserve water and energy, cut waste and reduce their total cost of operations. Our diverse process treatment programs include applications in mining and mineral processing, investment casting, odor control, food processing additives and membrane systems.

#### Market Position

\$6.4 billion global market <sup>(1)(2)</sup>  
#1 Market Position  
20% Market Share <sup>(3)</sup>

#### Net Sales

\$1,810 million

### Products and Services

Cooling water treatment and automation (scale control, microbial fouling control, corrosion control), boiler water treatment and automation (pre-treatment, condensate control, internal treatment), indoor air treatment, air emission control and combustion efficiency, raw and wastewater treatment, water reuse and recycle, and various water-based process applications

#### End Markets

Aerospace, Automotive, Buildings, Chemicals, Food and Beverage, Healthcare, Hotels, Institutions, Manufacturing, Microelectronics, Mining and Mineral Processing, Pharmaceuticals, Primary Metals, Utilities

### Energy Services

Our upstream process applications improve oil and gas recovery and production, extend production equipment life and decrease operating costs. Our downstream process applications increase refinery and petrochemical plant efficiency and the useful life of customer assets while improving refined and petrochemical product quality and yields. We offer solutions that mitigate the cost and delay of capital investment and help customers minimize emissions and meet environmental requirements.

#### Market Position

\$5.6 billion global market <sup>(1)</sup>  
#1 Market Position  
30% Market Share <sup>(3) (4)</sup>

#### Net Sales

\$1,686 million

### Products and Services

Corrosion inhibitors, scale control additives, biocides, cleaners, hydrate control, H<sub>2</sub>S scavengers, oil spill dispersants, asphaltene and paraffin control, foamers and anti-foams, flow assurance, oil/water separation, heavy crude desalting, monomer inhibitors, anti-oxidants, fuel and lubricant additives, air emission control and combustion efficiency, and traditional water treatment including boiler, cooling water, raw water and wastewater applications

#### End Markets

Additives for Drilling, Stimulation and Fracturing Programs, Oil and Gas Production, Enhanced Oil Recovery and Refinery and Petrochemical Processing

## Paper Services

Our comprehensive, grade-based approach addresses the unique needs of the various segments of the pulp and paper industry. We integrate the entire papermaking process through mechanical, operational and chemical means to improve finished product performance and optimize operational efficiency.

### Market Position

\$6.7 billion global market <sup>(1)</sup>  
#3 Market Position  
11% Market Share <sup>(3)</sup>

### Net Sales

\$755 million

## Products and Services

Flocculants, coagulants, microparticles, dewatering aids, digester yield enhancers, functional additives, biocontrol, data management and analysis, modeling, mechanical and operational adjustments to paper machines, air emission control and combustion efficiency, water and waste treatment

## End Markets

Containerboard, Graphic, Packaging, Tissue and Towel, Newsprint

- (1) Approximate market size based on internal estimates and industry publications and surveys. More details are in our 10-K.
- (2) Represents the water treatment and services markets, which accounted for approximately 69% of our Water Services segment's net sales in 2010.
- (3) Market share calculations include end-market allocations from an all-inclusive Emerging Market business unit within Water Services.
- (4) Excluding one-time sales of dispersant products in 2010, market share is 29%.