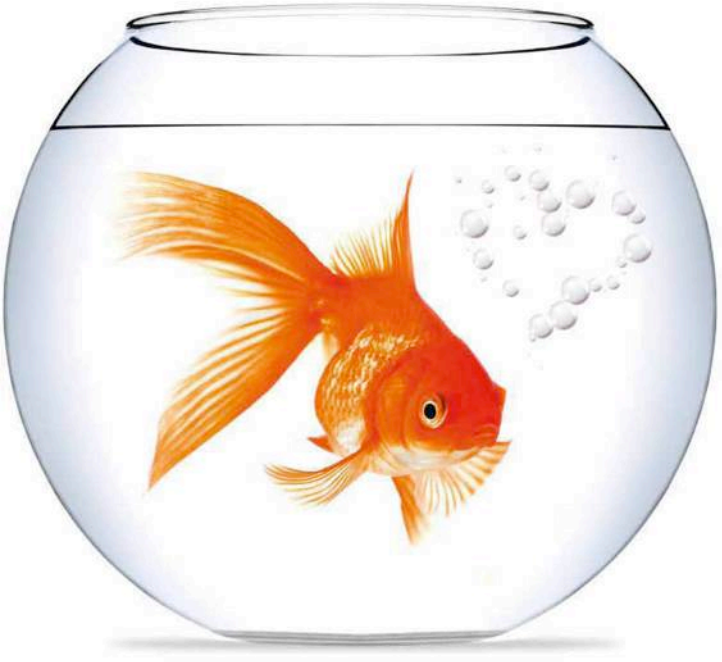
Le sable, l'eau,
pour mieux construire demain

Solution for the Chromium VI and total Chromium removal

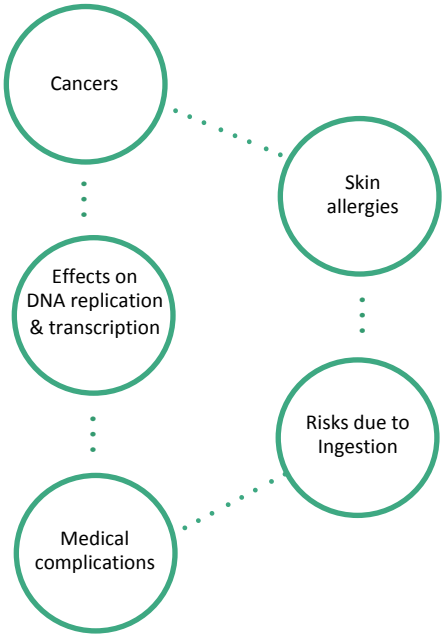
- Surface treatment
- Tannery
- Industries
- Concrete plant



CHROMIUM 6 FREE.
For really clean wastewater

Chrome VI, a public health issue…

Chromium VI toxicity



Regulatory framework

Decree dated on 1st february 2001, supported by the REACH
Chromium VI = Carcinogenic, mutagenic & reprotoxic agent

US-EPA sets the reference value at 100 µg/l of Total Chromium in water intended for human consumption (WIHC)

The WHO sets the reference value for Total Chromium at 50 µg/L in water intended for human consumption

ANSES – Saisine n°2011-SA-0127 – 02/07/12
Total Chromium = 50 µg/ in WIHC
Chromium VI = 6 µg/ in WIHC

* Chromium :

- is one of the 6 most dangerous pollutants in the world
- 16 millions people involved
- 3 million years of life lost
- Chromium is used in industrial sectors such as tanneries, metal processing, stainless steel welding, chromate production and the manufacture of chromium pigments.»

*Report dated on 2015 : Green Cross Suisse & Pure Earth

Eric Brockovich, legal assistant and environmental activist reveals a case of drinking water pollution at Hinkley by the company Pacific Gas and Electricity (PG&E), condemned in 1993.

CHROMIUM6FREE.
For really clean wastewater

Innovative, and single process

A patented process

Innovative & eco-friendly

Patent applied on 28/03/2014

Developed in partenship

With the CNRS

Supported by

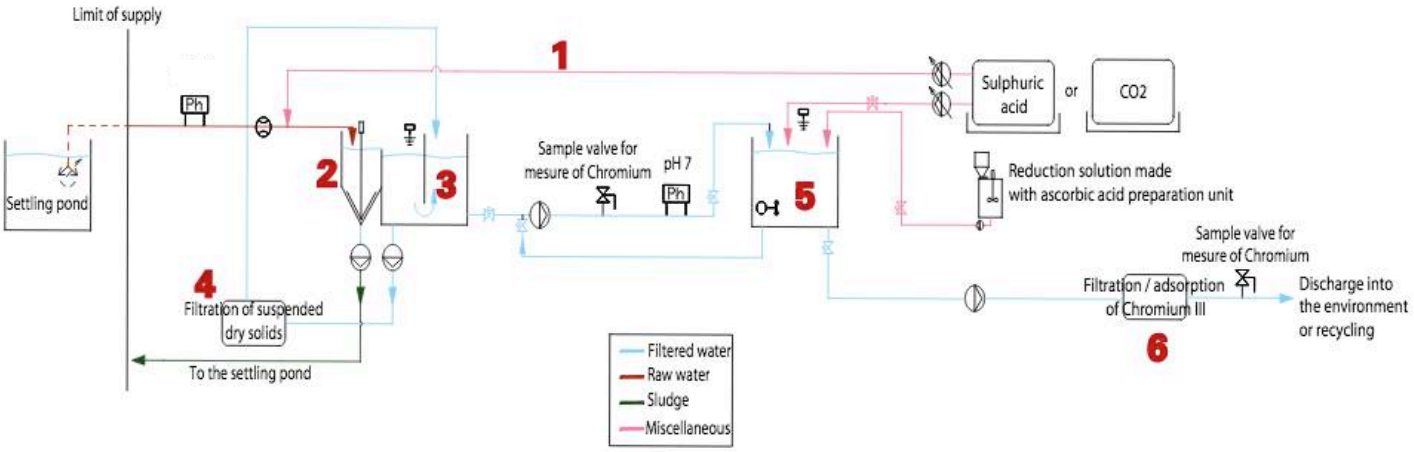
Région Auvergne & BPI

Sustainable Development Award :

Intermat Innovation Awards 2015

- pH treatment
- Chemical Reduction from Chromium VI to Chromium III thanks to a reducing solution based on eco-neutral ascorbic acid (non reversible).
- Filtration / Adsorption of Chromium III.

Flowsheet



CHROMIUM6FREE.
For really clean wastewater

An easy-to-implement solution

A global and transversal process,
for sectors whose wastewaters could contain Chromium VI

Business case based on the concrete plant sector

Decree standards* :
Suspended solids < 35 mg/L
5,5 < pH < 9,5
Total Chromium < 100 mg/L
Chromium VI < 50 µg/L

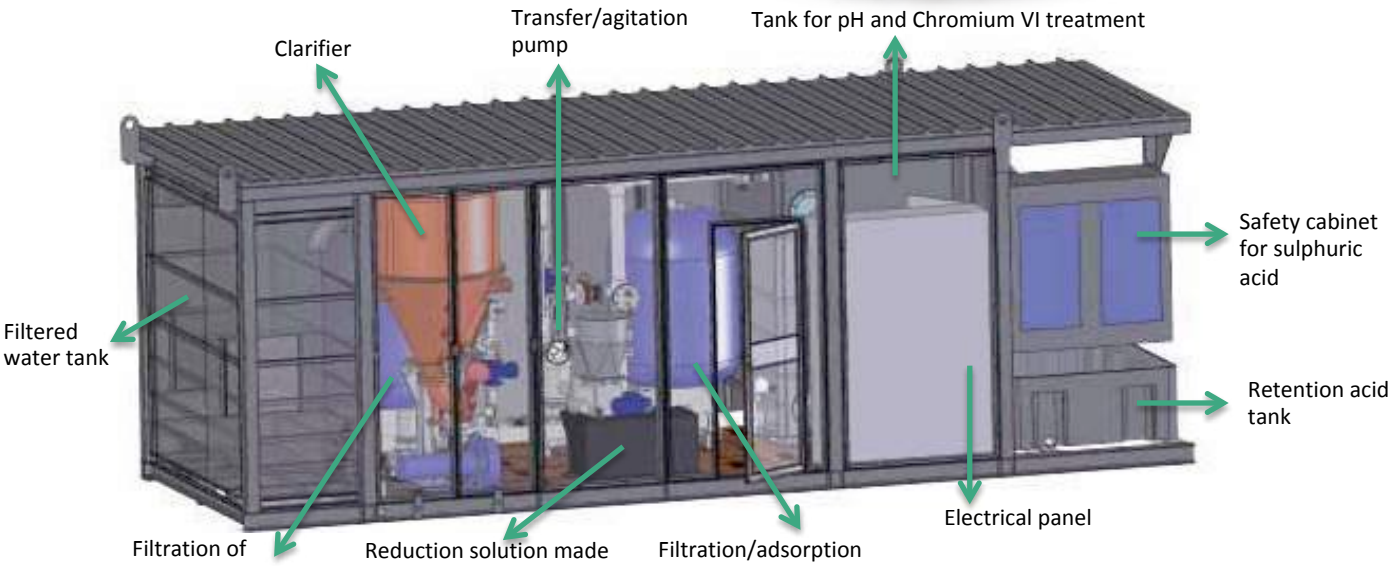
* The decree of 26 November 2011 relating to the general regulations applicable to ready-mix concrete production facilities has imposed new discharge standards since 1st of July 2012

Current discharge* :
10 < Suspended solids< 1000 mg/L
9 < pH < 12
Chromium VI : 100 à 400 µg/L

* Data from booklet n°3 "Water and Industry" - THE READY-TO-USE CONCRETE PRODUCTION CENTRALS OF THE SEINE-NORMANDIE BASIN.
By the Seine-Normandie Water Agencies

After treatment thanks to Chromium VI Free
Suspended solids< 35 mg/L
pH 5,5-9,5
Chromium VI < 10 µg/L

Grand Paris Worksite . . . . . .



CHROMIUM6FREE.
For really clean wastewater

«We believe it is our duty for future generations to adopt a more ethical code of conduct in construction industry»

Water Treatment

Mineral Industries

Underground Works

Recycling

La FRENCH FAB

ISO 9001
BUREAU VERITAS
Certification

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pour mieux construire demain

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