



Tanker delivery of liquid Neutralac® SL30 to the sludge storage tank



## Calci-action® Case study N°6



# Reducing odour and improving agricultural reuse value of liquid urban sludge

## The problem

French water company, la Générale des Eaux, operates a number of small and medium-sized urban wastewater treatment plants, producing residual liquid sludges which can be used for agricultural spreading.

In order to conserve the agricultural reuse outlet and perpetuate the spreading practice in the future the company required additional water treatment processing to ensure that the resultant liquid sludge conformed to agricultural reuse regulations.

The project brief included a series of specific requirements:

- Low cost investment
- Easy-to-use reagent
- Provide additional quantities of calcium or magnesium into the sludge to augment its agronomic value
- Ensure that liquid sludge be pumpable by farmers
- Deodorise the sludge in order to minimise noxious odours during agricultural spreading

## The solution

Lhoist considered the problem posed by la Générale des Eaux and several Calci-action® approaches were examined. The most suitable option was based on a ready-to-use reagent.

The Calci-action® package comprised:

- Modifications to the sludge storage silo involving discharge piping and mixing device
- Selection of a ready-to-use liquid reagent, including formulation, concentration and dosage rates (generally 30 wt% of Neutralac® per weight of sludge dry matter)
- Regular on-time deliveries of Neutralac® SL30 to match the needs of the agricultural spreading schedule
- Provision of regular technical service during start up and development



Discharge of Neutralac® SL30 into the tank



## Conclusion

The complete Calci-action® package provided by Lhoist allowed Générale des Eaux to match the requirements of its customers and partners. This package comprised:

- The overall management of the project, including supply of equipment and reagent deliveries
- Minimal investment and running costs
- The assurance of maintaining operational flexibility
- A satisfactory long-term solution for agricultural reuse of the sludge