Case Study Reduction of the AOX content in the sludge of a wastewater treatment plant

The *dtd* prevents cost-intensive disposal of wastewater by reducing the AOX content. In a food company, the AOX level in the wastewater treatment has risen so drastically that the wastewater could no longer to be "spread on fields", but had to be disposed in a very cost-intensive way.

Problem

- AOX is a sum parameter that indicates the adsorbable organically bound halogens of a substance.
- The AOX values in the wastewater of a food company has risen drastically above the limit values and the wastewater suddenly had to be disposed at high cost.
- The client checked the entire wastewater treatment plant, all processes, chemical additives, suppliers, etc. several times, but could not identify the problem.
- Due to the new cost pressure, an expert in the field of microbiology, and wastewater treatment had to be found quickly to solve the problem as soon as possible.

Procedure

- *dtd* has conducted an intensive workshop on site in order to be able to precisely record and understand the initial situation and challenge.
- To start the project, a comprehensive internet and literature search was carried out to identify experts in the DACH region who deal with the problem of AOX in sewage sludge and have basic microbiological expertise.
- *dtd* has contacted the identified companies and experts asked them about the possible reasons for the sudden increase in AOX values in wastewater and possibilities for solving the problem.

Result

- A total of almost 150 experts / companies were directly interviewed.
- The customer's problem was explained in detail to all experts / companies and possible reasons / triggers for the high AOX values were discussed.
- After approx. 3 weeks, a total of 35 experts including expert profiles, references and initial assessments of the problem were presented to the customer

Conclusion

The great challenge within the project was not only to consult the world of experts in the field of chemical technology, food technology and wastewater treatment, but also experts in the field of microbiology and soil science on possible explanations of the AOX phenomenon. This was achieved through *dtd*'s intensive preliminary research and the active questioning of experts. The client had discussions with 6 experts - 2 environmental institutes, 3 universities and 1 environmental technology company - and finally was able to identify and solve the problem within 3 weeks.