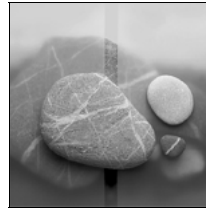


Community Association WWTP Worblental Enlargement biology



Environment
Geology and Geotechnics
Civil Engineering
Waste and Contaminated Sites
Treatment Plants

www.csd.ch



Project description

The waste water treatment plant (WWTP) Worblental was built in 1971 and cleans sewage from 10 communities and from different industrial firms. In the context of the project "enlargement biology" the WWTP is expanded to 180'000 PE. The project planning and the realisation of construction takes place in the context of a masters planner mandate by the engineering team Ryser Engineers Inc/ CSD Inc. The "expanded biology" meets the projects requirement from the canton Bern, in particular, nitrogen decomposition (year- round nitrification, part denitrification) is accomplished.

- Location: ARA Worblental, Worblaufen Switzerland.
- Reference person: J. van Elewout, plant manager
- Duration: 2001-2006
- Entire construction sum: 55 Mio. CHF
- Entire fee sum: 5.8 Mio. CHF

Highlights

Enlargement biology:

- Fine screen at the end of the grit chamber basin incl. conveyor screens
- Method for the fragmentation of the water amount on activated sludge plant (approx. 40%) and on fixed bed (approx. 60%)
- Feed channel to the fixed bed (press drift in a tunnel)
- Fixed bed installation incl. ancillary works
- Enlarging subsurface conduit tunnel by 80m
- Pumping station at the run-off, of the secondary sedimentation basin with pump pipeline to the feed channel fixed bed
- Reconstructing of discharge construction in the river Aare
- Ecological substitute measures (renaturation of the riverbank of the Aare)

Measures reduction smell:

- Covering diverse open channels
- Covering and hall grit chamber
- Hall primary sedimentation basin
- Exhaust air treatment plant
- Renewing of the extraction of floating sludge in the primary sedimentation basin

Our services

Project planning and realisation of following restoration measures:

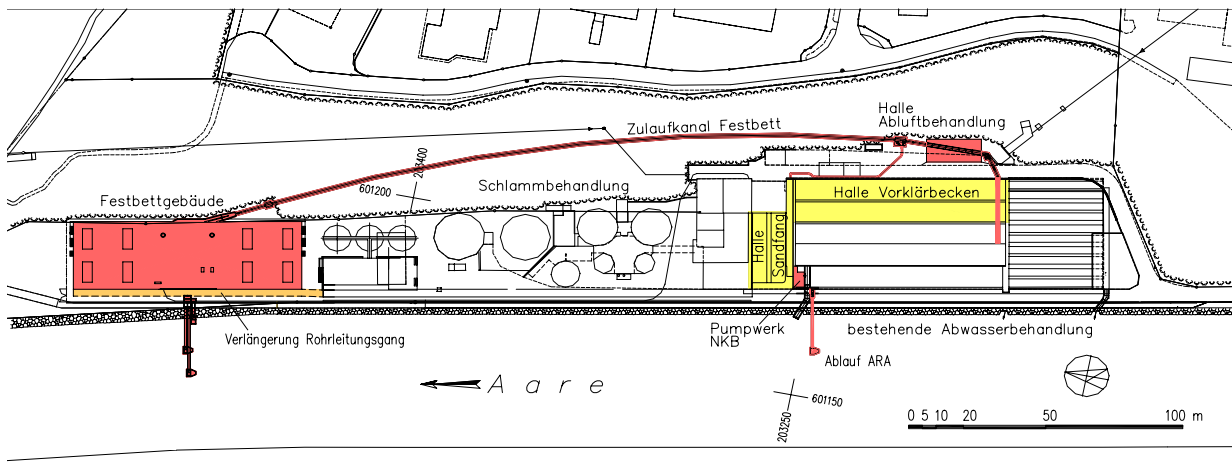
- Geotechnique excavations
- Feed channel fixed bed
- Hall primary sedimentation basin
- Covering the grit chamber basin and of grit chamber hall
- Fine screen installation
- Optimising the extraction of floating sludge
- Exhaust air hall
- Discharge construction to the river Aare
- Ecological substitute measures



Picture left:
Existing biological purification stage with primary sedimentation basin (left), aeration tank (background) and secondary sedimentation basin (right)



Picture right:
New, fully automatic extraction of the floating sludge of the primary sedimentation basin



Picture above: situation of the extension project with the new fixed bed installation