

# PROJECT PROFILE

## DRY WELL ASSESSMENT AND STORMWATER MANAGEMENT AT AVIANO AIR BASE

Dry wells are essentially boreholes or pits used for the disposal of sewage, runoff from work areas, or other liquid wastes. Over the past several years, D'Appolonia has undertaken a comprehensive program to survey, investigate, and manage dry wells at the Aviano Air Base in northeast Italy. D'Appolonia's billings for this work since 2001 have

work areas that could contribute to dry well contamination.

- Creation of a dry well database detailing dry well physical attributes, wastewater and/or stormwater sources, and operational history.
- Sampling of dry well sediment.
- Assessment of soil contamination under dry wells



Stormwater control structures at the Aviano Air Base.

exceeded \$2.8 million.

The project objectives have been wide-reaching and have included the following:

- Base-wide surveys of more than 500 dry wells.
- Comprehensive sampling, analysis and inventory of buildings and

polonia also investigated stormwater management options for the substantial volume of storm water currently being disposed of through dry wells at the Aviano Air Base.

Some dry wells that collect stormwater runoff at the base are not provided with a pre-treatment system, and findings from past investigations indicated the

A Dry Well Closure and Management Plan was prepared by D'Appolonia to provide a project programming tool for long-term planning of dry well management. This work included development of pollution prevention plans and designs to prevent contamination from entering dry wells. D'Ap-



Typical storm drain leading to a dry well at the Aviano Air Base.

presence of compounds of concern (CoCs) in stormwater runoff. The Stormwater Management Plan focused on identifying potential sources of contamination of storm water runoff. Catchment areas from which storm water runoff discharges to the subsurface were delineated.

The stormwater runoff from catchments of selected areas was characterized, and the implementation of diversions and treatment systems for all contaminated stormwater runoff catchments was prioritized.

The scope of work was divided into six main tasks for selected areas:

- Data collection and mapping.
- Review of stormwater issues and mitigation options
- Review of options for stormwater management.
- Focused field study on the stormwater features to verify stormwater network characteristics, catchment area, and surface features.
- Stormwater management and pre-treatment feasibility study to evaluate concrete stormwater management and pre-treatment options.
- Preliminary design for stormwater pretreatment based upon the results of the feasibility study.

All site activities were performed in accordance with U.S. Air Force and U.S. Environmental Protection Agency requirements, including implementation of a site-specific QA/QC program to validate field and laboratory results.

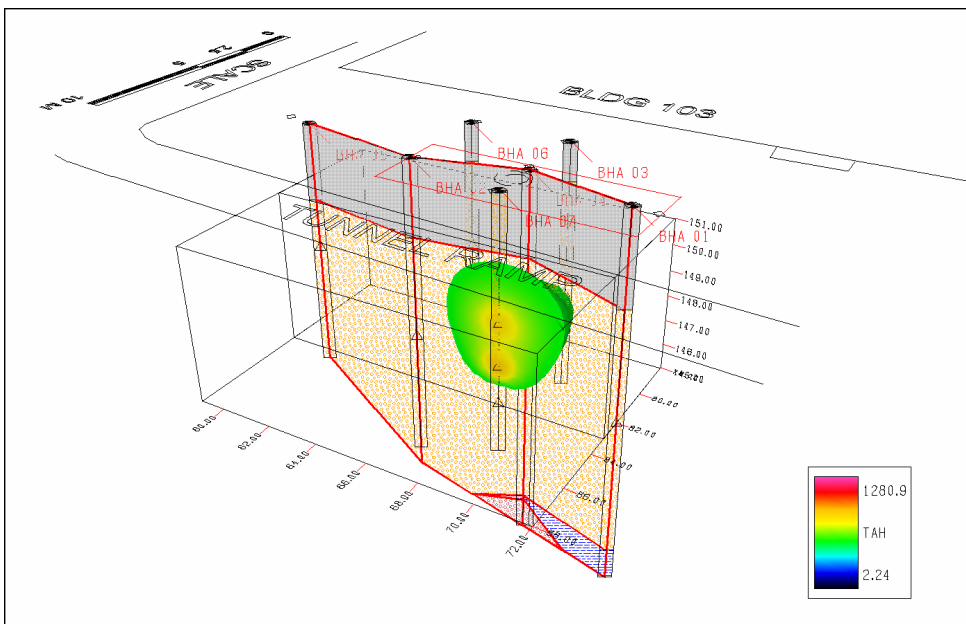


Image of subsurface contaminant plume from Aviano Air Base dry well.