

Intrusive Vapor Mitigation through Depressurization



Client

Electrical/electronics industry

Facts

Period2011 - 2019

Project CountryBrazil

UFSP

The
commitment of
all parties
involved in the
project enabled
its swift
implementation,
with minimum
impact to
campus
activities.

Minimization of
operational
interferences
with regular
campus
activities.

Documented
efficient
mitigation of
vapor intrusion.

This project encompassed a series of vapor intrusion services that enabled the continued use of several classrooms in a university campus in the city of São Paulo. The project started with a vapor intrusion investigation through the multiple lines of evidence approach followed by an assessment of mitigation alternatives, and the implementation and operation of a Sub-Slab Depressurization (SSD) system.

Environmental investigations conducted at a former industrial site in São Paulo detected the presence of a plume of chlorinated solvents. The area is currently occupied by a university. An investigation with multiple lines of evidence revealed the occurrence of vapor intrusion in several areas, mostly used as classrooms.

For safety reasons, the Health Surveillance Agency closed these areas to prevent access and use.

In order to solve the issue, EBP Brasil (formerly Geoklock) conducted an intrusive vapor mitigation alternatives study, which suggested that the best option for the area consisted of the application of the SSD technique.

- Vapor intrusion investigation
- Installation of sub-slab wells
- Collection and chemical analysis of air samples (vapor intrusion, ambient air)
- Temperature and atmospheric pressure variation monitoring. Intrusive vapors mitigation alternatives study
- Pilot test and engineering design
- Pilot test of SSD system
- Engineering design of SSD system
- Installation and operation of SSD system
- Installation of emergency SSD system
- Installation of full-scale SSD system
- Commissioning and startup of SSD system
- Operation and monitoring of SSD system

Following system startup, Geoklock conducted several monitoring events to assess air quality. Vacuum in the sub-slab was gauged continuously. The readings corroborated the successful mitigation of vapor intrusion, and the Health Surveillance Agency and the environmental agency (CETESB) approved the use of the classrooms and other areas.

Contact Persons



Rubens Spina

rubens.spina@ebpbrazil.com.br