

# Nitra-Seal Protects Multi-Acre Tampa Logistics Center

245,000 Square Foot Installation Eliminates Vapor Intrusion Threat To Future Tenants

## Site Details

### Site Type

Logistics Center

### Contaminants of Concern

Petroleum Hydrocarbons  
Methane

### Mitigation Approach

Nitra-Seal® with TerraVent™

## Highlights



New Logistics Center in Tampa, FL



High-Level Design Support Aided in Selection

**245,000**  
Square Feet

245,000 Square Feet Installed

## Project Summary

A new, expansive logistics center in Tampa, Florida, was the site of a former brownfield, where past operations left petroleum hydrocarbons and methane contaminants in soil and groundwater. The project required a cost-effective solution to mitigate the potential vapor intrusion risk from these contaminants. After reviewing multiple vapor intrusion mitigation system (VIMS) options, the project team ultimately selected the Nitra-Seal® Nitrile-Advanced Contaminant Vapor Barrier and TerraVent™ Low Profile Venting System. Nitra-Seal was viewed as the best available, most cost-efficient technology for the large logistics center considering the site conditions and level of contaminant risk. With a foundation approaching a quarter million square feet, and a tight project schedule, Nitra-Seal's nitrile-modified spray-applied core results in faster installations, while also providing superior chemical protection, separating it from other VI systems considered. Land Science's technical expertise and support in assisting with the VIMS design were also critical factors in the selection process.

## Application

S&H Waterproofing, a Land Science Certified Applicator, completed the Nitra-Seal and TerraVent installation on this site.



## Nitrile-Modified Asphalt Compared to Generic SBR Asphalt Latex

### Nitrile-Modified Asphalt

- ✓ Lab-proven to provide 10x higher chemical resistance
- ✓ Easier and faster to apply
- ✓ Equipment requires only soap and water to clean

### Generic SBR Asphalt Latex

- ✗ Higher permeability increases risk of contaminant sorption
- ✗ Longer, slower application time
- ✗ Equipment requires petroleum-based solvents to clean

## Technology

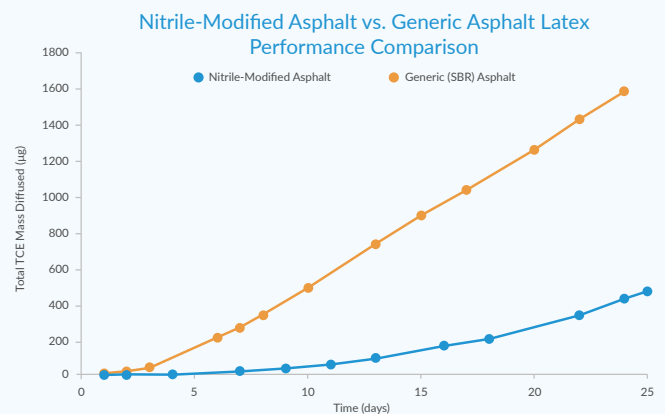
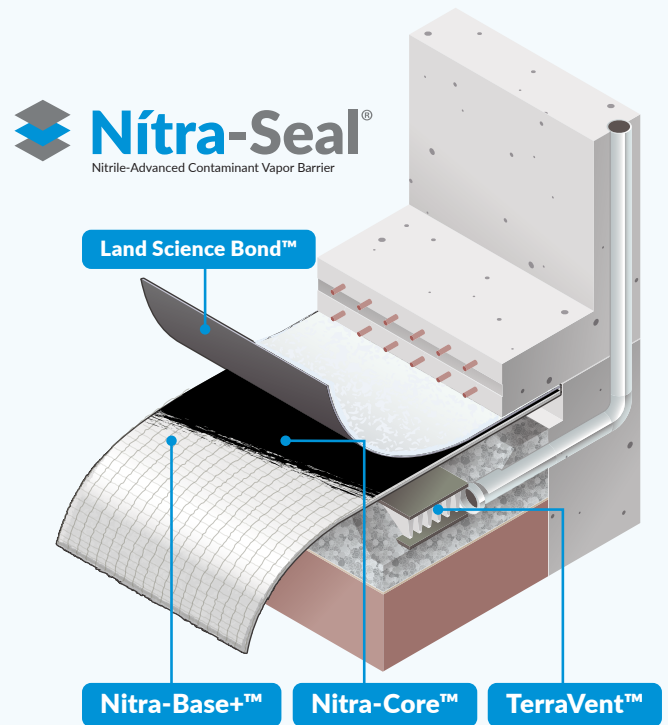
### A Multi-Layer Base with Innovative Nitrile-Modified Asphalt Technology

Nitra-Seal is an update/improvement on current vapor barrier systems, providing a more chemically resistant spray-applied core material.<sup>1</sup> Nitra-Seal is a triple-layer system. The Nitra-Base+ layer (bottom) and the Land Science Bond layer (top) are composed of a HDPE material bonded to a geo-textile on the out-facing side. HDPE is known for chemical resistance, high tensile strength, excellent stress-crack resistance and highly reliable subsurface containment. The geo-textile, which is physically bonded to the chemical resistant layer, accomplishes two goals; it allows the Land Science Bond layer to adhere to the slab, and provides friction course between the Nitra-Base+ layer and the soil. The Nitra-Core layer is composed of a unique, nitrile-modified asphalt which also provides additional protection against vapor transmission. Nitrile has been proven to offer exceptional chemical resistance in a wide range of applications. This layer creates a highly-effective seal around slab penetrations and eliminates the need for mechanical fastening at termination points.

1. U.S. and international patents pending.

## Results

Following the installation of Nitra-Seal and TerraVent, the new logistics center met safety and environmental regulatory requirements, providing a high level of vapor intrusion protection for future logistics center workers and office staff.



TCE diffusion rates in Nitrile-Modified Asphalt barrier systems vs those utilizing Generic (SBR) Asphalt.

**Are You Planning a Vapor Intrusion Mitigation Project? Contact us today for a free estimate.**

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