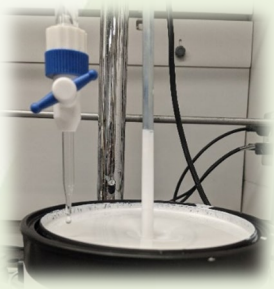
National Defense Center for Energy and Environment

SELF-DECONTAMINATING INTERIOR PAINTS TO PREVENT MOLD GROWTH

PROJECT OVERVIEW

The engineered reactive additives reduce microbial propagation on treated surfaces compared to commercial product alone (quantified by colony and spore counts for bacteria and molds). One formulation relies on the in-situ production of chloramide compounds. In the case of paints, treated surfaces can be periodically "recharged" by applying a simple wipe with a dilute solution of household bleach.

Trials with product from transition partner, ECOS Paints, have shown effective treatment periods (up to 5 years) - no mold growth observed on treated surfaces in multiple venues that had history of persistent mold colonization and propagation.



Water-based acrylic paint being treated with anti-mold additive at bench scale (left) and tested in a newly renovated office Tyndall AFB (right)

BENEFITS

Improved air quality can alleviate symptoms of Sick Building Syndrome (SBS), improve quality of life, and increase warfighter morale. There is no quick fix, no available COTS solution. Potential cost avoidance from class action lawsuits. Future recruitment and retention could be positively affected.

Paint demonstrated at civilian locations including Tallahassee Memorial Hospital and Eden Springs nursing home

PATH FORWARD

Paints are currently being demonstrated in two facilities on Tyndall AFB as well as a STEM school, Hospital, and two elderly care facilities.
Future demonstration site is planned for PACAF/INDOPACOM (TBA), where the team is planning to demonstrate on multiple barracks or base housing.

Outdoor latrine at 801st Red Horse Squadron, Tyndall AFB where the entire building has been painted (150 gal) – facility is not climate controlled!

DoW Executive Agent
Office of the Assistant Secretary of the Army for Installations, Energy, and Environment

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FOR FURTHER INFORMATION

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