

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
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Debra Lee, *Acting Chief*

April 23, 2024

RE: APPROVAL OF EXPERIMENTAL VARIANCE FROM TITLE 8 SECTION 3410.1 (d)(1)

Dear Chief Lawson,

This letter responds to your August 3, 2023 request on behalf of the California Department of Forestry and Fire Protection (Cal/FIRE) for a temporary experimental variance from California Code of Regulations, title 8, section 3410.1 (d)(1).

Experimental Variance Request

You requested an experimental variance to allow Cal/FIRE to use a new fabric (DuPont Nomex® Nano WUI-LAM 240)¹ in wildland firefighter protective clothing to better safeguard employees from dermal exposure to particulates, carcinogenic heavy metals, and other contaminants during wildland firefighting. To allow use of the new fabric, an experimental variance is needed from section 3410(d)(1), which states the following:

§3410.1. Personal Protective Equipment for Wildland Fire Fighting.

* * * *

(d) Body Protection.

(1) In-Service Body Protection. Body protection shall be provided to each wildland fire fighter exposed to wildland fire fighting. Protective garments used by fire fighters shall meet the requirements of NFPA 1977, Standard on Protective Clothing and Equipment for Wildland Fire Fighting, 2011 Edition, which is hereby incorporated by reference.

* * * *

Description of Experiment

The experiment will consist of the following:

- Approximately 50 Cal/FIRE employees will use pants constructed of the DuPont Nomex Nano material during all training and emergency response activities in lieu of NFPA 1977-2011 approved pants.
- The 50 employees will be from 11 different CAL/FIRE Administrative Units.
- This field evaluation is voluntary, and employees will be given the option to not participate.
- The pants will be manufactured by CrewBoss.
- Multiple versions of the pants may be developed from the DuPont Nomex Nano material, depending on feedback from participating employees.
- The DuPont Nomex Nano material will be used by Cal/FIRE employees for one year.

¹ The DuPont Nomex® Nano WUI- LAM 240 fabric is not NFPA approved as required by section 3410.1. Feedback from this experimental variance will be used to develop an improved prototype before pursuing NFPA approvals with Underwriters Laboratories.

- The pants will be worn to evaluate form, fit, and function through various seasonal conditions and to evaluate any changes in design.

Experimental Variance Granted

Cal/OSHA has reviewed DuPont's testing results and has concluded that, as reported, the Nomex® Nano WUI-LAM 240 fabric meets or exceeds NFPA 1977 requirements (2022 version). The pants are expected to provide the same or greater protections as NFPA-approved pants.

The Department of Industrial Relations and Cal/OSHA grant an experimental variance to Cal/FIRE pursuant to Labor Code section 6452 to allow for the evaluation of the DuPont Nomex® Nano WUI-LAM 240 material in firefighter pants. The variance shall remain valid for one year (from March 1, 2024 to March 1, 2025) provided Cal/FIRE complies with the following mandatory conditions:

- 1) Provide Cal/OSHA with an information sheet that Cal/FIRE will distribute to participants and to the collective bargaining agent that contains the following information:
 - A) A description of the evaluation project;
 - B) A statement that the pant meets or exceeds NFPA 1977 (2022 version) requirements but is not NFPA-approved;
 - C) The table showing a comparison of the test results of the DuPont Nomex Nano WUI-LAM 240 material with the NFPA 1977 (2022 version) requirements;
 - D) A statement that the field evaluation is taking place under a temporary experimental variance granted by Cal/OSHA;
 - E) A copy of the Cal/OSHA approval letter;
 - F) A statement informing the employees of their right to refuse participation in the evaluation without fear of reprisal; and,
 - G) A statement that employees may contact Mike Wilson, Senior Safety Engineer, Research and Standards, Cal/OSHA, at mwilson@dir.ca.gov with questions or concerns.
- 2) Provide Cal/OSHA with a brief update at the conclusion of the evaluation regarding Cal/FIRE's decision, if any, to proceed with using the material in firefighter PPE.

Sincerely,



Eric Berg
Deputy Chief of Health

cc. Debra Lee, Acting Chief of Cal/OSHA