

Owner / Applicant Information

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Project Information

Rolls-Royce Plant 5 Assembly & Test
2355 S. Tibbs Avenue

INDIANAPOLIS IN 46241

County MARION

Project Type New Addition Alteration Existing Change of Occupancy

Project Status F F=Filed U or Null=Unfiled

IDHS Issued Correction order? No Has Violation been Issued? No

Violation Issued by: NA

Local Building Official

Phone:

Email:

Local Fire Official

Phone:

Email:

Variance Details

Code Name: Other Code (Not in the list provided)

InBC - 2014 910.2.1

Conditions: n existing factory (c1942), with subsequent additions and razing of other parts of the existing facility, is undergoing extensive remodeling and retooling for a major engine manufacturing company will have the existing smoke and heat vents removed from the engine assembly buildings roofs. The use group of the engine assembly building is remaining an F-1 by today's code definition. Code requires F-1 use groups over 50,000 sq ft of undivided space to have Smoke and Heat vents or a mechanical exhaust system.

DEMONSTRATION THAT PUBLIC HEALTH, SAFETY, AND WELFARE ARE PROTECTED:

1=Non-compliance with the rule will not be adverse to the public health, safety or w

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2= Applicant will undertake alternative actions in lieu of compliance with the rule to ensure that granting of the variance will not be adverse to public health, safety, or welfare. Explain why alternative actions would be adequate (be specific).

Facts:

1. The engine assembly building will be protected with a new ordinary hazard sprinkler system per NFPA 13.
2. Five (5) new air handling units (AHU) with Spill-Air Hoods for full exhaust are being installed with four (4) at 20,000 cfm, and one (1) at 11,200 a total of 91,200 of total exhaust available for the entire area that would be require to maintain Smoke and Heat Venting.
3. The AHU will be wired for automatic shut down upon activation of the sprinkler system, HVAC duct detectors, or fire alarm system. All units will then be controlled, in two (2) separate zones, by the fire department at a control panel in the entry lobby of the Office and Dock building, per the request of the Local Fire Department.
4. The smoke exhaust system will have normal wiring and ratings. This is a post incident convenience system, without high temperature wiring, and fans
5. Smoke and egress modeling indicates that the smoke layer in an uncontrolled fire situation will be approximately 25.1 ft above the floor at the time all occupants are out of the building, giving significant time for total evacuation of the building.
6. Two (2) identical variances for Rolls Royce Projects 5AB (17-04-81) and 8M (17-04-80) were approved.

DEMONSTRATION OF UNDUE HARDSHIP OR HISTORICALLY SIGNIFICANT STRUCTURE:

Imposition of the rule would result in an undue hardship (unusual difficulty) because of physical limitations of the construction site or its utility services.

Y

Imposition of the rule would result in an undue hardship (unusual difficulty) because of major operational problems in the use of the building or structure.

Y

Imposition of the rule would result in an undue hardship (unusual difficulty) because of excessive costs of additional or altered construction elements.

Imposition of the rule would prevent the preservation of an architecturally or a historically significant part of the building or structure

Facts:

The owner's undue hardship involves the fact that all the existing smoke and heat vents are leaking, are not sized to today's requirements and may not even work. The code at the time did not require smoke and heat venting, and thus why they are not spaced properly. The cost to replace the smoke and heat venting with a code compliant smoke removal system is a cost hardship.

Studies show that smoke and heat vents should not be combined with sprinkler systems due to the potential of too many sprinkler heads going off over areas that are not over the fire as heat is drawing to an open smoke and heat vent. Finally, the engine assembly operation most resembles a F-2 use with extremely limited, if any at all, of combustibles.

