

Air Toxics Sampling Results U.S. Forest Industries, Grants Pass



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Quality

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DEQ and US Forest Industries Test Formaldehyde Levels

DEQ conducted ambient air sampling in July 2001 to determine if formaldehyde emissions from the USFI facility were impacting the surrounding area. In addition, DEQ performed an analysis of the fuel used by USFI concurrently with the ambient monitoring. This verified the use of ply-trim in the USFI burner during the same period.

USFI voluntarily conducted concurrent tests for formaldehyde levels from stack emissions when DEQ conducted ambient air monitoring. DEQ requires specific testing periodically on major permitted facility emissions. USFI conducted its last required stack emission tests in 1999.

Where DEQ Sampled

DEQ placed three air monitors to collect 24-hour samples for a five-day consecutive test. One monitor was placed upwind of USFI to measure the amount of formaldehyde in the air before USFI emissions enter the atmosphere. Two monitors were placed downwind to measure effects from USFI. The wind direction was measured during the five days and found to be in conformance with the placement of the two downwind monitors. The wind speed was generally light.

Results of DEQ Sampling

Samples collected downwind of the USFI facility showed no difference in ambient formaldehyde levels from those collected upwind.

Samples collected on a Saturday when the USFI facility was not operating showed no difference in ambient formaldehyde levels from when the facility was operating.

Results of USFI Tests

Temperature tests taken at the facility found the burners operating at a heat that destroys formaldehyde. During testing, the burners operated between 2070 and 2360 degrees Fahrenheit. Formaldehyde is destroyed at temperatures of 1400 to 1500 degrees Fahrenheit. Although fuel for the burners contains small amounts of formaldehyde resins, the temperature of the burners is sufficient to destroy all the formaldehyde in the fuel. The drying of the wood veneer does produce some formaldehyde that is not processed through the

burner and passes through the stacks.

USFI performed several stack emission tests. Measurements of stack emissions showed levels at the point of release from the stack are above OSHA approved occupational exposure levels. Both modeling of the emission levels and ambient monitoring conducted by DEQ downwind of the stacks demonstrate the levels at ground level are well below the OSHA standard.

Sample locations, dates and OSHA standard	Average formaldehyde levels in ug/m ³
Upwind location: 7-9 to 7-13-01 <i>Maintenance shop</i>	3.97
Downwind location: 7-9 to 7-13-01 <i>Umpqua Dairy</i>	3.29
Downwind location: 7-9 to 7-13-01 <i>Riverside Elementary</i>	4.18
USFI employee monitoring: <i>October 1997</i>	30.00
OSHA permitted 8-hour level for workers	922.50

Results Overview

DEQ determined formaldehyde levels released from USFI were within permit levels. Tests conclude that burning ply-trim at USFI is not the major contributor to the levels of formaldehyde in the ambient air of the immediate vicinity.

About Formaldehyde Levels

A broad look at Oregon shows formaldehyde is found just about everywhere. The major source in rural areas comes from area burning activities such as slash burning, backyard burning, woodstoves, and space heating for homes and small businesses. Josephine County figures show the same pattern. Area burning is the greatest contributor to area-wide formaldehyde levels. Motor vehicles and off-road engines contribute less than 20 percent, and major industry accounts for only one percent.

The ambient air monitors placed around USFI show the area of Grants Pass tested has lower

average formaldehyde levels than some other industrial areas in the state

The levels measured in the ambient air are not known to cause any acute health effects.

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