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CASE NARRATIVE

AN EVALUATION OF FORMALDEHYDE CONCENTRATION IN THE CARLTON AND DAWN SISTRUNK FEMA TRAILER

Thursday, April 06, 2006

1.0 INTRODUCTION

Bonner Analytical was retained by Mr. Brian Rabe, Deputy Project Manager with CH2M Hill, Inc. to investigate a complaint of elevated formaldehyde concentration in a FEMA trailer located in Baxterville, Mississippi. The trailer has been occupied by Mr. and Mrs. Sistrunk and their 4 month old daughter since February of 2006. The Sistrunks received the trailer from FEMA after their home was destroyed by hurricane Katrina. Mrs. Sistrunk is 2 months pregnant and has expressed concern for her unborn child and young daughter.

2.0 METHODOLOGY

This investigation was conducted as a preliminary range finding test in order to determine if formaldehyde levels were likely elevated. The method chosen was the Gastec Color Dosimeter Tube (91D) because results could be reported immediately.

OSHA/NIOSH validated protocols are recommended when legally defensible data are required.

3.0 ONSITE VISIT

Dr. Michael S. Bonner, with Bonner Analytical Testing Company arrived at [REDACTED] at 1030 hours on April 5, 2006. Mrs. Dawn Sistrunk provided background information and access to the trailer.

The Sistrunks received the 8X30 Coachmen trailer from FEMA in February of 2006. Shortly after, they experienced symptoms described as burning eyes

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and feeling sick. After visiting her doctor and describing symptoms, the doctor suggested that she may be exposed to formaldehyde.

Mrs. Sistrunk said that when the trailer is cool that the chemical smell is not as noticeable but in the heat of the day the smell becomes unbearable.

This trailer was manufactured by Coachmen RV Incorporated, LLC in January 2006. The trailer is a "Spirit of America SE30DBD", Model and Vehicle ID # [REDACTED]

At 1050 hours, 6 passive formaldehyde dose tubes (Gastec 91D) were put in place. One tube was placed outside at a distance of 20 feet from the trailer. Five (5) tubes were placed inside the trailer as follows:

1. Right side of the master bed
2. Kitchen
3. Inside the cabinet on the right side of the master bed
4. Bunk bed in small bedroom
5. Bathroom vanity
6. Background

During the first 45 minutes of the test there was no noticeable odor detected by this observer and there was no color change in the tubes to indicate the presence of formaldehyde. At the two hour mark there was still no observed odor nor was there any color change in the dose tubes to indicate the presence of formaldehyde.

The tubes were inspected once again at 1911 hours. At this time the background sample showed no detectable formaldehyde level but each of the tubes inside the trailer gave a positive response and this investigator could detect a burning sensation in his eyes. The results were as follows:

LOCATION	AVERAGE CONCENTRATION OVER 8.35 HOURS
1. Right side of the master bed	1.2 PPM
2. Kitchen	0.96 PPM
3. Inside the cabinet on the right side of the master bed	2.4 PPM
4. Bunk bed in small bedroom	1.2 PPM
5. Bathroom vanity	1.2 PPM
6. Background	0.0 PPM

4.0 DISCUSSION AND CONCLUSION

This test was conducted over an 8.35 hour period of time. The air conditioner was turned off for this test. At the beginning of the test the inside temperature was around 70 degrees in fact, two hours into the test the trailer was still cool. At the two hour mark the outside temperature was 80 degrees and the trailer was beginning to heat up from the sun. At this time there was still no detectable levels of formaldehyde. The reported high temperature for the day was 80 degrees.

Since these test results were averaged over the entire 8.35 hour test period, it is obvious that near the end of the test formaldehyde concentrations were significantly higher than the average reported values since there was no detectable formaldehyde during the first 2 hours.

OSHA has set an exposure limit of 0.75 ppm over an 8 hour time period and a limit of 2.0 ppm for short term exposure (15 minutes). NIOSH has established a much lower limit; 0.016 ppm for 8 hours and 0.1ppm for short term exposure.

These data show that both the OSHA and NIOSH limits for formaldehyde were exceeded in this FEMA trailer.



Michael S. Bonner, Ph.D.