

## **PURPOSE**

On November 2, 2011, Consolidated Safety Services Inc. (CSS) industrial hygiene personnel conducted a limited bulk sampling of suspected asbestos containing materials associated with the demolition of the southeast men's restroom in the building of N231. The purpose of the task was to determine if the upcoming renovations in the bathroom and perimeter wall will be impacting any asbestos and or lead containing materials. This report documents the findings and recommendations resulting from the industrial hygiene consulting services conducted in the men's restroom of building N231 of the NASA Ames Research Center (ARC).

## **BACKGROUND**

At the request of the Safety, Health, and Medical Services Division, Code QH, CSS personnel performed a limited asbestos survey in areas identified by Greg Hite of AECOM, code JCE, as those scheduled to be impacted by the scheduled renovations to the men's restroom and various equipment inside the High Bay area and yard of building N213. Jennifer Morris, Industrial Hygienist and Certified Asbestos Consultant and Lead building inspector from CSS, performed the asbestos and lead survey.

## **SAMPLING AND ANALYTICAL METHOD**

Six (6) bulk suspect asbestos samples were collected from the adjacent hallway in men's rest room. The asbestos bulk samples were submitted to EMSL Lab, Inc., San Leandro, CA. an AIHA accredited laboratory and participant in NVLAP, for analysis of asbestos. The samples were analyzed by EPA 600/R-93/116 method using polarized light microscopy (PLM).

Additionally, paint was tested by XRF method and found lead in the paint for the various buildings components:

- Blue Ceramic tiles in the men's rest room on the floor and walls;
- Orange Paint on the large equipment in High Bay;
- Gray Paint on the Sphere in the yard of N231

## **FINDINGS AND DISCUSSION**

The laboratory report indicated that asbestos is present in the joint compound on the drywall system of the adjacent hallway. The laboratory results are summarized in Table 1 below.

**Table 1. Building N231 Bulk Samples for Asbestos Content – November 2, 2011**

Sample No.	Location / Material Description	Asbestos Concentration*	NESHAPS Category	OSHA Class of Work
110111-N231-01	Bathroom wall hallway side	None Detected	NA	NA
<b>110111-N231-01 JC</b>	<b>Bathroom wall hallway side</b>	<b>&lt;1% Chrysotile</b>	<b>RACM</b>	<b>Class II</b>
<b>110111-N231-02</b>	<b>Hallway wall near bathroom cooler</b>	<b>2% Chrysotile</b>	<b>RACM</b>	<b>Class II</b>
110111-N231-03	Hallway baseboard brown	None Detected	NA	NA
110111-N231-04	Brown base board mastic	None Detected	NA	NA
Asbestos Cement piping in yard	Any piping for water underground in yard	Assumed	Cat II-Non Friable	Class II
TSI water or electrical	Any piping that may have Thermal System Insulation (TSI)	Assumed	RACM	Class I

\*The NASA Ames Asbestos Management Plan has defined asbestos containing materials as those materials that contain greater than 0.1% asbestos.

Sample No.	Location / Material Description	Lead Concentration*
LP-01	White paint on Hallway near men's RR	None Detected
LP-02	Blue fire box on hallway wall	None Detected
LP-03	Red Fire Box Door on hallway wall	None Detected
<b>LP-04</b>	<b>Blue Ceramic Tiles in Men's RR</b>	<b>Positive for lead per XRF &gt; 1.0mg/cm2</b>
<b>LP-05</b>	<b>Orange Paint on large high bay equipment</b>	<b>Positive for lead by XRF &gt;1.0mg/cm2</b>
<b>LP-06</b>	<b>Blue paint on equipment</b>	<b>None Detected</b>
<b>LP-07</b>	<b>Green Paint on large high bay equipment</b>	<b>Positive for lead by XRF &gt;1.0 mg/cm2</b>
LP-Sphere-01	Large Sphere Tank in N231 Yard	Below detection limit for lead by Flame AA
LP-Tank-02	Large Oval tank south of Sphere	Below detection Limit for lead by Flame AA

\*XRF-X-Ray Fluorescence Spectrometry: Positive results mean lead great than or equal to 1.0mg/cm2

## CONCLUSION

The following materials contained asbestos in the amounts regulated by the State of California these materials include: The joint compound of drywall system in the hallway adjacent to the men's restroom. The following building materials or equipment contain

lead in their paint. The blue ceramic tiles located in the men's restroom, the large equipment located in the High Bay area painted orange. The gray sphere in the yard of N231.

## **RECOMMENDATIONS**

The findings of the report should be included in the hazardous materials section of the construction plans for the demolition/renovation project.

Asbestos abatement control measures shall be taken to prevent environmental releases of asbestos. The policies and procedures established in AHB 1700.1 Chapter 30, Asbestos Management Plan and the applicable sections of the Ames Standard Construction Specification shall be followed. The NASA ARC Asbestos Management Plan and applicable Federal, State, and Local Governmental Regulations pertaining to handling, disturbance, removal, storage, and disposal of asbestos containing materials must be adhered to.

Lead in construction standard controls measures shall be taken to prevent lead contamination. The policies and procedures established in AHB 1700.1 Chapter 35, Lead Management Plan and the applicable section of the Ames Standard Construction Specification shall be followed

All construction jobs where lead is present shall follow the OSHA guidelines on lead safe work practices including: housekeeping, hand washing, training, written compliance program, and exposure monitoring.

Demolition contractors that bid on this work should follow the lead in construction safe work practices (found in this report). The scope of work should be reviewed and determine which trigger task level if any will be effected. If trigger task levels are affected implement the OSHA protective measures for that level of trigger task work, or have the paint removed prior to performing a trigger task.

If suspected asbestos or lead building materials are scheduled to be impacted that were not sampled during this survey, call the safety, health, and medical services division to schedule a survey.

## **REFERENCES**

NASA Ames Health and Safety Plan, Chapter 30 Asbestos Management Plan

NIOSH Manual of Analytical Methods (NMAM®), 4th ed., DHHS (NIOSH) Publication 94-113 (August, 1994), Cassinelli, M.E. & O'Connor, P.F. (pfo1@cdc.gov), Eds.

OSHA Technical Manual, Directive no. TED 1-0.15A, Occupational Safety and Health Administration (January, 1999).

29 CFR 1910.1000, 1910.1001 U.S. Occupational Safety and Health Administration.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Jennifer Morris  
CSS, Industrial Hygienist CAC, # 96-2013

Attachments

Appendix 1-  
Laboratory Analytical Report and  
Schematic Drawings of Sample Locations