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TO: Resident Staff

FROM: David King, Associate Director, Safety and Mission Assurance

SUBJECT: Hangar 1 Progress on Hazardous Materials Removal

The Remedial Action project at Hangar 1 that started in June 2010 has completed abatement of all Asbestos Containing Materials (ACM) inside the hangar. After internal abatement was finished, demolition of the internal building structures was completed. California regulated hazardous waste and non-hazardous wastes have now been removed from inside the hangar and have been manifested off site. To date, all perimeter and personnel air monitoring results have been below the Permissible Exposure Levels (PEL) for the three contaminants of concern, Polychlorinated Biphenyls (PCB), Lead and Asbestos.

During the last six months, several procedures have been in place to ensure that NASA personnel are not being exposed to hazardous materials from Hangar 1. These include physical barriers, wet work methods to reduce dust, air monitoring, training in safety and work procedures, and data sharing among the Navy, contractors, and NASA. In January of 2010, the Ames Environmental Management Division arranged for Navy briefings to personnel in an effort to provide information about the construction activities.

For health and safety reasons, a construction fence is erected around the hangar to keep the public and NASA personnel from entering. Controlled access is through a gate at the northeast side of the Hangar. Once inside the fence, the only entrance to Hangar 1 is through the decontamination zone set up at the east side entry door of the hangar. All project personnel entering the hangar are trained and certified for construction and hazardous waste operations work under the requirements established by the Occupational Safety and Health Administration (OSHA). All entering personnel receive hazard awareness training from the contractor's safety staff. All personnel once trained must sign in and use personal protective equipment (PPE) prior to entrance to the hangar. All visitors must have an onsite escort while in the hangar.

NASA safety and environmental representatives attend monthly telecons and a weekly coordination meeting held at the contractor's site office at Hangar 1. Other participants in these weekly meetings include the contractor's site manager, the site safety and health officer (who is also responsible for air monitoring), the Navy's Resident Officer In Charge of Construction, and other invited NASA staff members, including airfield operations representatives. In these weekly meetings, all parties are informed of the past week's accomplishments and any

challenges that were encountered during the latest week's work. A two-week look ahead is discussed so that all parties will know what is planned in the upcoming weeks.

During the asbestos abatement phase of the project, daily monitoring included air samples collected by a third party California Certified Asbestos Consultant. Air samples were collected from inside the hangar as well as outside at the perimeter fence. Air monitoring is conducted outside the hangar on a continuous, 24/7 basis to measure dust concentrations on the up- and down-wind sides of Hangar 1. Exterior air sampling for asbestos, lead, and PCBs is conducted when site work may create potential airborne particulate matter that may contain these three contaminants of concern. Air samples are sent to an off-site State-certified laboratory for analysis and those results are included in Weekly Air Monitoring Reports that are distributed to the EPA, Bay Area Air Quality Management District, Navy, and NASA Staff for review. To date, all air monitoring results have been below the established action levels.

If at any time air monitoring were to indicate results above the action level for any of the measured contaminants, the Navy or project personnel will notify NASA Emergency Dispatch Center (EDC) of the occurrence and EDC will take the appropriate actions to ensure the safety of NASA resident staff. To date, these emergency call procedures have not been necessary. Project information flyers, Safety Bulletins, and laboratory results of the air monitoring are regularly posted in several buildings surrounding Hangar 1 for NASA employee review. Ames personnel have attended Navy public bimonthly Restoration Advisory Board (RAB) meetings for periodic updates.

The Safety, Health and Medical Services Division assists in asbestos, lead and PCB work and helps ensure hazardous material activities are performed in accordance with the NASA Ames Health and Safety Manual, Federal, state, and local regulations thereby reducing the potential for health associated risks. Future project status on Hangar 1 safety controls will be provided through a Centerwide announcement similar to this message.

For additional background information on asbestos, lead and PCB containing materials, please refer to the QH health information notice located on the Safety, Health and Medical Services Division website, by following the links for QH, industrial hygiene, lead and asbestos. Please visit the Environmental Management Division's web site at <http://environmentalmanagement.arc.nasa.gov>. The point of contact for this email is John Steen, ext. 4-5726, of the Safety, Health and Medical Services Division or please contact the division at ext. 4-5602.

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