APPENDIX H - BLOOD TESTING OF CHILDREN

Children are affected by lead at lower blood lead levels than adults. A child's developing brain and nervous system is more sensitive than an adult's and can be harmed by blood lead levels of less than 10 µg/dL. Children are at greater risk for lead exposure because of crawling, playing on the floor, and placing objects in their mouths. A child's growing body absorbs more lead, especially if the child has poor nutrition. If a child absorbs a similar amount as an adult the smaller body mass would result in a higher blood lead concentration. Even a child who seems healthy could have high levels of blood lead. In order to accurately judge their child's exposure, parents of children ages 6 months to 6 years may ask their private doctor or an IHS doctor to perform a blood lead test on their children. This is a simple test and is the only way to determine if a dangerous level of lead has been absorbed. If a child has a blood lead level of over 10 µg/dL, an investigation should be done and steps should be taken to reduce lead exposures.

The Center for Disease Control and Prevention (CDC) recommended universal screening for all children due to the widespread use of lead paint. However, recently, CDC modified this recommendation because it was not determined to be cost-effective for the few numbers of serious cases of lead poisoning in children. The $9 fee per test cannot be justified when there are other childhood problems need attention. IHS cannot require testing of an employee's children, but parents should be informed of the risks of lead exposure and of their choice to consider blood lead testing for their children. Many private health insurance policies will cover the cost of the test.

The interpretation of blood lead test results is not a simple matter because of the variability in degrees of lead poisoning with different levels. Studies have shown that harmful effects of lead in children's blood can begin at levels as low as 10 µg/dL. There may be harmful effects at levels lower than 10 µg/dL but these have not been adequately evaluated. Levels between 10 - 14 µg/dL, may indicate borderline lead poisoning. Levels in this range should be retested to rule out lab error. See the chart below for more information on levels of lead poisoning.

Blood lead concentration (µg/dL)	**Follow-up activities for children based on a blood lead concentration**
less than 10	A child is not considered to be lead poisoned. Another blood lead test may be taken in a year for follow-up. Inform the doctor if the child lives in a home built before 1978 or in an older home under repair or renovation.
10-14	A child has some exposure to lead. A retest is recommended. If large numbers of children have this concentration, a community-wide effort should be made to reduce lead exposures. Educate parents on hazards of lead dust and paint chips. Check home for lead hazards.
15-19	A child is considered to have an elevated blood lead level. A retest is necessary. If levels remain high, conduct environmental evaluation and intervention. A child's nutrition should be checked and remedied if necessary. Poor nutrition, especially low levels of iron and calcium, enhances lead absorption. Educate parents on nutrition and other interventions.
20-44	A child is considered lead-poisoned. Conduct an environmental evaluation and intervention, and a medical evaluation. Test for iron deficiency. The child may need pharmacological treatment for lead poisoning. At the least, medical management requires removal of the child to a lead-safe environment; correct any iron and calcium deficiency in the diet; and retest the blood lead levels frequently to ensure that they are dropping.
45-69	A child is severely lead poisoned with this level and requires medical and environmental interventions, including chelation therapy. Chelation therapy is the use of drugs which can speed up the excretion of lead. A hospital stay may be required. The child must be removed from lead hazards and stay in a lead-free environment during treatment and recovery in order to get well.
70 and above	An acute medical emergency. Medical and environmental management must begin immediately. Hospitalization and chelation are required.