New England Region

Position Paper

***Lyme Disease***

Addressed to the National Occupational Safety, Health and Environmental
Compliance Committee (OSHECCOM)

## *Issue:*

Lyme disease transmitted by deer ticks is a major public health issue and concern of New England Region employees who are required to work in tick inhabited areas as a condition of employment. Regardless of whether or not employees work daily in tick infested areas, the belief is that the regular, recurrent exposure to tick habitats places certain employees at risk of contracting Lyme disease.

## *Background:*

Lyme disease was first recognized in the United States in 1975 after a mysterious outbreak of arthritis near Lyme, Connecticut. Since then, reports of Lyme disease have increased dramatically, and the disease has become an important public health problem in some areas of the United States. Lyme disease is an infection caused by *Borrelia burgdorferi*, a member of the family of spirochetes, or corkscrew-shaped bacteria.

Lyme disease is predominant in the northeast corridor and more specifically in Connecticut, Massachusetts and Rhode Island. In the United States, the highest incidence occurs in the

- Northeast, from Massachusetts to Maryland.
- North-central states, especially Wisconsin and Minnesota.
- West Coast, particularly northern California.

According to a report from the Center for Disease Control, Lyme disease is a rapidly emerging vector-borne infectious disease in the United States. More than 128,000 cases have been reported to health authorities in the U.S. since 1982, when a systematic national surveillance was initiated. Lyme disease now accounts for more than 95% of all reported vector-borne illness in the U.S. ***The CDC has stated that the overall incidence rate of reported cases in the U.S. is about 5 per 100,000 population, but there is considerable underreporting***. In 1998, the state of Connecticut ranked first for incidence of Lyme disease with 104.99 cases per 100 thousand population. The disease occurs in distinct and geographically limited areas. The incidence in a few of the most highly endemic communities may reach 1 to 3 percent a year. People of all ages and both genders are equally susceptible, although the highest incident rates ***(see chart attached)*** are in children aged 0-14 years, and in people 30 years of age and older. Although cases of Lyme disease have been reported from 48 states, significant risk of infection with the agent of Lyme disease, *Borrelia burgdorferi*, is found in only about 100 counties in 10 states located along the northeastern and mid-Atlantic seaboard, in the upper north-central region, and in a few counties in northern California.

According to the U.S. Advisory Committee on Immunization Practices the people who are 15-70 years of age and reside, work, or recreate in areas of high or moderate risk of exposure to tick-infested habitats should be considered for the vaccine. Campers, hikers,

outdoor workers and others who frequent wooded, brushy and grassy places are commonly exposed to ticks, and this may be important in the transmission of Lyme disease in some areas. Because new homes are often built in wooded areas, transmission of Lyme disease near homes has become an important problem in some areas of the United States. The risk of exposure to ticks is greatest in the woods and garden fringe areas, but ticks may also be carried into lawns and gardens by animals.

## *Aviation Medical's Position on the Lyme Vaccine:*

Persons at highest risk are those involved in frequent or prolonged exposure to tick habitat. The risk is based on the density of vector ticks and the prevalence of infected ticks (15 – 30% of ticks are infected).

The Advisory Committee on Immunization Practices (ACIP) recommendation dated June 4, 1999, stated most infections result from periresidential exposure to infected ticks during property maintenance, recreation and leisure activities. People who hike, camp, fish, and hunt in tick habitat or who are engaged in outdoor occupations (landscaping, forestry, wildlife and parks management) in endemic areas have a potential higher risk for infection.

Lyme Disease vaccine does not protect all recipients against infection, has potential adverse effects, does not guarantee permanent immunity (meaning future reinfection is possible) and therefore the possibility may exist for booster doses.

The Aviation Medical Division's position is that the exposure of Flight Standards aviation safety inspectors, Airports Division certification inspectors and Airway Facilities engineers and technicians is on an infrequent basis and therefore, the agency should not be involved with providing or reimbursing for the Lyme Disease vaccine. This is a personal health matter.

## *Affected Employees:*

New England Region Airway Facilities technicians and engineers performing facility maintenance, vegetation control, technical evaluations, safety inspections and construction of new facilities in high risk geographic locations are at risk of contracting Lyme disease. Likewise, aviation safety inspectors and airport certification inspectors who conduct routine surveillance and inspection activities as well as accident investigations are exposed to tick habitats. For example, the aircraft tie-down areas at some general aviation airports frequently abut grassy or woodland areas. Inspectors must walk through the grass to inspect the aircraft. Aircraft accident investigations often require inspectors to work in swamps, bogs or other relatively remote wooded areas.

In New England, there are 442 Aviation Safety Inspectors, Airport Certification Inspectors, Airway Facilities Technicians and Engineers who are exposed on a routine, recurring basis to tick habitats as a condition of employment.

## *Recommendation:*

Because certain employees in the agency are required to work in tick inhabited areas as a condition of employment and are potentially exposed to Lyme disease; it is recommended that the agency reimburse employees for the cost of the inoculation if they wish to become immunized.