



Legionnaires' Disease Outbreak at the Luxor Hotel and Casino, Las Vegas, NV, 2011

Interim Report #3

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INTRODUCTION:

Since our interim report #2, dated January 24th, 2012, the SNHD investigation and control team has made considerable progress.

Epidemiologic Investigation:

Office of Epidemiology (OOE) staff consulted with epidemiologists with the Washington Department of Health and were able to confirm that the third legionellosis case stayed at the Luxor Hotel in December 2011. Within a few days after visiting the Luxor, the case developed respiratory symptoms that progressed to pneumonia, resulting in hospitalization in early January 2012. The patient was diagnosed as having acute Legionnaires' Disease and in spite of treatment did not survive.

OOE staff consulted with the Centers for Disease Control and Prevention (CDC) to review preliminary results and to evaluate proposed control measures. It was confirmed that CDC had received laboratory isolates of *Legionella pneumophila* from the patient who died in Washington, and that CDC had been in communication with NALCO to arrange for environmental isolates from the Luxor water system to be forwarded to CDC for additional testing. CDC estimated that results of genetic testing could be available within a week of receipt by CDC of the specimens.

No additional cases of Legionnaires' Disease have been identified to date, and enhanced surveillance through EPI-X continues.

CDC agreed that a cluster of *Legionella* cases associated with the Luxor had been identified, that aggressive remediation of the Luxor water system was indicated, and that additional environmental sampling of the Luxor water system was appropriate.

Environmental Investigation

The final results from the sampling conducted on January 11, 2012 of two rooms served by the

same hot water system as the room where the case stayed and interim results from the sampling conducted by the SNHD on January 17 of the room where the case stayed, detected *Legionella pneumophila* in each of three rooms sampled. Additionally, the results provided by the Luxor from their 2011 third and fourth quarter testing indicated *Legionella pneumophila* was present in both high rise hot water systems that serve the entire floor where the case stayed. The third quarter results indicated *Legionella pneumophila* was present in the hot water system that served the opposite side of the building where the case stayed and the fourth quarter results indicated that *Legionella pneumophila* was present in the hot water system serving the room where the case stayed. Even though these two systems serving floors 17 to 30 are not directly connected, the SNHD results and the Luxor results indicated that the potential risk of contracting legionellosis was the same for both of these systems. The SNHD notified the Luxor hotel management that the emergency disinfection procedures, found in section VI of the Luxor Water Management Program dated January 23, 2012, was to be implemented beginning January 27, 2012 and completed as rapidly as possible. Additional water sampling for *Legionella* will be done as outlined in the attached letter from Glenn Savage to Anthony Williams dated January 26, 2012. The Luxor management has been working closely with the SNHD and has determined that they will go beyond SNHD recommendations. Luxor facility representatives decided to initiate emergency remediation procedures as described in their water management plan for all of the hot water systems serving guest rooms rather than conduct environmental sampling of their system. At the conclusion of each system remediation, hot water will be sampled from a random selection of rooms that will be analyzed for *Legionella pneumophila*. The remediation of the various hot water systems commenced on January 27, 2012 and will continue until February 8, 2012. To date the two hot water systems serving floors 17 to 30 of the pyramid have been completed. Follow-up testing is pending.

Discussion:

The SNHD will continue to work closely with the Luxor Hotel management and continue enhanced surveillance and observation of the remediation and environmental sampling.