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## Managing Health & Safety at Walt Disney World®

**D**uring AESF Week, participants in the OSHA Workshop had the unusual opportunity to visit Walt Disney World® “behind the scenes.” To prepare “the guests” for the event, Robert R. Bee, CIH, manager of Industrial Hygiene & Safety for the Walt Disney Company, presented an overview of the task of managing OSHA compliance at the world’s largest amusement/resort theme park. We were awestruck by the size of the operation: It covers 30,000 acres (an area twice the size of Manhattan), employs 40,000 people, and has daily guest counts that range between 60,000 and 150,000 people. To put its size into perspective, if you’ve visited Disney Land® in Anaheim, CA, you could put that entire “kingdom” into the parking lot at the Orlando Magic Kingdom® and still park 800 cars around it.

Two on-site electric power plants are responsible for the energy that runs Walt Disney World®. Also, there is a 15-mgd wastewater treatment plant and a major on-site recycling center. Disney boasts that it has the fifth largest navy in the free world.

### Behind the Scenes

In moving beyond the “magic,” Disney is a good-sized industrial city. Industrial applications looked much like our manufacturing facilities—although the outputs of production were characters, stages and entertainment products. This is accomplished in operations such as machining, woodworking, injection molding, and spray-painting. The paint booths were so large that a tractor-trailer could be driven through them.

The most intricate creative work is accomplished where artists and artisans apply their talents. One of the challenges engineers faced was to find a composite material that would be

lighter weight for character costuming. They have successfully reduced the weight of a typical headpiece from 40 lb. to a featherweight 2 lb. We watched as a section of 8-in.-diameter PVC pipe was transformed into the trunk of a palm tree. Some of these processes, much like our surface finishing industry processes, produce residual wastes that are hazardous and include waste solvents, flammables, lead and asbestos. The waste is managed in a secure hazardous waste landfill where each drum is carefully coded and tracked. Wherever possible, Disney is eliminating hazardous chemicals and materials at the source and has a comprehensive waste minimization plan.

### Safety is a Big Job

Managing safety is a colossal job at this world-class theme park & resort. With more than 17,500 Material Safety Data Sheets (MSDS) to manage, an elaborate computer database was created to track and make them readily available to employees. Because the workforce population is the size of a small city, the company places high value on experience and education. We were amazed when the managers who escorted us on our tour greeted the employees on a first-name basis.

The Industrial Safety & Health specialists have more than 18 years’ experience with Disney and more than 20 years of professional experience. The Disney team features many professional credentials (titles), including the Certified Industrial Hygienist (CIH), Medical Doctor (MD), Registered Nurse (RN), Licensed Asbestos Consultant, Registered Radiation Safety Officer, and Registered Laser Safety Officer. These specialists oversee 20 Occupational Health & Safety Administration

(OSHA) programs, including: Asbestos Abatement, Lead Abatement, Haz-Com, Respiratory Protection, Hearing Conservation, Bloodborne Pathogens, HazMat, Radiation Safety, Laser Safety, Heat Stress, Indoor Air Quality and Exposure Monitoring.

### Compliance Programs

Safety compliance programs include General Safety Issues, Construction Safety, Fall Protection, Confined Space Entry, Lockout/Tagout, PPE, Water Safety, Heavy Equipment Safety, Ergonomics, Process Safety, Roadway Safety and Self-Contained Underwater Breathing Apparatus (SCUBA) Safety. One of our workshop members asked Mr. Bee about the management of confined spaces. He responded, “We have more than 3,000 of them.” At any time, more than 1,000 contractors may be working on-site because of the challenges of on-going construction projects. Because heat stress is an important design consideration for characters, cooling vests and neck coolers are often worn to prevent this problem during parades.

Some of the health and safety issues specific to the amusement industry are theatrical fogs, pyrotechnics, laser effects, stunts, aviation safety, ride and show engineering. An elaborate tunnel system connects the “magic” to the behind-the-scenes support systems. Because Walt Disney World® is a small city, it has its own Fire Department, Emergency Medical Services and an in-house laundry that processes 100 tons of laundry each day. With more than 200 miles of roadway, 165 buses, 12 monorails on 14 miles of beams, and 20 steam trains, Walt Disney World® is truly big business.

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