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CONSULTANT'S UPDATE

ISSUE 12

APRIL — JUNE 2004

CITRUS CANKER AND THE LAND SURVEYOR

By Robert D. Huss, PLS



Land surveyors are fortunate to see parts of the countryside others rarely do, such as lush green valleys, deep river gorges, snow-capped mountaintops, forests of giant sequoias, and endless miles of citrus groves.

The latter may not seem as impressive or exciting as the others, but here in Central and

South Florida, surveyors likely will come into contact with, and have to enter, one or more citrus groves during the course of preparing a survey. Before doing so, it is important to take the necessary precautions to prevent the spread of citrus canker.

The first signs of citrus canker were detected in Miami-Dade County in 1995. In October 1999, the Florida Department of Agriculture & Consumer Services implemented an eradication program in an effort to

prevent the disease from spreading. Primarily, the emphasis was placed on removing the diseased and exposed trees but, due to legal actions by opponents to the destructive measures employed and its effect on citrus growers, eradication efforts have been seriously impacted. The canker disease has now been spread to Manatee, Hendry, Hillsborough, Palm Beach, Martin, Orange, Highlands, Desoto, and Collier counties.

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ADVANTAGES & DISADVANTAGES OF SAMPLING METHODOLOGIES

By Paul L. Osley, PE, DEE, CIH, CSP

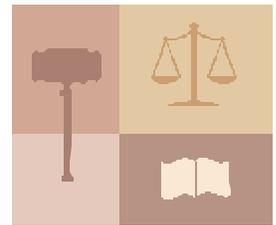


When mold growth/contamination has occurred, the source of the moisture intrusion must be identified and the scope of the problem assessed before remedial cleanup begins. In most cases, microbial sampling is not needed to provide a good preliminary assessment of the contamination. However, in some cases sampling may be warranted. For example, it may be prudent in litigation cases and where the contamination source(s) is unclear or to mitigate health concerns of building occupants.

Before collecting microbial samples, it is critical that a sampling plan and evaluation criteria strategy be developed to ensure that useful data is collected and evaluated consistently. As discussed in our December 2003 article, the following types of sampling may be incorporated into the building mold assessment strategy: Bulk Sampling, Surface Sampling (i.e., swab/wipe, tape) and Bioaerosol Sampling (i.e., viable/culture plate, non-viable/spore trap). Each of these sampling methodologies has advantages and disadvantages. In an effort to summarize this information in a concise comparable format, the table on page 2 has been prepared as a quick reference.

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EOH NEWS



◆ **Florida Mold Legislation Update:**

Senate Bill 1350 - Mold Remediation Registration Act has passed through several Committees and now resides in the Finance and Taxation, which reported favorably with proposed comments

◆ **State of Florida to Consider a Comprehensive School IAQ Bill**

◆ **ASHRAE has Published its Standard 62.2:**

Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

◆ **ASSE to Develop Mold Standard for Worker Protection**

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ADVANTAGES & DISADVANTAGES OF SAMPLING METHODOLOGIES

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Sampling Technique	Advantages	Disadvantages
Bulk	Inexpensive Rapid spore identification Can be quantitative Can identify viable/nonviable spores Viable assays includes organisms hidden in porous materials Can be cultured	Usually destructive Removal may cause exposure Not directly relatable to airborne exposures May not be source of amplification Laboratory processing can be difficult
Swab/Wipe	Inexpensive Nondestructive Rapid spore identification Can be quantitative Can be cultured Easy to perform sampling Can be collected from irregular- shaped surface(s) Convenient to hold and ship	Commercial swabs/wipes may contain preservatives which preserve spores (i.e., they cannot be cultured) Not directly relatable to airborne exposures May not be source of amplification Fungal structure may be damaged, making identification less accurate Spores may germinate before analysis May not capture organisms in porous materials
Tape	Inexpensive Rapid spore identification Quick and easy Convenient to hold and ship Nondestructive Easy to perform sampling Provides qualitative results	Cannot culture Not quantitative Tape pressure can deform/destroy spores Not directly relatable to airborne exposures May not be source of amplification Small sample area May be damaged in transit/shipping
Viable/ Culture Plate	Can sample both fungi and bacteria Relates directly to airborne exposure Qualitative and quantitative Can select different media to target specific organisms Can compare to bulk, swab or tape results for identifying amplification sites/areas	Initial equipment is expensive Sampling is cumbersome and noisy Can isolate only viable microbials Takes 7 to 10 days for complete analysis Some fungi may overgrow others Can speciate, but takes longer Low recovery rate for <i>Stachybotrys</i> Media has short shelf life Samples are perishable
Nonviable/ Spore Trap	Cassettes are easy to store Cassettes have long shelf life Provides qualitative results Relates directly to airborne exposure Rapid spore identification	Initial equipment is expensive Sampling is cumbersome and noisy No viable/nonviable differentiation Can be lab-to-lab variation in identification Variable industry methodology acceptance

As previously mentioned, it is important to note that mold sampling should be conducted by qualified professionals experienced in designing microbial sampling protocols, sampling methods and interpreting results. Samples should be analyzed by a laboratory that participates in the Environmental Microbiology Proficiency Analytical Testing Program (EMPAT) administered by the American Industrial Hygiene Association (AIHA).

The aforementioned sampling methodologies will identify numerous microbial organisms, each of which may or may not be an indication of potential adverse health impact(s). In our next article, "*Common Indoor Molds and Potential Health Impacts*", we will provide helpful information and guidelines for evaluating these results and potential concerns.

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CHANGES TO DEP RULES MEAN IMPORTANT CHANGES FOR FLORIDA UTILITIES

By Paul A. Bizier, PE, DEE



The Florida Department of Environmental Protection (FDEP) has been busy this past year revising rules which govern both public water systems and wastewater collection systems. The revisions to Chapter 62-555, which governs public water systems, were effective August 28, 2003, and were covered in a previous article. Revisions to Chapter 62-604, which governs wastewater collection systems, were effective November 2003, and are reviewed below.

The revisions to Chapter 62-604 will impact all wastewater systems. Many of the rule revisions bring requirements that previously had been incorporated only by reference to other standards, such as the Ten State Standards. Following are some highlights from the new rules.

- **No Permit for Individual Service Connections:** Previously, there have been issues as to whether or not a permit was required for a package pump station serving an individual residential service connection. The revised rules specifically exclude these individual connections, even if a pump station is utilized, from permitting.
- **Emergency Generator Requirements:** The FDEP has placed definitive requirements for emergency generators for lift stations. If a lift station receives flow directly from another lift station, then the lift station must have in-place emergency power. Also, if the discharge force main is 12" or larger, then the lift station must have in-place emergency power.
- **Separation Requirements:** The separation requirements have been revised to conform to the updated requirements in Chapter 62-555. Sewers and force mains are to be at least 10 feet from water mains. Sewers and force mains are required to be at least three (3) feet (outside to outside) from existing or proposed reclaimed water mains. Sewer pipes are to pass under wa-

ter mains, if possible, with at least 18" of separation. Lesser separation is possible, if certain requirements are met.

- **Construction Details:** There are many small changes in the requirements for construction of lift stations. These include requirements for fencing and signage, specific electrical control requirements, and flotation evaluation. Also, the permitting checklist (see below) adds specific requirements for influent screening, design conditions for cycle times, and conditions for use of electronics suitable for "hazardous conditions".
- **Alarm Requirements:** The new permitting checklist (see below) strongly encourages the use of telemetry to monitor lift stations. Although visual lights/horns are allowed, the Engineer must specifically address how reliability is maintained.
- **Odor/Lighting/Noise Control:** New wastewater collection facilities must demonstrate that they do not have an adverse impact on surrounding areas. In the event that a problem develops after the system goes into operation, the permittee is responsible for corrective action to eliminate the adverse impacts.
- **Permitting Requirements:** DEP has revised permitting requirements for collection system expansions. The same form, Form 8(a), is now used for both General Permit notifications and for Individual Permits. In each case, only one copy of the application is required. If the application is for a General Permit, then site plans or sketches can be submitted, rather than detailed drawings. For the Individual Permits, Engineering Reports complying with requirements for the 10-State Standards can be submitted in lieu of detailed drawings.

The form also has an extensive checklist. The checklist requires that an explanation must be provided for any item not marked, even if it is not applicable. In addition, the checklist, which is based on the 10-State Standards, imposes multiple requirements which are not contained in the actual rule. Therefore, the checklist should be carefully reviewed for any new project.

We suggest that persons involved with wastewater systems go to the DEP web site (www.dep.state.fl.us) and review the rules in detail. Chastain-Skillman has extensive experience in each of these areas, and stands ready to help you meet these new requirements.

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Because the movement of contaminated personnel, equipment, and citrus plant material transmits citrus canker, growers can only contain the disease by decontaminating the personnel, vehicles, and equipment when entering and leaving a grove.

As part of the eradication program, approved decontamination products and methods have been established under authority of Chapter 581.184 (6), Florida Statutes and Rule Chapter 5B-58. Information about the decontamination products available can be found on the Internet at www.doacs.state.fl.us/pi/canker/index.htm.

It is important that the surveying community, as well as others who enter and leave citrus groves, adhere to proper decontamination procedures.

Citrus is a \$9.1 billion industry in the State of Florida and extremely important to our local economy. Chastain-Skillman appreciates your help in making decontamination a part of your company's policy when working in or around citrus groves.

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This newsletter is provided solely for informational purposes and presents only highly condensed summaries relating to the topics presented. Therefore, it should not be relied upon as a complete record for purposes of regulatory compliance, nor is it intended to furnish advice adequate to any particular circumstances. For additional information on any of the topics in this newsletter, please contact the author, or Allan Duhm, (863) 646-1402, or e-mail us.

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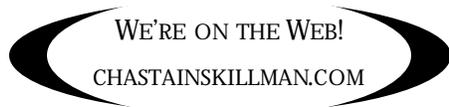
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