

and spill fuel on equipment, make sure equipment is in neutral when starting, operate at a safe speed, shut off and apply brakes when getting off equipment, do not put hands or feet near moving parts and **REPORT ALL EQUIPMENT MALFUNCTIONS TO THE MECHANIC SO THEY CAN BE REPAIRED PROMPTLY!** Properly running equipment can be a very useful production tool; improperly it can be hazardous and costly.

In the event of an accident, always follow up with a detailed report to find the cause and follow up with guidelines to prevent future occurrence.

Chemical Safety

Bill Mangold feels that the most important item in chemical safety is in the storage of chemicals. All golf courses should have a proper chemical storage room conforming to state regulations. It should be well ventilated and have an emergency shower in case of accidents. The chemical storage room should be marked as a restricted area and kept locked when not in use.

The superintendent should stress to the employees that they should not eat, smoke or drink when handling chemicals. Basic safety standards such as wearing respirators, gloves and boots, depending



Fueling Island at Martin Downs with approved fire extinguisher.



Periodically checking over equipment first hand with your mechanic will result in fewer mishaps due to failure.

on toxicity, are to be adhered to. Washing of employees and equipment after use are to be carried out.

Bill stated that any employee who handles pesticides on a regular basis should be State Certified. A certified employee will have more respect and use more care with chemicals. With all the bad publicity about chemicals lately, this is one area we must continue to monitor on a continuous manner.

Fire Hazards

Fire has the potential for being the most devastating consequence of poor safety practices. Over the years, golf course superintendents have produced a good track record with respect to fire. Usually we hear of serious fire that has devastated clubhouses, but loss of maintenance buildings or equipment to fire is not as common. However, fire prevention must continue to play an integral part of overall golf course operations safety.

Fire extinguishers should be mounted on all large tractors and mowing units. A large buildup of dry grass in the radiators or behind shields is potential for fire that could result in loss of an expensive piece of equipment.

Also, fire extinguishers should be mounted by the chemical room, by the fuel pumps, and in the mechanic's work area. Another good practice is to strategically place extinguishers throughout the maintenance area in case of an emergency to contain fire before it can get out of hand.

Bill said that an important thing to keep in mind is that a fire extinguisher is no good to anyone if it is empty or if an employee does not know how to operate it properly. Make sure all employees know how to operate each type of fire extinguisher on hand and check them periodically to make sure that they are fully charged.

All flammable liquids should be kept in a safe place and all fuels stored in marked safety containers. A first aid kit with burn ointment should be readily available when needed. One should display phone numbers for emergency services and a doctor.

In closing our interview, I asked Bill if there was anything else that he would like to add to our discussion. He did have one more important item to dwell on — and that is the use of alcohol or other drugs during working hours. At Martin Downs, it is company policy to terminate any employee who is caught drinking or working under the influence. This policy has been adopted with employee safety in mind because accidents will happen if an employee's senses and judgment are impaired.

Bill reminded me that we have only covered a small percentage of operations safety. Safety is something that can never be put to rest or dwelled on deeply enough. As we continue to upgrade our operations, we will always spot something that needs attention from a safety standpoint. ■

Central Florida Crowfoots



By RICK KAISER
Employee on Maintenance Staff
Bay Hill Club

Golf Course Maintenance Safety . . .

In any type of employment, there are safety measures required for particular hazards. While working in golf course maintenance, many levels of safety have to be acknowledged and practiced. In order to perform a particular job, consideration has to be made on the degree of hazard and all safety measures taken first. Equipment operation, facilities, chemical awareness and use are categories on a golf course that safety has to be part of the job.

EQUIPMENT OPERATION

The first step in operating equipment properly is to read and understand all directions and safety measures attached to the machines. Any further safety tips will usually come with the parts and repair manual. Toe guards or steel-toed shoes should be worn when operating any walk mowers. Many accidents occur when mowing steep slopes, so precautions should be taken to protect the feet.

Goggles play a major role in safety when operating small hand equipment. This is especially important when using a weedeater, edger, or electric trimmer. Flying debris can sometimes cause permanent damage to the eyes. In some cases, a full face shield would be an ideal safety measure against large particles.

For some reason or another, many operators shrug the idea of using a hard hat. It may be uncomfortable during summer heat, but this precaution is directly for the operator's benefit. One purpose in utilizing a hard hat is to protect the head from flying golf balls during the use of large equipment — (gang mowers, tractors, etc). Many times the operator finds himself or herself directly in the line of play and the individual should take precautions against injury.

Seldom do we acknowledge that small safety measures should be taken daily on all operating equipment. Inspections should be made on all

machines to check for loose nuts, bolts, screws, or any moveable parts. It is proper not to dress with loose clothing or jewelry that could become caught in moving parts of a unit. Do not remove a fuel tank cap while an engine is running. Ignited fumes can cause serious damage. Do not use equipment when you are tired or sick. Not only are you endangering yourself, but you're endangering workers and players around you. Always store fuel properly and designate areas where sharp tools are to be placed.

There are many preventive safety measures to become aware of and new personnel should be properly trained to handle any equipment that can be hazardous.

MAINTENANCE FACILITIES

In general, most accidents that occur in or around the maintenance facility, happen in the repair shop. Golf course maintenance can be dangerous when you consider the large amount of reel and rotary mowers that have to be sharpened or repaired. It is a good practice to utilize heavy gloves when sharpening and lapping reels or blades. Obviously, maintenance mechanics cannot wear gloves to work on engines, but safety gloves should be available when needed. Excess grease, debris, or worn parts should be checked on a scheduled basis to prevent machine hazards from occurring when equipment is in operation. Operators and mechanics should work very closely, making sure all safety conditions and methods are used with equipment.

All maintenance buildings should be constructed of relatively fire-resistant materials. There is an abundance of materials used in golf course maintenance that are fire hazards and you have to obtain proper storage. For example, all pesticides should be stored in a well ventilated room. There should be good lighting, enough insulation to prevent chemical freeze or overheat, and the storage room should have a lock on the door. Chemical labels will

have proper storage requirements and should be read when received. Pesticide poisoning is one of the worst safety hazards that can occur in golf course maintenance. Maintenance facilities should always have on hand current first-aid supplies which are properly stored and approved by a physician. Any pesticide applicator should tell his doctor which chemicals the individual uses; the doctor can study the symptoms, and treatment with antidotes can be readily available.

CHEMICAL AWARENESS AND USE

When a chemical contains ingredients that can cause injury, labels are attached to the container to provide information on toxic levels and designate safety measures to prevent poisoning. Special labels indicate the level of safety to be taken. DANGER and POISON on the label indicate the highest degree of toxic material, WARNING indicates a moderate toxic level, and CAUTION has a slightly toxic level which still should be treated with utmost care.

All accidental pesticide contamination is contracted by consuming the product, inhaling, or poisoning through the skin. There are many state and federal laws regarding restricted pesticide safety and use. That is the reason why golf course applicators have to be certified. Applicators learn safety measures used by the Environmental Protection Agency and to recognize symptoms of chemical poisoning. Preventive safety measures such as checking for the smallest hole in rubber gloves can prevent contamination. The following list of safety equipment should be readily available

for pesticide applicators.

1. Coveralls
2. Hat
3. Rubber Gloves
4. Goggles
5. Respirator
6. Rubber Boots

Caring and safety ride very close together in golf course maintenance and every crew member should take pride in his job performance. ■

Tees & Q's

(Continued from page 36)

that will provide a program to help avoid these problems in the future. Neighboring golf clubs have a local common interest in the sharing of any turfgrass information. The entire turfgrass industry in Florida can use any segment of turfgrass pest management to help assemble much needed information on turfgrass management.

An example of sharing information is the cooperative efforts of the University of Florida Turfgrass Research Personnel, turfgrass consultants, equipment and turfgrass suppliers, the FTGA, the FGCSA, and concerned golf course superintendents to try to assemble more facts about Bermudagrass Decline. This particular disease problem has enlisted more friendship and cooperation among industry leaders than any one turfgrass management item within the last couple of years. So be a leader and don't be afraid to discuss local problems experienced on your golf course. Just remember that we are all in the information sharing business. ■

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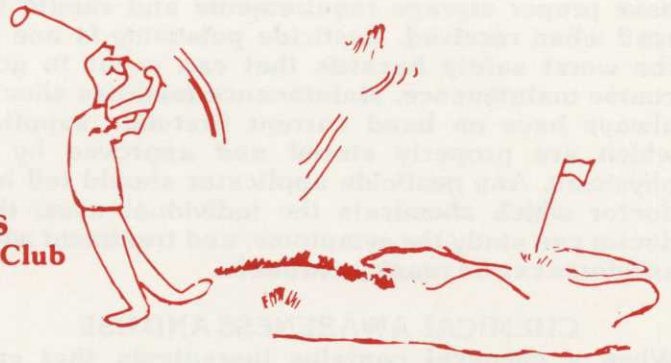
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DIVOTS

By **EDDIE SNIPES**
Selva Marina Country Club



'Flirting With Disaster?'

The number of times superintendents pass in and out of their maintenance facilities in a day would probably stagger the imagination. The same old walkways, entrances, storage areas take on a mesmerizing affect as the daily routine drags on. We are conscious but unconscious to situations that lurk off our beaten path. What will make one take notice of potential disasters to be; a lost finger, an eye put out, severe burn or a maintenance facility destroyed in the night?

But wait, I have been in the business 25 years, no such thing has happened to me. Why all the fuss and bother?

Have you ever stopped and thought why local, state and federal agencies spend millions of dollars a

year for something called SAFETY? Are these people crazy or is there a justified need for fingers, eyes, legs and life?

When we determine as professional managers how safe our maintenance facilities and programs are, we in essence have put a value judgement on human life. Sound a bit dramatic? Life and Death sound more than dramatic to me.

How does one know when and if he is flirting with disaster? Compiled in this article is a list of questions partially taken from HEW Publication No. (NIOSH) 75-119 pages 67-84 that I feel pertain to the golf course industry environment. Use them as an aid to help you look for potential disaster areas.

Let us collectively take pride in our industry by showing to our peers, members, and staff that safety is of utmost concern.

(Continued on page 45)

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GOLF COURSE MAINTENANCE SAFETY CHECK LIST

	YES	NO
1. Are all places of employment kept clean and orderly?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are floors, aisles, and passageways kept clean and dry and all spills cleaned up immediately?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are floor holes, such as drains, covered?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are permanent aisles appropriately marked?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are wet surface areas covered with non-slip materials?	<input type="checkbox"/>	<input type="checkbox"/>
6. Are platforms, storage lofts, balconies, etc., that are more than four feet above the floor protected with standard guardrails?	<input type="checkbox"/>	<input type="checkbox"/>
7. Are all doors that must be passed through to reach an exit always free to access with no possibility of a person being locked inside?	<input type="checkbox"/>	<input type="checkbox"/>
8. Are all exit routes always kept free of obstructions?	<input type="checkbox"/>	<input type="checkbox"/>
9. Are eye wash fountains and safety showers provided in areas where chemicals, such as caustics, are used?	<input type="checkbox"/>	<input type="checkbox"/>
10. Are all containers, such as vats, storage tanks, etc., labeled as to their contents?	<input type="checkbox"/>	<input type="checkbox"/>
11. Are employees required to wear personal protective equipment when handling hazardous materials (gloves, eye protection, respirators, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
12. Are flammable liquids kept in closed containers when not in use (e.g., parts cleaning tanks, pans, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all spills of flammable or combustible liquids cleaned up promptly?	<input type="checkbox"/>	<input type="checkbox"/>
14. Is combustible waste material (oily rags, etc.) stored in covered metal receptacles and disposed of daily?	<input type="checkbox"/>	<input type="checkbox"/>
15. Are gasoline and other flammable liquids stored in approved containers?	<input type="checkbox"/>	<input type="checkbox"/>
16. Do storage rooms for flammable and combustible liquids have explosion-proof lights?	<input type="checkbox"/>	<input type="checkbox"/>
17. Are LP-gas storage tanks guarded to prevent damage from vehicles?	<input type="checkbox"/>	<input type="checkbox"/>
18. Are storage cabinets for flammable and combustible liquids labeled "FLAMMABLE-KEEP FIRE AWAY"?	<input type="checkbox"/>	<input type="checkbox"/>
19. Is personal protective equipment provided, used, and maintained wherever it is necessary?	<input type="checkbox"/>	<input type="checkbox"/>
20. Is eye protection available where debris or flying objects could be a hazard?	<input type="checkbox"/>	<input type="checkbox"/>
21. Is the proper respirator in use for the hazards present? (For example, dust masks do not protect against solvent vapors.)	<input type="checkbox"/>	<input type="checkbox"/>
22. Are respirators provided where necessary?	<input type="checkbox"/>	<input type="checkbox"/>
23. Is the user instructed and trained in the proper use of respirators?	<input type="checkbox"/>	<input type="checkbox"/>
24. Are respirators cleaned and disinfected after use?	<input type="checkbox"/>	<input type="checkbox"/>
25. Are restrooms and washrooms kept in clean and sanitary condition?	<input type="checkbox"/>	<input type="checkbox"/>

(Continued on page 46)



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| 26. Are all outlets for water that is not suitable for drinking, clearly posted as "UNSAFE FOR DRINKING, WASHING, OR COOKING?" | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. If employees are permitted to eat on the premises, are they provided with a suitable space for that purpose? | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Are employees prohibited from eating in areas where toxic materials are present? | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Are first aid supplies readily available, inspected and replenished? | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Is at least one employee on each shift currently qualified to render first aid in the absence of a nearby clinic or hospital? | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. Are medical personnel readily available for advice and consultation on matters of employee health? | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Is there a first aid kit easily accessible to the work area? | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. Are emergency phone numbers posted? | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. Where employees may be exposed to injurious corrosive materials, are they provided with quick-drenching and flushing facilities for immediate emergency use? | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. Are extinguishers selected for the types of combustibles and flammables in the areas where they are to be used? | | |
| Class A. Ordinary combustible material fires | <input type="checkbox"/> | <input type="checkbox"/> |
| Class B. Flammable-liquid or grease fires | <input type="checkbox"/> | <input type="checkbox"/> |
| Class C. Energized-electrical-equipment fires | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. Are extinguishers fully charged and in designated places? | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. Are extinguishers locations free from obstruction or blockage? | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Are extinguishers located along normal paths of travel? | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. Have all extinguishers been serviced, maintained, and tagged at intervals not to exceed one year? | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. Are air tanks drained regularly? | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. Are pulleys and belts on compressors and motors completely guarded? | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. Is the pressure-relief device and gauge in good operating condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. Is battery charging on electric units performed only in designated areas? | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. Are "NO SMOKING" signs posted near electric battery charging units? | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. Are chain hoists, ropes and slings adequate for the job? | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. Are motorized vehicles and mechanical equipment inspected daily or prior to use? | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. Are goggles or face shields always worn when grinding? | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Are jacks checked periodically to see if they are still in good condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. Are tools and equipment (both company and employee-owned) in good condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. Have employees been instructed that the use of compressed air to blow debris from clothing or body is prohibited because it can enter the body and cause serious harm? | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. Have deteriorated air hoses been replaced? | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. Have employees been made aware of the hazards caused by faulty or improperly used hand tools? | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. Are cylinders secured and stored where they cannot be knocked over? | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. Are cylinder protective caps in place except when the cylinder is in use? | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. Are only instructed employees, who are judged competent by the employer, allowed to use oxygen or fuel gas equipment? | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. Is welding always conducted at a safe distance from flammable liquids? | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. Are all compressed gas cylinders legibly marked for identifying the content? | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. Have exposed wires, frayed cords, and deteriorated insulation been repaired or replaced? | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. Is all metal fixed electrical equipment grounded? | <input type="checkbox"/> | <input type="checkbox"/> |
| 60. Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation (at least six air changes per hour)? | <input type="checkbox"/> | <input type="checkbox"/> |

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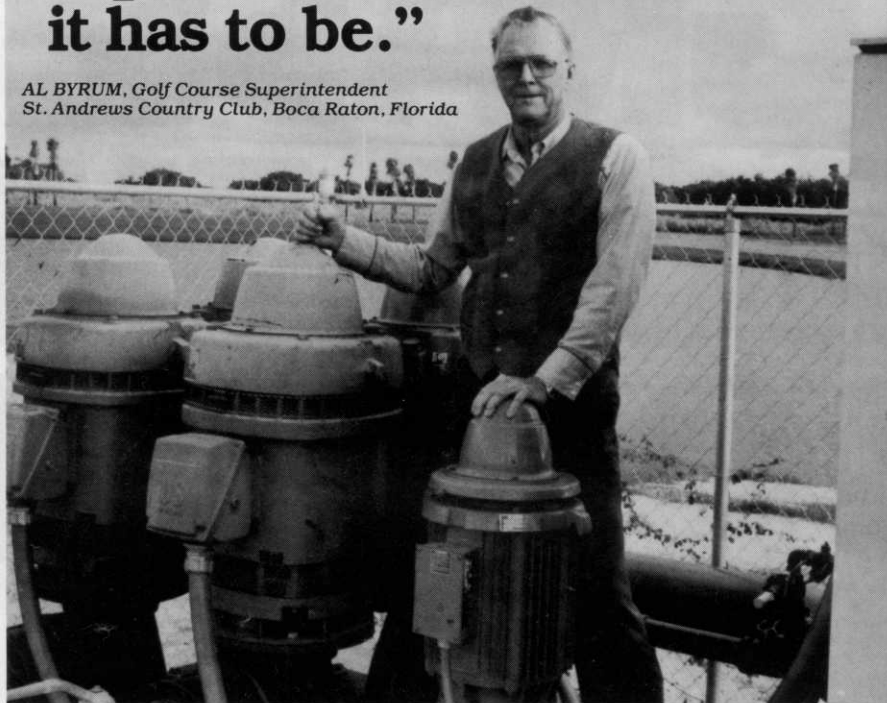


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Beauty of Par 3, 12th hole, shows environment of golf course.

jupiter island club

Jupiter Island Club, Hobe Sound, Florida. Even the name wears the correct address. Probably the states' most private and secluded island hideaway, is the seasonal winter home for a truly select few. All the island social activities revolve around the club of which the golf course has a rich heritage.

Nathaniel Reed, greens committee chairman, explains some of the past. "Some of our old timers believe a golf course had been cleared from the island jungle as early as the 1890's, but all documentation has been lost in time. Our records indicate that the Jupiter Island Golf Course had been constructed by 1912. Visitors to the Mainland Inn, owned and operated by a British holding company, took a ferry across to Jupiter Island and played an interesting compact course of 9 holes which featured 3 holes that have actually disappeared into the sea. In 1922 the then financially revitalized Olympia Beach Company had sufficient funds to expand the course. The jungle was cleared for the sweep of holes 4, 5, 6. The greens were

modified and improved. New fairway and greenside bunkers were constructed and irrigation water was brought to each of the 9 greens. The fairways remained sandy. If you could find a lie, it was made of a mixture of rough bermuda and sand spurs. The sand spurs were so prolific that they were raked by a mule-pulled drag to the side of the fairways and burned."

Today this short yardage course is one of the states' most enjoyable to play because of its natural tropical beauty. Because of his longtime interest in botany Nathaniel Reed says, "I decided that our course would become a tropical garden sanctuary with a collection of palms, tropical trees, and now citrus, avocados, mangoes, flowering trees and vines, hibiscus, and a water lily pond. Our membership has supported my concept with zeal."

Bob Hurst, golf course superintendent, is the force behind these ideas. He has held his current position for over 23 years. Bob came to Jupiter Island in