HAWAIIAN DREDGING CONSTRUCTION COMPANY, INC.
GREEN OHANA

# PULAMA HONUA

*Cherishing the Earth*

ISSUE 4 October 2009

## SUSTAINABILITY meets OCCUPATIONAL SAFETY & HEALTH

By Lou Ann Grant, LEED AP

The late '60s were a turbulent time in America, a period of social and political upheaval. The nation faced serious concerns both abroad and at home. Civil rights, women's rights, Vietnam, worker safety and the environment all demanded the country's attention.

As a result, two pivotal events took place in 1970:

- Senator Gaylord Nelson of Wisconsin created the first Earth Day, on April 22, 1970, leading eventually to national legislation such as the Clean Air Act and the Clean Water Act.

- On December 29, 1970, President Richard M. Nixon signed The Occupational Safety and Health Act of 1970. This is because in the late '60s, occupational injuries and illnesses were increasing in both number and severity. Disabling injuries increased 20 percent during the '60s, and 14,000 workers were dying on the job each year.

Since the first Earth Day till the present day, all things "green" have become main stream. An awareness of the effects our way of life is having on the environment has lead to sustainable construction, and rating systems like Leadership in Energy and Environmental Design (LEED). We are becoming more aware of the value of designing the building process to eliminate hazardous by-products and wastes rather than just disposing of those by-products and waste at the end of the process.

At the same time there has been a change in the approach to Occupational Safety and Health. There has been a shift among progressive safety professionals from simply enforcing regulations to a more process oriented approach. This has resulted in a growing emphasis on preplanning the workplace to eliminate hazards rather than (or in addition to) writing up a safety program to accommodate these same hazards and the incidents that could result from those hazards.

It is no surprise that there is a natural synergy between sustainable construction and Occupational Safety and Health. There is logic in connecting safeguarding the environment and the health of the future occupants of a building and safeguarding the safety and health of the men and women involved in the actual construction of sustainable projects.

Several LEED prerequisites and credits

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relate directly or indirectly to occupant comfort and health. Remember, occupant refers to those involved on site during the construction of the building, as well as building staff, employees and residents.

Recently we had the opportunity to speak to Neil Silins, LEED AP, president of EMS Environmental Inc., and chair of the American Society of Safety Engineer's Outreach Committee in Chicago, about the correlations between LEED and occupational safety and health. He stated, "A good example of credits that impact or can be related to worker safety and health is Materials and Resources credits 3.1 and 3.2 - Optimize the use of IAQ Compliant Products. *continued....*

## QWIK FACTS

Congratulations to OUR NEWEST LEED AP William Rauckhorst.

We have 31 Accredited Professionals....

These credits require that a building purchase 'air quality compliant' materials for use inside the building to reduce emissions from materials used in the building. This includes paints and coatings, adhesives, sealants, carpet, composite panels and agrifiber products. While this does not directly address worker safety, these requirements will certainly contribute positively to the health of construction workers engaged in projects at the site."

Mr. Silins also commented, "The US Green Building Council (USGBC) did not have an occupational safety professional on the committee as they designed the LEED Green Building Rating System. However there is a clear connection in spirit between LEED and Occupational Safety and Health and we believe it will be further addressed in future versions. Right now, there is a LEED Existing Building project in California that is incorporating occupational safety and health as an Innovation in Design credit."

Michael Ivanovich of Consulting-Specifying Engineer suggests that the future version of LEED BD+C (Building Design + Construction) should have a prerequisite for safe worksites and should adopt 29 CFR 1026, the OSHA Construction Industry Standards, to incorporate worker safety in construction.

LEED certification, sustainability efforts and the green building movement represent a new frontier for all of us across the

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construction industry. There is a natural and logical progression to a clearer partnership between LEED and the Occupational Safety and Health profession. As our industry moves towards a more collaborative work environment and as LEED is continuously evaluated and improved by the USGBC, we can expect more definition and inclusion of Occupational Safety & Health.

There is a lot to look forward to as we all work together to protect and safeguard the planet, our communities and those who construct our sustainable buildings.

## GREEN PRODUCT NEWS...

## PERVIOUS CONCRETE

During this year's Build and Buy Green Conference and Expo, there were many vendors showing their various "green" products and services. One booth, in particular, had a fascinating product on display—PERVIOUS CONCRETE. This product offers great potential for our company. If used properly, it can be a very green and sustainable replacement for normal concrete slabs or asphalt pavement.

Here's the concept: Pervious concrete allows storm water to penetrate through it recharging the groundwater below grade. Of equal significance, it helps reduce the amount of storm water run-off created which reduces erosion and soil/sediment contamination of waterways.

The proper base course must be installed—the typical base course does not work since the percolating water would erode it and the underlying soils.

Pervious concrete is best suited for large exterior expanses such as parking lots, streets, sidewalks, and plazas.

On LEED projects, using pervious concrete can assist in achieving the following LEED credits:

- Credit SS-C6.1 Storm water Design-Quantity control
- Credit SS-C6.2 Storm water Design-Quantity control
- Credit SS-C7.1 Heat Island Effect- non roof

PAU