Sand Testing Results Update (May 16) Click Here

Sand Testing Results
Update: May 16, 2014

On Wednesday May 14, the Miami-Dade Health Department received a copy of the Town's sand testing results prepared by an independent testing company (Terracon). These testing results were sent to the Florida Department of Health in Tallahassee.

Below is the risk assessment from the Florida Department of Health concerning the levels of arsenic found in the beach sand from the Surf Club:

"Arsenic is a common naturally occurring element in the environment. Evidence indicates the levels of arsenic found in the sand of the Surf Club are close to natural background levels found in Miami-Dade County. The background soil levels report can be found at http://www.miamidade.gov/environment/research-reports.asp.
The Florida Department of Health (FDOH) has determined there is an extremely low risk of health effects due to the arsenic found in the sand of the Surf Club in Miami-Dade County. The maximum arsenic level found in the Surf Club Sand (8.9 parts per million) may lead to an additional risk of developing cancer of eight in 1million, or eight additional cancers in a million people exposed daily to the soil over a lifetime (70 years). To put this into perspective, the baseline risk for developing any cancer in the U.S. is 0.4 or 40 percent. The additional risk from this exposure could change the risk from 0.400000 to 0.400008 for a person exposed over their lifetime to this sand. Other serious, non-cancer, health effects are not expected at this low level exposure to arsenic for children or adults."

Update (#2): Wednesday, May 14 (2:00 pm)

1. Conference call with Wilber Mayorga (DERM: Chief of Environmental Monitoring and Restoration Division)

   Summary:
   - Mr. Mayorga reviewed the Town's independent testing report including the data relating to arsenic levels
   - Indicated that the testing results are consistent with previous research and published report on arsenic levels
   - Stated the test results are consistent with naturally occurring arsenic levels on the barrier island in Miami-Dade County

2. Conference call with Dr. Samir Elmir (Director, Miami-Dade Health Department; Dr. Lilian Rivera, Health Officer and Olga Connor, PIO)

   Summary:
   - Dr. Elmir indicated that the department reviewed test results
   - Discussed test results with DERM and indicated that arsenic levels are consistent with the naturally occurring arsenic levels for the beach area
   - Concluded that the arsenic level in the sand excavated at the Surf Club was within one order of magnitude for arsenic levels in the beach area
   - Forwarded a copy of the Town's test results to the State toxicologist in Tallahassee; awaiting response of test results
   - Will respond to media once the State toxicology office responds with their input/findings (could be as early as today – Wednesday)

Future Actions

1. Thursday, May 15 – 8:30 am conference call with HSWMR (Chris Teaf, PhD – President and Director of Toxicology) – independent toxicologist (potential service provider to Town to perform toxicology assessment and identify remedial actions as a result of assessment).
2. Thursday, May 15 – 9:30 am meeting with Fausto Gomez (Gomez Barker and Associates) to assist in preparing the Town's request to FDEP to actively review test results; provide analysis and identify any necessary remediation.

Town of Surfside

MEMORANDUM

To: Town Commission

From: Michael P. Crotty, Town Manager

Date: May 13, 2014

Subject: Sand Testing Results – Surf Club Sand Transfer Project

Attached are the results of the sand testing. This independent testing was performed by Terracon and included testing for beach compatibility and toxicology.

Thomas Tepper, PE of Terracon will present the test results to the Commission at tonight's meeting and respond to any questions.

The toxicology report and correspondence dated May 9 identifies a reading higher than the 2.1 residential limits for arsenic. The Terracon report states that a DERM study indicates that for this area of Miami-Dade County (see attached) the background concentrations for arsenic is 5.2 mg/kg. The May 9 correspondence of Terracon states that:

Results of several studies on the background concentrations of chemicals in soils in Miami-Dade County were recently presented by Mr. Wilbur Mayorga, M.S.,P.E. of Environmental Monitoring and Restoration Division (DERM) on February 27, 2014 to the 'Contaminated Media Forum - Background Work Group' and were published in the Miami-Dade County website (http://www.miamidade.gov/environment/research-reports.asp). Review of the results presented in this study shows that anthropogenic background concentration for arsenic in soil in the project area is 5.2 mg/kg. which is of the same order of magnitude found in the samples that we analyzed.

Based on the sequence of events during the excavation and filling for the renourishment project, one can infer that the shallow excavated material was placed near the southern limits of the renourishment area and the deeper material near its northern limits. Consequently, it is believed that the sand sampled near 88th Street and that sampled near 94th Street are representative of the shallow and deep portions of the cut, respectively. Based on our understanding of the sequence of events during excavation, the similarity of the two sand samples in terms of arsenic concentrations and their close proximity to the values reported in the literature as 'background' for the area, leads us to believe that the concentrations measured in the laboratory tests reflect background levels.

Upon receipt of each report, I forwarded the test results to the permitting agency (FDEP) for their input so it could be included in the Commission report. FDEP geologist Dr. Jennifer Coor reported this morning that, "the Department doesn't require contaminants testing for sand placement, unless the material is coming from a place that is believed to be contaminated, such as a port/harbor. Tim Rach oversees the ERP permits, and may have more experience with various contaminants in permits and allowable limits by the Department. His contact information is: timothy.rach@dep.state.fl.us. I have read both the reports, and I think the grain size statistics and color that was presented is consistent with the application and sediments that I reviewed. I have never worked with arsenic in beach sands, but after reading the Terracon report, I would tend to agree that these would be acceptable levels as the sand both comes from and was placed in a region with a slightly high natural arsenic level".

As previously reported, samples were taken in April by FDEP for testing and FDEP representative Christian Lambright reports that their testing confirms beach compatible sand. The May 1 report on independent testing of Terracon on the sand samples indicates similar results utilizing FDEP protocols for determining beach compatibility.

Respectfully Submitted

by: Michael Crotty
Michael P. Crotty
Town Manager