Florida Department of
Environmental Protection

Memorandum

TO: Bob Sellers, ESIII
Southwest District, Division of Waste Cleanup

THROUGH: Brian Dougherty, Ph.D., Environmental Administrator,
Program & Technical Support Section, BWC

FROM: Esen Momol, Ph.D., Environmental Scientist, em
Program & Technical Support Section, BWC

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAR 24 2006
SOUTHWEST DISTRICT TAMPA

DATE: March 17, 2006

SUBJECT: Countryside Executive Golf Course
2506 Countryside Boulevard
Clearwater, Pinellas County
Site Assessment Report and Remedial Action Plan dated December, 2005

I reviewed the subject the Site Assessment and Remedial Action Plan dated December, 2005 (received March 6, 2006). Nicholas Albergo, P.E. signed and sealed the subject document under the letter head of HSA Engineers & Scientists. Within this limited context, the report is generally adequate for its intent. Based on Site Assessment report, arsenic was identified as the only COC for soil and groundwater at the site. The highest soil and groundwater arsenic concentrations were detected in the vicinity of maintenance facility located at the east-central portion of the site. Arsenic impacts in other areas appear to be the result of routine application of herbicide/pesticide. The owner voluntarily agrees to remediate the site under the direction of the Department. HSA proposed excavation and off site disposal of arsenic-impacted soil from around the maintenance facility. Following soil removal activities, groundwater impacts are expected to naturally attenuate. HSA recommended the use of an institutional control with an engineering control to limit the exposure to the residents. They proposed to place 2 feet of clean fill in all areas that will be exposed following site redevelopment and a restriction will be placed on the use of groundwater at the site.

I have the following comments for your consideration:

1. The Report stated that four wells (2 irrigation, 2 potable) were located at the site as well as four potable wells within a ¼ mile of the site and 2 additional potable wells were identified between ¼ and ½ of a mile of the site. Was arsenic analyzed in samples collected from these wells?

2. The site assessment activities should be completed before remedial action is considered. Arsenic delineation of groundwater and soil has not been completed. Soil excavation may be appropriate around the maintenance facility to remove the

source, however leachability of soil should be addressed for the rest of the site and groundwater criteria of 10 ug/L should be met.

3. They proposed to place two feet of clean fill in all areas that will be exposed following site redevelopment and a restriction will be placed on the use of groundwater at the site. It is recommended that they need to place a restriction on digging if arsenic exceeds direct exposure levels.

4. The Report stated that 95% UCL of the mean was calculated by using Pro-UCL for the maintenance area and the entire site. Please note that since the site will be redeveloped to residential town houses, it is not acceptable to develop a single 95% UCL for the entire residential development area. For residential land use involving single dwellings, the exposure unit is typically the residential lot. The Department considers the default residential lot to be 0.25 acres in size. Different exposure units can be managed through different Risk Management Options levels. ten samples are needed within an exposure unit to calculate a 95% UCL using FLUCL (Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.) or pro-UCL (see the attached letter).

Please call me at (850) 245-7501 if you have questions.