STATE OF NEW YORK
DEPARTMENT OF HEALTH

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April 23, 2004

Mr. Alexander F. Ciesluk, Jr.
Deputy Regional Permit Administrator
New York State Department of
Environmental Conservation, Region 3
21 South Putt Corners Road
New Paltz, New York 12561

RE: The Belleayre Resort
at Catskill Park DEIS

Dear Mr. Ciesluk:

Thank you for the opportunity to comment on the DEIS for the proposed Belleayre Resort at the Catskill Park. The location and magnitude of this proposed project is of particular concern to us. The project site straddles the geographical divide between the drainage basins of the Esopus Creek and the East Branch of the Delaware River which feed New York City's Ashokan and Pepacton Reservoirs, respectively. These reservoirs are key water sources of NYC's Catskill and Delaware water systems that supply about 90 percent of the drinking water to over nine million New Yorkers. Since NYC has been granted a Filtration Avoidance Determination for these systems, unfiltered drinking water is delivered directly to consumers. To protect water quality, we urge careful scrutiny of all proposed activities in these watersheds, especially those the size of Belleayre Resort.

We believe that the following water supply, irrigation and stormwater issues need further attention. We request that, where appropriate, they be addressed as special conditions of the water supply and wastewater permits. These comments were prepared in consultation with the Ulster County Health Department.

A. Protection of Water Supply Sources:

A pre-blast survey of private wells in the vicinity of this project by the blasting contractor is proposed to establish baseline conditions such as well construction, production and usage, prior to blasting activities. We support the proposal and recommend that the survey include all public and private water sources, including springs and wells, within one-half mile of blasting. The benchmark data should be expanded to include baseline testing for bacteriological contamination and turbidity since blasting may impact water quantity and quality.

B. WSA #10,455 Big Indian Plateau:

1. The application needs to be updated to include all three proposed Rosenthal Wells. Water demands should be the calculated demands (115,000 gpd average, 190,000 gpd max.) without taking into account any reductions, as indicated in Delaware Engineering's March 1, 2004 response to January 21, 2004 meeting comments. Any reference to reduction in demands should be eliminated from the application.

2. Approved well capacities should be based on the results of the April 2004 combined pump test of wells RW1, RW2, and RW3. The Department will consider approval of these wells once we receive and review the pump test and water quality data and analysis.

3. It appears that portions of the 100-ft and 200-ft control radius areas for wells RW1, RW2, and RW3 are outside of the property owned by the developer. How does the applicant propose to provide adequate protection of these wells and the aquifer from which they feed if the surrounding lands are not owned and/or controlled by the project owner?

4. A sulfur odor was detected during the first two pump tests of RW2. If necessary, the applicant should provide details regarding the proposed treatment for odor removal during the design stage.

5. The applicant should confirm the revised location of the treated wastewater effluent, and provide a site map indicating its proximity to the proposed wells. The applicant should also confirm and provide drawings to show physical separation of the potable water system from the irrigation/wastewater effluent piping.

6. Arsenic was detected in the samples taken after the November 2001 and September 2002 pump tests of RW2, at 16-parts per billion (ppb) and 15-ppb. These levels are above the newly promulgated federal maximum contaminant level (MCL) of 10-ppb, which will be enforceable starting on January 23, 2006. Depending on arsenic results from the April 2004 pump test, additional treatment may be required.

7. Further evaluation, in accordance with NYSDOH Environmental Health Manual, Item No. PWS 42, "Identification of Ground Water Sources Under the Direct Influence of Surface Water" will be required in order to make a final determination of surface water influence for the three proposed wells. Daily comparative testing of temperature and conductivity between wells RW1, RW2, and RW3 and Birch Creek should begin as soon as possible. This information should be collected for a one year period, and submitted quarterly to the Ulster County Health Department for review. Pending review of the April 2004 pump test data, the Department may give conditional approval to use the wells while this evaluation is taking place.

8. During the November 2001 and September 2002 pump tests of RW2, turbidity levels were initially relatively high until the well had been pumped for a few hours, at which time the turbidity lowered to acceptable levels. This is most likely due to the well standing idle for long periods in between pumping. Well RW2, however, may need to be pumped to waste

upon start-up until acceptable turbidity levels are reached. Results from the April 2004 pump test will help to further characterize turbidity levels in RW2.

9. Prior to or during the design stage of this project, the applicant must address the physical upgrade and water quality/treatment aspects of Silo A Spring. A full Part-5 water quality analysis must be provided for Silo A Spring as part of this evaluation. In accordance with NYSDOH Environmental Health Manual Item No. PWS 42, any spring source must undergo a detailed evaluation to determine or rule out surface water influence. Silo A Spring must undergo such an evaluation. Any existing data regarding GWUDI testing on Silo A Spring should be submitted to the Department for review.

10. The applicant should discuss and confirm that no wastewater effluent, fertilizers, pesticides, herbicides, or other possible contaminant will be applied in the vicinity of RW1, RW2, RW3, and Silo A Spring. Any waste effluent and/or possible chemical contamination source must not be applied within 200 feet of any proposed ground water source.

C. WSA #10,566 Wildacres Resort / Highmount Golf Club / Highmount Estates:

1. The application should be revised to clearly identify the applicant (legal entity that will be authorized to develop and operate the water system). From the January 21 and March 3, 2004 meetings at NYSDEC Headquarters, it was clear that the applicant intends to create a water company. The water company filing should be initiated prior to issuance of the water supply permit. Also, the property to be owned by the water company should be described in the application and noted on the plans.

2. The application should be revised to conform to the usual practice of requesting authorization for the maximum day water demand rather than average day. Also, the application needs to be updated to indicate the most current water demands to be used. Water demands should be the calculated demands (136,635 gpd average, 225,448 gpd max.) without taking into account any reductions, as indicated in Delaware Engineering's March 1, 2004 response to January 21, 2004 meeting comments. Any reference to reduction in demands should be eliminated from the application.

3. Fleischmanns Well #1 is currently not functional. There is no pump, the casing terminates in a vault that must be eliminated, and there is no piping connecting the well to the distribution system. The 3/1/04 Delaware Engineering letter indicates that this well will be put back into service as part of this project. The rehabilitation of Fleischmanns Well #1, in accordance with NYSDOH standards, needs to be incorporated into the permit conditions.

4. A formal pump test, in accordance with NYSDOH standards, will be required as part of the rehabilitation work for Fleischmanns Well #1. The applicant's yield rating for Well #1 is questionable, since the well has not been formally pump tested. Also, some of the yield data from the December 21, 2000 "Water Supply Evaluation" report (Appendix 7, DEIS) is contradictory. The text and Table 2 indicate a pumping rate of 94 gpm, while Appendix E-1 (p.2) indicates a rate of 83 gpm. This should be clarified.

5. The yield rating for the Fleischmanns spring may be high. This yield estimate was based on flow measured during drought conditions (December 2001), but not a drought of record. The applicant should compare the December 2001 drought conditions with a drought of record and adjust the springs yield rate accordingly.

6. Wells #1 and #2 and the springs are potentially Ground Water Under the Direct Influence of Surface Water (GWUDI). The NYSDOH has concluded that there may be surface water intrusion into the springs, and there may be a significant connection between Well #2 and the nearby stream. Since it is similar to Well #2, Well #1 is also suspected of being influenced by surface water. Any source determined to be GWUDI will require filtration or similar treatment, or replacement with an alternate source. The applicant should explain how any source(s) determined to be GWUDI will be treated or replaced.

7. One proposed source alternative for the project is development of a new well near the Village's existing Well #3. This option should not be counted on until well testing confirms available yield and no adverse effects on existing Village water sources.

8. The Village of Fleischmanns has committed in writing only "an expression of interest in selling water to the proposed developments". An executed contract between the applicant and the Village, detailing the amounts and conditions of water purchases, should be provided before the permit is issued, or as a permit condition.

9. The Delaware County Soil and Water District has provided comments on the water budget analysis. These comments concluded that the net effect on the Village's springs may be a decrease in recharge to the springs, not an increase as indicated in the application. Although the applicant has disputed this analysis, they should address the possibility that the project may have an adverse impact on the Fleischmanns springs yield and/or quality, and how this issue will be resolved if it occurs. Additional related concerns are described in items 10, 11, and D.2.a.below.

10. Designated wetland 16 and several isolated wetlands (17,18,19,20,21) are located in the recharge zone of the Fleischmanns spring sources. Wetlands, and isolated wetlands in particular, are likely sources of groundwater recharge. Isolated wetland 21 is of particular concern as its clearly defined stream and streambed disappear on a topographical bench about 500 feet from the springs. Direct communication may exist between isolated wetland 21 and the groundwater that recharges the springs, necessitating special protective measures around this wetland.

11. The exact locations of the various Fleischmanns spring collection areas are not shown in the application documents. These locations should be shown on all appropriate site plans. The catchment area south of the railroad tracks is of particular concern – a lagoon (TP #101) is proposed very near that area, immediately below the proposed water treatment plant. This lagoon and the exact springs location relate to concerns described in item 9 above.

D. SPDES #027-0661 Wildacres Resort and #027-0679 Big Indian Plateau

1. Irrigation:

The applicant has proposed utilizing tertiary treated effluent for spray irrigation of golf courses and grounds. However, for these effluents, designated outfall 002 at Wildacres and 002 at Big Indian, the respective footnotes related to "achieving 99.9% and 99.99% removal and/or inactivation, respectively, for *Giardia lamblia* cysts and enteric viruses", may not be reasonably protective for irrigation purposes in the case of enteric viruses. For example, if the effluent contains 10^8 virus particles per ml (typical high-end value for diluted viruses under conditions of illness) and there is no removal via microfiltration, but 99.99% disinfection, 10^4 viable virus particles per ml would be present in the effluent discharged to the irrigation pond. Exposure to the elements (especially sunlight) could further reduce this concentration but, if there is little or no retention in the pond, this concentration of viruses ultimately may be present in the sprayed irrigant. The World Health Organization has extensively examined the issue of treated wastewater uses and has recommended guidelines that protect public health. Discharge virus numbers are indirectly managed by the WHO using the levels of Fecal Coliform present i.e. if the effluent criteria for FC is met as a result of treatment, the presumed virus levels will be acceptable. It is critical, therefore, to get accurate FC counts. In order to have good confidence in the disinfection methods and the actual numbers of microorganisms in the effluent, we suggest an increased frequency of sampling when the receiving ponds are in use. Further, due to the potential for human exposure to aerosolized irrigation water, we recommend disinfection by both chlorination and UV to maximize removal/deactivation of protozoa, bacteria and enteric viruses.

2. Stormwater:

a. At Wildacres, proposed stormwater basins 14, 15, 17, 20 and 23 are located in the recharge zone of the Fleischmanns spring sources. The basins will collect contaminated runoff from golf course tees, greens and fairways and housing units 3, 4 and 5. Basin 15 is of particular concern since it is located in the likely recharge area of isolated wetland 21. Proposed basins 10, 22 and 24 are also in the recharge area but farther from the springs. The applicant should determine if the stormwater detention basins have the potential to affect the quality and quantity of the springs and propose mitigative measures for each possibility. Special restrictions on the use of treated wastewater for irrigation, fertilizers and pesticides should be implemented in the catchment areas within the recharge zone.

b. An important objective of the Stormwater Pollution Prevention Plan is to insure that all disturbed areas are stabilized prior to winter freeze up or snow cover. Allowing for continued disturbance until winter freeze up or snow cover will result in unstabilized soils left vulnerable to winter season thaws and the spring thaw. Given the vulnerability of the critical slopes and areas of thin soils at Belleayre and the potential for impacting the Ashokan and Pepacton Reservoirs, special conditions should be imposed to insure complete site stabilization prior to winter. New areas should not be opened after December 1, allowing sufficient time for site stabilization. New areas opened after November 1 should be restricted in size and unprotected areas should be stabilized as soon as possible after that date.

Again, thank you for the opportunity to comment on this proposed project. If you have any questions, please call me at (518) 402-7650.

Sincerely,

John M. Dunn, P.E.
Assistant Bureau Director
Bureau of Water Supply Protection

cc: Mr. Tramontano
Mr. Svenson
Mr. Burke
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