APPENDIX .

This protocol shall govern the monitoring of private water wells on residential properties abutting the Tuxedo Reserve Project along Mountain Road, Hillside Avenue and Southside Place that are in existence as of the date of the issuance of the Special Permit (the "Existing Wells").

Well monitoring shall be undertaken by the Permitee on each Existing Well so long as a reasonable access agreement is obtained from the property owners permitting (a) the monitoring; (b) entry onto the property and (c) the installation of equipment in the Existing Well.

The well monitoring required herein shall be undertaken in conjunction with the testing and development of any water supply well intended to service the Tuxedo Reserve Project and shall be continued until 90% of the Tuxedo Reserve Project is constructed. All well monitoring reports shall be provided to the Town.

The Permitee will carry out the following protocol governing well monitoring:

- 1. Undertake an existing conditions survey for the Existing Wells. The existing conditions survey shall determine the total reserve capacity of each Existing Well. The total reserve capacity is the capacity for the well to sustain a water level reduction and is determined, in part, by measuring the amount of water in the well above the lowest level to which the water can be drawn down and still enable the well to properly function.
- 2. One week prior to the 72 hour pumping test, install electronic data loggers (water level meters) in the Existing Wells. The data loggers will be about one-inch in diameter and 12 inches long and will be made of inert materials (stainless steel and teflon cables) similar to the materials used for the submersible pumps already in the wells, so there will be no adverse water quality issues. The data loggers will be installed in such a manner to not interfere with the pump and use of the well. They will be secured at the well head, so no modifications to the well are necessary. No trucks or heavy equipment will be required for the installation, so there will be no risk of damage to lawns or other ornamental landscaping.
- 3. Program the data loggers to collect pre-pumping test water level data at regular intervals to establish a "background" condition.
- 4. Immediately prior to the 72 hour pumping test, download the background data from the data loggers, and re-program them to collect water level data every hour during the 72 hour pumping test.
- 5. After the 72 hour pumping test, download the data loggers and re-program them to collect post-pumping test data for one additional week.
- 6. One week after the 72-hour pumping test, download data from the data loggers,

and remove equipment from the Existing Wells, secure the well cap and leave the property.



- 7. Immediately prior to the start-up of the Tuxedo reserve on-site water system, install data loggers in the Existing Wells and program them to collect data daily, such data to be downloaded quarterly until 90% of Tuxedo Reserve is constructed.
- 8. As part of the first site plan/subdivision plan application for the Tuxedo Reserve Project, submit an Engineers Report presenting and summarizing water level data.
- 9. The following standards shall be used to determine whether action is necessary to protect an Existing Well arising from the Project's water usage:
 - A. If the test data reveal that the reserve capacity in an Existing Well has been reduced by 25% or less, then the Applicant or any successor Water Works Corporation will determine if such a reduction is, to a reasonable degree of scientific certainty as certified to by a professional engineer, attributed to the Project's water usage or some other factor (e.g. seasonal or episodic regional ground water level reductions). No other action would be taken if the reserve capacity is reduced by 25% or less.
 - B. If the test data reveal that the reserve capacity in an Existing Well has been reduced by more than 25% and less than 50%, and if such reduction is, to a reasonable degree of scientific certainty as certified to by a professional engineer, attributed to the Project's water usage, then the Applicant or any successor Water Works Corporation shall identify what actions are reasonably necessary to assure a continued adequate and reliable supply of potable wholesome water from he Existing Well. If so, then such actions shall be implemented by the Applicant or any successor Water Works Corporation. Such actions may include, but are not limited to, deepening the Existing Well, drilling a new well, or connecting the property to the Tuxedo Reserve water supply system at no present or future cost to the property owner.
 - C. If the test data reveal that the reserve capacity in an Existing Well has been reduced by more than 50%, and if such reduction is, to a reasonable degree of scientific certainty as certified to by a professional engineer, attributed to the Project's water usage, then the Applicant or any successor Water Works Corporation shall immediately implement specific remedial actions to assure that the property continues to be served with a continued adequate and reliable supply of potable wholesome water. Such remedial actions may include, but are not limited to deepening the Existing Well, drilling a new well, or connecting the property to the Tuxedo Reserve water supply system at no present or future cost to the property owner.



TOWN OF TUXEDO - PLANNING BOARD MINUTES PUBLIC HEARING AND REGULAR MEETING June 12, 2007

Mr. Gartiser made a motion to confirm that the water testing for Tuxedo Reserve's Southern Tract yields a significant quantity and quality of water to service the project or the portion of the project proposed to be constructed with all future reports being submitted to the Planning Board and the Town Clerk. Approval is also based on compliance with any other conditions that may be imposed during the blasting protocol. Mr. Phelps seconded the motion and it was approved by a 4 to 1 vote with Mr. Hays voting nay.





H2M Associates, Inc. ▶ H2M Architects & Engineers, Inc. H2M Labs, Inc. ▶ Holzmacher, McLendon & Murrell, P.C.

555 Preakness Avenue, Totowa, NJ 07512 973.942.0700, Fax: 973.942.1333

www.h2m.com

May 8, 2007

Albert J. Capuzzi, P.E.
Black & Veatch Corporation
220 White Plains Road, Suite 275
Tarrytown, New York 10591

Re:

Tuxedo Reserve

Water Supply Investigation Report

Dear Mr. Capuzzi:

On April 26, 2007, you submitted a draft Water Supply Investigation Report by email on behalf of Tuxedo Reserve. Since then, we have provided comments to you and you have submitted revised copies of the draft report.

Based on our review of the Report, we find that it is consistent with the March 9, 2007 Protocol submitted to and approved by the Tuxedo Planning Board. Further, we find that the results of testing support the required supply of water and that such operation will not require corrective actions to adjacent supply, as described in Appendix D of the Special Permit.

If you have any questions or comments, please feel free to reach out to me.

Very truly yours,

HOLZMACHER, McLENDON & MURRELL, P.C.

Stanley G. Puszcz, P.E.

Vice President

CC:

Chairman Nils Gerling and the Tuxedo Planning Board Supervisor Peter Dolan and the Tuxedo Town Board Joseph Tripoli, Tuxedo Highway Superintendent Larry Wolinsky, Town Attorney Thomas Egan, Esq., Planning Board Attorney Bonnie Franson, Town Planner Andrew Dance, Tuxedo Reserve Frank Getchell, LBG Steve Barshov, Sive Paget & Reisel Robin Persad, Gary Loesch, Joe Walukiewicz and Don Sioss, H2M

Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D. Commissioner

Wendy E. Saunders Chief of Staff

March 5, 2008

Mr. Alexander F. Ciesluk, Jr. Division of Environmental Permits NYS-DEC Region 3 21 South Putt Corners Road New Paltz, NY 12561-1696

RE: WSA 11082, Log 18210
DEC # 3-3350-00044/00003
Tuxedo Reserve - New Planned Integrated Development
Five New Wells - Up to 1,195 Units in Phased Construction
(T) Tuxedo, Orange Co.

Dear Mr. Ciesluk:

[Note: This is a revision to correct the reference town and to correct the well notations in condition 4.]

We have reviewed the documents received on September 19, 2007, February 1, 2008 and coordinated the project with staff of the Orange County Department of Health. We recommend:

- $\underline{\mathbf{X}}$ Approval of this application with the following conditions:
- 1. That final plans and specifications for each development phase shall be submitted to and approved by the New York State Department of Health with copies of submissions provided to the Orange County Department of Health.
- 2. That interim development limits, design demands, source capacities, treatment, storage and distribution will be established within plan and specification approvals for interim constructions in Phase 1A, Section 1 Northridge; Phase 1A, Section 2 East Terrace/West Terrace and Commons; Phase 1B Bog Meadow; Phase 2 and Phase 3.
- 3. That, within one year of completion of each phase of construction, the supplier shall conduct well head protection planning for the five wells, to include review and improvement of chemical storage and use, well abandonment, irrigation restrictions, access to facilities and parking lot drainage, with copies of any written well head protection plan being submitted to the Orange County Department of Health and the New York State Department of Health.

- 4. That Wells TW-2B and LBG-2 will be wired and controlled to only operate simultaneously during conduct of an approved study or during an Orange County Department of Heath authorized emergency.
- 5. That pumping from TW-2B (250 gpm) will not exceed 360, 000 gpd, TW-F (70 gpm) will not exceed 100,800 gpd, LBG-1 (130 gpm) will not exceed 187,200 gpd, LBG-2 (250 gpm) will not exceed 360,000 gpd, LBG-6 (130 gpm) will not exceed 187,200 gpd and total daily taking shall not exceed 835,200 gpd.

Sincerely,

Kenneth W. Caffrey, P.E. Senior Sanitary Engineer

Bureau of Water Supply Protection

cc: Black & Veatch, Attn.: Janine B. Witko, P.E.

Black & Veatch, Attn.: Albert J. Capuzzi

Leggette, Brashears & Graham, Attn: Frank Getchell, PG

Orange County Department of Health, Attn.: Edwin L. Sims, P.E. PSC, Office of Electric, Gas and Water, Attn: Thomas G. Dvorky

NYSDEC, Attn: Michael Holt, P.E. NYSDOH, Attn: Danial S. Machell, P.E. NYSDOH, Attn.: Anna Stamm, P.E.