

Appendix A

QUARRY POND PLANNED
DEVELOPMENT DISTRICT
PROPOSED LOCAL LAW

Local Law Filing

NEW YORK STATE DEPARTMENT OF STATE
V 1221

(Use this form to file a local law with the Secretary of State)

Text of law should be given as amended. Do not include matter by
italics or underlining to indicate new matter.

County

City

of Town of Philipstown

Town

Village

Local Law No. _____ of the year 2004

A local law Amendment Number - Zoning Law - Town of Philipstown
(Insert Title)To amend the Zoning Law to create a Planned Development Districtknown as the Quarry Pond Planned Development DistrictBe It enacted by the Town Board of the
(Name of Legislative Body)

County

City

of Town of Philipstown as follows:

Town

Village

SECTION 1. Chapter 175 of the Code of the Town of Philipstown is hereby amended to add a new Section following Section 175-61 to be known as Section 175-61A as follows:

§ 175-61A. Quarry Pond Planned Development District.

A. Purpose. The purpose of the Quarry Pond Planned Development District (herein known as "QPPDD") is to allow a tract of land of considerable size to be developed and designed as a harmonious unit, and to establish uses of land and buildings that encourage innovations in residential development to meet demands for housing by a greater variety of housing types which have been found to be beneficial to or necessary in the Town, and to permit flexibility in the design and construction of buildings and facilities that, by virtue of their location, orientation, landscaping and other features, demonstrate design merit. The Town Board wishes to provide ownership opportunities for senior housing and affordable housing that do not otherwise exist in the Town.

B. Creation. The QPPDD is hereby created to be allowed on the parcel of land described below. The QPPDD is intended to supplement and allow uses in addition to the existing zoning (currently "Industrial")

which also applies to the parcel so long as the QPPDD is in effect. However, upon issuance of Site Plan approval and a Building Permit for the QPPDD use the existing zoning shall be deemed replaced and the QPPDD shall be the sole remaining zoning applicable to the property for so long as it is in effect. However, the replacement and loss of the existing zoning ("Industrial") shall not apply if any action, proceeding or appeal is brought to void or nullify such approval and/or permit for so for so long as such action, proceeding or appeal is pending. The QPPDD shall apply to the following described parcel of real property:

ALL that certain plot, piece or parcel of land situate, lying and being in the TOWN OF PHILIPSTOWN, County of Putnam and State of New York that is further bounded and described as follows:

BEGINNING at a point on the easterly line of U.S. Route 9 (State Highway No. 5149 also known as New York & Albany Post Road) where the said easterly line is intersected by the line dividing the lands herein described on the north from lands now or formerly of Hustis on the south at which point there is a concrete monument and which point occupies coordinate position N 538202.30 (y) E 614 699.19 (x) of the New York State Coordinate System, East Zone,

THENCE from the said point of beginning northerly along the said easterly line of U.S. Route 9 North $20^{\circ} 18' 31''$ East 394.04 feet to a point. Thence leaving the said easterly line of U.S. Route 9 and running along a curve to the right, the central angle of which is 75-47-35, the radius of which is 65.00 feet for 85.98 feet to a point on the southerly line of Horton Road. Thence easterly along the said southerly line of Horton Road the following: First South $83^{\circ} 53' 54''$ East 54.66 feet, then on a curve to the left, the central angle of which is 10-10-00, the radius of which is 449.67 feet for 79.79 feet, then North $85^{\circ} 56' 06''$ East 57.10 feet, and then on a curve to the right, the central angle of which is 43-34-54, the radius of which is 170.00 feet for 129.31 feet to a point. Thence leaving the said southerly line of Horton Road and running along the southerly line of lands now or formerly of Gilston and in part along the center of a stone wall and in part along the remains of a post and wire fence the following courses: South $50^{\circ} 29' 00''$ East 648.26 feet, South $57^{\circ} 59' 46''$ East 34.04 feet. South $53^{\circ} 10' 40''$ East 30.62 feet and South $50^{\circ} 16' 58''$ East 84.92 feet to a point at the line of lands formerly of Cohen, and now or formerly of Ruby which point occupies coordinate position N 538069.17 (y) E 615833.80 (x) of the aforementioned New York State Coordinate System, East Zone. Thence along the said Ruby lands South $37^{\circ} 23' 46''$ West 75.03 feet and South $49^{\circ} 45' 11''$ East 720.00 feet to a point in the center of Clove Creek. Thence southerly along the centerline of Clove Creek the following courses:

South $53^{\circ} 29' 28''$ West 121.66 feet,
South $19^{\circ} 04' 09''$ West 85.70 feet,
South $12^{\circ} 07' 38''$ West 123.76 feet,
South $52^{\circ} 22' 26''$ West 60.61 feet,
South $54^{\circ} 53' 04''$ West 129.11 feet,
South $71^{\circ} 34' 31''$ West 76.41 feet,
South $35^{\circ} 23' 17''$ West 28.85 feet
South $10^{\circ} 47' 36''$ East 109.41 feet,
South $1^{\circ} 45' 41''$ East 49.69 feet,
South $16^{\circ} 20' 11''$ West 132.27 feet,
South $63^{\circ} 26' 06''$ West 46.96 feet,
South $38^{\circ} 54' 55''$ West 140.09 feet,

South 40° 34' 45" West 118.14 feet,
 South 38° 53' 41" West 126.46 feet
 South 22° 34' 37" West 234.72 feet,
 South 10° 15' 55" West 126.90 feet,
 South 35° 57' 54" West 63.75 feet,
 North 79° 22' 44" West 162.83 feet,
 South 77° 09' 56" West 91.39 feet,
 South 37° 04' 28" West 27.48 feet,
 South 3° 05' 45" East 185.78 feet,
 South 17° 07' 05" East 54.06 feet,
 South 1° 51' 57" West 86.32 feet and

South 44° 16' 42" West 32.73 feet to a point on the northerly line of lands formerly of Hustis and now or formerly of Adams, which point occupies coordinate position N 535756.56 (y) E 615226.15 (x) of the aforementioned New York State Coordinate System, East Zone. Thence westerly along the said Adams lands and in part along the center of a stone wall and post and wire fence the following courses:

North 65° 05' 00" West 705.00 feet,
 North 68° 40' 00" West 63.00 feet
 North 53° 40' 00" West 160.00 feet,
 North 66° 05' 00" West 77.00 feet and

North 64° 35' 00" West 135.50 feet to the easterly line of the aforementioned U.S. Route 9 and a point which occupies coordinate position N 536236.84 (y) E 614191.92 (x) of the aforementioned New York State Coordinate System, East Zone. Thence northerly along the said easterly line of U.S. Route 9 the following courses:

North 10° 53' 12" East 279.89 feet
 North 2° 39' 52" East 128.66 feet,
 North 7° 16' 16" East 21.79 feet,
 North 8° 07' 26" East 418.72 feet,
 North 6° 48' 46" East 161.97 feet,
 North 4° 45' 18" East 67.25 feet,
 North 5° 57' 06" East 53.11 feet,
 North 1° 07' 39" East 155.12 feet,
 North 12° 31' 26" East 119.52 feet and

North 29° 41' 27" East 89.53 feet to a point at the southerly line of lands now or formerly of Hustis. Thence along the said Hustis lands the following courses:

South 55° 00' 00" East 216.09 feet to an iron pipe,
 North 35° 00' 00" East 574.66 feet to an iron pipe and
 North 55° 00' 00" West 259.68 feet to the aforementioned concrete monument and the easterly line of U. S. Route 9 and the point or place of BEGINNING.

C. Standards.

1. The QPPDD may allow up to 84 units of age restricted (55 and older) senior housing and up to 10 units of affordable housing on the parcel of land described herein.
2. The senior housing is envisioned as market rate duplexes clustered on the northern end of the subject site, with access from either Horton Road or US Route 9, pending NYSDOT work permit approval. The affordable housing will be price restricted as described below, and will be also clustered on the North end of the site with access from either Horton Road or U.S. Route 9.
3. All units shall be developed as condominiums with no more than two bedrooms each and all land and common areas shall be owned by a condominium association. All streets and infrastructure shall be private and owned and maintained by the condominium association. The senior housing will have no more than two units in any one building. The affordable housing will have no more than four units in any one building.
4. The property shall be served by a central water supply system and a central sewage disposal system.

D. Area and Bulk Requirements

1. The minimum required building setback from the street line of Route 9 shall be 75 feet. The minimum required building setback from any street line (other than Route 9) shall be 100 feet.
2. The minimum required building setback from a residential zoning district shall be 100 feet.
3. The maximum permitted floor area as a percent of lot area shall be 25 percent.
4. The maximum permitted lot coverage as a percent of lot area shall be 25 percent.
5. The maximum permitted building height shall be 35 feet with no more than 2½ stories.
6. The minimum floor area for the age restricted housing units shall be 1800 square feet and for the affordable housing units, 1200 square feet.
7. There shall be a minimum of two off street parking spaces per unit.

E. Additional restrictions and requirements:

1. The QPPDD does not grant site plan approval to this property.
A detailed site plan prepared pursuant to Section 175-36 and 39 of the Town Code must first be submitted to the Planning Board for review and approval.
2. Site plan approval by the Planning Board shall be subject to securing applicable approvals from all other agencies, including but not limited to the Putnam County Department of Health, New York State Department of Health, New York State Department of Transportation, New York State Department of Environmental Conservation and Putnam County Department of Planning.
3. An application for site plan approval must be prepared in compliance with the conditions outlined herein and submitted to the Philipstown Planning Board within 180 days of the effective date of the creation of the QPPDD. Any submission beyond said time may only be made with the approval by Resolution of the Town Board, which approval shall be within their sole discretion.
4. Upon issuance of site plan approval and a building permit there shall be no transport of earth, sand, gravel, stone and/or soil

of any type from the QPPDD site to an offsite location, unless such action is required to meet a condition of site plan approval by the Planning Board. However, this restriction shall not apply if any action, proceeding or appeal is brought to void or nullify such approval and/or permit for so long as such action, proceeding or appeal is pending.

5. Other than installation of required utilities and/or infrastructure (such as water supply facilities, storm drain and retention facilities, electricity and related utilities), there shall be no grading or tree cutting within 100 feet of the bank of Clove Creek.
6. No structure, building or impervious surface shall be constructed within 200 feet of the bank of Clove Creek, other than that which may be associated with the installation of required utilities and/or infrastructure as provided in subdivision 5 above.
7. A stormwater management plan prepared by a licensed professional engineer shall be submitted with the site plan application and it shall demonstrate treatment of the "first flush" of runoff from all proposed impervious surfaces prior to discharge to

Clove Creek. The stormwater management plan shall also demonstrate that there will be no increase in the peak storm flow in Clove Creek for the 2, 10, 25 and 100 year storms and shall fully conform to applicable stormwater management guidelines.

8. A reclamation plan shall be submitted with the application for site plan approval that shows restoration of all areas of the site not to be included in the limits of disturbance of the proposed senior/affordable housing project. The reclamation plan shall be prepared to the satisfaction of the Philipstown Town Board to foster the use of the land for recreational purposes, particularly in the southern half of the site, and shall include provisions for erosion and sediment control to protect Clove Creek at all times.
9. The site plan application shall be accompanied by an erosion control plan which shall be consistent with New York State guidelines and demonstrate full protection of Clove Creek during all phases of site development.
10. Prior to initiating construction of any residential building on the QPPDD site, the former soil mine shall be reclaimed to the satisfaction of the New York State Department of Environmental

Conservation and the Town Board with respect to slopes, erosion control and stabilization.

11. As a condition of site plan approval a work permit application for connection(s) to Route 9 or improvements to Horton Road at Route 9 shall be submitted and approved by DOT, unless waived or deemed inapplicable by DOT.
12. The site plan applicant shall be responsible for the costs and implementation of any required improvements to either Route 9 or Horton Road to satisfy the requirements of the Town and the New York State DOT for required access(es) to the property, including emergency access.
13. A gated emergency access road shall connect the QPPDD internal development roads to the southern portion of the site and an emergency access road to Route 9. Appropriate easements shall be established to assure availability of said emergency access to Route 9 in the southern half of the property. The emergency access road shall be kept clear and free of snow and obstructions by a condominium association or its equivalent. All of the foregoing must be satisfactory to the Town Board.

14. A recreation facility shall be provided onsite to support the senior housing project and shall include a community building, tennis courts and/or other active recreation facilities.
15. Fees. Prior to the signing of the site plan by the Chairperson of the Planning Board, the applicant shall pay applicable fees that may be established by the Town Board pursuant to Section 175-14.
16. Affordable housing. The site plan applicant shall submit a proposal for the administration of the affordable housing component of the project to the Town Board that shall include but not be limited to a proposal for administration of the affordable units, proposed sale or rental prices of the affordable units, income eligibility relative to median income standards in Putnam County, maximum appreciation on the sale of affordable units, and term which the units shall remain affordable. A plan for administration of the affordable units shall be approved by the Town Board prior to the signing of the site plan by the Planning Board Chairman.
17. Conceptual Plan. The site plan application submitted to the Planning Board for site plan approval, shall generally conform to the conceptual plan prepared by Tim Miller Associates, Inc., dated

8/1/2004, filed in the Town Clerk's Office, or such amended concept plan as may be adopted by Local Law.

18. Reimbursement To Town. Pursuant to 6 NYCRR Part 617.13 (a), the Town Board as Lead Agency of the Draft Generic Environmental Impact Statement and the Final Generic Environmental Impact Statement prepared in connection with this Zoning Amendment, shall be reimbursed for the actual cost of preparing said documents at the time formal submission of the site plan application is made to the Planning Board. Evidence of said reimbursement shall be included in the site plan application package.

SECTION 2. Effective Date.

This Local Law shall become effective upon its filing with the Secretary of State.

(Complete the certification in the paragraph that applies to the filing of this local law and strike out that which is not applicable.)

1. (Final adoption by local legislative body only.)

I hereby certify that the local law annexed hereto, designated as local law No. _____ of 2004, of the ~~(County)(City)~~ (Town)(Village) of Philipstown was duly passed by the Town Board on _____ 2004, in accordance with the applicable provisions of law.
(Name of Legislative Body)

~~2. (Passage by local legislative body with approval, no disapproval or repassage after disapproval by the Elective Chief Executive Officer*)~~

~~I hereby certify that the local law annexed hereto, designated as local law No. _____ of 20____, of the (County)(City)(Town)(Village) of _____ was duly passed by the _____ on _____ 20____, and was (approved)(not approved)(repassed after disapproval) by the _____ and was deemed duly adopted on _____ 20____, in accordance with the applicable provisions of law.
(Name of Legislative Body) (Elective Chief Executive Officer*)~~

3. (Final adoption by referendum.)

~~I hereby certify that the local law annexed hereto, designated as local law No. _____ of 20____, of the (County)(City)(Town)(Village) of _____ was duly passed by the _____ on _____ 20____, and was (approved)(not approved)(repassed after disapproval) by the _____ on _____ 20____. Such local law was submitted to the people by reason of a (mandatory)(permissive) referendum and received the affirmative vote of a majority of the qualified electors voting thereon at the (general)(special)(annual) election held on _____ 20____, in accordance with the applicable provisions of law.
(Name of Legislative Body) (Elective Chief Executive Officer*)~~

4. (Subject to permissive referendum and final adoption because no valid petition was filed requesting referendum.)

~~I hereby certify that the local law annexed hereto, designated as local law No. _____ of 20____, of the (County)(City)(Town)(Village) of _____ was duly passed by the _____ on _____ 20____, and was (approved)(not approved)(repassed after disapproval) by the _____ on _____ 20____. Such local law was subject to permissive referendum and no valid petition requesting such referendum was filed as of _____ 20____, in accordance with the applicable provisions of law.
(Name of Legislative Body) (Elective Chief Executive Officer*)~~

* Elective Chief Executive Officer means or includes the chief executive officer of a county elected on a county-wide basis or, if there be none, the chairperson of the county legislative body, the mayor of a city or village, or the supervisor of a town where such officer is vested with the power to approve or veto local laws or ordinances.

~~(City local law concerning Charter revision proposed by petition.)~~

~~I hereby certify that the local law annexed hereto, designated as local law No. _____ of 20____, having been submitted to referendum pursuant to the provisions of section (36)(37) of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of such city voting thereon at the (special)(general) election held on _____ 20____, became operative.~~

~~6. (County local law concerning adoption of Charter.)~~

~~I hereby certify that the local law annexed hereto, designated as local law No. _____ of 20____, State of New York, having been submitted to the electors of the County of _____ at the General Election of November _____ 20____, pursuant to subdivisions 5 and 7 of section 33 of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of the cities of said county as a unit and a majority of the qualified electors of the towns of said county considered as a unit voting at said general election, became operative.~~

~~(If any other authorized form of final adoption has been followed, please provide an appropriate certification.)~~

I further certify that I have compared the preceding local law with the original on file in this office and that the same is a correct transcript therefrom and of the whole of such original local law, and was finally adopted in the manner indicated in paragraph _____, above.

Clerk of the County legislative body, City, Town or Village Clerk
or officer designated by local legislative body

TINA MERANDO, TOWN CLERK

Date: _____ 2004

(Seal)

(Certification to be executed by County Attorney, Corporation Counsel, Town Attorney, Village Attorney or other authorized attorney of locality.)

STATE OF NEW YORK
COUNTY OF PUTNAM

I, the undersigned, hereby certify that the foregoing local law contains the correct text and that all proper proceedings have been had or taken for the enactment of the local law annexed hereto.

Signature EDWARD W. DOYLE

TOWN ATTORNEY

Title

~~County~~
~~City~~ of PHILIPSTOWN
~~Town~~
~~Village~~

Date: _____ 2004

Appendix B

SEQRA DOCUMENTATION

FINAL
SCOPING OUTLINE
FOR
QUARRY POND PLANNED DEVELOPMENT DISTRICT
GENERIC DRAFT ENVIRONMENTAL IMPACT STATEMENT
TOWN OF PHILIPSTOWN
PUTNAM COUNTY, NEW YORK

June 5, 2003

Revised October 8, 2003

Lead Agency and Contact Person:

Mr. William Mazzuca, Supervisor
Philipstown Town Hall
238 Main Street
Cold Spring, New York 10516

Preparer and Contact Person:

Tim Miller Associates, Inc.
10 North Street
Cold Spring, N.Y. 10516
ATT: Tim Miller, AICP
Consulting Town Planner
(845) 265-4400

Date of Scoping Meeting: June 25, 2003

GENERAL GUIDELINES:

The DEIS should cover all items in this Scoping Document. Each impact issue (e.g., soils, surface water, traffic, etc.) can be presented in a separate subsection as it relates to existing conditions, future conditions without the project and future conditions with the project as presently planned, and any mitigation measures designed to minimize the identified impacts.

Narrative discussions should be accompanied by appropriate tables, charts, graphs, and figures whenever possible. If a particular subject can be most effectively described in graphic format, the narrative discussion should merely summarize and highlight the information presented graphically. All plans and maps showing the site should include adjacent properties (if appropriate), neighboring uses and structures, roads, and water bodies.

Information should be presented in a manner which can be readily understood by the public. Efforts should be made to avoid the use of technical jargon.

Discussions of mitigation measures should clearly indicate which measures have been incorporated into project plans, versus measures that may mitigate impacts, but have not been incorporated into project plans.

The document and any appendices or technical reports should be written in the third person (i.e., the terms "we" and "our" should not be used). Any assumptions incorporated into assessments of impact should be clearly identified. In such cases, the "worst case" scenario analysis should also be identified and discussed.

The entire document should be checked carefully to ensure consistency with respect to the information presented in the various sections.

CONTENTS

COVER SHEET

- A. State whether list is a draft or final statement.
- B. Title/name of the project.
- C. Location (county and town) of the project.
- D. Name and address of the lead agency; name and telephone number of the person to contact at the lead agency for information.
- E. Name and address of project consultants; including contact name and number.
- F. Date of submittal.
- G. Date of acceptance of the DEIS.
- H. Date of Public Hearing
- I. The deadline date by which comments are due.

SUMMARY

- A. Brief description of the Proposed Action.
- B. Significant beneficial and adverse impacts.
- C. Issues of controversy specified.
- D. Proposed mitigation measures.
- E. Adverse impacts that cannot be avoided.
- F. Alternatives considered.
- G. Irreversible and irretrievable commitment of resources.
- H. Growth inducing aspects.
- I. Use and conservation of resources.
- J. Permits and approvals.

I. PROJECT DESCRIPTION

Describe proposed Planned Development District and likely concept plan that may result. With respect to concept plan to a level of detail available from conceptual drawings, discuss the following:

A. PROJECT DESIGN AND LAYOUT

- 1. Total site area
 - a. anticipated impervious surface area (roofs, parking lots, roads).
 - b. amount of land to be cleared by type, i.e. woodland, meadow, etc.
 - c. amount of open space, if any
 - d. discussion of pedestrian facilities.
 - e. stormwater management/drainage plans.

2. Structures
 - a. Location and configuration of residences
 - b. Clubhouse and recreational facilities
3. Parking
 - a. Pavement area
 - b. Number of spaces and layout
4. Access

Discuss access from Route 9 and Horton Road, primary and secondary access.
5. Landscape Concepts and Buffers
6. Zoning

Discuss Planned Development District zoning.

B. LOCATION

1. Establish geographic boundaries and general conditions of the project site, including regional and local maps.

C. CONSTRUCTION AND OPERATION

1. Construction (generically discuss)
 - a. Anticipated construction period
 - b. Schedule of construction
2. Operation (generically discuss)
 - a. Homeowners association
 - b. Administration of affordable units

D. PERMITS AND APPROVALS

1. Local
 - a. Zoning Approval - Philipstown Town Board
 - b. Site Plan Approval - Philipstown Planning Board
2. County
 - a. 239 L & M - Putnam County Planning Department
 - b. Water supply - Putnam County Health Department
 - c. Septic approvals - Putnam County Health Department
3. State
 - a. Highway access permit - NYS Department of Transportation
 - b. Stormwater and Wastewater SPDES permit - New York State DEC

E. PROJECT PURPOSE, NEED AND BENEFITS

1. Background and history.
2. Public need for the project, including social and economic considerations, and municipality objectives on adopted county and local development plans.
3. Social and economic benefits of the action

II. ENVIRONMENTAL SETTING, ANTICIPATED IMPACTS AND PROPOSED MITIGATION MEASURES

A. SOIL AND TOPOGRAPHY

Existing Conditions

- a. List and distribution of soil types
- b. Composition and thickness of subsurface material
- c. Depth to, nature of, bedrock formations and impermeable layers
- d. Usefulness as construction material
- e. Description of topography and environmentally sensitive lands

Anticipated Impacts

- a. Grading potential, cuts and fills
- b. Potential for erosion
- c. Potential impacts and stability of large cut slopes
- d. Mining reclamation
- e. Impact on the floodplain
- f. Impact on the aquatic and terrestrial habitats if the floodplain is impacted by this project

Mitigation Measures

- a. Use of excavated material for land reclamation
- b. Slope stability design
- c. Soil erosion control plan

B. WATER RESOURCES

1. Groundwater

Existing Conditions

- a. hydrogeological review and description of onsite aquifer

- b. Discussion of Clove Creek watershed and potential critical environmental area
- c. Identification of present uses and level of use of groundwater

Anticipated Impacts

- a. Discuss potential Impacts on the aquifer and neighboring communities
- b. Discuss changes to aquifer recharge
- c. Potential pollution of the aquifer from oil, gas and septic system
- d. Discuss water demand, potable water quality tests, well location, well head protection, pumping test methodology, well yields and offsite interference

Mitigation Measures

Discuss community water supply system, storage requirements, provisions for fire flow, mitigation of any offsite interference as per water supply studies.

2. Surface Water

Existing Conditions

- a. Location and description of surface water located on project site or those that may be influenced by the project
- b. Quantity and quality of surface water
- c. Identification of uses and level of use of all surface waters
- d. Existing drainage areas, patterns, channels and flood plains; Identify the 100 and 500 year floodplain of Clove Creek

Anticipated Impacts

- a. Increased runoff from impervious surfaces
- b. Potential water quality impacts and temperature change of Clove Creek from stormwater discharge, fertilizers and pesticides

Mitigation Measures

- a. Ensure use of soil erosion control techniques during construction and operation to avoid siltation
- b. Silt fence
- c. Temporary restoration of vegetation to disturbed areas
- d. Wheel cleaning pads

- e. Design adequate stormwater control system in accord with the DEC "Stormwater Management Guidelines for New Development"

C. FLORA AND FAUNA

1. Vegetation

Existing Conditions

- a. Discussion of site vegetation characteristics and wildlife habitat including riparian corridor and wetlands
- b. Conduct a biodiversity study to include discussion of the habitat along Clove Creek and its buffer area

Anticipated Impacts

- a. Discuss removal of vegetation associated with implementation of PDD. Evaluate removal of unusual or unique habitat.

Mitigation Measures

- a. After construction, landscape site with native vegetation

2. Wildlife

Existing Conditions

- a. Discussion of wildlife population and characteristics

Anticipated Impacts

- a. Displacement of existing habitat and wildlife.

Mitigation Measures

- A. Preservation of riparian and wildlife corridors

D. TRANSPORTATION AND TRAFFIC

1. Roadways

- a. Description of the size, capacity and physical condition of Horton Road and Route 9 traffic controls including speed limits, advisory signs,
- b. Existing peak hour volumes and description of current

level of services for a.m. and p.m. peak hour

Anticipated Impacts

- a. List other developments in the vicinity which will have impact on the roadway network
- b. Determine project's affect on traffic volumes, level of service, delays, reserve capacities and volume/capacity ratios as applicable at Route 9 and Horton Road (Generation rates must reflect the specific land uses as proposed).
- c. Use and accepted overall growth rate for the area and add surcharges for any proposed or approved but un-built projects
- d. Separate analyses will be shown for existing conditions, future without the project and future with the project.

Mitigation Measures

- a. Design adequate and safe access to project to handle projected traffic flow
- b. Discuss necessary mitigation and party that will be responsible for or pay for required mitigation

E. NOISE

Existing conditions

- a. Identification of major sources of noise and levels on site

Anticipated Impacts

- a. future exterior and interior noise levels after development
- b. Construction noise

Mitigation Measures

- a. Schedule for construction to occur between 7:00 a.m. and 7:00 p.m.
- b. Adherence to town noise standards

F. LAND USE AND ZONING

Existing Conditions

- a. Description of the existing land use of the project site and surrounding area
 - Residential
 - Non-residential
- b. Description of existing zoning of site and surrounding area
- c. Description of land use, master plan and the draft comprehensive plan that include the project site and surrounding area

Anticipated Impacts

- a. Conformance to the requirements of zoning and land use plans
- b. Conformance to the draft comprehensive plan goals and strategies

Mitigation Measures

- a. Design project to comply with existing land use plans and zoning regulations
- b. Design functionally and visually pleasing project that is in harmony with existing character of the area

H. SEWAGE TREATMENT

Existing Conditions

1. Discuss existing soil conditions and septic testing as provided by owner's engineer

Anticipated Impacts

- a. Discuss sewage generation and location and concept design of treatment system including septic system or alternative system.

Mitigation Measures

I. ECONOMIC AND DEMOGRAPHIC

Existing Facilities

- a. Discussion of existing population and housing parameters in Philipstown
- b. Description of existing town, county and school tax structure and relationship to project

Anticipated Impacts

- a. Increased population employment opportunities
- b. Strategies to manage senior housing
- c. Strategies to manage affordable units
- d. Change in tax revenues generated versus municipal and school costs.

Mitigation Measures

J. Visual Resources

Existing Conditions

- a. Description of the physical character of the area surrounding the project site

Anticipated Impacts

- a. Change to visual character of site
- b. Visual impact of bringing in utilities
- c. Architecture and landscaping design
- d. Pedestrian access and open space

Mitigation Measures

- a. Design standards and landscape planning
- b. Lighting standards

III. THRESHOLDS FOR FUTURE ENVIRONMENTAL REVIEWS

Discuss any future site plan application under Planned Development District designation, conformance with environmental thresholds, and conditions under which future SEQRA review would be required. Develop a checklist for conducting such future reviews.

IV. ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Identify those adverse environmental effects in Section II that can be expected to occur regardless of the mitigation measures considered.

- A. Temporary construction impacts
- B. Impacts on natural site features
- C. Operational impacts

V. ALTERNATIVES

This section contains alternatives to the proposed project that minimize or avoid adverse environmental impacts. Discussion of each alternative will be at a level sufficient to permit a comparative assessment of costs, benefits and environmental risks of each alternative.

The general alternatives to be considered are as follows:

A. ALTERNATIVE USES

- 1. Develop site for industrial uses as zoned
- 2. Conventional subdivision
- 3. Alternative concepts for senior housing

B. NO ACTION

- 1. This section will discuss continuation of the soil mine

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Identify those natural and human resources listed in Section II that will be consumed, converted or made unavailable for future use.

VII. GROWTH INDUCING ASPECTS

VIII. AFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

Identify the energy sources to be used, anticipated levels of construction and ways to reduce energy consumption.

APPENDICES

- A. List of underlying studies, reports and information considered and relied on in preparing EIS.
- B. List all federal, state, regional or local agencies, contacted in preparing the statement.
- C. Technical exhibits including traffic and drainage computations.
- D. Relevant correspondence regarding the project.

PART 1 - PROJECT INFORMATION
Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

NAME OF ACTION Enactment of Planned Development District (PDD) on the 80 AC property known as Philipstown Industrial Park		
LOCATION OF ACTION (Include Street Address, Municipality and County) East side of U.S. Route 9, immediately south of Horton Road, Philipstown, New York		
NAME OF APPLICANT/SPONSOR Town of Philipstown Town Board	BUSINESS TELEPHONE (845) 265-5200	
ADDRESS 238 Main Street, P.O. Box 155		
CITY/PO Cold Spring	STATE New York	ZIP CODE 10516
NAME OF OWNER (if different) Philipstown Industrial Park, Inc.	BUSINESS TELEPHONE	
ADDRESS 155 Moog Road		
CITY/PO Garrison	STATE NY	ZIP CODE 10524
DESCRIPTION OF ACTION Allow PDD overlay zone on Philipstown Industrial Park ("PIP") site to accommodate the future development of an existing soil and gravel mine into an "active adult housing" development of up to 84 units with an affordable housing component of up to 10 units. See attached draft description of PDD.		

Please Complete Each Question - Indicate N.A. if not applicable

A. Site Description

Physical setting of overall project, both developed and undeveloped areas.

1. Present land use: ☐ Urban ☐ Industrial ☐ Commercial ☒ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☒ Other Soil & gravel mining; largely unreclaimed

2. Total acreage of project area: 80 ± acres.

APPROXIMATE ACREAGE

Meadow or Brushland (Non-agricultural)

Forested

Agricultural (Includes orchards, cropland, pastures, etc.)

Wetland (Freshwater or tidal as per Articles 24, 25 or ECL)

Water Surface Area

Unvegetated (Rock, earth or fill)

Roads, buildings and other paved surfaces

Other (Indicate type) Landscape, lawn

	PRESENTLY	AFTER COMPLETION
	<u>53.21 ±</u> Acres	<u>48.83 ±</u> acres
	<u>14.0 ±</u> Acres	<u>10 ±</u> acres
	<u>0</u> Acres	<u>0</u> acres
	<u>0</u> Acres	<u>0</u> acres
	<u>7.79 ±</u> Acres	<u>7.79 ±</u> acres
	<u>5.0 ±</u> Acres	<u>0.78 ±</u> acres
	<u>0</u> Acres	<u>8.00</u> acres
	<u>0</u> Acres	<u>4.6</u> acres

3. What is predominant soil type(s) on project site?

Gravel; Chatfield Charlton Loam

- a. Soil drainage: ☐ Well Drained 40 % of site ☐ Moderately well drained 55 % of site
☐ Poorly Drained 5 % of site

- b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N.A. acres. (See 1 NYCRR 3700.)

4. Are there bedrock outcroppings on project site? ☒ Yes ☐ No

- a. What is the depth to bedrock?

Varies from 0 to Greater than 7 feet (in feet)

5. Approximate percentage of proposed site with slopes: ☒ 0-10% 68 % ☒ 10-15% 8 %
☒ 15% or greater 24 %
6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? ☐ Yes ☒ No
7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ☐ Yes ☒ No
8. What is the depth of the water table? Varies from 0 to greater than 7 feet (in feet)
9. Is site located over a primary, principal, or sole source aquifer? ☒ Yes ☐ No
10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ☒ Yes ☐ No
11. Does project site contain any species of plant or animal life that is identified as threatened or endangered?
☐ Yes ☒ No According to Site Inspections
 Identify each species _____
12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations.)
☐ Yes ☒ No Describe _____
13. Is the project site presently used by the community or neighborhood as an open space or recreational area?
☐ Yes ☒ No If yes, explain _____
14. Does the present site include scenic views known to be important to the community?
☐ Yes ☒ No
15. Streams within or contiguous to project area: Clove Creek forms the eastern property line
 a. Name of Stream and name of River to which it is tributary Fishkill Creek, which is tributary to the Hudson River
16. Lakes, ponds, wetland areas within or contiguous to project area:
 a. Name Unnamed quarry settling pond b. Size (In acres) 7.79 +
17. Is the site served by existing public utilities? ☐ Yes ☒ No
 a) If Yes, does sufficient capacity exist to allow connection? ☐ Yes ☐ No
 b) If Yes, will improvements be necessary to allow connection? ☐ Yes ☐ No
18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets law, Article 25-AA, Section 303 and 304? ☐ Yes ☒ No
19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? ☐ Yes ☒ No
20. Has the site ever been used for the disposal of solid or hazardous wastes? ☐ Yes ☒ No

B. Project Description (Planned Development District and construction of 84 units of "active adult housing" and up to ten affordable non age restricted residential units)

1. Physical dimensions and scale of project (fill in dimensions as appropriate)
- a. Total contiguous acreage owned or controlled by project sponsor 80 acres.
- b. Project acreage to be developed: 25 to 35 acres initially; 25 to 35 acres ultimately.
- c. Project acreage to remain undeveloped +50 acres.
- d. Length of project, in miles: N.A. (if appropriate)
- e. If the project is an expansion, indicate percent of expansion proposed? N.A. %
- f. Number of off-street parking spaces existing N.A. proposed +175
- g. Maximum vehicular trips generated per hour 30 40 trips (upon completion of project)?
PM peak hour
- h. If residential: Number and type of housing units:
- | | One Family | Two Family | Multiple Family | Condominium |
|------------|------------|------------|-----------------|-------------|
| Initially | | | | <u>84</u> |
| Ultimately | | | | <u>84</u> |

- i. Dimensions (in feet) of largest proposed structure 35 height; 64 width; 67 Length.
- j. Linear feet of frontage along a public thoroughfare project will occupy 2460 ft.
is? _____
2. How much natural material (i.e. rock, earth, etc.) will be removed from the N.A. tons/cubic yards?
site? _____
3. Will disturbed areas be reclaimed? ☒ Yes ☐ No
a. If yes, for what intended purpose is the site being reclaimed? _____
b. Will topsoil be stockpiled for reclamation? ☒ Yes ☐ No
c. Will upper subsoil be stockpiled for reclamation? ☒ Yes ☐ No
4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? 8.38 acres.
5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?
☐ Yes ☒ No
6. If single phase project: Anticipated period of construction? 24 months, (including demolition).
7. If multi-phased: N.A.
a. Total number of phases anticipated? _____ (number).
b. Anticipated date of commencement phase 1 _____ month _____ year, (including demolition)
c. Approximate completion date of final phase _____ month _____ year.
d. Is phase 1 functionally dependent on subsequent phases? ☐ Yes ☐ No
8. Will blasting occur during construction? ☐ Yes ☐ No **To be determined**
9. Number of jobs generated during construction? +200 ; after project is complete 0
10. Number of jobs eliminated by this project? 3
11. Will project require relocation of any projects or facilities? ☐ Yes ☒ No
If yes, explain _____
12. Is surface liquid waste disposal involved? ☐ Yes ☒ No
a. If yes, indicate type of waste (sewage, industrial, etc.) and amount. _____
b. Name of water body into which effluent will be discharged. _____
13. Is subsurface liquid waste disposal involved? ☒ Yes ☐ No
14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ☒ No
Explain _____
15. Is project or any portion of project located in 100 year flood plain? ☒ Yes ☐ No
16. Will the project generate solid waste? ☒ Yes ☐ No
a. If yes, what is the amount per month 9.14 + Tons
b. If yes, will an existing solid waste facility be used? ☒ Yes ☐ No
c. If yes, give name To be determined (private carters to dispose) ; location TBD
d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☐ Yes ☒ No
e. If yes, explain _____
17. Will the project involve the disposal of solid waste? ☐ Yes ☒ No
_____ tons/month.
b. If yes, what is the anticipated site life? _____ years.
18. Will project use herbicides or pesticides? ☐ Yes ☒ No
19. Will project routinely produce odors (more than one hour per day?) ☐ Yes ☒ No
20. Will project produce operating noise exceeding the local ambient noise levels? ☐ Yes ☒ No
21. Will project result in an increase in energy use? ☒ Yes ☐ No
If yes, indicate type(s) Electric/fuel oil
22. If water supply is from wells, indicate pumping capacity 20-25 gallons/minute.
23. Total anticipated water usage per day 30,000 gallons/day.

24. Does project involve Local, State or Federal funding? ☐ Yes ☒ No

If yes, explain _____

25. Approvals Required:

		Type	Submittal Date
City, Town, Village Board	☒ Yes ☐ No	<u>Zoning Approval</u>	_____
City, Town, Village Planning Board	☒ Yes ☐ No	<u>Site Plan Approval/potential Subdivision</u>	_____
City, Town Zoning Board	☐ Yes ☒ No	_____	_____
City, County Health Department	☒ Yes ☐ No	<u>SPDES/Water Supply</u>	_____
Other Local Agencies	☒ Yes ☐ No	<u>239 Reviews County Planning</u>	_____
Other Regional Agencies	☐ Yes ☒ No	_____	_____
State Agencies	☒ Yes ☐ No	<u>SPDES/Water Supply/Art. 15 NYSDEC NYSDOT Poss. Work Permit</u>	_____
Federal Agencies	☐ Yes ☒ No	_____	_____

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? ☒ Yes ☐ No

2. If yes, indicate decision required:

☒ zoning amendment ☐ zoning variance ☐ special use permit ☒ subdivision ☒ site plan
☐ new/revision of master plan ☐ resource management plan ☐ other _____

2. What is the zoning classification(2) of the site? I Industrial

3. What is the maximum potential development of the site if developed as permitted by the present zoning? 500,000 SF industrial

4. What is the proposed zoning of the site? Planned Development District for senior/affordable housing

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?

84 units senior, 10 affordable units

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? ☒ Yes ☐ No

7. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action?

Predominantly commercial/industrial, and residential uses permitted in the B-2, I and R-40 zoning districts

8. Is the proposed action compatible with adjoining/surrounding land uses within a ¼ mile? ☒ Yes ☐ No

9. If the proposed action is the subdivision of land, how many lots are proposed? Potentially two

a. What is the minimum lot size proposed? 35 Acres

10. Will proposed action require any authorization(s) for the formation of sewer or water districts? ☐ Yes ☒ No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)?

☒ Yes ☐ No

12. Will the proposed action result in the generation of traffic significantly above present levels? ☐ Yes ☒ No

a. If yes, is the existing road network adequate to handle the additional traffic? ☐ Yes ☐ No

D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and measures which you propose to mitigate or avoid them.

E. Verification

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name Town of Philipstown Town Board

Date 04/04/03

Signature _____ Title

Planner for Town of Philipstown

State Environmental Quality Review
NOTICE OF COMPLETION OF DRAFT GEIS
AND
NOTICE OF HEARING PURSUANT TO THE
STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA)

October 7, 2004

This notice has been prepared in accordance with Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law and is issued pursuant to Part 617 of the regulations implementing such Article 8.

A Draft Generic Environmental Impact Statement (DGEIS) has been completed and accepted by the Town of Philipstown Town Board, as Lead Agency, for the proposed action described below. A public hearing on the proposed Planned Development District and the DGEIS will be held on _____ at _____ P.M. at _____.

Comments on the DGEIS are requested and will be accepted by the contact person until not less than 10 days after the close of the public hearing.

Name of Action: Quarry Pond Planned Development District

Description of Action: The proposal herein entails the mapping of a zoning overlay district in the Town of Philipstown referred to as the Quarry Pond Planned Development District (Quarry Pond PDD). The Town of Philipstown proposes to designate approximately 80 acres of the North Highlands section of the Town as a Planned Development District (PDD) pursuant to Chapter 175, Article XII of the Philipstown Code in order to facilitate the construction of senior and affordable housing on a site that is now industrially zoned and used for soil mining.

SEQR Classification: Type 1

Location: The Quarry Pond subject site is located on the eastern side of US Route 9 near the northwestern corner of the Town of Philipstown, Putnam County, New York, and south of Horton Road. It is located approximately one mile south of the Town's border with Dutchess County and just over two miles from the intersection of US Route 9 and Route 301. The site is bordered on the east by the Clove Creek. Hustis Road terminates at US Route 9 opposite the site's southeastern corner and the existing entrance to the site. The project site is designated in tax map Section 16, Block 1, Parcel 38 on the Town of Philipstown Tax Assessment Rolls.

Potential Environmental Impacts: The action of designating the subject site as a Planned Development District will have no environmental impacts. Implementation of the PDD would result in a residential development, which would replace the current use as soil and gravel mine. Potential environmental impacts of residential development would include grading, disturbance of slopes and removal of vegetation that will be required for construction of senior and affordable housing on the northern portion of the site and installation of utilities and septic areas.

Approximately eight acres of new impervious surfaces would be created on the site as a result of anticipated new construction and the volume of stormwater runoff would increase. Aside from the creation of these impervious surfaces, construction disturbance will generally be

limited to areas within 20 feet of proposed buildings and roadways and within 15 feet of septic areas. Anticipated Quarry Pond PDD development would increase traffic on local roadways.

Lead Agency: Town of Philipstown Town Board
Philipstown Town Hall
238 Main Street
Cold Spring, New York 10516
(845) 265-3329

A Copy of the Draft GEIS may be viewed by contacting:

Contact Person for
Additional Information: Tim Miller, AICP

Address: TIM MILLER ASSOCIATES, INC.
10 North Street
Cold Spring, NY 10516

Telephone Number: (845) 265-4400

Or by visiting: www.timmillerassociates.com

A Copy of this Notice and Draft GEIS Shall be Sent to:

Involved and Interested Agencies

1. Town of Philipstown Planning Board
2. New York State Department of Transportation, Region 8
3. Putnam County Department of Health
4. New York State Department of Environmental Conservation
5. Putnam County Department of Planning and Development

Copy of Notice only to: Environmental Notice Bulletin

Appendix C
CORRESPONDENCE



PHILIPSTOWN NORTH HIGHLANDS FIRE DISTRICT

R.D. #1 North Highlands Road

Cold Spring, New York 10516

(914) 265-2828 or 265-9595

June 18, 2004

Board of Fire Commissioners

Mr. Josh Moreinis, AICP, Senior Planner
Tim Miller Associates, Inc.
10 North Street
Cold Spring, New York 10516

**Re: Quarry Pond Planned Development District
Route 9, Town of Philipstown, New York**

Dear Mr. Moreinis:

Thank you very much for your letter of March 29, 2004, enclosing an excellent copy of the Conceptual Plan for Review Only, and a good copy of the Site Location Map.

We understand that this is a zoning action at the present time and not a proposed project; that you are preparing a Generic Environmental Impact Statement that will meet N.Y. State requirements related to the re-zoning of the described property.

While we are not opposed to the concept of providing additional housing of up to 84, 2 1/2 story town home duplexes for seniors and ten units of non-age restricted affordable housing (for Emergency Service personnel who desire to live locally?), we do have serious concerns as respects fire protection for this site.

We are of the firm opinion that a good water supply from Quarry Pond to the furthest proposed homes (approximately 1,600 linear feet) would involve an engineered Certified Dry Hydrant System connecting a dry hydrant at Quarry Pond with connected piping to dry (gray) hydrants spaced throughout to housing complex.

Additionally, it would be most advisable to have all buildings protected by automatic sprinklers with power generator back-up. Also, all units should be protected by Central Station supervised smoke detectors.

The Philipstown North Highlands Fire District has an adequate supply of fire apparatus to deal with fires at the described location, as our firehouse is close by. Response time would generally be a matter of minutes. North Highlands Engine Co. No. 1 is comprised of about 50 active members, all volunteers. There are no paid personnel. We respond to about 100-125 alarms annually.

Mr. Josh Moreinis, AICP, Senior Planner
Tim Miller Associates, Inc.

June 10, 2004
Page 2

We participate with Cold Spring Fire Department, Garrison Fire Department and Rombout Fire Department in an automatic dispatch Mutual Aid arrangement, to insure that maximum fire suppression resources are immediately brought to bear in the event of a fire alarm situation.

Therefore, our main concerns are life-safety (which would be best served by sprinkler and fire detector protection), and an assured water supply in the event of a fire situation.

Very truly yours,



George Lisikatos, Chairman of the Board
Philipstown North Highlands Board of Fire
Commissioners



Joseph Hyatt, Chief
North Highlands Engine Company No. 1

BIBBO ASSOCIATES, L.L.P.
Consulting Engineers – Planners

John P. McNamara, P.E.
Joseph J. Buschynski, P.E.
Timothy S. Allen, P.E.

Leonard J. Bibbo, P.E.
Robert A. B. Howe, B.S.

June 1, 2004

Tim Miller Associates
10 North Street
Cold Spring, NY 10516

ATTN: Tim Miller, AICP

RE: Quarry Pond Estates
Town of Philipstown

Dear Mr. Miller:

Pursuant to your request, Bibbo Associates, L.L.P. has reviewed the following document:

- Engineers Report- Sewage Disposal System Feasibility Study for Philipstown Senior Housing, prepared by Putnam Engineering, PLLC.,
Revised: January 2004

As requested our office has reviewed the above referenced document and we offer the following comments as they relate to the feasibility of the Sewage Disposal System.

Analysis of flow:

1. The proposed design flow has been reviewed and it is understood that the Putnam County Department of Health has accepted the flow rate, therefore we do not feel any further review is necessary.

Site Investigation:

2. It is unclear how the chosen sewage disposal area was determined. Were other areas of the property tested and rejected? It may be prudent to test other areas of the property.
3. The percolation rates in the area of the proposed system seem to be erratic for the types of soils depicted by the deep tests. The percolation tests should be stabilized and in accordance with the NYSDEC Guidelines.

4. It is our understanding, that the New York State Department of Environmental Conservation design standards do not permit averaging of percolation rates. We have compared all the percolation tests in the area, including the tests that were running prior to caving in. The average of these results appears to be greater than the proposed design percolation rate of 10 min/in. It may be necessary to design the system on the higher percolation rate thus requiring more lineal feet of absorption trench and a larger area for the system.
5. We would recommend deep tests and percolation tests be performed to a greater depth to explore the possibilities of alternate types of sewage treatment systems.

System Design:

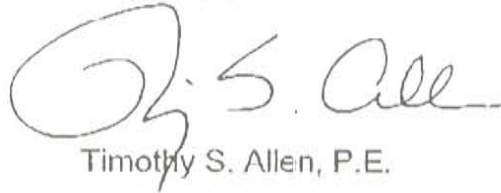
6. Alternate types of sewage disposal systems should be explored to determine if other options may be feasible. i.e. galleys, etc.
7. It has been our experience that the New York State Department of Environmental Conservation and The New York State Department of Health discourage high flow traditional community subsurface sewage disposal systems without some level of pre-treatment. We would recommend further discussions with the local health department and / or state agencies having jurisdiction.
8. The site plan depicts a mining pond / lake on site. The report should indicate the size of the lake coincides with the date of the report and the lake is not expected to be enlarged.
9. We acknowledge that the lake is currently being mined and is believed to consist of primarily sand and gravel. The existence of wetlands if any should be determined with respect to the lake and if needed the proper setbacks should be adhered to.
10. The New York State Department of Environmental Conservation should be consulted to determine if a mounding analysis will be required.

Cost Analysis:

11. It has been our experience that typically absorption trench is installed at a rate of \$20-\$22 per lineal foot.
12. A cost analysis should be looked at if alternative systems are feasible to determine if the Subsurface System proposed is the most economical.
13. The New York State Department of Environmental Conservation and or The New York State Department of Health should be contacted to determine the requirements of pre treatment, if any, in order to more accurately estimate the costs that may be incurred.

Please do not hesitate to contact myself or Ray Hamill of our office if you should have any questions.

Very truly yours,

A handwritten signature in cursive script, reading "T.S. Allen". The signature is written in dark ink on a white background. The first letter "T" is large and loops around the "S". The last name "Allen" is written in a fluid, cursive style.

Timothy S. Allen, P.E.

TSA/rh



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

April 15, 2004

Josh Moreinis
Tim Miller Associates
10 North Street
Cold Spring, New York 10516

Re: SEQRA
Quarry Pond Planned Development District
Post Road at Horton Road
Philipstown, Putnam County
04PR01708

Dear Mr. Moreinis:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based upon this review, it is the OPRHP's opinion that your project will have No Impact upon cultural resources in or eligible for inclusion in the State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont
Director

RLP:cmp

**BUILDINGS/STRUCTURES/DISTRICTS
EVALUATION COMMENTS**

PROJECT NUMBER 04PR01708

**(Quarry Pond Planned Development District/Post Road at Horton
Road/T/PHILIPSTOWN)**

-
- ☒ Based upon a review of the information submitted and the scope of the project described, the NYS Office of Parks, Recreation and Historic Preservation has no concerns regarding historic buildings/structures/districts within your project area.
- ☐ The following State/National Registers of Historic Places listed/eligible property/district is located within or adjacent to your project area. However, given the scope of the project, the NYS Office of Parks, Recreation and Historic Preservation has no concerns regarding historic buildings/structures/districts within your project area.

* Archaeology comments will be provided in a separate attachment.

If you have any questions concerning this information, please call Peter Shaver at 518-237-8643. ext 3264

**PLEASE BE SURE TO REFER TO THE PROJECT NUMBER NOTED ABOVE WHEN
RESPONDING TO THIS REQUEST**



PUTNAM COUNTY
OFFICE OF THE SHERIFF
THREE COUNTY CENTER
CARMEL, NEW YORK 10512



DONALD B. SMITH
Brigadier General, U.S. Army (Ret.)
SHERIFF
(845) 225 - 3000

PETER H. CONVERY
UNDERSHERIFF
(845) 225 - 1460

April 12, 2004

Mr. Josh Moreinis, AiCP
Senior Planner
Tim Miller Associates, Inc.
10 North Street
Cold Spring, New York 10516

Re: Quarry Pond Proposed Residential and Parkland Development,
Route 9, Town of Philipstown, NY

Dear Mr. Moreinis:

This is in response to your letter, dated March 11, 2004, regarding the proposed Quarry Pond Planned Development District rezoning in the Town of Philipstown which would facilitate residential development on an 80-acre site in the North Highlands section of Philipstown. In your letter, you requested information on the ability of the Sheriff's Department to provide police protection services to this project's future residents and visitors. I hope the information listed below is of use in your Environmental Impact Study

- The Putnam County Sheriff's Department, along with the New York State Police, provides primary police services to the entire Town of Philipstown including the Proposed Quarry Pond Residential and Parkland Development.
- The Sheriff's Department has a minimum of one patrol assigned to the Philipstown area 24 hours a day. The closest car concept is utilized in response to 911 emergency calls; either the Putnam County Sheriff's patrol unit or the New York State Police patrol unit would be dispatched.

Josh Moreinis

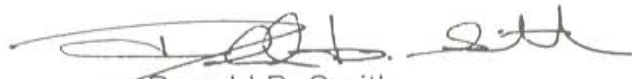
April 12, 2004

Page 2

- During the years 2001, 2002 and 2003, approximately 325 calls for service per year were responded to by the patrol units assigned to the Town of Philipstown. The approximate response time of responding units is anywhere from 5 minutes to 30 minutes depending on the location of the patrol unit in relation to the call for service.
- We do not anticipate a significant impact to the Putnam County Sheriff's Department in providing police protection specifically attributed to the future residents of the Proposed Quarry Pond Residential and Parkland Development. However, with Putnam County being one of the fastest growing counties in New York State, the collective impact of many new developments on law enforcement would most certainly require more law enforcement resources in future years.

I hope the above information is helpful to your project. Should you need any additional information, please do not hesitate to contact me or Captain William H. Schallock, who heads our Road Patrol Division, at (845) 225-7505.

Sincerely,

A handwritten signature in black ink, appearing to read 'Donald B. Smith', with a stylized flourish at the end.

Donald B. Smith
Sheriff

DBS/jm



WAYNE E. BENNETT
SUPERINTENDENT

NEW YORK STATE POLICE
BUILDING 22
1220 WASHINGTON AVE.
ALBANY, N. Y. 12226-2252

March 31, 2004

Mr. Josh Moreinis, AICP
Tim Miller Associates, INC
10 North Street
Cold Spring, NY 10516

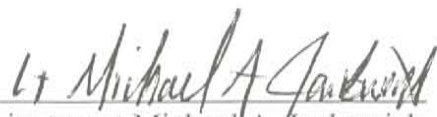
Dear Mr. Moreinis:

I am in receipt of your correspondence dated March 11, 2004 regarding the proposed Quarry Pond development district in the Town of Philipstown, NY.

I have reviewed your proposal with members of my command who service the Philipstown area in Putnam County. We have no immediate concerns and would like to provide you with the following description of State Police services in your area:

The State Police personnel that provide coverage to your area are stationed at the Wappinger Barracks on Middlebush Road in the Town of Wappinger. Presently there are twenty-four (24) Uniformed Troopers and six(6) Investigators, as well as the accompanying supervisory personnel, assigned to SP Wappinger. Citizens of Philipstown have the option of requesting police assistance directly from the State Police or the Putnam County Sheriff's office; in the event of an emergency, telephone calls to "911" are dispatched by the Sheriff's office to the closest available police officer (NYSP or PCSO). Response times cannot be accurately predicted, but historically have varied between "immediate" and up fifteen minutes. I hope this information is helpful. If you have any other concerns please feel free to contact me at SP Wappinger (845-298-1557) or via e-mail at mjankowi@troopers.state.ny.us.

Sincerely,


Lieutenant Michael A. Jankowiak
Troop "K", Zone 2

LORETTA MOLINARI
Public Health Director



ROBERT J. BONDI
County Executive

DEPARTMENT OF HEALTH

1 Geneva Road, Brewster, New York 10509

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Nursing Services (845) 278 - 6558 WIC (845) 278 - 6678 Fax (845) 278 - 6085
Early Intervention/Preschool (845) 278 - 6014 Fax (845) 278 - 6648

February 24, 2004

Mr. Thomas Cusack
Legette, Brashears & Graham, Inc.
126 Monroe Turnpike
Trumbull, Ct. 06611

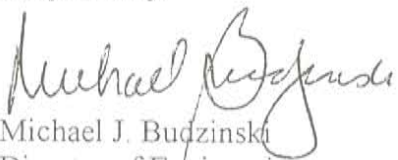
Re: Proposed Well Pumping Plan for
Quarry Pond, (T) Philipstown

Dear Mr. Cusack:

This Department has received and reviewed the proposed pumping test plan for the two small diameter sand and gravel test wells. Upon review, this Department has concluded it has no objection to the well preliminary pumping plan dated November 26, 2003.

It is understood additional pumping tests will be required at the time the production wells are completed.

Respectfully,


Michael J. Budzinski
Director of Engineering

MJB:cj
Cc: Tim Miller ✓



**PHILIPSTOWN EMERGENCY MEDICAL SERVICES
VOLUNTEER AMBULANCE CORPS Inc.**

14 CEDAR STREET, COLD SPRING, NEW YORK 10516
(845) 265-2103 FAX (845) 265-2173

Tim Miller Associates, Inc
Attention: Josh Moreines
10 North Street
Cold Spring, New York 10516

Dear Mr. Moreinis,

The following information is provided to you in response to your request of March 11, 2002, regarding the ability of the Philipstown Volunteer Ambulance Corp to provide emergency medical service to the residents of the proposed Quarry Pond PDD.

1. PVAC currently operates two ambulances
2. PVAC currently has 25 volunteer members
3. PVAC currently has a full time, paid staff of 8 EMTs
4. PVAC responds to approximately 370 emergency calls annually
5. The anticipated response time to the site is approximately 9 minutes or less
6. In addition to PVAC, a Putnam County Paramedic will also respond to the site
7. The primary hospital is Hudson Valley Hospital Center in Peekskill. PVAC will also transport patients to Westchester Medical Center, Vassar Brothers Hospital, St Francis Hospital and St Luke's Hospital.

With a projected occupancy of 195 persons we would statistically expect this to result in approximately 15 additional emergency calls per year. We feel confident that we will be capable of providing the necessary service to the residents of the Quarry Pond PDD.

If you require any further information or have any questions, please contact me.

Sincerely,

Patrick O'Dell
Captain



June 15, 2004

Tim Miller
Tim Miller Associates
10 North Street
Cold Spring, NY 10516

RE: Quarry Pond Estates
Town of Philipstown

Dear Mr. Miller:

We have reviewed the comments of Bibbo Associates on the Sewage Disposal System Feasibility Study for the above project and offer the following:

Flow Analysis

1. Comment noted.

Site Investigation

2. The selected potential sewage disposal area was as a result of eliminating areas not suitable, due to slope, proposed development, setback constraints from water bodies, property lines, water supply wells and areas not large enough to work with.
3. Perc tests for design will be presoaked, stabilized and witnessed by the Putnam County Health Department. The perc tests recently conducted were to determine suitability of the soils in the proposed sewage disposal area and the feasibility of constructing a sewage disposal system on the site.
4. When official percolation tests are done with the Putnam County Health Department, significantly fewer perc tests will be done than those done for determining feasibility. The order of magnitude of the tests to be done with the Health Department will most likely be six (6) to eight (8). The test results will not be averaged, each will stand on its own result.
5. There is no advantage to an alternate system such as galleys in this situation. Although galleys provide additional square footage per linear foot, they must be spaced 24 feet on center compared to 6 feet on center for absorption trench. Therefore the savings in area required is modest and the cost of galleys is

(L04349)

significantly more than absorption trench. Also, the depth to groundwater and ledge in a few locations would preclude the use of galleys without additional fill across the entire sewage disposal area.

System Design

6. See response above.
7. Putnam County Health Department was contacted regarding the need for pre treatment and felt that there would be no need for same.
8. The lake shown on the plans is from a current survey prepared by Badey & Watson. The lake perimeter coincided with what was present at the time of the report and that shown on the plans.
9. There were no wetlands observed within the required setbacks of the proposed sewage disposal area.
10. The Putnam County Health Department was consulted regarding the possible need for a Mounding Analysis. It was their opinion that a Mounding Analysis would not be required. The Putnam County Health Department is the delegated review authority for the New York State Department of Environmental Conservation.

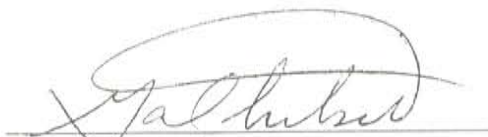
Cost Analysis

11. The cost for absorption trench utilized in the estimate is typical for Putnam County. The cost was confirmed with local contractors.
12. See response #5
13. See response #10

Upon your review of this information, should you have any comments or questions, please contact me at this office.

Very truly yours,

PUTNAM ENGINEERING, PLLC



Gary A. Tretsch

GAT/cp

(L04349)

PUTNAM ENGINEERING, PLLC. Engineers and Architects

4 OLD ROUTE 6, BREWSTER, NEW YORK 10509 • (845) 279-6789 • FAX (845) 279-6769 • EMAIL: putnamengineering@rcn.com

Memorandum:

To: Philipstown Town Board
From: Quarry Pond PDD Concept Committee
Date: February 6, 2004
Subject: Findings of Committee

The Quarry Pond Concept Committee was established to review potential development scenarios for the Quarry Pond property on Route 9 and Horton Road as it relates to the parameters outlined for the property by the Town Board and the draft Planned Development District local law.

The Committee met on two occasions, once in the fall of 2003 to walk the site and review the existing conditions, the second one on January 7, 2004, in order to review revisions to the Concept Plan based on preliminary results of soil and septic testing and well testing.

The Concept Plan was prepared by Stephen Lopez, a landscape architect in Tim Miller's office. The last version reviewed by the Concept Committee was dated December 2003. After review and discussion, the Concept Committee endorses this plan and has the following comments:

1. The Concept Plan provides substantial and deep setbacks from Clove Creek, with an opportunity for the Clove Creek corridor to come into public (town of Philipstown) ownership.
2. The Concept Plan provides relatively deep setbacks from Horton Road (greater than 100 feet) that would provide protection privacy to the Horton Road neighborhood.
3. The Concept Plan provides a reasonable setback from NYS Route 9 at greater than 100 feet that is deeper than what would typically be required under existing zoning.
4. The Concept Plan provides 10 units of affordable housing in its own cluster, separate from the senior citizens development. The provision of affordable housing is a stated goal of the Town's Draft Comprehensive Plan. This project has the potential to represent a significant first step in the provision of affordable housing in the Town.

5. The concept of age restricted residential development in a duplex configuration is attractive for a number of reasons. There are very few opportunities for multifamily housing in the Town at the present time. This provides an alternative to other housing opportunities in the Town (largely large lot, single family homes). The Concept Committee, however, recommends that the duplexes be designed to have the look and appearance of a single family home to the greatest extent possible, during the site plan review phase of this project.

6. The Concept Committee endorses the idea of a club house / recreation area for the future community. There should be some flexibility when the site plan development takes place as to where such a facility should be located on the site.

7. The Concept Committee believes that the site can support the proposed density subject to continued demonstration of this through the environmental review process. To the extent possible the Concept Committee endorses increasing the separation distance between buildings within the constraints of the existing site.

8. The Concept Committee recommends that particular attention be paid to the feasibility of septic system to assure that the underlying aquifer is protected. To this end, it is recommended that the Town engage a professional engineer to review the septic system data and design during the SEQRA review process for the Planned Development District.

9. The Concept Committee recommends that the Planned Development District law be amended to assure that the Town is reimbursed for its expenses in developing the Concept Plan and going through the SEQRA review process.

10. The Concept Committee recognizes that the development options for the Quarry Pond site include 1) the continuation of soil mining for which an application is pending in front of the New York State Department of Environmental Conservation; 2) use of the site consistent with the Industrial zoning designation for office, manufacturing, warehousing or light industrial use (very preliminary indications suggest that the site could accommodate well in excess of 500,000 square feet of such use with substantial parking, impervious surface area and traffic generation); or 3) in excess of 30 single family homes (the owners have preliminary subdivision approval for 37 single-family homes although it is unlikely that the site could accommodate such a use given its present configuration).

In considering the above options, the Concept Committee believes that use of the site for a senior housing development and affordable housing development, with a large portion of the property being maintained as open space, represents a far more desirable option for the property than any of the aforementioned alternatives.

The senior housing will represent a substantial tax ratable to the Town without generating school children to the Haldane School District. Senior housing is also traditionally a very low traffic generator.

That being the case, the Concept Committee recommends that the Town Board pursue the Planned Development District in the Concept Plan so long as continued demonstration of water and sewer feasibility and development aesthetics are taken into account as the review proceeds.

CONCEPT COMMITTEE FOR PIP SITE

Richard Shea
523 East Mountain Road North
Cold Spring, New York 10516

Anthony Merante
56 Pine St.
Nelsonville, New York 10516

Alfred Hosmer
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Cold Spring, New York 10516

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50 Beckwith Lane
Garrison, New York 10524

Josephine Doherty
310 Main St.
Nelsonville, New York 10516

Technical Memorandum

Subject:

To: Tim Miller
From: Sergio Smiriglio
CC:
Date: 6/25/2004
Re: Quarry Pond Site, Philipstown Industrial Park

Leggette, Brashears and Graham, Inc. has completed preliminary hydrologic testing on small diameter wells completed as part of their ground water exploration program. Normally, pumping tests are performed on the production wells that will eventually be used for the completed project. However, the Putnam County Health Department requested these preliminary tests to determine if the aquifer has the potential to provide the required water supply without adversely impacting neighboring private wells.

The project, as described by LBG, will consist of 84 attached senior housing units and 10 attached residential units. The estimate water demand for the project is 28,200 gallons per day [gpd] or 19.6 gallons per minute [gpm]. The system will need to prove, to meet regulatory requirements, 39.2 gpm with the best well out of service.

LBG selected wells TW-3 and TW-6 for testing [pumping] and wells MW-1, MW-4, TW-1, TW-2, TW-4, TW-5 and TW-7 as sand and gravel monitoring wells. Additionally, several offsite private wells, all but one tapping the bedrock aquifer, were monitored for this test. The testing utilized suction pumps due to the small diameter of the test wells. Both wells were pumped at rates that exceeded the required minimum yield for the project [46 and 42 gpm] and both wells showed minimal drawdown during the test. The impact to the on-site wells confirms that the aquifer is a typical unconfined unconsolidated formation. These formations tend to produce shallow, wide cones of depression with impacts of about ½ foot at 200 feet and 1/10 of a foot at 370 feet. Given the minimal impact to the unconsolidated aquifer, no impact is expected in the bedrock aquifer. LBG reports that no impacts were observed in any of the offsite wells.

The recharge analysis that was completed for this project utilizes generic calculations that have been used for many years. This estimate tends to be conservative since it needs to be applicable to a wide variety of hydrologic settings. Therefore, the recharge estimate that LBG uses for this project has to be considered conservative, indicating sufficient recharge for the project.

SSEC Inc.
4 Deer Trail
Cornwall, New York 12518
(845) 534 3816
(845) 534 3314 fax
email@groundwatergeology.com

The LBG pumping test has shown that the aquifer productivity at the test site should be sufficient to provide the proposed project with the required water supply with no impact to offsite wells. The aquifer, a shallow water table aquifer, is subject to water level fluctuations due to climatic changes. Although those fluctuations are expected to be limited and not impact the productivity of the final production wells, SSEC recommends that at least one of the test wells used for this program be fitted with a data logger that will take, at minimum, daily water level readings during the summer and autumn. The resulting hydrograph will be useful for the final well design.

The NYSDOH requires a minimum 24-hour pumping test on the final production wells once they are built. Although 24-hours is sufficient to determine the short term productivity of these wells, we agree with LBG that 72-hour tests are needed. This aquifer has limited aerial extent since it is contained within a narrow valley bounded by bedrock hills. Hydrologic environments such as these tend to show boundary conditions. The propagation of a cone of depression during extended pumping of the production well can cause the leading edge of the cone to reach the limits of the aquifer. This will result in deepening of the cone of depression and increased drawdown in the well. The limited 24-hour tests that have been completed indicate that at the required pumping rates, the cone of depression will not reach a boundary. However, the extended testing will further stress the aquifer providing more useful hydrologic data.

Upon completion of the well testing, LBG should provide a remediation plan to the Town that will cover possible adverse affects that use of the production wells may have on private off-site wells. The plan should detail several remedial options. The plan should also detail a monitoring plan that will allow the well operators to preemptively address potential problems. Some, or all, of existing monitoring wells, if they are not in locations that would dictate their destruction, can be incorporated into a monitoring system. If the existing wells are not available, new monitoring wells in strategic locations should be considered.

DRAKE, SOMMERS, LOEB, TARSHIS, CATANIA & LIBERTH, PLLC

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jloeb@dsllc.com

September 28, 2004

Town Board
Town of Philipstown
Town Hall
238 Main Street
Cold Spring, New York 10516

Dear Board Members:

Re: Our File #6082-50513

The Town has asked me to opine on the legal ramifications of senior housing, with a specific focus on the issues of discrimination and enforcement.

Designated Senior Housing Is Not Discriminatory

Senior housing provides a benefit to a select class of individuals. It might appear that because senior housing is limited to seniors, by its very nature it excludes and unlawfully discriminates against all others. The issue is whether this exclusion is discrimination prohibited by law.

The federal Fair Housing Act prohibits discrimination in the sale or rental of housing based upon, among other things, "familial status." Fair Housing Act § 3604. This restriction was designed to ensure the availability of housing to families with children. However in recognizing the importance of reserving housing for older persons, Congress exempted certain groups from its blanket prohibition against such discrimination. Specifically, Section 3607 of the Fair Housing Act states that no provision "regarding familial status [shall] apply with respect to housing for older persons." 42 U.S.C. § 3607(b) (1).

The phrase "housing for older persons" is carefully defined. The first of three alternate definitions involves housing "provided under any State or Federal program that the Secretary determines is specifically designed and operated to assist elderly persons" (as defined in federal or state programs). 42

Town Board
Page 2
September 28, 2004

U.S.C. § 3607(b)(2)(A). The Fair Housing Act next exempts housing "intended for, and solely occupied by, persons sixty-two years of age or older." 42 U.S.C. § 3607(b)(2)(B). The third definition was recently amended to avoid ambiguity. The amendment now creates a four-prong test to determine the applicability of the Fair Housing Act. 42 U.S.C. § 3607(b)(2)(C). The fifty-five or older test presently requires:

- (1) that the housing be intended and operated for occupancy by persons fifty-five years of age or older;
- (2) that at least 80 percent of the occupied units are occupied by at least one person who is fifty-five years of age or older;
- (3) that the housing facility or community publishes and adheres to policies and procedures that demonstrate the intent necessary to satisfy the definition of "housing for older persons"; and
- (4) that the housing provider complies with HUD regulations.

42 U.S.C. § 3607(b)(2)(C). Thus, if any project meets any of the three definitions of "housing for older persons" in the Fair Housing Act, then by operation of federal law the project is not unlawfully discriminatory.

Whether a project meets the federal standards does not end the inquiry because New York has its own laws regulating housing discrimination. New York prohibits a housing provider from refusing to sell or rent a housing accommodation to any person or group based on, among other things, age. New York Executive Law § 296(5). However, that prohibition does not apply to "the sale, rental or lease of housing accommodations exclusively to persons fifty-five years of age or older and the spouse of such person." New York Executive Law § 296(5).

Although they are not parallel, both the federal and state prohibitions against discrimination exempt senior housing projects that meet their respective criteria. In order to avoid a claim of unlawful discrimination, a project must meet both the federal and state standards. Once it does, any claim that the sale or rental of the housing is discriminatory would not be upheld by the courts.

A question that often arises is whether the age restrictions apply to all occupants. In other words, can a spouse who is not

Town Board
Page 3
September 28, 2004

yet fifty-five or sixty-two (as the case may be) or a child reside with a qualifying senior? The answer depends on the class of the senior housing project. There are thirteen different classes of senior housing in New York:

- Active-Adult Community
- Senior Housing (with no services)
- Supportive Senior Housing
- New York State Licensed Adult Home
- New York State Licensed Enriched Housing
- Enriched Housing or Adult Home with Limited Licensed Home Care Agency
- New York State Licensed Assisted Living Program
- New York State Approved Continuing Care Retirement Community (CCRC)
- Dementia Care Facility
- Shared Living Residence
- Naturally Occurring Retirement Community (NORC)
- Intergenerational Housing
- Senior SRO (Single Room Occupancy)

Not all of the above classes require licensing from the state or qualify for subsidization in the nature of tax relief. However, each class has its own age-eligibility for residents.

Restrictions On The Resale Of Senior Housing

Another issue is the effect of resale of a senior housing unit and whether such a resale would maintain the unit's status as senior housing.

As part of the approval process, the Town can impose or require restrictions in the deeds for each unit. These deed restrictions could, among other things, limit any resale to a buyer who meets the criteria for the project (e.g., fifty-five or sixty-two years or older, as the case may be). These restrictions could be enforced by the Town or any other entity named in the deed restrictions such as a homeowners association.

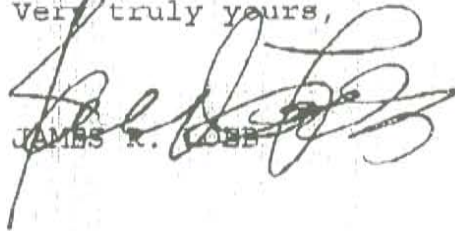
Deed restrictions can also limit the permissible sale price of any resale. For instance, a restriction may limit any resale to the original price of the unit adjusted for inflation and the cost of any improvements (as the Town may define). Once again, this restriction would be enforceable by the Town or any other entity named in the deed restrictions such as a homeowners association.

Deed restrictions are permanent in nature and run with the land. They may be limited in time if provided in the terms of

Town Board
Page 4
September 28, 2004

the restrictions. Deed restrictions bind all future owners. Deed restrictions are released only on rare occasions and if the Town were given the right to enforce them, in our opinion they would not be released without the consent of the Town. Deed restrictions can be modified or released by a Court, but again in our opinion a Court would not do so if the Town objected to the modification or the release.

Very truly yours,



JAMES R. LOEB

cc: Edward W. Doyle, Esq.
Tim Miller

JRL/DRC/ef/279148

Appendix D

GROUNDWATER EXPLORATION
PROGRAM

**GROUND-WATER EXPLORATION PROGRAM
PHILIPSTOWN INDUSTRIAL PARK
QUARRY POND SITE
(T) PHILIPSTOWN, NEW YORK**

Prepared For:

Philipstown Industrial Park, Inc.

May 2004

Prepared By :

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water and Environmental Engineering Services
126 Monroe Turnpike
Trumbull, Connecticut 06611

TABLE OF CONTENTS

	<u>Page</u>
Water Demand Estimate	1
HYDROGEOLOGY SETTING	1
Sand and Gravel Aquifer	1
Bedrock Aquifer.....	2
GROUND-WATER BALANCE	3
GROUND-WATER EXPLORATION PROGRAM	5
Bedrock Test Well	5
Sand and Gravel Test Wells.....	6
24-Hour Pumping Test of TW-3 and 6	7
TW-3	7
TW-6	8
Well Yield Capacity.....	8
WELL MONITORING PROGRAM.....	8
Sand and Gravel Monitoring Wells	9
Bedrock Monitor Wells.....	10
Piezometers	10
Water Quality.....	10
Wellhead Control.....	11
CONCLUSIONS.....	11

**GROUND-WATER EXPLORATION PROGRAM
PHILIPSTOWN INDUSTRIAL PARK
QUARRY POND SITE
(T) PHILIPSTOWN, NEW YORK**

Leggette, Brashears & Graham, Inc. (LBG) was retained in May of 2003 to conduct a ground-water exploration program to develop an onsite water supply for the proposed Quarry Pond Planned Development District (PDD) project. This rezoning proposal, put fourth by the Town of Philipstown, would permit up to 84 attached senior housing units and 10 attached residential units on the study parcel. The 80-acre parcel has been mined for sand and gravel for a number of years. The site is shown on Plates 1 and 2.

Water Demand Estimate

A development permitted under the provisions of this proposed PDD would have a total water demand of 28,200 gpd (gallons per day) or about 19.6 gpm (gallons per minute). The Putnam County Department of Health (PCDOH) will require 300 gallons per day per unit. The New York State Department of Health (NYSDOH) requires that the water supply for development be able to support the design maximum day demand (twice the estimated average daily demand) of the residential housing or about 39.2 gpm with the best well out of service.

HYDROGEOLOGY SETTING

The published geologic maps for the study region indicate a significant sand and gravel aquifer is mapped along the Clove Creek corridor and underlies a majority of the study parcel (Cadwell, 1989). The bedrock beneath the site is a metamorphic rock know as gneiss (Fisher et al., 1970).

Sand and Gravel Aquifer

The soils in the upland area west of Route 9 and east of Clove Creek are developed from glacial till, poorly-sorted mixture of clay, silt and gravel. The overburden material is relatively thin in the upland area with numerous rock outcrops observed during the site visits. The till overburden material is not suitable for development of well supplies.

The valley setting, which includes a majority of the study parcel, is underlain by glacial deposits known as outwash deposits. These deposits formed from glacial meltback, as melt water from the glaciers carried the gravel, sand, silt and clay held in ice and deposited the material downstream. The aquifer is not typically continuous vertically, but occurs in layers interbedded with silty and clayey lenses. The fine-grained materials were deposited by sluggish streams capable of transporting only silt- and clay-sized particles or during temporary glacial-lake environments resulting from ice damming. However, at times, the streams were regenerated and during these periods of high flow, coarse-grained materials were deposited by swifter meltwater streams. The best aquifers are glacial outwash materials deposited by swifter meltwater streams. Such outwash deposits are the best sand and gravel aquifers in Southern New York State, and are highly permeable and readily recharged. One of the best examples of a prolific sand and gravel aquifer is the Clove Creek Well Field developed by the Village of Fishkill. The wells are located along the Clove Creek Valley, about 2.4 miles north of the study parcel in the Town of Fishkill. The well field is reported to have a yield capacity of up to 2.0 to 3.0 mgd (million gallons per day).

The water-bearing and yielding properties of the stratified drift aquifer along the Clove Creek in the Town likely varies from excellent to poor. These characteristics depend largely upon the relative amounts of fine-grained versus coarse-grained interbeds this stratified drift contains and thickness of the aquifer. It is likely not all of the sand and gravel aquifer mapped along Clove Creek is suitable for the development of the water-supply sources.

Bedrock Aquifer

The bedrock beneath the site is a metamorphic rock known as gneiss (Fisher et al., 1970). Outcrops of the gneiss observed onsite consist of massive, foliated gneissic rock. A significant regional fault zone bisects the site in a north to south orientation (parallels Route 9 and Clove Creek).

Bedrock underlies the surficial unconsolidated deposits and exists everywhere in the region. Ground water in the bedrock is contained in fractures, joints, bedding plane fissures and faults, which provide the principal channels for storage and movement of water. The yield of a bedrock well depends on the number of fractures or openings intersected by the borehole and their degree of connection with other fracture systems.

The gneiss in Putnam County is reported to produce small to moderate quantities of water. Grossman (1957) reports that the yield of wells completed in gneiss in Putnam County averages 11 gpm. The report "Ground-Water Availability in Putnam County, New York: A Preliminary Evaluation" (1984) report yields of 3 to 12 gpm in similar hydrogeologic conditions. The most recent study, the "Route 9 Aquifer Study and Townwide Aquifer Review" prepared for the Town of Philipstown (Tim Miller Associates, 1991), reports the gneiss bedrock aquifers in the Town have a mean well yield of 12 gpm. It should be understood that the data supporting the above-cited studies included mostly well data from residential and small commercial wells. Consequently, most of the wells inventoried were drilled only deep enough to obtain yields sufficient to meet the demand of a single household (5 gpm) or for small commercial uses. Higher yields may be obtainable from properly-located and in some cases deeper wells.

A drilling program conducted on the study parcel in June 2000 for a previously proposed subdivision included the completion of four bedrock test wells. The wells are shown on Plate 1 as BRW-1, 2, 3 and 4 and were reported to yield between 6 to 8.5 gpm at completion depths ranging from 265 to 706 feet. The well completion reports for these wells are presented in Appendix I.

GROUND-WATER BALANCE

A ground-water balance compares the available recharge to a property with the estimated water-supply demand of a proposed development. This comparison determines if the property is self-sufficient in providing the water that will be required by the proposed development, or whether the proposed water demand exceeds the available recharge. If the projected demand exceeds the estimated available recharge, periodically ground-water recharge would have to be drawn from beyond the property boundaries. For sites with tight water balances, water availability within the watershed becomes important to determine if the proposed demand would oversubscribe the available resource. If onsite recharge meets or exceeds the proposed demand, the water supply should be reliable and not adversely affect the aquifer in offsite areas. Although water-budget analyses are useful in estimating available ground water resources, drilling and testing supply wells is the only definitive indicator of ground water availability from the aquifer source and any potential impacts to neighboring water supplies.

Recharge is generally related to precipitation, but the amount of rainfall which becomes ground-water recharge is difficult to measure directly. In Putnam County, the average precipitation is about 40 to 45 inches per year. About half this amount is lost to evaporation and transpiration processes; the remainder is available to become surface- and ground-water runoff. Ground-water recharge results from the portion of total rainfall and snowmelt that infiltrates the soil and overburden materials. The sand and gravel aquifers are recharged from precipitation which falls directly on the surface of the aquifer, from ground-water flow from surrounding hills and mountains and, most importantly, from significant streams or overlying surface-water bodies. A portion of the total runoff that infiltrates into the soil and overburden materials (including sand and gravel aquifers) eventually recharges the bedrock fracture system and is available for capture by bedrock wells.

The amount of rainfall that becomes ground-water recharge is difficult to measure directly. An estimate developed by the USGS for recharge to similar sand and gravel deposits in the nearby Fishkill-Beacon area (Snively, 1980) is an average recharge rate of 1,000,000 gpd per square mile, or about 21 inches annually. The recharge estimate to the sand and gravel aquifer on the Quarry Pond site (80 acre parcel) is estimated to be about 125,000 gpd. During drought conditions (one-year-in-30 drought event) if ground-water recharge decrease at the same rate as precipitation, the recharge estimate will be reduced by approximately 29 percent. On this basis, recharge to the sand and gravel aquifer during drought conditions is estimated to be about 88,750 gpd.

It should be noted that the ground-water withdrawal from the proposed water supply systems is considered non-consumptive. Some of the water used by households will be returned to the ground-water system by the proposed community septic-system leachfields. The consumptive water use for homes utilizing onsite wells and underground septic systems is low and not typically considered in water-budget analyses. Approximately 85 percent of water withdrawn from the aquifer from an onsite well is returned to the ground-water system by onsite community septic-system leachfields. The remaining consumptive water use is primarily associated with watering lawns and gardens, washing cars and outdoor recreation. These consumptive uses are highest in the warm-weather months and decline to near zero in the winter. Consequently the total consumptive use (or water lost) for the proposed development would be

approximately 4230 gpd. The available recharge significantly exceeds the consumptive water use of the proposed project under normal and drought conditions.

GROUND-WATER EXPLORATION PROGRAM

The goal of the ground-water exploration program was to develop a minimum of two test wells which meet or exceed the double-estimated average water demand of the project to conform with regulatory requirements. Therefore the goal was to develop two wells which yield 40 gpm or greater, if possible.

Bedrock Test Well

The initial attempt was to conduct a ground-water exploration of the bedrock aquifer underlying the site. The decision was based on economics and time frame restrictions. Generally, bedrock wells can be completed in a shorter time frame and at a much lower cost as compared to test production wells completed in sand and gravel aquifer material.

Ground-water exploration projects for large residential and commercial development typically utilize a hydrogeologic technique known as fracture-trace analysis to target locations favorable for the development of high-yielding wells. Fracture-trace analysis is a method in which stereo-pair aerial photographs are examined under a magnifying stereoscope to identify straight or curvilinear trends that reflect fracture trends in the underlying bedrock. These fracture traces result from subtle differences in topography, differences in soil moisture content and natural vegetative patterns. Higher yields are generally found at the intersection of two or more fracture traces. Bedrock test well locations utilizing the fracture-trace analysis method should be checked in the field to confirm that the perceived fracture traces are natural and not the result of manmade artifacts. Fracture-trace analysis provides no guarantee of finding successful wells but it has been shown to be a highly effective tool for improving the probability of obtaining higher-than-average bedrock well yields.

The most significant fracture traces in the study region are oriented approximately north-south. Most of the mapped lineaments are also aligned along streams or drainage lines, whose position probably reflects the bedrock structures.

In July of 2004, Boyd Artesian Well completed bedrock test well BRW-5 (Plate 1) under the supervision of LBG at a favorable location on the northeastern portion of the study parcel. The well was completed at a depth of 455 feet and was reported to yield about 10 gpm at the completed depth. The data from the five onsite bedrock test wells (BRW-1, 2, 3, 4 and 5) indicated that these wells are not suitable to meet the required water demands of the project. Subsequently at this time, the project team made the decision to continue the ground-water exploration of the sand and gravel aquifer on the study parcel.

Sand and Gravel Test Wells

The exploration of the sand and gravel aquifer was conducted in two phases. Phase I was completed by Kendrick Enterprises, Ltd. under the supervision of LBG in August of 2003. The initial program included the completion of seven test borings (TB-1, 2, 3, 4, 5, 6 and 7) and the installation of three 2-inch PVC monitoring wells (MW-1, 4 and 5). The area of the initial investigation was limited to the onsite corridor which paralleled Clove Creek. The test borings and monitoring wells are shown on Plate 1. The monitoring wells installed at the test boring location TB-1, 4 and 5, are completed in sand and gravel aquifer material encountered from about 33 to 39 feet. The geologic logs and monitoring well construction details for those locations are presented in Appendix II.

In September 2003, LBG conducted short-term pumping tests on MW-1, 4 and 5. The data from the short-term pumping tests indicated yields of less than 3 gpm from the respective monitoring wells and the data indicated the sand and gravel aquifer material at these locations is not suitable for the development of high-yielding sand and gravel wells.

The Phase II exploration program targeted the sand and gravel aquifer north of Quarry Pond. The program was conducted by The Stephen B. Church Company (Church) in September and October of 2003. The data indicate suitable sand and gravel aquifer material was encountered at all seven test boring/test well locations (TW-1, 2, 3, 4, 5, 6 and 7). Small diameter (2.5-inch) test wells were left in place at each location. The test wells are shown on Plate 1. The geologic logs and well completion reports for the test wells are presented in Appendix III.

The data from short-term pumping tests conducted on the respective test wells following completion of drilling reported yields from 25 to 65 gpm. The data indicate TW-3, 4 and 6 were

the most favorable for the development of high-yielding wells. The geologic logs for TW-3, 4 and 6 report a thick silt/clay deposit was encountered from surface to about 18.5 feet at TW-3; to 61.0 feet at TW-4; and to about 37.5 feet at TW-6. Favorable sand and gravel aquifer material was encountered at depths at each location between 50 to 85 feet from surface.

24-Hour Pumping Test of TW-3 and 6

LBG prepared a preliminary pumping test program outlined in a letter dated November 26, 2003 for submission to PCDOH and the Town of Philipstown for approval. The Town requested a preliminary 24-hour pumping test be conducted on the two small diameter test wells (TW-3 and 6). The preliminary pumping test would be conducted to determine yield, water quality and potential offsite impacts to neighboring wells. It is understood additional pumping tests will be required at the time the large diameter production wells are drilled.

In April 2004, Church installed a 4 hp and 2 hp suction lift pump in TW-3 and TW-6, respectively, with a 1.5 inch drop pipe set at 30 feet below top of casing in each well. The discharge hose from TW-3 and TW-6 converged at a common 3 hp booster pump and converted to a single discharge hose to divert the water 1,350 feet away from the pumping wells. The discharge hose pumped directly in a drainage ditch which flowed toward the creek (Plate 1).

LBG installed dedicated pressure transducers in pumping test wells TW-3 and 6. The pressure transducer or Troll, as it is called, are set up to record water-level measurements every 5 minutes. The data is stored on the device and retrieved during the test using a laptop computer. The flow rate for TW-3 and 6 were measured with a flow meter and periodically checked with a stopwatch and measured bucked.

The 24-hour pumping test on TW-3 and 6 started with the pump in both wells simultaneously turned on at 1035 hours on April 7, 2004. The test was shut down at 1045 hours on April 8, 2004.

TW-3

TW-3 was pumped at the maximum capacity of the pump at a rate of 46 gpm for the entire test. The water level declined from a pre-test static water level of 12.7 feet to a final pumping water level of 13.9 feet just prior to shutdown of the test. The total drawdown at the end of the test was 1.2 feet which indicated a specific capacity of 38.3 gallons per minute per

foot of drawdown. The pumping rate and water level had stabilized for the last 6 hours of the test as required by the regulatory agencies.

After the test was terminated, recovery measurements were made in TW-3 for a period of about 24 hours. The well recovered rapidly and was fully recovered in less than 12 hours from shutdown of the test. Water-level data measured during the test, including water-level recovery data for TW-3 are given in Appendix IV.

TW-6

TW-6 was pumped at the maximum capacity of the pump at a rate of 42 gpm for the entire test. The water-level declined from a pre-test static water level of 12.3 feet to a final pumping water level of 14.6 feet just prior to shutdown of the test. The total drawdown at the end of the test was 2.3 feet which indicated a specific capacity of 18.2 gallons per minute per foot of drawdown. The pumping rate and water level had stabilized for the last 6 hours of the test.

Similar to TW-3, the water level in TW-6 was reported to recover rapidly and was fully recovered in less than 12 hours from shutdown of the test. Water-level data measured during the test, including water-level recovery data for TW-6 are given in Appendix V.

Well Yield Capacity

Based on specific capacities (derived from the above referenced 24-hour pumping test) of the existing small diameter test wells (TW-3 and 6) and an evaluation of the geologic logs and sieve analysis, LBG conservatively estimates that a large diameter (minimum 8-inch) production well completed at TW-3 and 6 would likely yield up to 150 gpm (or greater). Drilling of the production wells including additional long term testing (72-hour duration) would be required to confirm the higher yield estimates.

WELL MONITORING PROGRAM

During the 24-hour pumping test conducted on TW-3 and 6 in April 2004, a well monitoring program was conducted including onsite monitoring wells completed in the sand and gravel and bedrock aquifers. In addition, the program included adjacent offsite homeowner and

commercial water supply sources completed in the underlying bedrock aquifer, with the exception of Nairn's well which is reported to be completed in the sand and gravel aquifer. LBG also installed piezometers (PZ-1 and 2) to determine any hydraulic connection with the sand and gravel aquifer and onsite surface water bodies (pond) and wetland features. PZ-1 was installed in a wetland feature and PZ-2 in Quarry Pond.

The onsite and offsite monitoring wells and piezometers are shown on Plates 1 and 2.

Between April 6 and 9, 2004, a water-level interference study was conducted of the respective monitoring wells and piezometers. The hydrographs for the monitoring wells, including piezometers are given in Appendix VI.

Sand and Gravel Monitoring Wells

The Nairn's well which is located off the study parcel indicates no discernible drawdown interference effects from pumping TW-3 and 6. The hydrographs for the onsite monitoring wells indicate the following drawdown effects from pumping TW-3 and 6.

Well	Drawdown (feet)	Distance From Closest Pumping Well
MW-1	ND*	1,260 (TW-3)
MW-4	ND	1,185 (TW-6)
TW-1	0.12	372 (TW-6)
TW-2	0.26	156 (TW-6)
TW-4	0.57	108 (TW-6)
TW-5	0.18	312 (TW-6)
TW-7	0.56	204 (TW-3)

* Not discernible

TW-1, 2, 4, 5 and 7 are completed in the sand and gravel aquifer and within close proximity to the pumping wells indicate 0.12 to 0.57 foot of water-level drawdown effects from pumping wells TW-3 and 6. The hydrographs for these wells show an immediate decline resulting from pumping TW-3 and 6 and a recovery response at the time the pumps in the wells was turned off. The drawdown diminishes at greater distances from the respective pumping well(s) as expected, with TW-1 372 feet from TW-6 exhibiting a minimal amount of drawdown of about 0.12 foot. A drawdown versus distance plot presented in Appendix VII indicates that the estimated conservative area of influence of the production wells (TW-3 and 6) is 622 feet at a

combined pump rate of 88 gpm. The area of influence of the production well at rates to meet the estimated average water demand of the project (19.6 gpm) will be considerably less.

Bedrock Monitor Wells

The hydrographs for the bedrock monitor wells onsite and offsite indicate no discernible drawdown interference effects from pumping TW-3 and 6 completed in the sand and gravel aquifer. This is clearly demonstrated from the hydrograph of bedrock monitor well BRW-1 which is located only 10 feet from pumping well TW-3 and indicates no water-level interference effects from the adjacent pumping well. The hydrographs for the offsite wells indicated minor fluctuation in water level from their domestic use. An example of fluctuation from domestic water use (i.e., showering, laundry, etc.) is a rapid decline (drawdown) in the water level from the pumping of the well for domestic use followed by a rapid rise in the water level from the pump turning off.

Piezometers

The hydrographs for PZ-1 and PZ-2 indicate no discernible water-level interference effects. The data indicate no direct hydraulic connect between the sand and gravel aquifer (TW-3 and 6) and the onsite surface-water body (pond) and wetland feature.

Water Quality

Ground-water quality in the sand and gravel aquifer along the Clove Creek Corridor in Dutchess and Putnam Counties is generally good. Near the end of the 24-hour pumping tests conducted in April 2004, ground-water samples were collected from TW-3 and 6. The samples were analyzed for parameters specified in the New York State Department of Health (NYSDOH) Sanitary Code, Part 5, Subpart 5-1. Samples were taken after nearly 24 hours of pumping, to ensure that the samples were clear and representative of the ground water from the formation in which the well is completed. The results of the analyses for TW-3 and 6 are included in Appendix VIII of this report.

The water quality for TW-3 and 6 meets all New York State drinking water standards. The MPA indicates low risk of direct hydraulic connection between TW-3 and 6 and the nearby pond and that the well is not under direct influence of surface water.

Wellhead Control

The NYSDOH guidelines require that a public water supply have a 100-foot radius of ownership and a 200-foot radius of sanitary control. TW-3 and 6 meets the regulatory guidelines of a 100-foot radius of ownership and 200-foot radius of sanitary control (Plate 1).

CONCLUSIONS

- The proposed residential development will require a total water demand of 28,200 gpd (gallons per day) or about 19.6 gpm (gallons per minute). The Putnam County Department of Health (PCDOH) will require 300 gallons per day per unit. The New York State Department of Health (NYSDOH) requires that the water supply for development be able to support the design maximum day demand (twice the estimated average daily demand) of the residential housing or about 39.2 gpm with the best well out of service.
- The data from the pumping test indicated TW-3 and 6 can be pumped at 46 and 42 gpm or about 66,240 gpd and 60,480 gpd, respectively. The proven capacity of TW-3 and 6 exceeds the delivery requirements of the regulatory, with the best well out of service. The April 2004 pumping test met the requirements of demonstrating a satisfactory water supply for the proposed project.
- Data clearly indicate ground-water withdrawals from production wells to be completed at TW-3 and 6 of up to 19.6 gpm to meet the estimated water demands of the project will have no impact on offsite wells.
- The water quality analysis of water samples collected in April of 2004 for TW-3 and 6 indicates the water is acceptable for New York State Drinking Water Standards and has not been adversely impacted from surrounding land use.

- Surface water bodies (Quarry Pond) and onsite wetland features are expected to exhibit no significant effects from ground-water supply withdrawals from productions well completed at TW-3 and 6.
- It should be noted that the proposed development of production wells at TW-3 and 6 will require additional long-term (72-hour duration) pumping tests; water-quality analysis; and an offsite well monitoring to confirm findings presented in this study.

LEGGETTE, BRASHEARS & GRAHAM, INC.



Thomas P. Cusack
Senior Associate



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May 21, 2004

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APPENDIX I

**PUTNAM COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES**

WELL COMPLETION REPORT

BLW-1

Well Location	Street Address:	Town/Village:	Tax Grid #		
Well Owner:	Name:	Address:			
Use of Well:	☐ Residential ☐ Public Supply ☐ Air cond/heat pump ☐ Irrigation ☐ 1-primary ☐ Business ☐ Farm ☐ Test/monitoring ☐ Other(specify) ☐ 2-secondary ☐ Industrial ☐ Institutional ☐ Standby				
Drilling Equipment	☐ Rotary ☐ Cable percussion ☒ Compressed air percussion ☐ Other (specify)				
Well Type	☐ Screened ☐ Open end casing ☒ Open hole in bedrock ☐ Other				
Casing Details	Total length	93 ft.	Materials: ☒ Steel ☐ Plastic ☐ Other		
	Length below grade	91 ft.	Joints: ☐ Welded ☒ Threaded ☐ Other		
	Diameter	6 in.	Seal: ☐ Cement grout ☒ Bentonite ☐ Other		
	Weight per foot	17 lb/ft.	Drive shoe: ☒ Yes ☐ No Liner: ☐ Yes ☐ No		
Screen Details		Diameter (in)	Slot Size	Length(ft)	
	First			Depth to Screen (ft)	
	Second			Developed? ☐ Yes ☐ No	
Well Yield Test	☐ Bailed ☒ Pumped ☐ Compressed Air			Hours 6 Yield 8.5 gpm	
Depth Data	Measure from land surface-static (specify ft)		During yield test(ft)		
	60		198		
Well Log If more detailed information descriptions or sieve analyses are available, please attach.	Depth From Surface		Water Bearing	Well Diameter(in)	
	ft.	ft.		Formation Description	
	Land Surface	70	No	8 7/8	SILT sand Gravel Clay
	70	91	No	8 7/8	Bedrock
	91	706	yes	6"	Bedrock
If yield was tested at different depths during drilling, list:	Feet		Gallons Per Minute	Pump/Storage Tank Information	
				Pump Type _____ Capacity _____	
				Depth _____ Model _____	
				Voltage _____ HP _____	
				Tank Type _____ Volume _____	
Date Well Completed	Putnam County Certification No.	Date of Report	Well Driller (signature)		
6/3/00	8	7/20/00	Alan Erickson		

NOTE: Exact location of well with distances to at least two permanent landmarks to be provided on a separate sheet/plan.

Well Driller's Name ERICKSON BROS
Signature: Alan Erickson

Address: 1211 old ALBANY RD
Date: 7/20/00 GARRISON

White copy: HD File; Yellow copy - Building Inspector; Pink copy - Owner; Orange copy - Well driller

Form WC-97

**PUTNAM COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES**

WELL COMPLETION REPORT

Well BL-W 2

Well Location	Street Address:	Town/Village:	Tax Grid # Map Block Lot(s) <u>17</u>		
Well Owner:	Name: Address:				
Use of Well:	☐ Residential ☐ Public Supply ☐ Air cond/heat pump ☐ Irrigation ☐ Business ☐ Farm ☐ Test/monitoring ☐ Other(specify) ☐ Industrial ☐ Institutional ☐ Standby				
Drilling Equipment	☐ Rotary ☐ Cable percussion ☒ Compressed air percussion ☐ Other (specify)				
Well Type	☐ Screened ☐ Open end casing ☒ Open hole in bedrock ☐ Other				
Casing Details	Total length	<u>21</u> ft.	Materials: ☒ Steel ☐ Plastic ☐ Other		
	Length below grade	<u>19</u> ft.	Joints: ☐ Welded ☒ Threaded ☐ Other		
	Diameter	<u>6</u> in.	Seal: ☒ Cement grout ☐ Bentonite ☐ Other		
	Weight per foot	<u>17</u> lb/ft.	Drive shoe: ☒ Yes ☐ No Liner: ☐ Yes ☐ No		
Screen Details		Diameter (in)	Slot Size Length(ft) Depth to Screen (ft) Developed?		
	First				
	Second				
Well Yield Test	☐ Bailed ☒ Pumped ☐ Compressed Air		Hours <u>6</u> Yield <u>6</u> gpm		
Depth Data	Measure from land surface-static (specify ft) <u>29'</u>	During yield test(ft) <u>29'</u>	Depth of completed well in feet <u>265'</u>		
Well Log If more detailed information descriptions or sieve analyses are available, please attach.	Depth From Surface		Water	Well	Formation
	ft.	ft.	Bearing	Diameter(in)	Description
	Land Surface	<u>8</u>	<u>No</u>	<u>8 7/8</u>	<u>BANK RUN SAND & GRAVEL</u>
	<u>8</u>	<u>19</u>	<u>No</u>	<u>8 7/8</u>	<u>Bedrock</u>
	<u>19</u>	<u>265</u>	<u>Yes</u>	<u>6"</u>	<u>Bedrock</u>
If yield was tested at different depths during drilling, list:	Feet	Gallons Per Minute	Pump/Storage Tank Information		
			Pump Type	Capacity	
			Depth	Model	
			Voltage	HP	
			Tank Type	Volume	
Date Well Completed <u>6/7/00</u>	Putnam County Certification No. <u>8</u>	Date of Report <u>7/20/00</u>	Well Driller (signature) <u>Alan Erickson</u>		

NOTE: Exact location of well with distances to at least two permanent landmarks to be provided on a separate sheet/plan.

Well Driller's Name Erickson Bros

Signature: Alan Erickson

Address: 1211 Old ALBANY POST RD

GARRISON NY

Date: 7/20/00

White copy: HD File; Yellow copy - Building Inspector; Pink copy - Owner; Orange copy - Well driller

Form WC-97

**PUTNAM COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES**

WELL COMPLETION REPORT

Well BRW-3

Well Location	Street Address:	Town/Village:	Tax Grid # Map Block Lot(s) <u>18</u>		
Well Owner:	Name: Address:				
Use of Well:	☐ Residential ☐ Public Supply ☐ Air cond/heat pump ☐ Irrigation ☐ 1-primary ☐ Business ☐ Farm ☐ Test/monitoring ☐ Other(specify) ☐ 2-secondary ☐ Industrial ☐ Institutional ☐ Standby				
Drilling Equipment	☐ Rotary ☐ Cable percussion ☒ Compressed air percussion ☐ Other (specify)				
Well Type	☐ Screened ☐ Open end casing ☒ Open hole in bedrock ☐ Other				
Casing Details	Total length	<u>21</u> ft.	Materials: ☒ Steel ☐ Plastic ☐ Other		
	Length below grade	<u>19</u> ft.	Joints: ☐ Welded ☒ Threaded ☐ Other		
	Diameter	<u>6</u> in.	Seal: ☒ Cement grout ☐ Bentonite ☐ Other		
	Weight per foot	<u>17</u> lb/ft.	Drive shoe: ☒ Yes ☐ No Liner: ☐ Yes ☐ No		
Screen Details		Diameter (in)	Slot Size Length(ft) Depth to Screen (ft) Developed?		
	First				
	Second				
Well Yield Test	☐ Bailed ☒ Pumped ☐ Compressed Air		Hours <u>6</u> Yield <u>6.5</u> gpm		
Depth Data	Measure from land surface-static (specify ft) <u>8'</u>		During yield test(ft) <u>460</u>		
Well Log If more detailed information descriptions or sieve analyses are available, please attach.	Depth From Surface		Water Bearing	Well Diameter(in)	Formation Description
	ft.	ft.			
	Land Surface	<u>6</u>	<u>No</u>	<u>8 7/8</u>	<u>SAND GRAVEL</u>
	<u>6</u>	<u>19</u>	<u>No</u>	<u>8 7/8</u>	<u>BEDROCK</u>
	<u>19</u>	<u>665</u>	<u>Yes</u>	<u>6"</u>	<u>BEDROCK</u>
If yield was tested at different depths during drilling, list:	Feet		Gallons Per Minute	Pump/Storage Tank Information	
				Pump Type	Capacity
				Depth	Model
				Voltage	HP
				Tank Type	Volume
Date Well Completed	Putnam County Certification No.	Date of Report	Well Driller (signature)		
<u>6/9/00</u>	<u>8</u>	<u>7/20/00</u>	<u>John Erickson</u>		

NOTE: Exact location of well with distances to at least two permanent landmarks to be provided on a separate sheet/plan.

Well Driller's Name ERICKSON Bros
 Signature: John Erickson

Address: 1211 old ALBANY Post Rd
GARRISON NY
 Date: 7/20/00

White copy: HD File; Yellow copy - Building Inspector; Pink copy - Owner; Orange copy - Well driller

Form WC-97

**PUTNAM COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES**

WELL COMPLETION REPORT

Well Location	Street Address:	Town/Village:	Tax Grid # Map Block	BRW-4 Lot(s) 19	
Well Owner:	Name: _____ Address: _____				
Use of Well:	☐ Residential ☐ Public Supply ☐ Air cond/heat pump ☐ Irrigation ☐ 1-primary ☐ Business ☐ Farm ☐ Test/monitoring ☐ Other(specify) ☐ 2-secondary ☐ Industrial ☐ Institutional ☐ Standby				
Drilling Equipment	☐ Rotary ☐ Cable percussion ☒ Compressed air percussion ☐ Other (specify)				
Well Type	☐ Screened ☐ Open end casing ☒ Open hole in bedrock ☐ Other				
Casing Details	Total length	21 ft.	Materials: ☒ Steel ☐ Plastic ☐ Other		
	Length below grade	19 ft.	Joints: ☐ Welded ☐ Threaded ☐ Other		
	Diameter	6 in.	Seal: ☒ Cement grout ☐ Bentonite ☐ Other		
	Weight per foot	17 lb/ft.	Drive shoe: ☒ Yes ☐ No Liner: ☐ Yes ☐ No		
Screen Details		Diameter (in)	Slot Size	Length(ft)	
	First			Depth to Screen (ft)	
	Second			Developed? ☐ Yes ☐ No	
Well Yield Test	☐ Bailed ☒ Pumped ☐ Compressed Air			Hours 6 Yield 7 gpm	
Depth Data	Measure from land surface-static (specify ft) 20'		During yield test(ft) 20'	Depth of completed well in feet 265'	
Well Log If more detailed information descriptions or sieve analyses are available, please attach.	Depth From Surface		Water Bearing	Well Diameter(in)	Formation Description
	ft.	ft.			
	Land Surface	8	No	8 7/8	Sand Gravel
		19	No	8 3/4	Bedrock
		265	Yes	6	Bedrock
If yield was tested at different depths during drilling, list:	Feet		Gallons Per Minute	Pump/Storage Tank Information	
				Pump Type _____	Capacity _____
				Depth _____	Model _____
				Voltage _____	HP _____
				Tank Type _____	Volume _____
Date Well Completed 5/8/06	Putnam County Certification No. 8		Date of Report 7/20/00	Well Driller (signature) <i>Alan Erickson</i>	

NOTE: Exact location of well with distances to at least two permanent landmarks to be provided on a separate sheet/plan.

Well Driller's Name ERICKSON BROS
Signature: *Alan Erickson*

Address: 1211 old ALBANY Post Rd
GARRISON NY
Date: 7/20/00

White copy: HD File; Yellow copy - Building Inspector; Pink copy - Owner; Orange copy - Well driller

Form WC-97

**PUTNAM COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES**

WELL COMPLETION REPORT

Well Location	Street Address: <u>QUARRY ROAD</u>		Town/Village: <u>PHILIPSTOWN</u>		Tax Grid # <u>BRW-5</u>	
	<u>TEST WELL 3 ESTATES</u>				Map Block Lot(s)	
Well Owner:	Name: <u>LEE BALTER</u> Address: <u>P.O. Box 536, GARRISON, NY 10524</u>					
Use of Well:	☐ Residential ☐ Public Supply ☐ Air cond/heat pump ☐ Irrigation ☐ Business ☐ Farm ☒ Test/monitoring ☐ Other(specify) ☐ Industrial ☐ Institutional ☐ Standby					
1-primary						
2-secondary						
Drilling Equipment	☐ Rotary ☐ Cable percussion ☒ Compressed air percussion ☐ Other (specify)					
Well Type	☐ Screened ☐ Open end casing ☒ Open hole in bedrock ☐ Other					
Casing Details	Total length <u>60</u> ft.		Materials: ☒ Steel ☐ Plastic ☐ Other			
	Length below grade <u>59</u> ft.		Joints: ☐ Welded ☒ Threaded ☐ Other			
	Diameter <u>6</u> in.		Seal: ☒ Cement grout ☐ Bentonite ☐ Other			
	Weight per foot <u>19</u> lb/ft.		Drive shoe: ☒ Yes ☐ No		Liner: ☐ Yes ☒ No	
Screen Details	Diameter (in)		Slot Size	Length(ft)	Depth to Screen (ft)	Developed?
	First					☐ Yes ☐ No
	Second					Hours
Well Yield Test	☐ Bailed ☐ Pumped ☒ Compressed Air				Hours <u>6</u>	Yield <u>10</u> gpm
Depth Data	Measure from land surface-static (specify ft)		During yield test(ft)		Depth of completed well in feet	
			<u>Total DEW DOWN</u>		<u>455'</u>	
Well Log	Depth From Surface		Water	Well	Formation	
If more detailed information descriptions or sieve analyses are available, please attach.	ft.	ft.	Bearing	Diameter(in)	Description	
	Land Surface	<u>47</u>			<u>SAND + GRAVEL - Till</u>	
		<u>47</u>			<u>CLAY</u>	
		<u>370'</u>			<u>Water Bearing Fracture 10gpm</u>	
If yield was tested at different depths during drilling, list:	Feet	Gallons Per Minute	Pump/Storage Tank Information			
	<u>370'</u>	<u>10gpm</u>	Pump Type	Capacity		
			Depth	Model		
			Voltage	HP		
			Tank Type	Volume		
	<u>total</u>	<u>10gpm</u>				
Date Well Completed	Putnam County Certification No.		Date of Report	Well Driller (signature)		
<u>1-30-03</u>	<u>003</u>		<u>9/23</u>	<u>[Signature]</u>		

NOTE: Exact location of well with distances to at least two permanent landmarks to be provided on a separate sheet/plan.

Well Driller's Name: BOYD ARTESIAN WELL

Signature: [Signature]

Address: 1094 RT 52 CARMEL, NY 10512

Date: 9-23-03
845-225-3196

White copy: HD File; Yellow copy - Building Inspector; Pink copy - Owner; Orange copy - Well driller

Form WC-97

APPENDIX II

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918	845-469-2266 845-469-2443 FAX JOB # 1871-03
Project - Quarry Park - Rt 9 Phillipstown	Boring #: 1 <i>tb-1 ; mw-1</i>
Client: LBG	Location of Boring:
Remarks:	Date Started: 8/20/03
	Date Finished: 8/20/03

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-1'	Topsoil
				1'-3'	Light brown silty fine sand
				3'-12'	Brown coarse to fine sand, little silt, trace of coarse to fine Gravel, trace of rock fragments, occasional cobbles.
5					
10					
				12'-18'	Brown coarse to fine sand trace of gravel, and rock
15					
				18'-39'	Gray brown coarse to fine sand and coarse to fine gravel, Some cobbles and small boulder, trace of silt
20					
					EOB 39'
					NOTE: installed 5' of 2" PVC screen from 33'-38'
					2" PVC Riser to surface
25					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918		845-469-2266 845-469-2443 FAX		JOB # 1871-03
Project - Quarry Park – Rt 9 Phillipstown		Boring #: 2 <i>TB-2</i>		
		Location of Boring:		
Client: LBG		Date Started: 8/19/03		
Remarks:		Date Finished: 8/19/03		

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-1'	Topsoil
				1'-3'	brown silty sand
				3'-12'	Brown coarse to fine sand, little coarse to fine gravel
5					
10					
				12'-25'	Brown medium to fine sand, trace of silt
15					
20					
25				25'-31'	Brown silty fine sand and medium to fine sand

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KENDRICK ENTERPRISES, LTD.

Depth below gnd. Surf.	Casing blows per ft.	Sample no.	Blows on Sample Spoon per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
30					
				31'-33'	Roller bit, hard drilling, possible bedrock
					EOB 33'
35					
40					
45					
50					
55					
60					
65					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918		845-469-2266 845-469-2443 FAX		JOB # 1871-03
Project - Quarry Park – Rt 9 Phillipstown		Boring #: 3 <i>TB-3</i>		
		Location of Boring:		
Client: LBG		Date Started: 8/18/03		
Remarks:		Date Finished: 8/18/03		

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-11'	Brown medium to fine sand, trace of silt
5					
10					
				11'-18'	Brown medium to fine sand, occasional pockets of brown silty Sand and sandy silt 2'-3', trace of coarse sand
15					
				18'-22'	Brown sandy silt and silty sand, trace of gravel
20					
				22'-28'	Brown silt, trace of cobbles
25					

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KENDRICK ENTERPRISES, LTD.

Depth below gnd. Surf.	Casing blows per ft.	Sample no.	Blows on Sample Spoon per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				28'-31'	Hard drilling some seams, possible bedrock or boulders
30					
				31'-32'	Hard drilling
					EOB 32'
35					
40					
45					
50					
55					
60					
65					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918		845-469-2266 845-469-2443 FAX		JOB # 1871-03
Project - Quarry Park - Rt 9 <u>Phillipstown</u>		Boring #: 4 <i>TB-4 ; MW-4</i>		
		Location of Boring:		
Client: LBG		Date Started: 8/18/03		
Remarks:		Date Finished: 8/18/03		

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-11'	Brown coarse to fine sand, trace of coarse to fine gravel, Trace of silt
5					
10					
				11'-17'6"	Brown medium to fine sand, occasional pockets of silt
15					
				17'6'-22'	Gray fine to medium sand, little silt
20					
				22'-30'	Gray poskets of silty fine sand and sandy silt with lenses of Coarse to fine sand
25					

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KENDRICK ENTERPRISES, LTD.

Depth below gnd. Surf.	Casing blows per ft.	Sample no.	Blows on Sample Spoon per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
30				30'-30'6"	Brown silt
				30'6"-33'6"	Brown coarse to fine sand, trace of coarse to fine gravel
				33'6"-36'6"	Gray coarse to fine very compact sand and rock fragments
35					
				36'6"-39'	Very hard drilling, possible bedrock
					EOB 39'
40					Installed 5'2" screen and 33'2" PVC Riser
					Bottom depth 36'
45					
50					
55					
60					
65					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918		845-469-2266 845-469-2443 FAX	JOB # 1871-03
Project - Quarry Park – Rt 9 Phillipstown		Boring #: 5	<i>TB-5 ; MW-5</i>
		Location of Boring:	
Client: LBG		Date Started: 8/25/03	
Remarks:		Date Finished: 8/25/03	

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-1'	Brown topsoil
				1'-3'	Brown medium to fine sand, trace of silt
				3'-16'	Brown coarse to fine sand, trace of coarse to fine gravel, Occasional cobbles, trace of silt
5					
10					
15					
				16'-21'	Brown pkets of fine sandy silt and silty sand and coarse To fine sand, trace of cobbles
20					
				21'-36'	Brown fine sand and silty fine sand and sandy silt
25					

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KENDRICK ENTERPRISES, LTD.

Depth below gnd. Surf.	Casing blows per ft.	Sample no.	Blows on Sample Spoon per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
30					
35					
				36'-38'	Cobbles
				38'-41'	Gray brown coarse to fine sand and coarse to fine gravel, trace Occasional cobbles
40					
				41'-44'	Sand, gravel, boulders and cobbles
					EOB 44'
45					NOTE: installed 5' of 2" PVC screen from 39'-34'
					Riser from 34' to 42
					Protective casing installed
50					
55					
60					
65					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918	845-469-2266 845-469-2443 FAX JOB # 1871-03
Project - Quarry Park – Rt 9 Phillipstown	Boring #: 6 <i>TB-6</i> Location of Boring: as directed
Client: LBG	Date Started: 8/25/03
Remarks:	Date Finished: 8/26/03

Casing Hammer	Sample Hammer	Ground Water Observations			
Wt. 300	Wt. 140	Date	Time	Depth	Casing at
Fall 24	Fall 30				
Ground Elev.	O.D. Spoon 2"				
	I.D. Casing 4"	Driller: TJ Kendrick			

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-3'	Brown silty fine sand
				3'-6'	Brown coarse to fine sand, trace of coarse to fine gravel
5					
				6'-8'	Gray silty fine sand
				8'-10'	Brown gray medium to fine sand
10				10'-13'6"	Brown silt and medium to fine sand (layered)
				13'6"-18'6"	Brown sand, gray and rock fragments and cobbles, very hard
15					
				18'6"-21'	Roller bit, very hard drilling, possible rock
20					EOB 21'
25					

Kendrick Enterprises, Ltd. 63 Black Meadow Road Chester, New York 10918	845-469-2266 845-469-2443 FAX JOB # 1871-03
Project - Quarry Park – Rt 9 Phillipstown	Boring #: 7 <i>TB - 7</i> Location of Boring: as directed
Client: LBG	Date Started: 8/26/03
Remarks:	Date Finished: 8/26/03

Casing Hammer		Sample Hammer		Ground Water Observations		
Wt.	300	Wt.	140	Date	Time	Depth
Fall	24	Fall	30			
Ground Elev.		O.D. Spoon	2"			
		I.D. Casing	4"	Driller: TJ Kendrick		

Depth below gnd. Surf	Casing blows per ft.	Sample no.	Blows on Sample Spoon Per 6"	FIELD IDENTIFICATION OF SOIL & REMARKS	
				0-3'	Brown coarse to fine sand and coarse to fine gravel with Cobbles
				3'-7'	Brown coarse to fine sand, trace of coarse to fine gravel
5					
				7'-9'	Roller bit, hard drilling, possible rock
					EOB 9'
10					
15					
20					
25					

APPENDIX III

PAGE 1
OF 1

RECORD OF TEST DRILLING
CLIENT Philipstown : Paul
HOLE# S.B.C. #1-03 *FW-1*
DATE 09/26/2003
RIG ACKER
DRILLER Joe Tucker

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863			HAMMER WEIGHT 500 STATIC WATER LEVEL 11.86 MATERIALS LEFT IN PLACE: 27' of 2 1/2" pipe with drive shoe 2 - .020 slot screen	
DEPTH FROM SURFACE	FROM	TO		
	0'	10'-8"		
10'-8"	16'-0"			
16'-0"	21'-4"			
21'-4"	26'-8"			
26'-8"	32'-0"			
32'-0"	37'-4"			
37'-4"	41'-4"			
Drove hard, 0'-5', Drove fair 5'-10', till-like clay, cobbles, sand and gravel to 5', then fine to medium brown sand and gravel Took little water				
Drove fair, fine to medium brown sand, fine to coarse gravel, some brown silt, took water fair				
Drove fair, fine to medium brown sand, fine to medium gravel, some brown silt, Took water good				
Drove fair, fine to medium brown sand, fine to medium gravel, heavier silt, Took water good				
Drove fair, fine to medium brown sand, fine to medium gravel, trace coarse gravel brown silt Took water good				
Drove fair, change 35' +-, very fine to fine brown sand, heavier brown silt, trace fine gravel Took water good				
Drove fair, very fine to fine brown sand, some fine gravel Took no water				
Set .020 inch screens from 29 to 39'4"; bottom 5 foot interval pumped 60 gpm with 21.5" vacuum; the entire 10 feet of screen pumped 65 gpm with 19.5" vacuum				

PAGE 1
OF 2

RECORD OF TEST DRILLING
CLIENT Phillipstown : Paul
HOLE# S. B. C. #2-03 Tw-2
DATE 9-26 to 9-29-03
RIG ACKER
DRILLER Joe Tucker

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863		HAMMER WEIGHT 500 STATIC WATER LEVEL 8.86 MATERIALS LEFT IN PLACE: 64': 2 1/2" pipe, 1 1/2" shoe 1: 2 - .020 slot screens	
DEPTH FROM SURFACE	TO		
	FROM	TO	
	0"	10'-8"	Drove good, brown silt, brown and gray clay Took no water
	10"-8"	16'-0"	Drove good, brown silt, brown and gray clay, starting to get some sand and gravel Took no water
	16'-0"	21'-4"	Drove good, layer fine to medium brown sand, fine to medium gravel, fine to medium gray sand, fine to medium gravel, heavy silt and clay Took no water
	21'-4"	26'-8"	Drove fair, gray silt, gray blue clay balls, fine gray sand, some fine gravel Took no water
			Took no water
	26'-8"	32'-0"	Drove fair, heavy gray silt, gray blue clay, trace sand and gravel Took no water
	32'-0"	37'-4"	Drove fair, heavy gray silt, gray blue clay, trace sand and gravel Took no water
	37'-4"	42'-8"	Drove fair, heavy gray silt, gray blue clay, trace sand and gravel Took no water
	42'-8"	48'-0"	Drove fair, blue-gray clay and silt Took no water
	48'-0"	53'-4"	Drove fair, blue-gray clay and silt Took no water
	53'-4"	58'-8"	Drove fair, blue-gray clay and silt Took no water
	58'-8"	64'-0"	Drove fair, blue-gray clay and silt, brown clay, trace brown sand & gravel to 62' then fine to medium brown sand, fine to medium gravel Took water good
	64'-0"	69'-4"	Drove hard, fine to medium brown sand, fine to medium gravel, brown silt Took water good

RECORD OF TEST DRILLING

CLIENT Philipstown Paul

HOLE# S.B.C. #3-03 TW-3

DATE 09/30/2003

RIG ACKER

DRILLER Joe Tucker

PAGE 1
OF 2

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863		HAMMER WEIGHT	500
		STATIC WATER LEVEL	9.96
		MATERIALS LEFT IN PLACE: 48'-2 1/2" pipe, 1: 2 1/2 " shoe	
		2 - .020 slot and 1 - .030 slot screen	
DEPTH FROM SURFACE	FROM	TO	
	0"	10'-8"	
	10'-8"	16'-0"	Drove good, layer clay, sand and gravel then brown clay and silt Took no water
	16'-0"	21'-4"	Drove fair, brown clay, silt, trace sand and gravel Took no water
			Drove hard, brown clay & silt to 18.5', fine brown sand, fine gravel, silt to 21'
			Took little water
	21'-4"	26'-8"	Drove hard, fine to medium brown fine sand, fine to coarse silty gravel
			Took some water
	26'-8"	32'-0"	Drove hard, fine brown sand, fine gravel, brown silt, thin clay layers, Took some water
	32'-0"	37'-4"	Drove Fair, fine brown sand, fine to medium gravel, heavy brown silt, trace brown clay balls Took some water
	37'-4"	42'-8"	Drove hard, fine to medium brown sand, fine to medium gravel, heavy brown silt, trace brown clay balls Took some water
	42'-8"	48'-0"	Drove hard, fine to medium brown sand, fine to medium gravel, heavy brown silt, Took water very good
	48'-0"	53'-4"	Drove hard, fine to medium brown sand, fine to medium gravel, brown silt Took some water

RECORD OF TEST DRILLING

CLIENT Philipstown : Paul

HOLE#	S.B.C. #3-03	7u-3
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DATE	09/30/2003
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RIG ACKER

DRILLER
Joe Tucker

THE STEPHEN B. CHURCH CO.

SEYMOUR, CONNECTICUT 06483

PHONE (203) 888-2132 FAX (203) 888-1863

HAMMER WEIGHT

STATIC WATER LEVEL

MATERIALS LEFT IN PLACE:

DEPTH
FROM
SURFACE

FROM

01

53' 4"

58'-8"

Drove very very hard, very fine milky brown sand, fine gravel, silt

Took some water

8.85

64'-0"

Drove very hard, very fine milky brown sand, fine gravel, silt

Took some water

64'-0"

65'-4"

Drove very hard, very fine sand and gravel, till-like material Took more

water

Set 10 feet of .020 inch slot screen on bottom, with 5 feet of .030 inch screen above it; screens set from 49' to 64'; well pumped 65 gpm with 19.5" vacuum

19.5" vacuum

RECORD OF TEST DRILLING

CLIENT

Philipstown Paul

HOLE#

SBC #4-03

DATE

10/02/2003

RIG

Acker

DRILLER

Joe Tucker

PAGE 1
OF 2

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863			HAMMER WEIGHT	500
DEPTH FROM SURFACE			STATIC WATER LEVEL	10.02
			MATERIALS LEFT IN PLACE:	
			64 feet of 2 1/2 inch pipe with drive shoe; 20 feet of .020 inch slot well screen	
FROM	TO			
0	10' 8"		Drove good; brown clay and silt; took no water	
10' 8"	16' 0"		Drove good to 14 feet; drove fair to 16 feet; brown silt and clay with some sand; took no water	
16' 0"	21' 4"		Drove fair; brown fine to medium sand; very silty, with clay layers - took no water	
21' 4"	26' 8"		Drove good - blue-grey clay and silt with some sand and gravel - took no water	
26' 8"	32' 0"		Drove good - blue-grey clay and silt - took no water	
32' 0"	37' 4"		Same	
37' 4"	42' 8"		Same	
42' 8"	48' 0"		Same	
48' 0"	53' 4"		Same	
53' 4"	58' 8"		Drove good - blue grey clay and silt; trace sand and gravel	
58' 8"	64' 0"		Drove fair; clay and silt to 61 feet; then brown fine to medium sand and gravel; took water good	
64' 0"	69' 4"		Drove hard; brown silty fine to medium sand; fine gravel; took water fair	
69' 4"	74' 8"		Same - took water fair	
74' 8"	80' 0"		Drove fair; same material - took water fair	

RECORD OF TEST DRILLING

CLIENT Philipstown : Paul

HOLE# SBC #6-03

DATE 10/03/2003

RIG Acker

DRILLER Joe Tucker

PAGE
OF

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863			HAMMER WEIGHT 500
DEPTH FROM SURFACE			STATIC WATER LEVEL 10.32
			MATERIALS LEFT IN PLACE:
			48 feet of 2 1/2 inch pipe with drive shoe; 15 feet of .020 inch slot well screen
FROM	TO		
0	10' 8"	Drove good - Brown silt and clay - took no water	
10' 8"	16' 0"	Drove good - Brown silt and clay with trace of sand and gravel; took no water	
16' 0"	21' 4"	Drove good - brown silty-clayey sand with fine to medium gravel; took no water	
21' 4"	26' 8"	Drove good - grey silt and clay with some sand and gravel - took no water	
26' 8"	32' 0"	Drove good - same - took no water	
32' 0"	37' 4"	Drove good - grey silty/ clayey fine to medium sand and gravel - took no water	
37' 4"	42' 8"	Drove fair - grey clayey sand and gravel to 40 feet; then brown silty fine to medium sand and gravel - took water good	
42' 8"	48' 0"	Drove fair - brown silty sand and fine to medium gravel; took water good	
48' 0"	53' 4"	Drove hard - brown silty sand and fine to medium gravel - took water fair	
53' 4"	58' 8"	Drove hard - brown silty fine to medium sand and fine gravel - took water fair	
58' 8"	63' 3"	Drove very hard - Brown very silty sand and fine gravel - took water fair	
		Set .020 inch slot screen from 48 to 63.25 feet; well pumped 60 gpm with 21 inches of vacuum	

RECORD OF TEST DRILLING

CLIENT Philipstown : Paul

HOLE# S.B.C. #7-03 W-7

DATE 10-6 to 10-8-03

RIG ACKER

DRILLER Joe Tucker

PAGE 1
OF 1

THE STEPHEN B. CHURCH CO. SEYMOUR, CONNECTICUT 06483 PHONE (203) 888-2132 FAX (203) 888-1863			HAMMER WEIGHT	500
DEPTH FROM SURFACE			STATIC WATER LEVEL	11.52'
			MATERIALS LEFT IN PLACE:	
			75 feet of 2 1/2" pipe, 1 1/2 shoe	
			1 - .020 slot screen	
FROM	TO			
0'	10'-8"	Drove good, brown sand, brown silt & clay Took no water		
10'-8"	16'-0"	Drove good, brown silt, brown clay, gray clay Took no water		
16'-0"	21'-4"	Drove fair, blue-gray silt & clay, brown clay, sand & gravel mixed Took no water		
21'-4"	26'-8"	Drove fair, blue-gray silt & clay, brown clay, sand & gravel mixed Took no water		
26'-8"	32'-0"	Drove fair, blue-gray silt & clay, brown clay, sand & gravel mixed Took no water		
32'-0"	37'-4"	Drove fair, solid blue-gray clay & silt Took no water		
37'-4"	69'-4"	Drove good samples are all blue clay and silt Took no water		
69'-4"	74'-8"	Drove hard, blue-gray clay & silt to 71.5', fine to medium brown sand, fine to medium gravel, brown silt to 75' Took water good		
74'-8"	80'-0"	Drove hard, fine to medium brown sand, fine gravel, brown silt Took water good		
		Not drilled to refusal - Screened from 75' 3" to 80' 3" with .020 inch slot screen; developed and pumped 25 gpm with 25 inches vacuum		

APPENDIX IV

**PHILIPSTOWN INDUSTRIAL PARK
TOWN OF PHILIPSTOWN, NEW YORK**

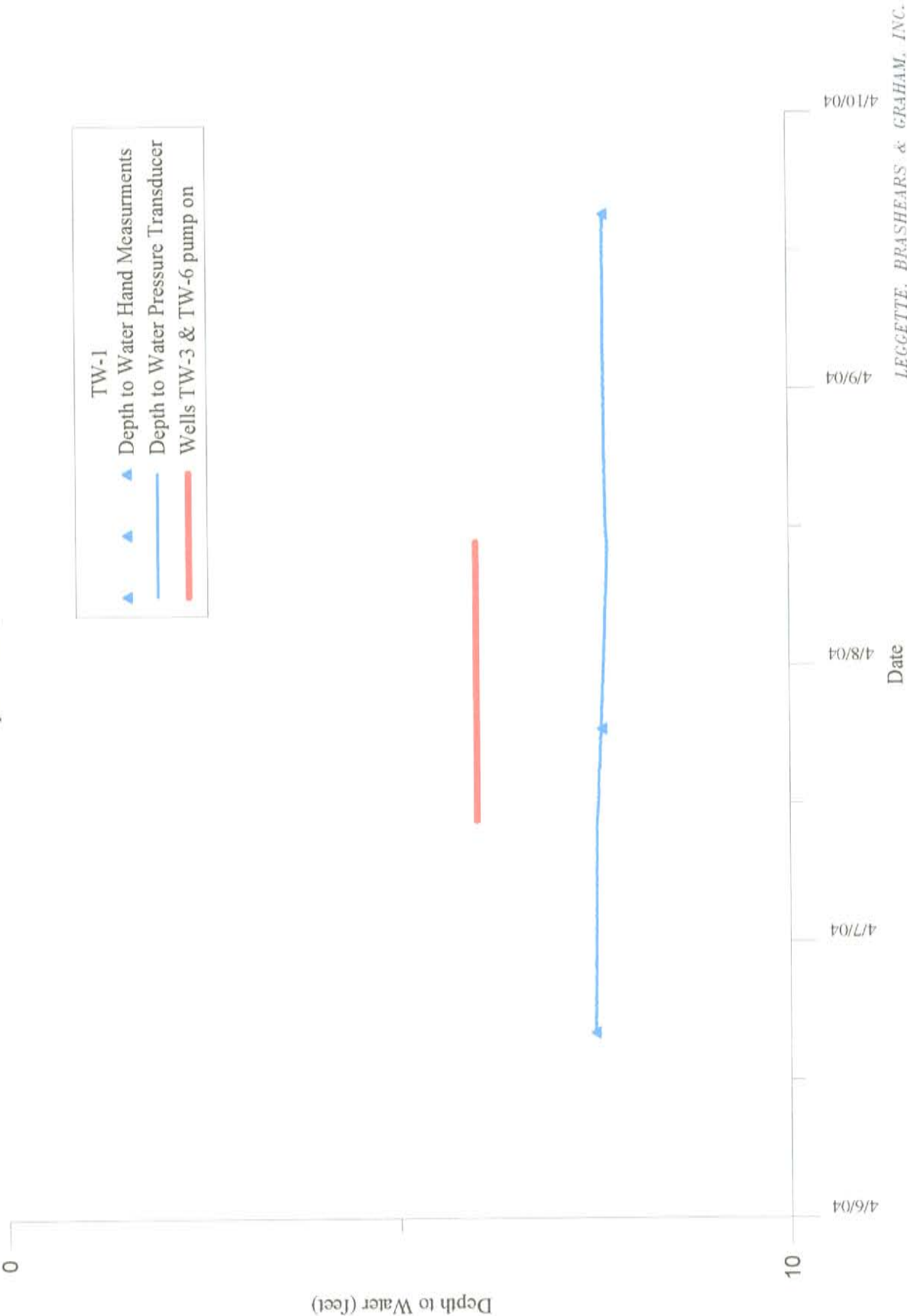
**Table Summarizing Precipitation Data Collected During Simultaneous
Pumping Test of TW-3 and TW-6. April 6 – April 9, 2004**

Date	Time	Rain (inches)	Comments
4/6/04	12:00	0	
4/7/04	12:00	0	
4/8/04	12:00	0	
4/9/04	12:00	0	

H:\TEXTTEMP\Quarry Pond 2004\precipitable\Precip table.doc

**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of TW-1
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



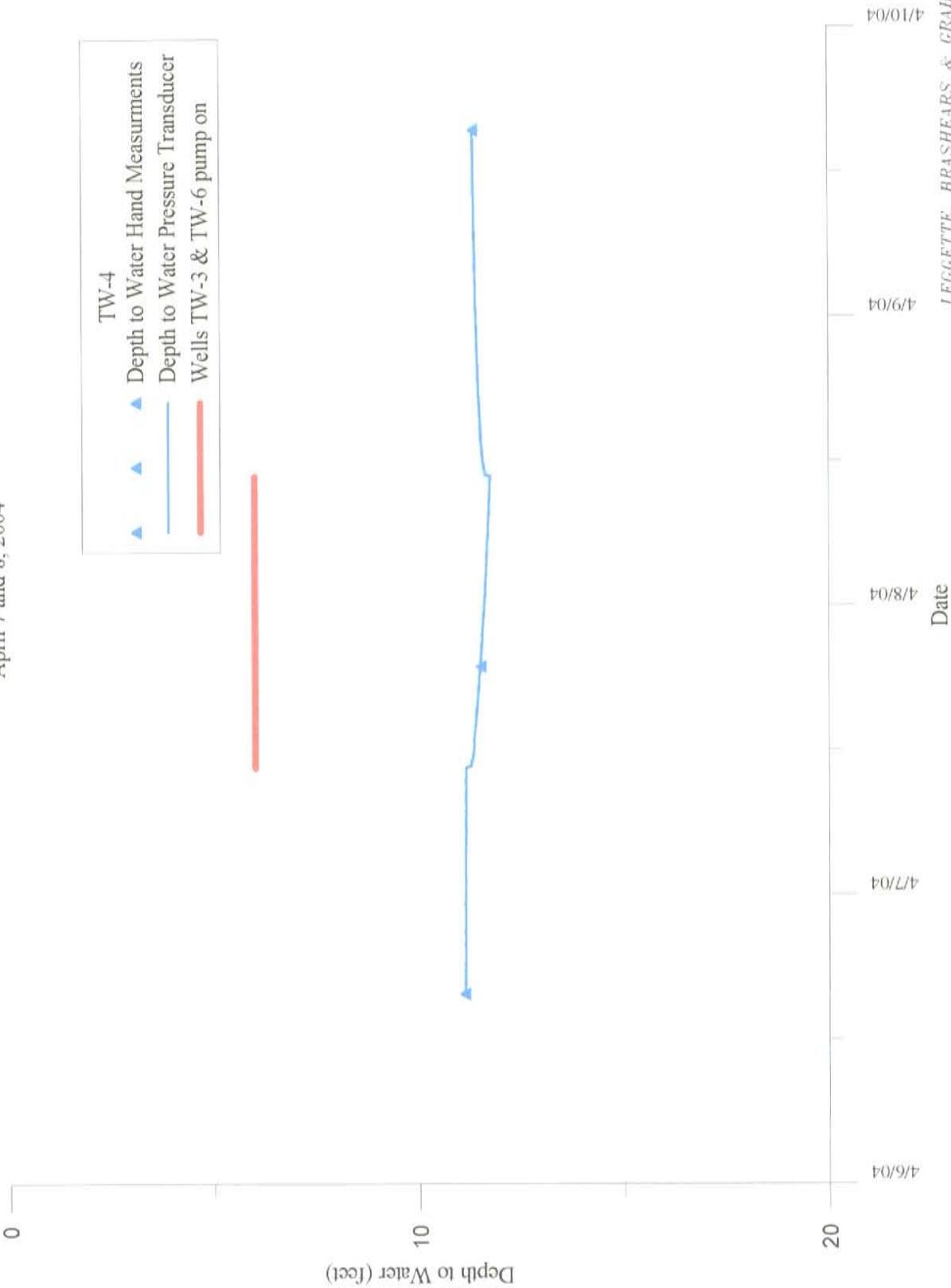
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of TW-2
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of TW-4
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004

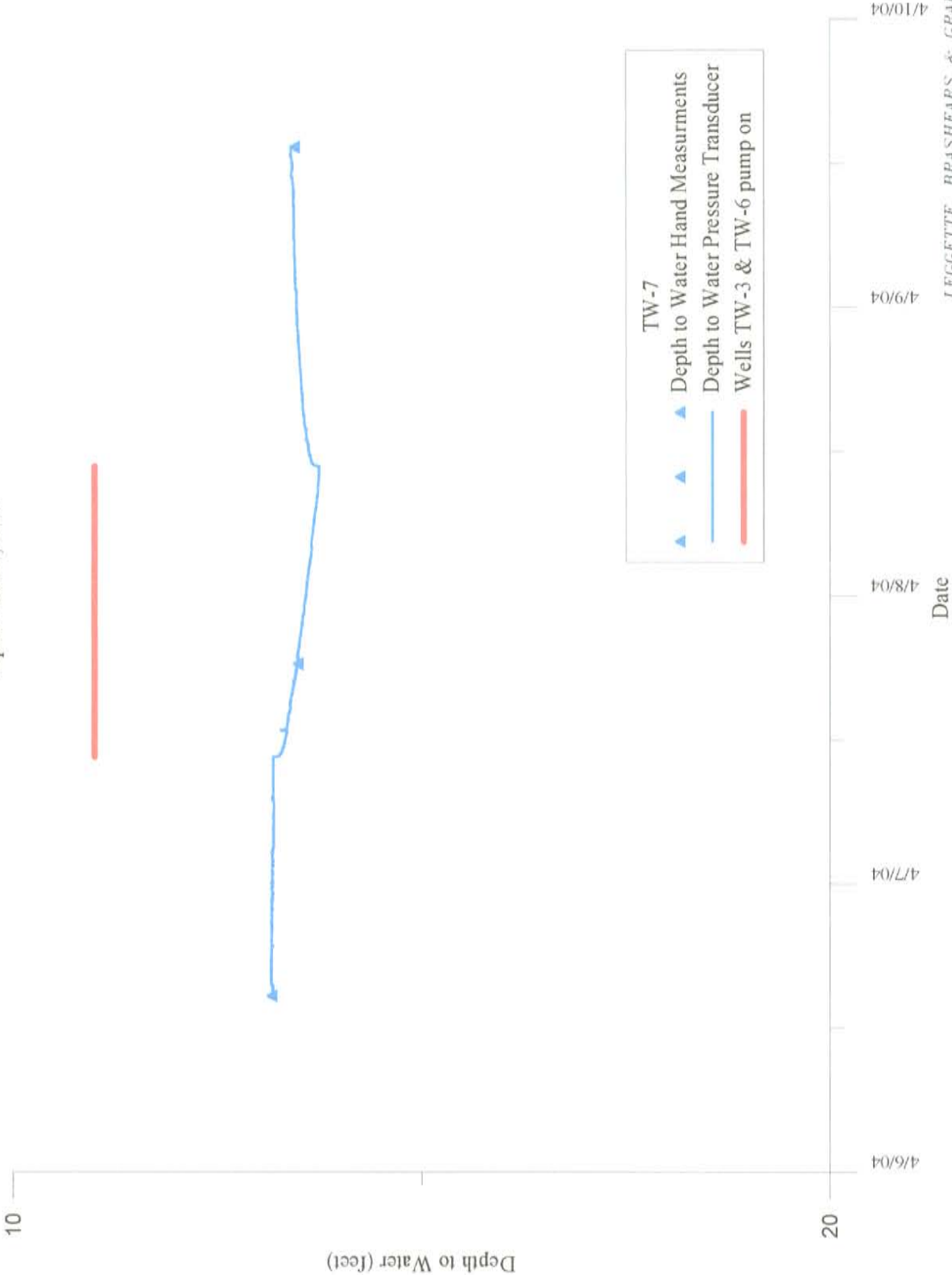


Hydrograph of TW-5
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



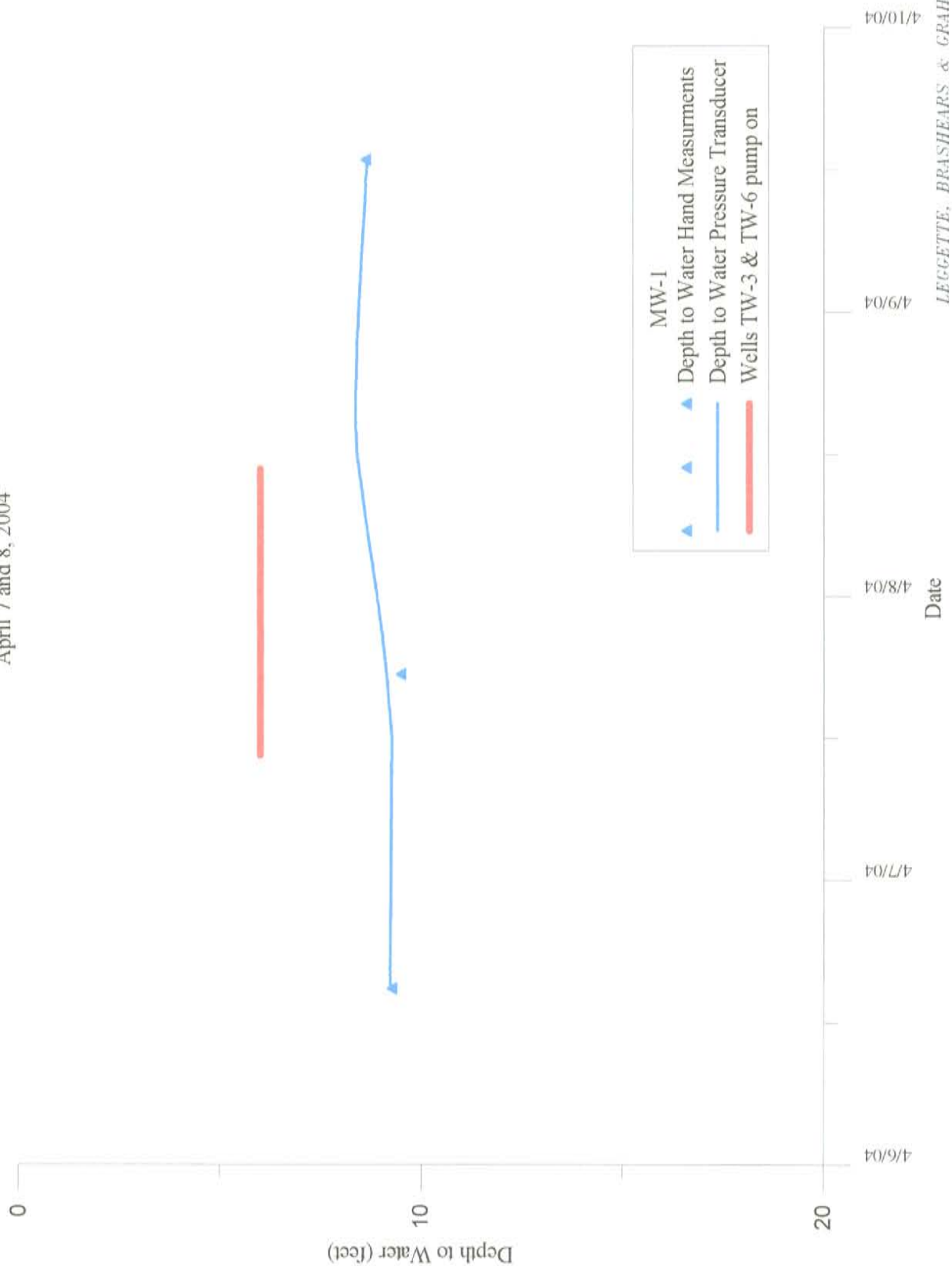
PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK

Hydrograph of TW-7
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



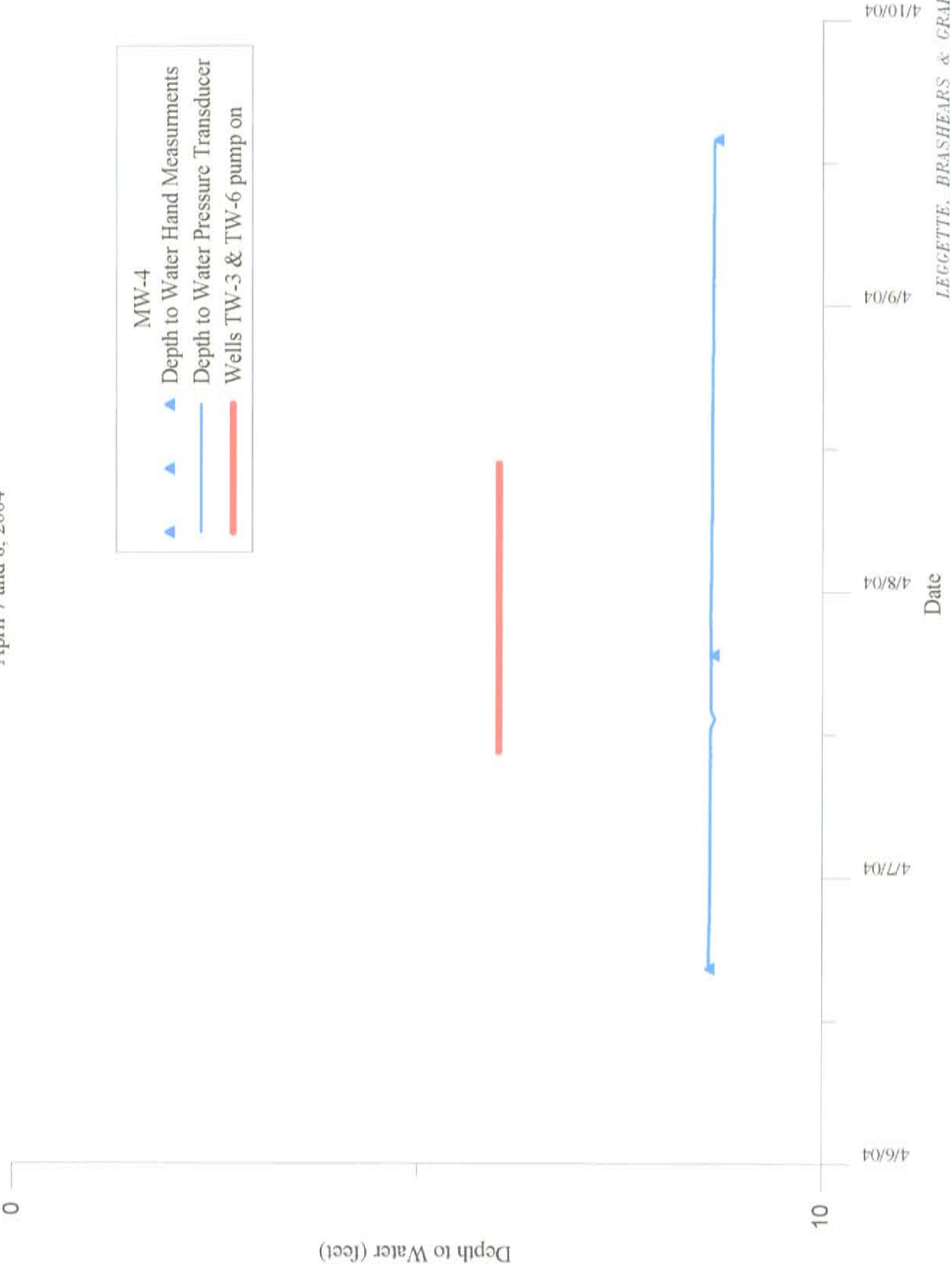
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of MW-1
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



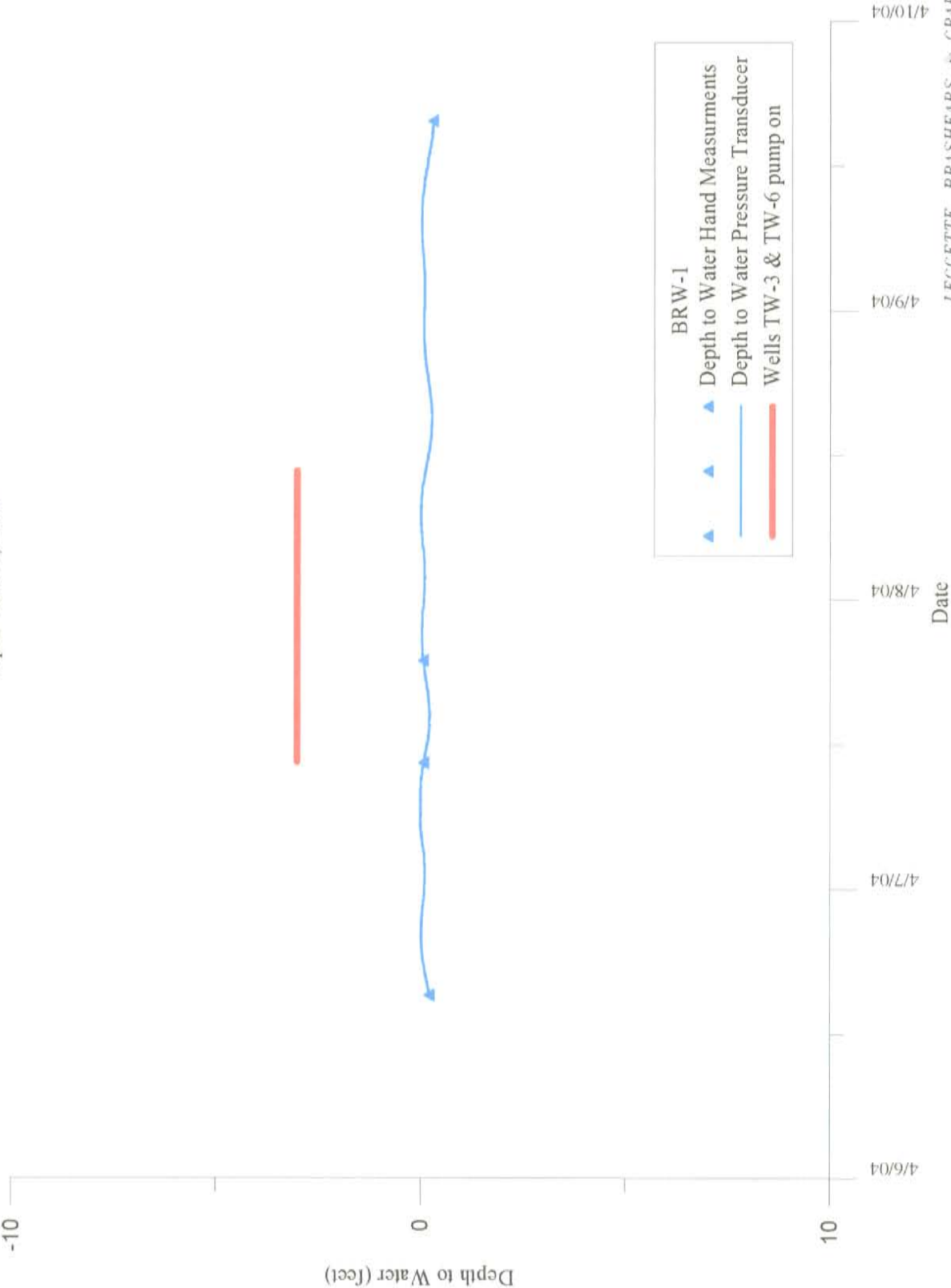
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of MW-4
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



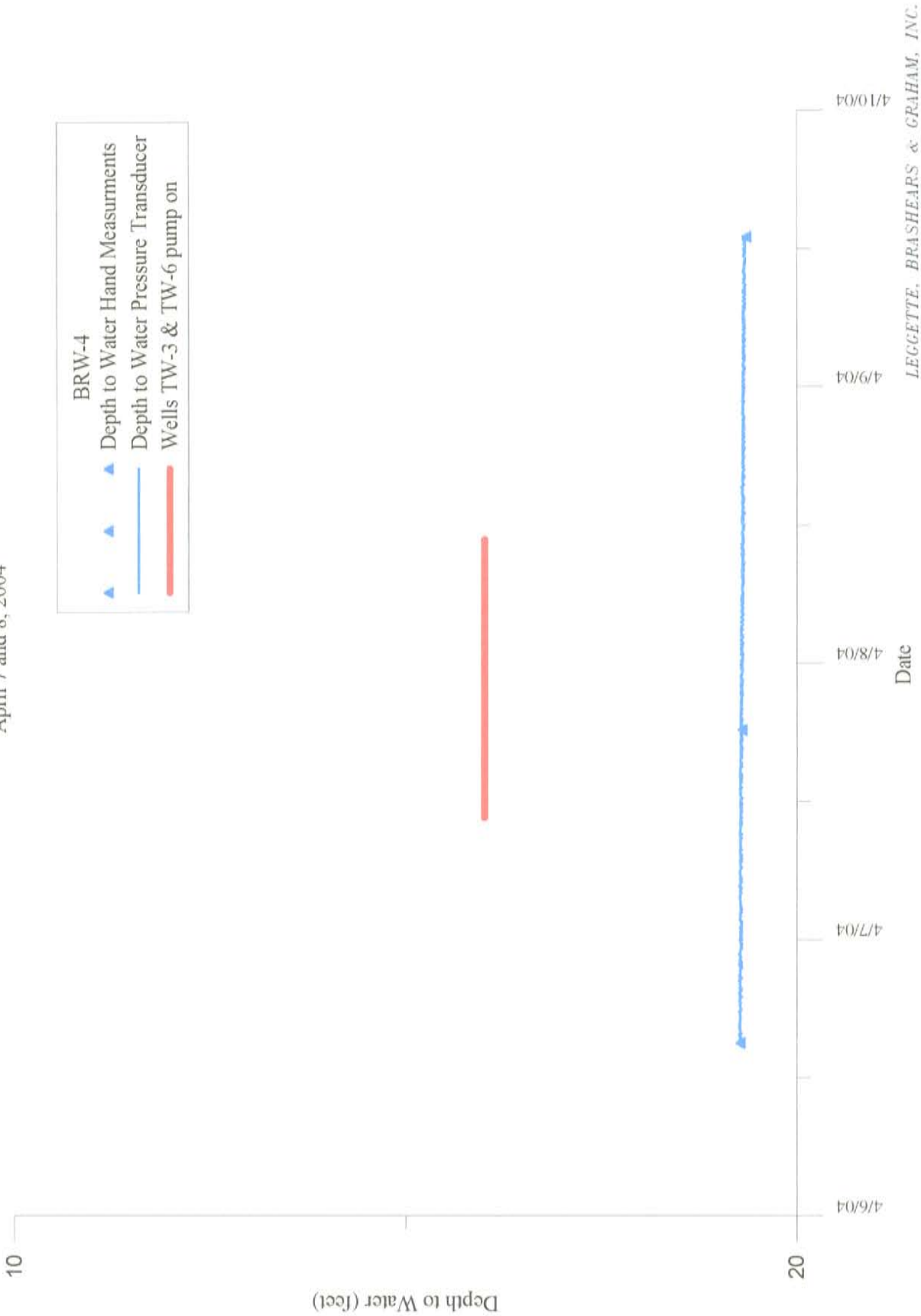
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of BRW-1
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



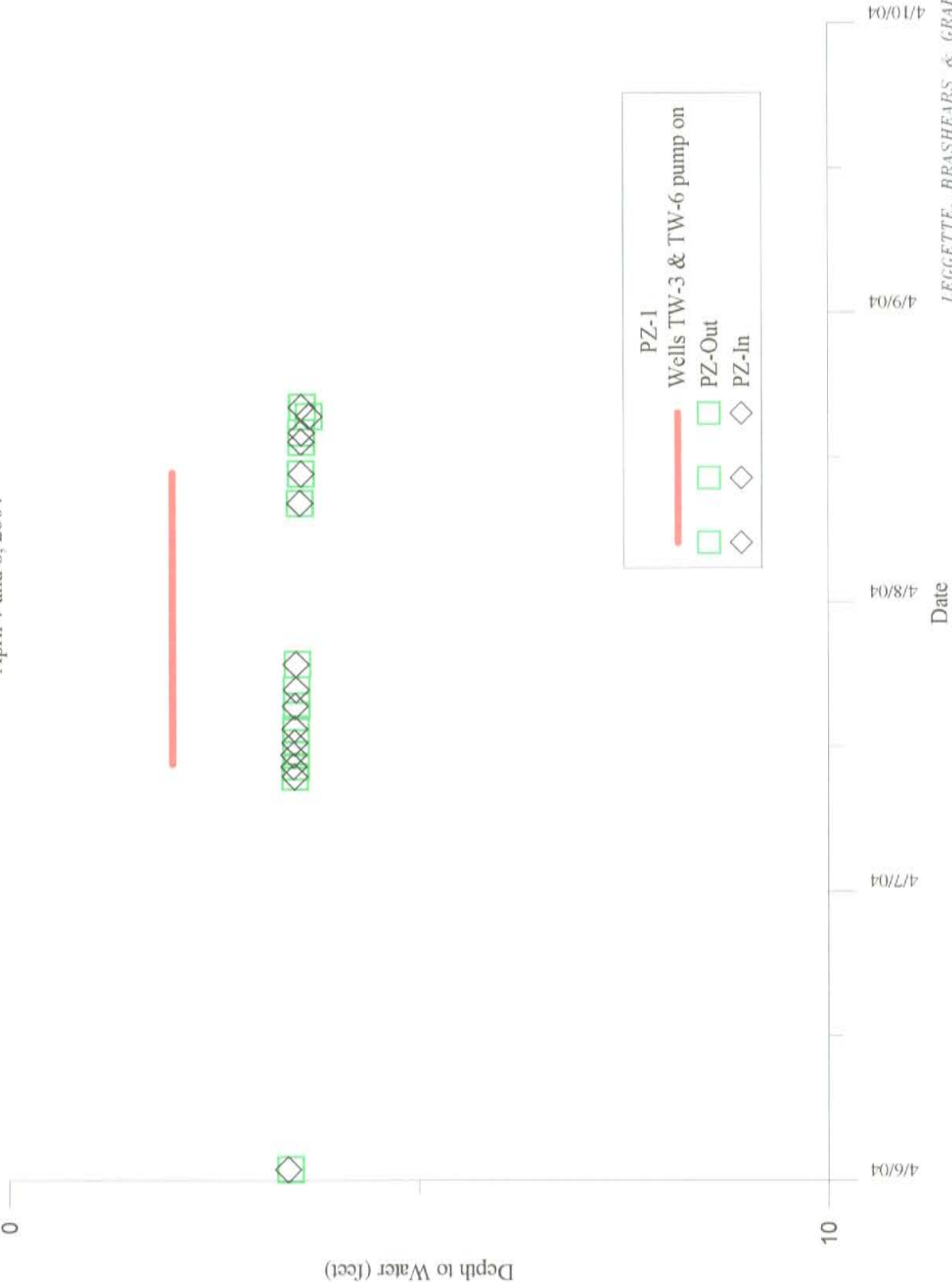
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of BRW-4
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



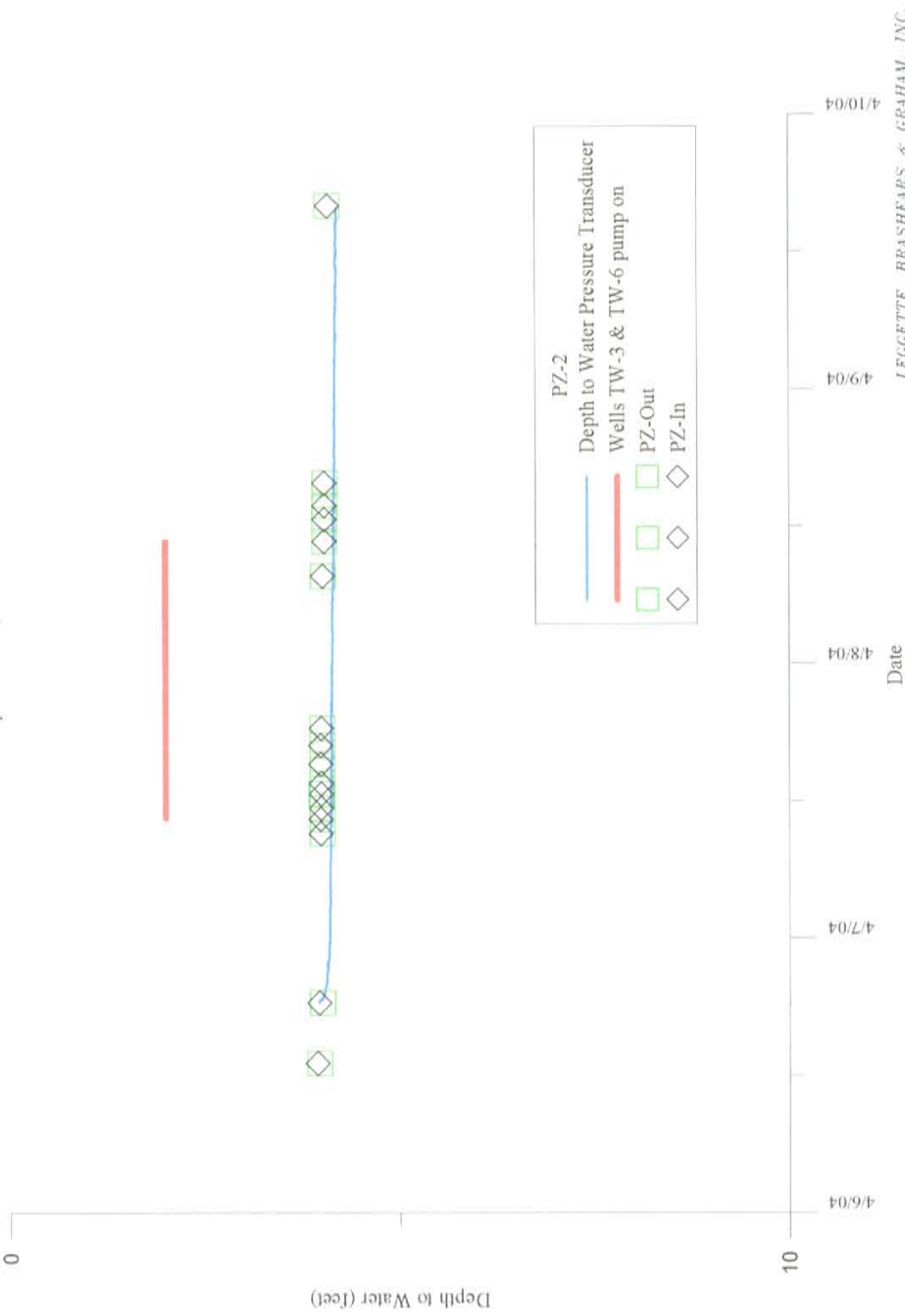
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of PZ-1
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



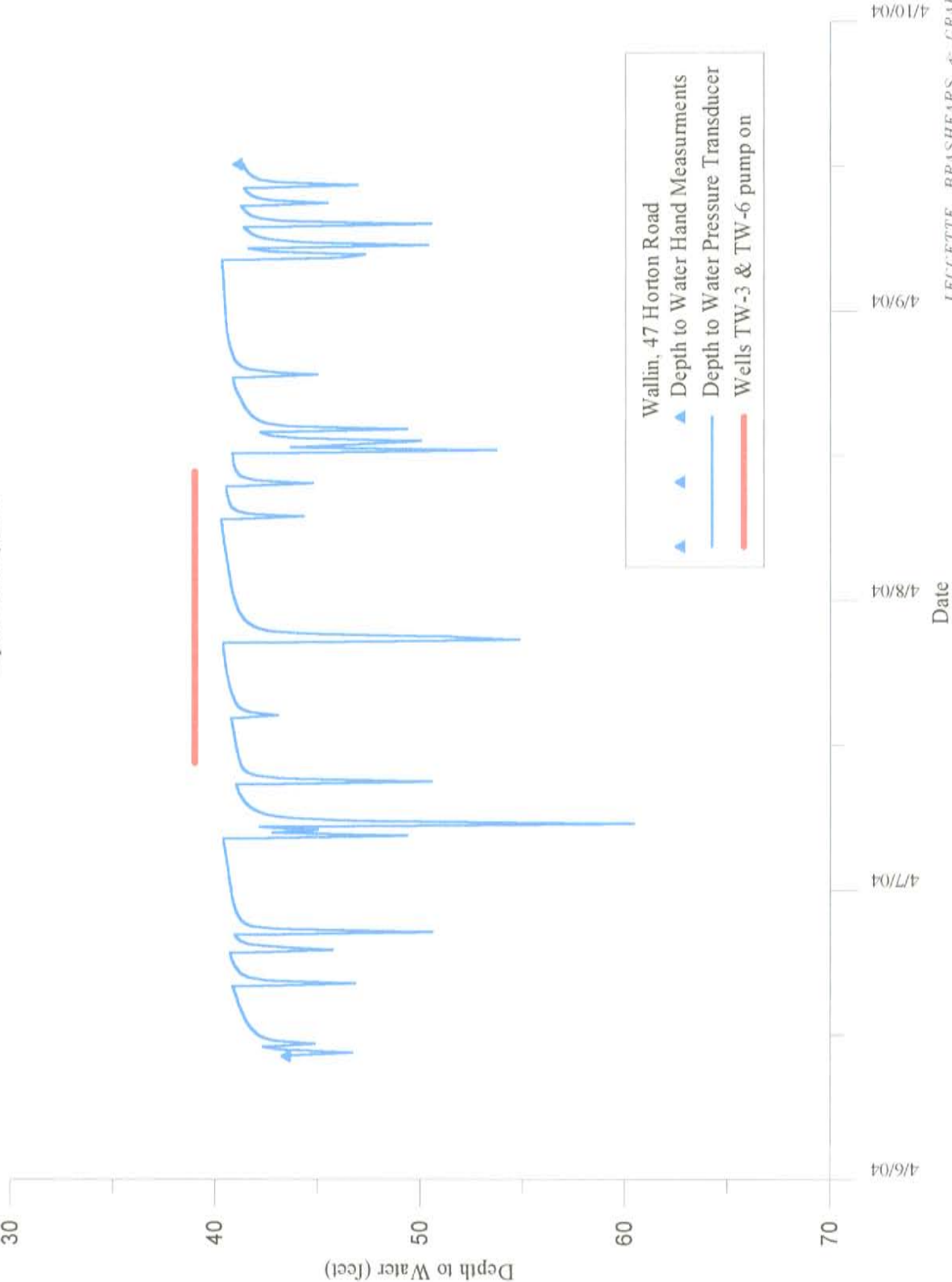
PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK

Hydrograph of PZ-2
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



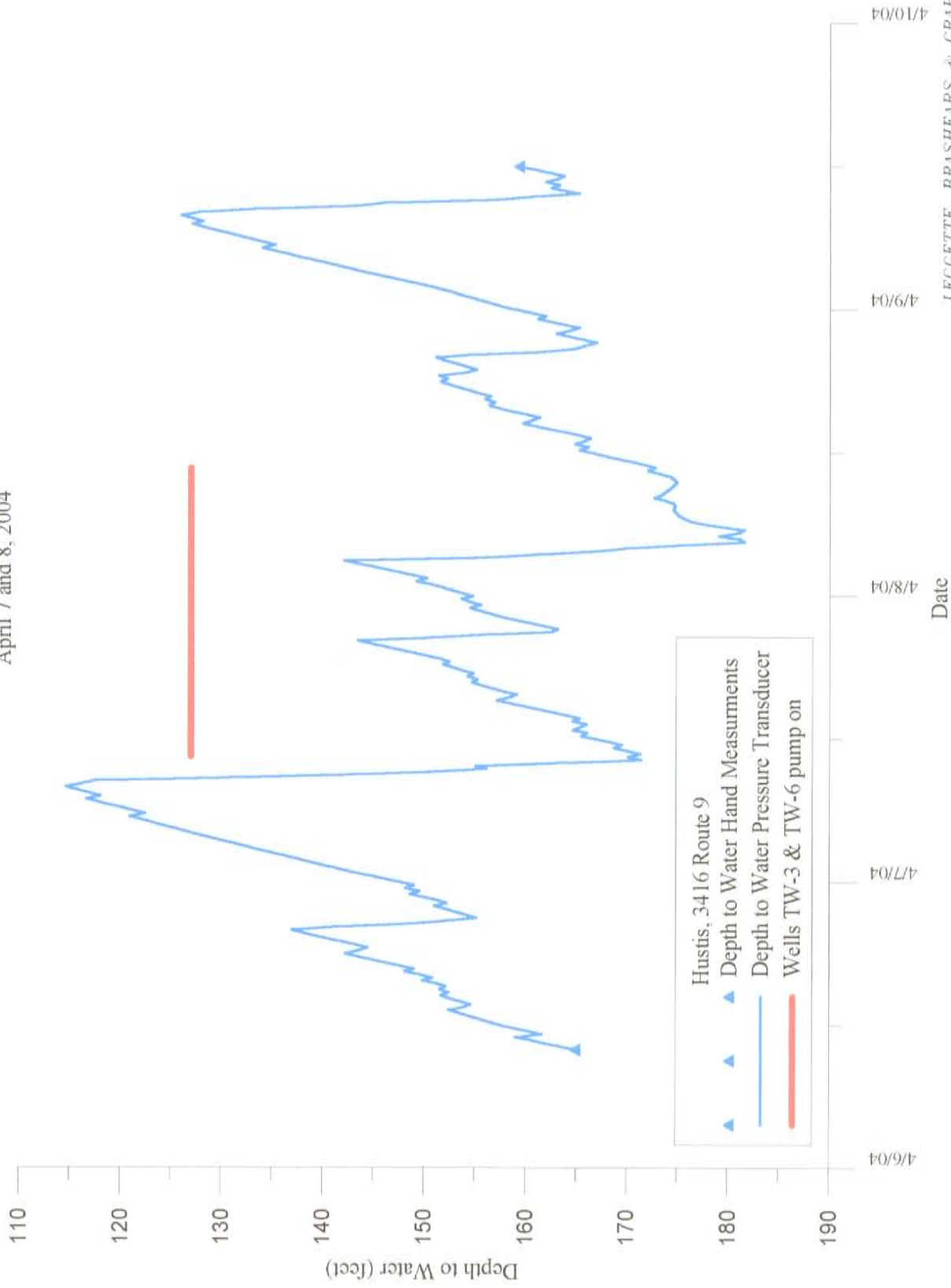
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of Wallin Well
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



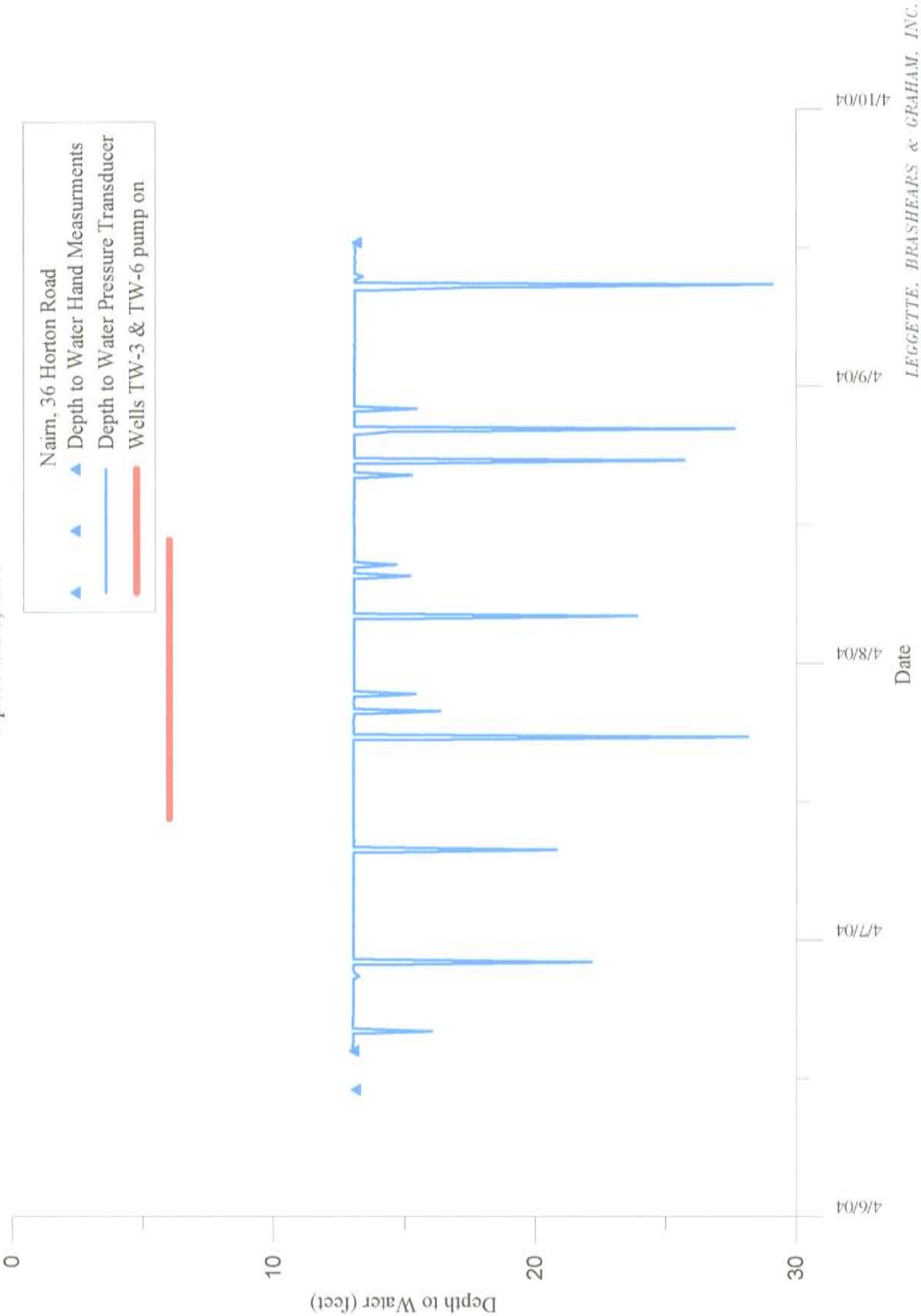
PHILIPSTOWN INDUSTRIAL PARK PHILIPSTOWN, NEW YORK

Hydrograph of Hustis Well
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



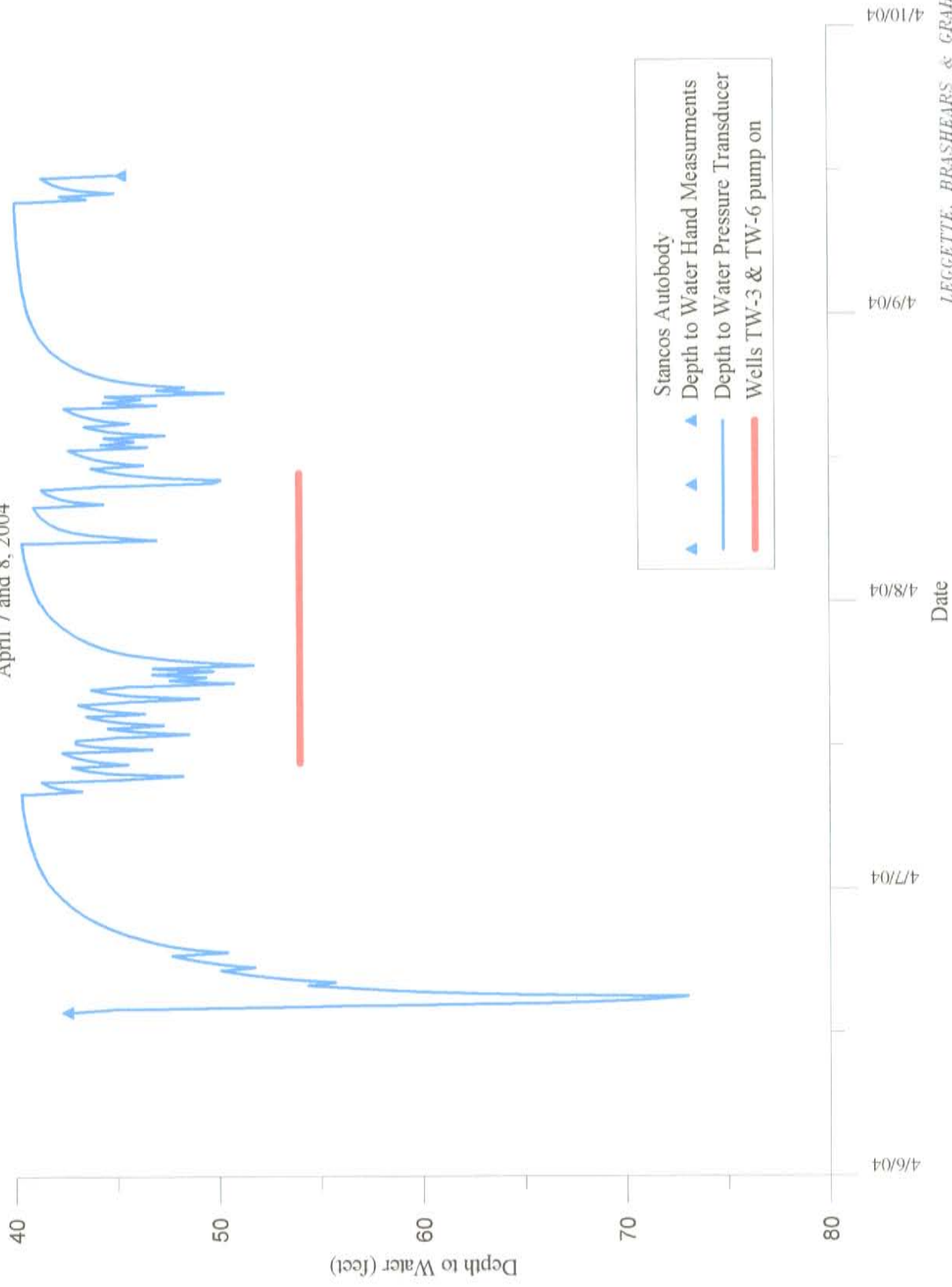
PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK

Hydrograph of Naim Well
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



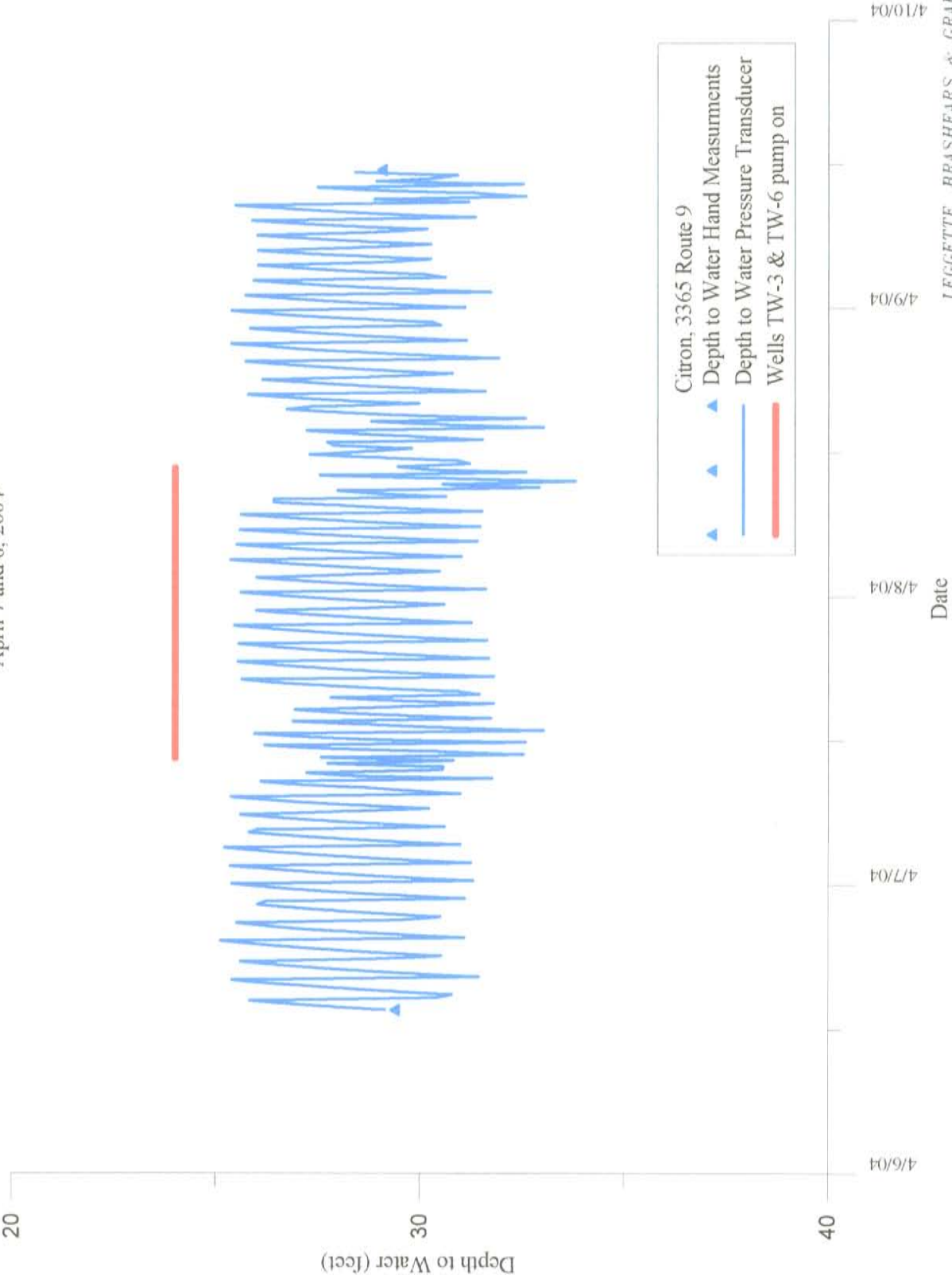
**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of Stancos Autobody Well
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydrograph of Citron Well
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



APPENDIX V

**PHILIPSTOWN INDUSTRIAL PARK
TOWN OF PHILIPSTOWN, NEW YORK**

**Table Summarizing Water Level Measurements for TW-6 During the Last 6 hours of the
Simultaneous Pumping Test of TW-3 and TW-6.
April 7 – April 8, 2004**

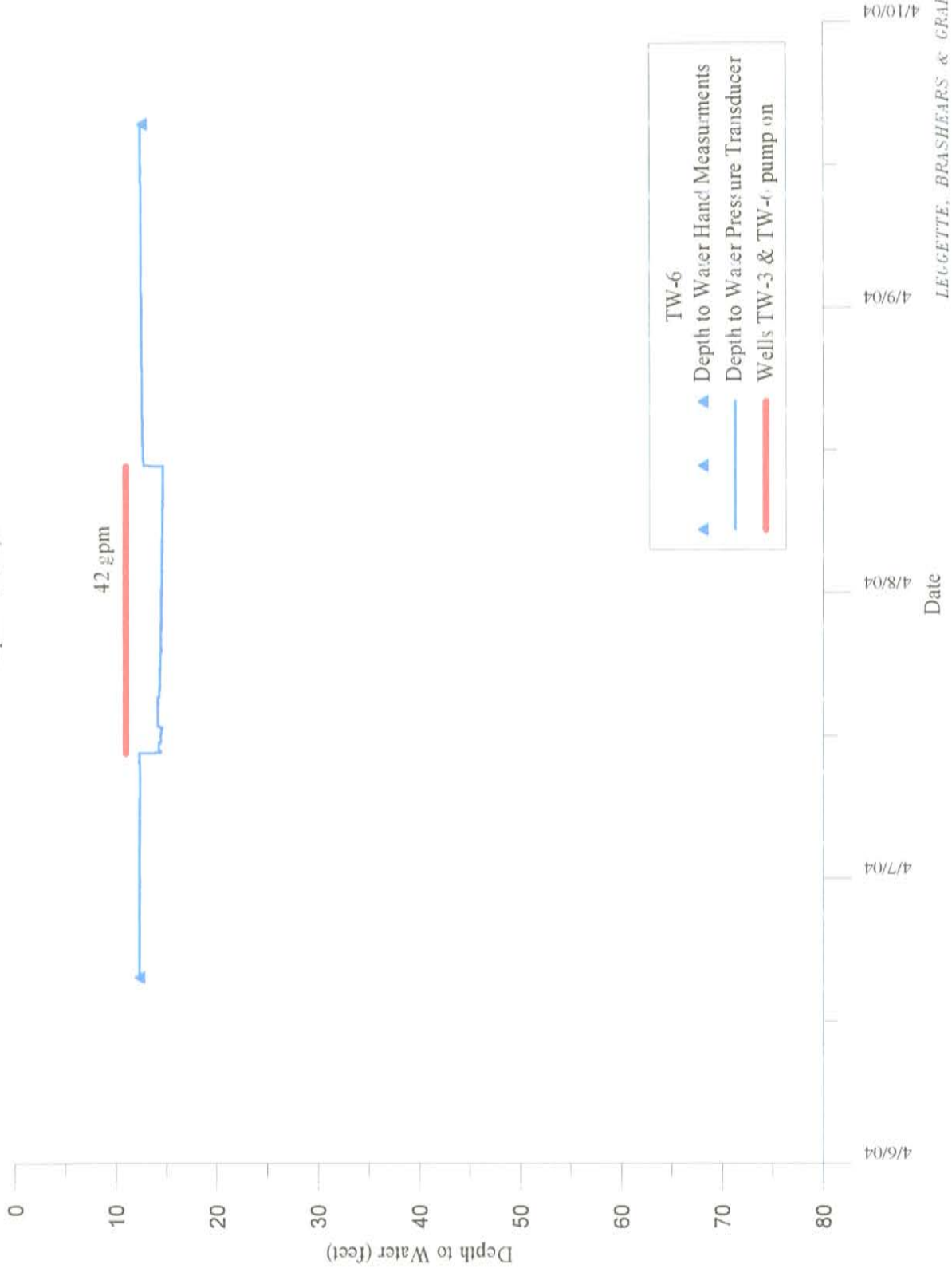
Date	Time	Depth to Water (ft bdt)	Pumping Rate (gpm)
4/8/04	4:39	14.573	42
4/8/04	5:39	14.585	42
4/8/04	6:39	14.585	42
4/8/04	7:39	14.622	42
4/8/04	8:39	14.622	42
4/8/04	9:39	14.628	42
4/8/04	10:39	14.634	42

ft bdt feet below the drop tube
gpm gallons per minute

H:\TEXTTEMP\Quarry Pond 2004\stabletables\TW-6-stabilization.doc

PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK

Hydrograph of TW-6
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



APPENDIX VI

**PHILIPSTOWN INDUSTRIAL PARK
TOWN OF PHILIPSTOWN, NEW YORK**

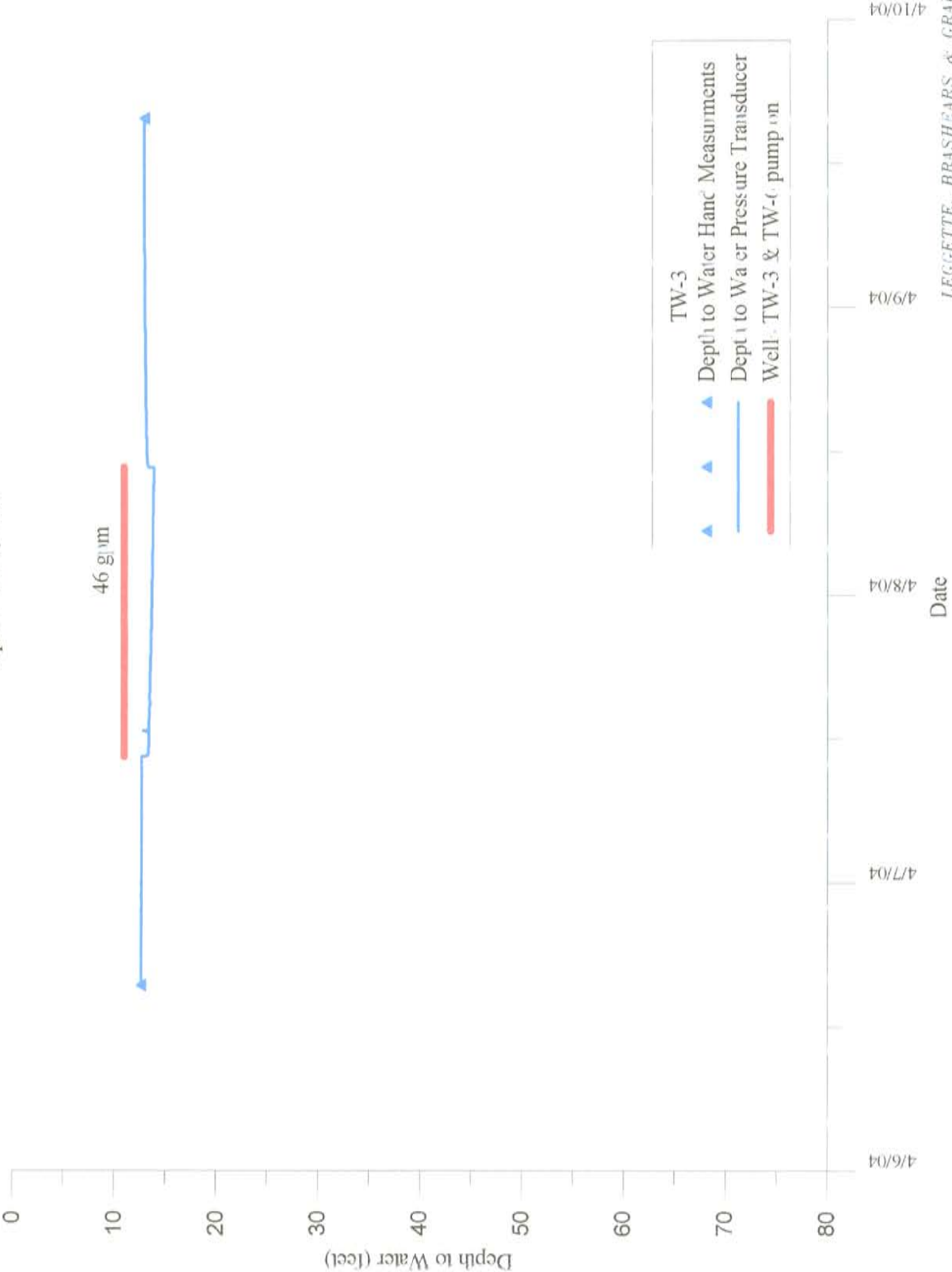
**Table Summarizing Water Level Measurements for TW-3 During the Last 6 hours of the
Simultaneous Pumping Test of TW-3 and TW-6,
April 7 – April 8, 2004**

Date	Time	Depth to Water (ft bdt)	Pumping Rate (gpm)
4/8/04	4:43	13.832	46
4/8/04	5:43	13.852	46
4/8/04	6:43	13.878	46
4/8/04	7:43	13.897	46
4/8/04	8:43	13.910	46
4/8/04	9:43	13.923	46
4/8/04	10:43	13.923	46

ft bdt feet below the drop tube
gpm gallons per minute

**PHILIPSTOWN INDUSTRIAL PARK
PHILIPSTOWN, NEW YORK**

Hydro graph of TW-3
During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004

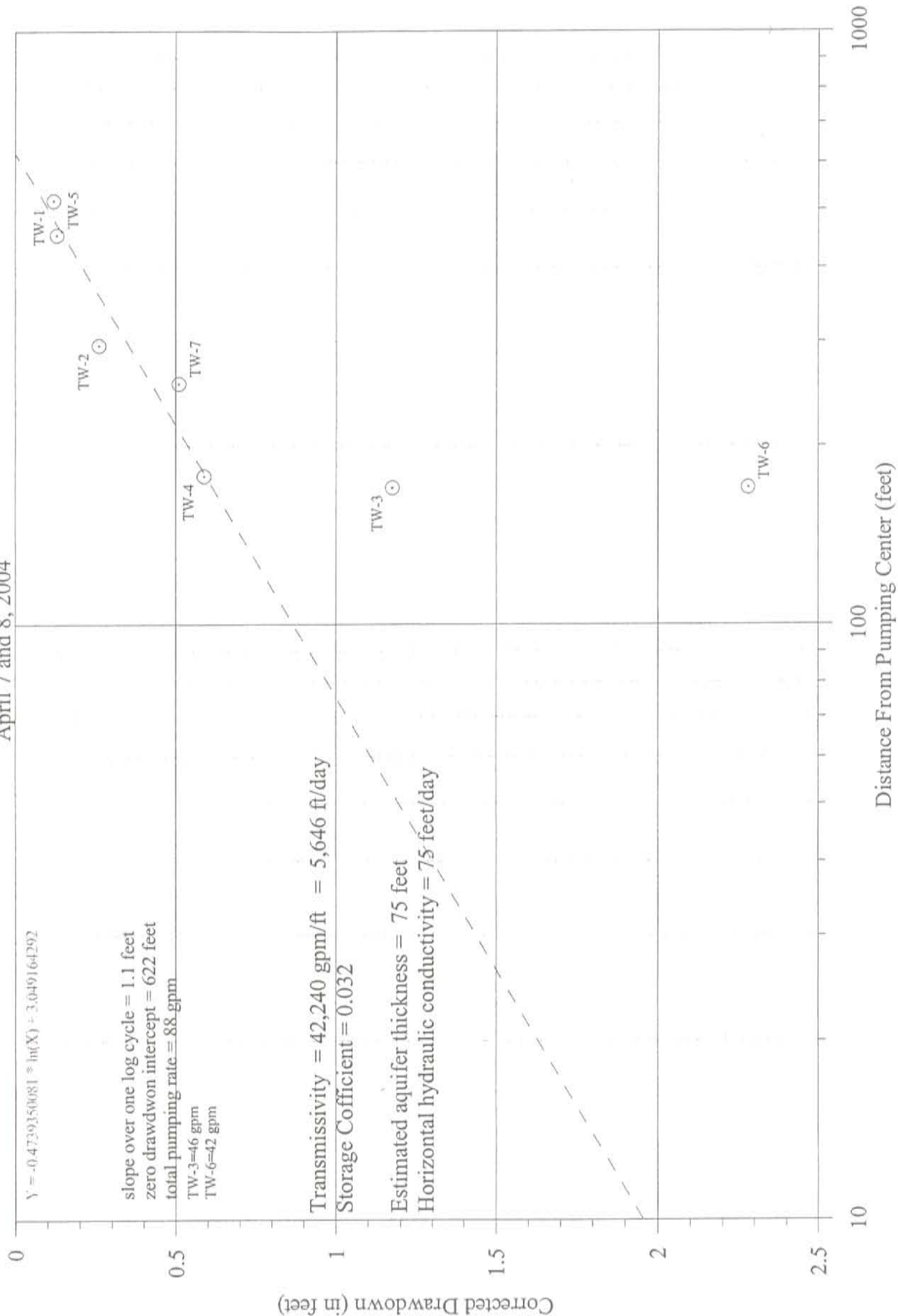


APPENDIX VII

PHILIPSTOWN INDUSTRIAL PARK PHILIPSTOWN, NEW YORK

Drawdown versus Distance

During the simultaneous 24 hour pumping of TW-3 and 6
April 7 and 8, 2004



APPENDIX VIII

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557

Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Leggett, Brashears, Graham Inc.
126 Monroe Turnpike
Trumbull CT 06611

RECEIVED
MAY 12 2004

Printed: 4/13/2004

Client Code: LBG

Fed ID :

OCL Sample No: 163039

System Name : Leggett, Brashears, Graham Inc.
Exact Location : Philipstown Ind. Pk. TW - 3, Quarry Pond

Date/time Collected : 4/8/2004 9:00

Date Received : 4/8/2004

Submit By : LBG

Microbiological Results

Analysis	Result	Units	Method	Lab	Date	Time	By	Remarks
Total Coliform(ONPG)	absence	C100	9223B	10510	04/08/04	15:00	HH	Pass
E.coli(ONPG)	absence	C100	9223B	10510	04/08/04	15:00	HH	Pass

Remarks :

PASS = Passes NYSDOH and EPA Drinking Water Standards
FAIL = Fails NYSDOH and EPA Drinking Water Standards
GT = Greater Than
LT = Less Than
C1 = Colonies per milliliter
C100 = Colonies per 100 milliliters


Microbiology Department

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557

Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 4/27/2004

Leggett, Brashears, Graham Inc.
126 Monroe Turnpike
Trumbull CT 06611

Client Code : LBG

Fed ID :

OCL Sample No : **163039**

System Name : Leggett, Brashears, Graham Inc.

Exact Location : Philipstown Ind. Pk. TW - 3, Quarry Pond

Date/time Collected : 4/8/2004 9:00

Date Received : 4/8/2004

Submit By : LBG

Analytical Results

Analysis	Result	Units	MCL	DL	Method	Lab	Date	Time	By	Remarks
Alkalinity as CaCO ₃	212	mg/L		None	2320B	10510	04/13/04		MC	
Chloride	37	mg/L	250	4.0	4500CL-C	10510	04/14/04		LM	
Color	LT 5			5	2120B	10510	04/08/04	15:00	KG	
Fluoride	LT 0.20	mg/L	2.2	0.20	340.2	10510	04/27/04		LM	
Hardness as CaCO ₃ , Calcium	182	mg/L		10	3500 Ca-D	10510	04/08/04	15:30	KG	
Nitrate as N	1.36	mg/L	10	0.2	Lachat	10510	04/19/04		LM	
Nitrite as N	LT 0.01	mg/L	1	0.01	EPA354.1	10510	04/08/04	13:30	KG	
Odor	None				2150	10510	04/08/04	15:00	KG	
pH	6.93				4500H+B	10510	04/08/04	15:00	KG	
Solids, Dissolved Total	362	mg/L			2540C	10510	04/14/04		MC	
Sulfate	28	mg/L	250	5	375.4	10510	04/26/04		LM	
Turbidity	LT 0.10	ntu		0.10	2130B	10510	04/08/04	15:00	KG	
Corrosivity(Langelier Index)	-0.47					10510	04/27/04		KG	

Copies to: Fax: (203)452-3111 Acell203-767-0275

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level

H. C. McClinton
Inorganic Chemistry Department

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557

Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 4/14/04

Leggett, Brashears, Graham Inc.		
126 Monroe Turnpike		
Trumbull	CT	06611

Client Code : **LBG**

Fed ID :

OCL Sample No : **163039**

— System Name : **Leggett,Brashears,Graham Inc.**
Exact Location : **Philipstown Ind. Pk. TW - 3, Quarry Pond**

Date/Time Collected : **4/8/04 9:00**

Date Received : **4/8/04**

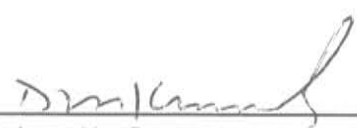
Submitted By : **LBG**

Analytical results are shown on the pages following this cover page

Notes

Remarks:

Cover Page


Reviewed by David M. Kennedy - Director

ELAP#10510

Matrix: Water

Client: -

Sample TW-3/Quarry Pond

Location

OCL Analytical Services
35 Goshen Turnpike
Bloomingburg, NY 12721-

This sample taken by . at on 4/8/2004. . Point of
collection: Sample ID-163039

Miscellaneous Scan Report

Results

EPA Limits

Misc.

Radon in Water

705 pCi/L

MA D.E.P. Proposed Guideline

10,000 pCi/L

The integrity of the sample and results are dependent on the quality of sampling. The results apply only to the actual sample tested.
Environmental Testing and Research Laboratories shall be held harmless from any liability arising out of the use of such results.

05/04/04

Attn: David Kennedy

pCi / Labs, Inc.

**103 South Greenbush Road
Orangeburg, New York 10962**

NY Lab ID: 11765

TEL: 845-680-0031

NJ Lab ID: NY009

FAX: 845-680-0185

Report of Analysis

OCL Analytical Services

35 Goshen Turnpike

Bloomington

NY 12721

Work Order Number 3852

Received 04/10/04

Purchase Order

Sample No.	1	Type	W	Collection Date/Time	04/08/04 9:00 AM
------------	---	------	---	----------------------	------------------

Sample identification 163039; TW-3/Quarry Pond

Analysis	Count Date/Time	Activity	Uncertainty	MDL	Units	Procedure
RA-226	05/03/04 3:31 PM	-0.02	0.37	0.62	pCi / L	EPA 903.0
RA-228	04/17/04 4:20 PM	2.06	1.14	1.60	pCi / L	NJ 1980
GR-A	04/14/04 7:56 AM	0.43	1.35	1.99	pCi / L	EPA 900.0
GR-B	04/14/04 7:56 AM	1.83	1.68	2.56	pCi / L	EPA 900.0

A report of Quality Control samples processed with this work order is available upon request.

Last Page of Report

Approved By:

David Martin (for)
Laboratory Technical Director

Andrew Baruchel (for)
Quality Assurance Manager

MDL is the detection limit at the 4.66 sigma level. If the MDL is greater than the activity, it is concluded that no radioactivity was found in the specified analysis.

pCi/Labs, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference (NELAC) Standards.



32 ITHACA STREET
TELEPHONE (607) 565-3500

WAVERLY, NY 14892-1532
FAX (607) 565-4083

NY 10252 NJ 73168
PA 68180 EPA NY00033

Certificate of Analysis

OCL Analytical Services
35 Goshen Turnpike
Bloomingburg, NY 12721
Attn: Todd Zeilinski

Order Number: 0404-00354
Date Reported: 5/4/2004
Date Received: 4/9/2004
Invoice Number: 2764
Customer Number: 0003
Customer PO:

Subject:
MPA

SMP	Analysis Performed	Result	Units	Detection Limit	Method	Analysis Information
002	LBG 163039 TW-3 Quarry Pond	4/8/2004 10:30	Client			
	MPA					4/11/04, 11:18, EMR
	Cryptosporidium	U	/100 L	0.03	ICR USEPA	4/11/04, 11:18, EMR
	Giardia	U	/100 L	0.03	ICR USEPA	4/11/04, 11:18, EMR
	Algae	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Diatoms	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Rotifers	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Rotifer Eggs	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Plant Matter	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Pollen	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Insects	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Insect Parts	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Nematodes	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Nematode Eggs	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Crustaceans	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Crustacean Parts	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Protozoa	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Fine Debris	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Large Debris	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 5-15 uM	1.1E+07	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 15-100 uM	2.3E+06	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 100-200 uM	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of >200 uM	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR

Approved By: _____

Jason Homrighaus, Managing Director

Key: E = estimated value < = less than the indicated value ug/L = micrograms per liter (equivalent to parts per billion)
 ND or U = analyte not detected mg/L = milligrams per liter (equivalent to parts per million)
 B = analyte was detected in the method or trip blank mg/Kg = milligrams per kilogram (equivalent to parts per million)

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your sample will be discarded after 14 days unless we are advised otherwise.

OC~~L~~ Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557
Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 5/3/2004

Leggett, Brashears, Graham Inc. 126 Monroe Turnpike Trumbull CT 06611

Client Code : LBG

Fed ID :

OC~~L~~ Sample No : 163039

System Name : Leggett,Brashears,Graham Inc.
Exact Location : Philipstown Ind. Pk. TW - 3, Quarry Pond

Date/Time Collected : 4/8/2004 9:00

Date Received : 4/8/2004

Submitted By : LBG

Analytical results are shown on the pages following this cover page

Notes

LIFE*	Analysis performed by NYSDOH# 10248
LLFB	LFB % Recovery below acceptance limits. The result may be biased low.
PACE*	Analysis performed by NYS DOH #11647
FCOL*	Analysis performed by NYS DOH#10552, PA DEP#20-073
QC	Quality Control Standard
SURRH	Surrogate recovery was above the acceptance limit. The result may be biased high.

Cover Page


Reviewed by David M. Kennedy - Director

ELAP#10510

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, New York 12721

Analytical ResultsOCL Sample No: **163039**

Page 1 of 7

Method: EPA 1613B

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,3,7,8-TCDD	ND	pg/l	30	5		PACE*	04/22/2004 00:00	04/25/2004 14:14

Method: EPA 200.7

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Barium	0.016	mg/l	2	0.0020	CD		04/13/2004 00:00	04/14/2004 02:37
Beryllium	ND	mg/l	0.004	0.0010	CD		04/13/2004 00:00	04/14/2004 02:37
Cadmium	ND	mg/l	0.005	0.0020	CD		04/13/2004 00:00	04/14/2004 02:37
Chromium	ND	mg/l	0.1	0.0050	CD		04/13/2004 00:00	04/14/2004 02:37
Copper	0.015	mg/l	1.3	0.0050	CD		04/13/2004 00:00	04/14/2004 02:37
Iron	ND	mg/l	0.3	0.050	CD		04/13/2004 00:00	04/14/2004 02:37
Lead220	ND	mg/l	0.015	0.010	CD		04/13/2004 00:00	04/14/2004 02:37
Manganese	ND	mg/l	0.05	0.0050	CD		04/13/2004 00:00	04/14/2004 02:37
Nickel	ND	mg/l		0.0020	CD		04/13/2004 00:00	04/14/2004 02:37
Silver	ND	mg/l	0.1	0.0010	CD		04/13/2004 00:00	04/14/2004 02:37
Sodium	39	mg/l		5.0	CD		04/13/2004 00:00	04/13/2004 03:17
Zinc	0.016	mg/l	5	0.010	CD		04/13/2004 00:00	04/14/2004 02:37

Method: EPA 200.9

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Antimony	ND	mg/l	0.006	0.0050	CD		04/13/2004 00:00	04/13/2004 00:00
Arsenic	ND	mg/l	0.05	0.005	CD		04/14/2004 00:00	04/14/2004 00:00
Selenium	ND	mg/l	0.05	0.010	CD		04/19/2004 00:00	04/19/2004 00:00
Thallium	ND	mg/l	0.002	0.002	CD		04/20/2004 00:00	04/20/2004 00:00

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 245.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Mercury	ND	mg/l	0.002	0.0002	KM		04/13/2004 00:00	04/13/2004 00:00

Method: EPA 335.4

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Cyanide (total)	ND	mg/l	0.2	0.025	RN		04/16/2004 08:30	04/20/2004 12:00

Method: EPA 502.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1,1-Trichloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1,2,2-Tetrachloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1,2-Trichloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1-Dichloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1-Dichloroethene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,1-Dichloropropene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2,3-Trichlorobenzene	ND	ug/l	5	0.5	MR	LLFB	04/15/2004 00:00	04/15/2004 00:00
1,2,3-Trichloropropane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2,4-Trichlorobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2,4-Trimethylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2-Dichloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,2-Dichloropropane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,3,5-Trimethylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,3-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,3-Dichloropropane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
1,4-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
2,2-Dichloropropane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
2-Chlorotoluene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
4-Chlorotoluene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Benzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Bromobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00

Method: EPA 502.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Bromochloromethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Bromomethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Carbon tetrachloride	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Chlorobenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Chloroethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Chloromethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Dibromomethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Dichlorodifluoromethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Ethylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Hexachlorobutadiene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Isopropylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Methyl tert-butyl ether	ND	ug/l		0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Methylene chloride	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Styrene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Tetrachloroethene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Toluene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Trichloroethene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Trichlorofluoromethane	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
Vinyl chloride	ND	ug/l	2	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
cis-1,2-Dichloroethene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
cis-1,3-Dichloropropene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
m,p-Xylene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
n-Butylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
n-Propylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
o-Xylene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
p-Isopropyltoluene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
sec-Butylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
tert-Butylbenzene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
trans-1,2-Dichloroethene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00
trans-1,3-Dichloropropene	ND	ug/l	5	0.5	MR		04/15/2004 00:00	04/15/2004 00:00

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Chlorofluorobenzene (ELCD)	11.3	ug/l			MR	QC	04/15/2004 00:00	04/15/2004 00:00
Chlorofluorobenzene (PID)	9.60	ug/l			MR	QC	04/15/2004 00:00	04/15/2004 00:00

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 504.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,2-Dibromo-3-chloropropane	ND	ug/l	0.2	0.01	JK		04/20/2004 08:11	04/21/2004 15:33
1,2-Dibromoethane (EDB)	ND	ug/l	0.05	0.01	JK		04/20/2004 08:11	04/21/2004 15:33

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Tetrachloro-meta-xylene	0.304	ug/l			JK	SURRH QC	04/20/2004 08:11	04/21/2004 15:33

Method: EPA 508

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Chlordane (tech)	ND	ug/l	2	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1016	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1221	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1232	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1242	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1248	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1254	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
PCB-1260	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:54
Toxaphene	ND	ug/l	3	0.25	JAK		04/14/2004 08:18	04/17/2004 04:54

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
beta-BHC	0.105	ug/l			JAK	QC	04/14/2004 08:18	04/17/2004 04:54

Method: EPA 515.3

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,4,5-TP (Silvex)	ND	ug/l	50	2.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 515.3

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,4-D	ND	ug/l	70	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dalapon	ND	ug/l	200	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dicamba	ND	ug/l	50	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dinoseb	ND	ug/l	7	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Pentachlorophenol	ND	ug/l	1	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Picloram	ND	ug/l	500	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00

Method: EPA 525.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Alachlor	ND	ug/l	2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Aldrin	ND	ug/l	5	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Atrazine	ND	ug/l	3	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Benzo (a) pyrene	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Butachlor	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Di(2-ethylhexyl)adipate	ND	ug/l	400	2.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Di(2-ethylhexyl)phthalate	ND	ug/l	6	2.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Dieldrin	ND	ug/l	5	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Endrin	ND	ug/l	2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
HCH-gamma (Lindane)	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Heptachlor	ND	ug/l	0.4	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Heptachlor epoxide	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Hexachlorobenzene	ND	ug/l	1	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Hexachlorocyclopentadiene	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Methoxychlor	ND	ug/l	40	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Metolachlor	ND	ug/l	50	1.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Metribuzin	ND	ug/l	50	1.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Propachlor	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Simazine	ND	ug/l	4	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,3-Dimethyl-2-nitrobenzene	6.41	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00
Perylene-d12	5.08	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00
Triphenyl phosphate	5.35	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 525.2

Method: EPA 531.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
3-Hydroxycarbofuran	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb	ND	ug/l	3	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb sulfone	ND	ug/l	2	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb sulfoxide	ND	ug/l	4	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Carbaryl	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Carbofuran	ND	ug/l	40	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Methomyl	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Oxamyl	ND	ug/l	200	1.0	IC		04/13/2004 00:00	04/13/2004 00:00

Method: EPA 547

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Glyphosate	ND	mg/l	700	0.05	IC		04/16/2004 00:00	04/16/2004 00:00

Method: EPA 548.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Endothall	ND	mg/l	0.1	0.05		FCOL*	04/13/2004 11:00	04/14/2004 19:00

Method: EPA 549.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Diquat	ND	ug/l	20	0.8	IC		04/14/2004 00:00	04/15/2004 00:00

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

CHAIN OF CUSTODY

OCL Analytical Services

Client:

Name LRC

Address

176 Mercer Turnpike

City, State, Zip Turnbull, CT 06611

Phone (203) 452-3100

35 Goshen Turnpike, Bloomington, NY 12721
Phone (845) 733-1557 Fax (845) 733-1944

Samples should be brought
to the lab on ice with a
receiving temp of 2 to 6 C.

Sample Temp (c) _____
Sample rec'd on ice? _____
Sample set up in 6 hr? _____
Properly preserved? _____
Within holding times? _____
Reviewed by _____

OCL#	Matrix	Collection Date	Time	comp	grab	Sample Description/Location	Containers No/type	Preservative	Analysis Required	Results
163039	L	4-5-04				TW-3 / Quarry Pond	125 mL	none	Full Part 5: Metals, Organics & Inorganics	
			455				500ml - P	none	Total Coliform	
			454				500ml - P	none	Alkalinity	
			454				1L Plastic	none	Nitrate, nitrite	
			-						pH, odor, turbidity, color, fluoride, chloride, TDS, sulfate, Ca hardness,	
			-						corrosivity	
			445				1L Plastic	HNO3	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu,	
			-						Fe, Mn, Na, Zn, Sb, Be, Ni, Ti	
			902				1L Plastic	NaOH	Cyanide	
163039							2-40ml vial	HCl	VOC + MTBE	

IN ADDITION TO ABOVE TESTING, COMPLETE SOC AND RADIOLOGICALS ARE REQUIRED

Comments/Special Instructions:

Rush Requested?

Client Code:

Prepaid?

Sampled By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:

CHAIN OF CUSTODY

OCL Analytical Services

35 Goshen Turnpike, Bloomingburg, NY 12721
Phone (845)733-1557 Fax (845)733-1944

Client:

Name	
Address	
City, State, Zip	
Phone	

Samples should be brought
to the lab on ice with a
receiving temp of 2 to 6 C.

Sample Temp (c)
Sample rec'd on ice?
Sample set up in 6 hr?
Properly preserved?
Within holding times?
Reviewed by

OCL#	Matrix	Collection Date	Time	comp	grab	Sample Description/Location	Containers No/type	Preser- vative	Q resid	Analysis Required	Complete SOC Testing	Results
1163039	L	4-5-01				TW-3 / Quarry Pond	2 40ml G	thio		EPA 504		
							2 1L G	thio		EPA 508		
							1 250ml G	thio		EPA 515.3		
							2 1L G	sulfite		EPA 525.2		
							2 40ml G	thio		EPA 531.1		
							1 1L G	thio		extra sample		
							3 40ml G	thio		EPA 547 Glyphosate		
							1 250ml G	none		EPA 548 Endothall		
							1 1L G	thio		EPA 549 Diquat		
1163039							1 1L G	thio		EPA 549 Diquat		

Comments/Special Instructions:

Rush Requested?

Client Code:

Prepaid?

Sampled By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:

4/8
12

OCL Analytical Services

Client:

Name	
Address	
City, State, Zip	
Phone	

Samples should be brought to the lab on ice with a receiving temp of 2 to 6 C.

Sample Temp (c) _____
 Sample rec'd on Ice? _____
 Sample set up in 6 hr? _____
 Properly preserved? _____
 Within holding times? _____
 Reviewed by _____

[illegible]

Comments/Special Instructions:

Rush Requested?

Client Code:

Prepaid?

Sampled By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____
Relinquished By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____
Relinquished By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____

CHAIN OF CUSTODY

Client:

Name	
Address	
City, State, Zip	
Phone	

Samples should be brought to the lab on ice with a receiving temp of 2 to 6 C.

Sample Temp (c)
 Sample rec'd on ice?
 Sample set up in 6 hr?
 Properly preserved?
 Within holding times?
 Reviewed by

OCL#	Matrix	Collection Date	Time	comp	grab	Sample Description/Location	Containers No/type	Preservative	Cl resid	Analysis Required	Results
163039	✓	4-5-84	900	✓	✓	TW-3 / Quarry Road	1 LP	HNO3		Gross Alpha	
			903	✓	✓		1 LP	HNO3		Gross Beta	
			453	✓	✓		1 LP	HNO3		Radium 226	
			536	✓	✓		1 LP	HNO3		Radium 228	
163039				✓	✓		2 40ml vials	none		Radon in Water	

Comments/Special Instructions:

Rush Requested?

Client Code:

Prepaid?

Sampled By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:
Relinquished By:	print	date:	Received By:	print	date:
	sign	time:		sign	time:

OCL Analytical Services

35 Goshen Turnpike, Bloomingburg, NY 12721
Phone (845) 733-1557 Fax (845) 733-1944

Name	
Address	
City, State, Zip	
Phone	

Sample Temp (c) _____
 Sample rec'd on Ice? _____
 Sample set up in 6 hr? _____
 Properly preserved? _____
 Within holding times? _____
 Reviewed by _____

[illegible]

Prepaid?

Sampled By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____
Relinquished By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____
Relinquished By:	print _____	date: _____	Received By:	print _____	date: _____
	sign _____	time: _____		sign _____	time: _____

TW-3

~~163038~~
163039

35 Goshen Turnpiki,

OCL ANALYTICAL SERVICES
Bloomingburg, NY 12721

(914) 733-1557

MUNICIPAL WATER SAMPLING INSTRUCTIONS
GIARDIA/CRYPTOSPORIDIUM OR MICROSCOPIC PARTICULATE ANALYSIS

1. READ INSTRUCTIONS COMPLETELY before starting to collect samples.
2. Remove the ice pack from the box. The ice pack must be frozen and returned with the filter and the filtering unit when the are shipped back to the lab. Ice may be used instead of ice packs.
3. Select a cold water faucet with a male thread, such as the clothes washer faucet, outdoor faucet or the kitchen faucet. Flush the faucet for three minutes.
4. Screw the garden hose connection into the filter apparatus and adjust the water flow to not more than one gallon per minute. Pressure gauge should not read above 30 psi. If pressure gauge reads greater than 30 psi adjust pressure regulator.
5. Flush the sampling apparatus for twenty minutes. Turn the water off and disassemble the filter housing. Pour out the water.
6. Place the filter into the filter housing. Save the bag for shipping purposes.
7. Screw the housing into the head of the unit. Be sure that the filter and the housing are secure, or it will leak. Again, adjust the flow to not more than one gallon per minute and pressure gauge at 30 psi or lower.
8. Filter a minimum of 300 gallons of water through the unit. Record the following.
Initial reading _____ Final meter reading _____
Final - Initial reading = Total Volume of water sampled 986
9. Turn water off. **Put On Vinyl Gloves.** Open the filter and pour the water in the housing into the one gallon plastic bag. Carefully remove the filter from the housing by sliding it into the plastic bag in which it was originally shipped. Seal the bag and place in another bag. Place double-bagged filter, bottle of water, ice pack, and sampling unit in the box and seal.
10. If you are sampling more than one site, the sampling apparatus must be cleaned between each sample, by washing the filter housing and inlet hose with warm soapy water. Rinse thoroughly with tap water.
11. Return the package to Orange County Lab. Please note that the analysis must be started within 48 to 96 hours from the time you conducted the filtering process.

SAMPLING LOCATION Well 3Total Volume of Water Sampled 986SAMPLING DATE/TIME 4/8 10:20 AMSampled By J. CusackClient Name LBGAddress Turnpike

Bill to _____

Address _____

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557

Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

RECEIVED
MAY 10 2004

Leggett, Brashears, & Graham, Inc.

Printed: 4/13/2004

Leggett, Brashears, Graham Inc.

126 Monroe Turnpike

Trumbull CT 06611

Client Code: LBG

Fed ID :

OCL Sample No: 163038

System Name : Leggett, Brashears, Graham Inc.
Exact Location : Philipstown Ind. Park, TW - 6 Quarry Pond

Date/time Collected : 4/8/2004 9:55

Date Received : 4/8/2004

Submit By : LBG

Microbiological Results

Analysis	Result	Units	Method	Lab	Date	Time	By	Remarks
Total Coliform(ONPG)	absence	C100	9223B	10510	04/08/04	15:00	HH	Pass
E.coli(ONPG)	absence	C100	9223B	10510	04/08/04	15:00	HH	Pass

Remarks :

PASS = Passes NYSDOH and EPA Drinking Water Standards
FAIL = Fails NYSDOH and EPA Drinking Water Standards
GT = Greater Than
LT = Less Than
C1 = Colonies per milliliter
C100 = Colonies per 100 milliliters


Microbiology Department

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557
Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 4/27/2004

Leggett, Brashears, Graham Inc.
126 Monroe Turnpike
Trumbull CT 06611

Client Code : LBG

Fed ID :

OCL Sample No : **163038**

System Name : Leggett, Brashears, Graham Inc.

Exact Location : Philipstown Ind. Park, TW - 6 Quarry Pond

Date/time Collected : 4/8/2004 9:55

Date Received : 4/8/2004

Submit By : LBG

Analytical Results

Analysis	Result	Units	MCL	DL	Method	Lab	Date	Time	By	Remarks
Alkalinity as CaCO ₃	167	mg/L		None	2320B	10510	04/13/04		MC	
Chloride	29	mg/L	250	4.0	4500CL-C	10510	04/14/04		LM	
Color	LT 5			5	2120B	10510	04/08/04	15:00	KG	
Fluoride	LT 0.20	mg/L	2.2	0.20	340.2	10510	04/27/04		LM	
Hardness as CaCO ₃ , Calcium	156	mg/L		10	3500 Ca-D	10510	04/08/04	15:30	KG	
Nitrate as N	0.86	mg/L	10	0.2	Lachat	10510	04/19/04		LM	
Nitrite as N	LT 0.01	mg/L	1	0.01	EPA354.1	10510	04/08/04	13:30	KG	
Odor	None				2150	10510	04/08/04	15:00	KG	
pH	7.10				4500H+B	10510	04/08/04	15:00	KG	
Solids, Dissolved Total	341	mg/L			2540C	10510	04/14/04		MC	
Sulfate	25	mg/L	250	5	375.4	10510	04/26/04		LM	
Turbidity	LT 0.10	ntu		0.10	2130B	10510	04/08/04	15:00	KG	
Corrosivity(Langelier Index)	-0.47					10510	04/27/04		KG	

Copies to: Fax: (203)452-3111 Acell203-767-0275

GT = greater than
LT = less than
ND = not detected

MCL = maximum contaminant level
DL = detection level

J. C. McClinton

Inorganic Chemistry Department

ELAP#10510

OCL Analytical Services

35 Goshen Turnpike
Bloomington, NY 12721

Phone: 845-733-1557

Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 4/14/04

Leggett, Brashears, Graham Inc. 126 Monroe Turnpike Trumbull CT 06611

Client Code : **LBG**

Fed ID :

OCL Sample No : **163038**

— System Name : **Leggett,Brashears,Graham Inc.**
Exact Location : **Philipstown Ind. Park, TW - 6 Quarry Pond**

Date/Time Collected : **4/8/04 9:55**

Date Received : **4/8/04**

Submitted By : **LBG**

Analytical results are shown on the pages following this cover page

Notes

Remarks:

Cover Page


Reviewed by David M. Kennedy - Director

ELAP#10510

OCL Analytical Services
35 Goshen Turnpike
Bloomingburg, NY 12721-

Matrix: Water

Client: -

Sample TW-6/Quarry Pond

Location

This sample taken by . at on 4/8/2004. , Point of
collection: Sample ID-163038

Miscellaneous Scan Report

Results

EPA Limits

Misc.

Radon in Water

Not Detected

MA D.E.P. Proposed Guideline

10,000 pCi/L

The integrity of the sample and results are dependent on the quality of sampling. The results apply only to the actual sample tested.
Environmental Testing and Research Laboratories shall be held harmless from any liability arising out of the use of such results.

05/04/04

Attn: David Kennedy

pCi / Labs, Inc.

103 South Greenbush Road
Orangeburg, New York 10962

NY Lab ID: 11765

TEL: 845-680-0031

NJ Lab ID: NY009

FAX: 845-680-0185

Report of Analysis

OCL Analytical Services

35 Goshen Turnpike

Bloomington

NY 12721

Work Order Number 3851

Received 04/10/04

Purchase Order

Sample No. 1 Type W Collection Date/Time 04/08/04 9:32 AM

Sample identification 163038; TW-6/Quarry Pond

Analysis	Count Date/Time	Activity	Uncertainty	MDL	Units	Procedure
RA-226	05/03/04 3:31 PM	0.34	0.39	0.44	pCi / L	EPA 903.0
RA-228	04/17/04 4:20 PM	0.97	1.04	1.56	pCi / L	NJ 1980
GR-A	04/14/04 7:56 AM	3.02	2.51	2.86	pCi / L	EPA 900.0
GR-B	04/14/04 7:56 AM	2.19	1.75	2.63	pCi / L	EPA 900.0

A report of Quality Control samples processed with this work order is available upon request.

Last Page of Report

Approved By:

David Martin (for)
Laboratory Technical Director

Andrew Carmichael (for)
Quality Assurance Manager

MDL is the detection limit at the 4.66 sigma level. If the MDL is greater than the activity, it is concluded that no radioactivity was found in the specified analysis.

pCi/Labs, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference (NELAC) Standards.



32 ITHACA STREET
TELEPHONE (607) 565-3500

WAVERLY, NY 14892-1532
FAX (607) 565-4083

NY 10252 NJ 73168
PA 68180 EPA NY00033

Certificate of Analysis

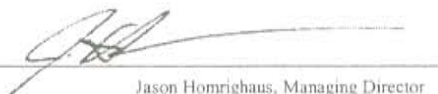
OCL Analytical Services
35 Goshen Turnpike
Bloomingburg, NY 12721
Attn: Todd Zeilinski

Order Number: 0404-00354
Date Reported: 5/4/2004
Date Received: 4/9/2004
Invoice Number: 2764
Customer Number: 0003
Customer PO:

Subject:
MPA

SMP	Analysis Performed	Result	Units	Detection Limit	Method	Analysis Information
001	LBG 163038 TW-6	4/8/2004 10:30	Client			
	MPA					4/11/04, 11:18, EMR
	Cryptosporidium	U	/100 L	0.03	ICR USEPA	4/11/04, 11:18, EMR
	Giardia	U	/100 L	0.03	ICR USEPA	4/11/04, 11:18, EMR
	Algae	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Diatoms	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Rotifers	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Rotifer Eggs	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Plant Matter	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Pollen	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Insects	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Insect Parts	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Nematodes	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Nematode Eggs	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Crustaceans	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Crustacean Parts	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Protozoa	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Fine Debris	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Large Debris	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 5-15 uM	2.1E+07	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 15-100 uM	3.9E+06	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of 100-200 uM	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR
	Particle Size of >200 uM	ND	/100 L		EPA 910/9-92-029	4/11/04, 11:18, EMR

Approved By:


Jason Homrighaus, Managing Director

Key: E = estimated value < = less than the indicated value ug/L = micrograms per liter (equivalent to parts per billion)
ND or U = analyte not detected mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank mg/kg = milligrams per kilogram (equivalent to parts per million)

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your sample will be discarded after 14 days unless we are advised otherwise.

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, NY 12721

Phone: 845-733-1557
Fax: 845-733-1944

Serving The Hudson Valley For Over Sixty Years

Printed: 5/3/2004

Leggett, Brashears, Graham Inc.		
126 Monroe Turnpike		
Trumbull	CT	06611

Client Code : **LBG**

Fed ID :

OCL Sample No : **163038**

System Name : **Leggett,Brashears,Graham Inc.**
Exact Location : **Philipstown Ind. Park, TW - 6 Quarry Pond**

Date/Time Collected : **4/8/2004 9:55**

Date Received : **4/8/2004**

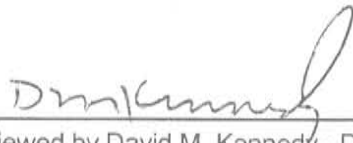
Submitted By : **LBG**

Analytical results are shown on the pages following this cover page

Notes

LIFE*	Analysis performed by NYSDOH# 10248
LLFB	LFB % Recovery below acceptance limits. The result may be biased low.
PACE*	Analysis performed by NYS DOH #11647
FCOL*	Analysis performed by NYS DOH#10552, PA DEP#20-073
QC	Quality Control Standard
SURRH	Surrogate recovery was above the acceptance limit. The result may be biased high.

Cover Page


Reviewed by David M. Kennedy - Director

ELAP#10510

OCL Analytical Services

35 Goshen Turnpike
Bloomingburg, New York 12721

Analytical ResultsOCL Sample No: **163038**

Page 1 of 7

Method: EPA 1613B

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,3,7,8-TCDD	ND	pg/l	30	5		PACE*	04/22/2004 00:00	04/25/2004 07:26

Method: EPA 200.7

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Barium	0.013	mg/l	2	0.0020	CD		04/14/2004 00:00	04/14/2004 11:08
Beryllium	ND	mg/l	0.004	0.0010	CD		04/14/2004 00:00	04/14/2004 11:08
Cadmium	ND	mg/l	0.005	0.0020	CD		04/14/2004 00:00	04/14/2004 11:08
Chromium	ND	mg/l	0.1	0.0050	CD		04/14/2004 00:00	04/14/2004 11:08
Copper	ND	mg/l	1.3	0.0050	CD		04/14/2004 00:00	04/14/2004 11:08
Iron	ND	mg/l	0.3	0.050	CD		04/14/2004 00:00	04/14/2004 11:08
Lead220	ND	mg/l	0.015	0.010	CD		04/14/2004 00:00	04/14/2004 11:08
Manganese	ND	mg/l	0.05	0.0050	CD		04/14/2004 00:00	04/14/2004 11:08
Nickel	ND	mg/l		0.0020	CD		04/14/2004 00:00	04/14/2004 11:08
Silver	ND	mg/l	0.1	0.0010	CD		04/16/2004 00:00	04/19/2004 11:22
Sodium	26	mg/l		5.0	CD		04/13/2004 00:00	04/13/2004 03:19
Zinc	ND	mg/l	5	0.010	CD		04/14/2004 00:00	04/14/2004 11:08

Method: EPA 200.9

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Antimony	ND	mg/l	0.006	0.0050	CD		04/13/2004 00:00	04/13/2004 00:00
Arsenic	ND	mg/l	0.05	0.005	CD		04/14/2004 00:00	04/14/2004 00:00
Selenium	ND	mg/l	0.05	0.010	CD		04/19/2004 00:00	04/19/2004 00:00
Thallium	ND	mg/l	0.002	0.002	CD		04/20/2004 00:00	04/20/2004 00:00

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ND = not detected

MCL = maximum contaminant level
DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 245.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Mercury	ND	mg/l	0.002	0.0002	KM		04/13/2004 00:00	04/13/2004 00:00

Method: EPA 335.4

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Cyanide (total)	ND	mg/l	0.2	0.025	RN		04/16/2004 08:30	04/20/2004 12:00

Method: EPA 502.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1,1-Trichloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1,2,2-Tetrachloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1,2-Trichloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1-Dichloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1-Dichloroethene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,1-Dichloropropene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2,3-Trichlorobenzene	ND	ug/l	5	0.5	MR	LLFB	04/14/2004 00:00	04/14/2004 00:00
1,2,3-Trichloropropane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2,4-Trichlorobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2,4-Trimethylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2-Dichloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,2-Dichloropropane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,3,5-Trimethylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,3-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,3-Dichloropropane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
1,4-Dichlorobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
2,2-Dichloropropane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
2-Chlorotoluene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
4-Chlorotoluene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Benzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Bromobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00

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DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 502.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Bromochloromethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Bromomethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Carbon tetrachloride	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Chlorobenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Chloroethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Chloromethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Dibromomethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Dichlorodifluoromethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Ethylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Hexachlorobutadiene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Isopropylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Methyl tert-butyl ether	ND	ug/l		0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Methylene chloride	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Styrene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Tetrachloroethene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Toluene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Trichloroethene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Trichlorofluoromethane	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
Vinyl chloride	ND	ug/l	2	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
cis-1,2-Dichloroethene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
cis-1,3-Dichloropropene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
m,p-Xylene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
n-Butylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
n-Propylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
o-Xylene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
p-Isopropyltoluene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
sec-Butylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
tert-Butylbenzene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
trans-1,2-Dichloroethene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00
trans-1,3-Dichloropropene	ND	ug/l	5	0.5	MR		04/14/2004 00:00	04/14/2004 00:00

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Chlorofluorobenzene (ELCD)	11.6	ug/l			MR	QC	04/14/2004 00:00	04/14/2004 00:00
Chlorofluorobenzene (PID)	9.90	ug/l			MR	QC	04/14/2004 00:00	04/14/2004 00:00

GT = greater than
LT = less than
ND = not detected

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DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 504.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,2-Dibromo-3-chloropropane	ND	ug/l	0.2	0.01	JK		04/20/2004 08:11	04/21/2004 15:33
1,2-Dibromoethane (EDB)	ND	ug/l	0.05	0.01	JK		04/20/2004 08:11	04/21/2004 15:33

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Tetrachloro-meta-xylene	0.269	ug/l			JK	SURRH QC	04/20/2004 08:11	04/21/2004 15:33

Method: EPA 508

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Chlordane (tech)	ND	ug/l	2	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1016	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1221	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1232	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1242	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1248	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1254	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
PCB-1260	ND	ug/l	0.5	0.10	JAK		04/14/2004 08:18	04/17/2004 04:18
Toxaphene	ND	ug/l	3	0.25	JAK		04/14/2004 08:18	04/17/2004 04:18

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
beta-BHC	0.0901	ug/l			JAK	QC	04/14/2004 08:18	04/17/2004 04:18

Method: EPA 515.3

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,4,5-TP (Silvex)	ND	ug/l	50	2.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00

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DL = detection level
ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 515.3

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
2,4-D	ND	ug/l	70	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dalapon	ND	ug/l	200	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dicamba	ND	ug/l	50	10.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Dinoseb	ND	ug/l	7	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Pentachlorophenol	ND	ug/l	1	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00
Picloram	ND	ug/l	500	1.0		LIFE*	04/14/2004 00:00	04/16/2004 00:00

Method: EPA 525.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Alachlor	ND	ug/l	2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Aldrin	ND	ug/l	5	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Atrazine	ND	ug/l	3	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Benzo (a) pyrene	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Butachlor	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Di(2-ethylhexyl)adipate	ND	ug/l	400	2.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Di(2-ethylhexyl)phthalate	ND	ug/l	6	2.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Dieldrin	ND	ug/l	5	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Endrin	ND	ug/l	2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
HCH-gamma (Lindane)	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Heptachlor	ND	ug/l	0.4	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Heptachlor epoxide	ND	ug/l	0.2	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Hexachlorobenzene	ND	ug/l	1	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Hexachlorocyclopentadiene	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Methoxychlor	ND	ug/l	40	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Metolachlor	ND	ug/l	50	1.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Metribuzin	ND	ug/l	50	1.00	RJH		04/20/2004 00:00	04/21/2004 00:00
Propachlor	ND	ug/l	50	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00
Simazine	ND	ug/l	4	0.10	RJH		04/20/2004 00:00	04/21/2004 00:00

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
1,3-Dimethyl-2-nitrobenzene	6.39	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00
Perylene-d12	5.01	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00
Triphenyl phosphate	5.21	ug/l			RJH	QC	04/20/2004 00:00	04/21/2004 00:00

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PID = Photoionization Detector (QC)
Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

Method: EPA 525.2

Method: EPA 531.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
3-Hydroxycarbofuran	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb	ND	ug/l	3	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb sulfone	ND	ug/l	2	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Aldicarb sulfoxide	ND	ug/l	4	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Carbaryl	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Carbofuran	ND	ug/l	40	1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Methomyl	ND	ug/l		1.0	IC		04/13/2004 00:00	04/13/2004 00:00
Oxamyl	ND	ug/l	200	1.0	IC		04/13/2004 00:00	04/13/2004 00:00

Method: EPA 547

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Glyphosate	ND	mg/l	700	0.05	IC		04/16/2004 00:00	04/16/2004 00:00

Method: EPA 548.1

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Endothall	ND	mg/l	0.1	0.05		FCOL*	04/13/2004 11:00	04/14/2004 18:12

Method: EPA 549.2

Analyte	Result	Units	MCL	DL	By	Notes	Prepared	Analyzed
Diquat	ND	ug/l	20	0.8	IC		04/14/2004 00:00	04/15/2004 00:00

GT = greater than
 LT = less than
 ND = not detected

MCL = maximum contaminant level
 DL = detection level
 ELCD = Electrolytic Conductivity Detector (QC)

PID = Photoionization Detector (QC)
 Analysis by Eastern Lab Services #11216

Printed on: 5/3/2004

CHAIN OF CUSTODY

OCL Analytical Services

35 Goshen Turnpike, Bloomingburg, NY 12721
Phone (845)733-1557 Fax (845)733-1944

Client:

Name	LBG
Address	176 Monroe Turnpike
City, State, Zip	Trumbull, CT 06611
Phone	(203) 452-3100

Sample Temp (c) _____
Sample rec'd on ice? _____
Sample set up in 6 hr? _____
Properly preserved? _____
Within holding times? _____
Reviewed by _____

Samples should be brought
to the lab on ice with a
receiving temp of 2 to 6 C.

OCL#	Matrix	Collection Date	Time	Sample Description/Location	Preservative	Containers No/type	Analysis Required	Results
163038	L	4-8-01		Quarry Pond	none	125 mL	Full Part 5: Metals, Organics & Inorganics	
			946	Tw-6 / Quarry Pond	none	500ml - P	Total Coliform	
			937		none	500ml - P	Alkalinity	
			939		none	1L Plastic	Nitrate, nitrite	
							pH, odor, turbidity, color, fluoride,	
							chloride, TDS, sulfate, Ca hardness,	
							corrosivity	
			943		HNO3	1L Plastic	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu,	
			944		NaOH	1L Plastic	Fe, Mn, Na, Zn, Sb, Be, Ni, Ti	
							Cyanide	
163038					HCl	2-40ml vial	VOC + MTBE	

IN ADDITION TO ABOVE TESTING, COMPLETE SOC AND RADIOLOGICALS ARE REQUIRED

Comments/Special Instructions:

Rush Requested?

Client Code:

Prepaid?

Sampled By:	print	sign	date:	time:
Relinquished By:	print	sign	date:	time:
Relinquished By:	print	sign	date:	time:

Client: _____

Name _____

Address _____

City, State, Zip _____

Phone _____

Sample Temp (c) _____

Sample rec'd on ice? _____

Sample set up in 6 hr? _____

Properly preserved? _____

Within holding times? _____

Reviewed by _____

Samples should be brought
to the lab on ice with a
receiving temp of 2 to 6 C.

OCL#	Matrix	Collection Date	Time	grab	Sample Description/Location	Containers No/type	Preservative	Complete SOC Testing	Analysis Required	Results
163038	V	4-6-01			TW-6 / Quarry Road	2 40ml G	thio	EPA 504		
			997/44			2 1L G	thio	EPA 508		
			1000			1 250ml G	thio	EPA 515.3		
			950/955			2 1L G	sulfite	EPA 525.2		
			1100			2 40ml G	thio	EPA 531.1		
			956			1 1L G	thio	extra sample		
			1100			3 40ml G	thio	EPA 547 Glyphosate		
			1001			1 250ml G	none	EPA 548 Endothall		
			953			1 1L G	thio	EPA 549 Diquat		
163038	V		952			1L G	sulfite	Extra		

Comments/Special Instructions: _____

Rush Requested? _____ Client Code: _____ Prepaid? _____

Sampled By: _____	print _____	sign _____	date: _____	time: _____
Relinquished By: _____	print _____	sign _____	date: _____	time: _____
Relinquished By: _____	print _____	sign _____	date: _____	time: _____

CHAIN OF CUSTODY

OCL Analytical Services
 35 Goshen Turnpike, Bloomingburg, NY 12721
 Phone (845)733-1557 Fax (845)733-1944

Client:

Name
Address
City, State, Zip
Phone

Sample Temp (c) _____
 Sample rec'd on ice? _____
 Sample set up in 6 hr? _____
 Properly preserved? _____
 Within holding times? _____
 Reviewed by _____

Samples should be brought
 to the lab on ice with a
 receiving temp of 2 to 6 C.

OCL#	Matrix	Collection Date	Time	comp	grab	Sample Description/Location	Containers No/type	Preservative	cl resid	Analysis Required	Results
162763	✓	4-20-01	937	✓	✓	TW-6 / Quarry Pond	1 LP	HNO3		Gross Alpha	
163038			934	✓	✓		1 LP	HNO3		Gross Beta	
				✓	✓						
			941	✓	✓		1 LP	HNO3		Radium 226	
			942	✓	✓		1 LP	HNO3		Radium 228	
				✓	✓		2 40ml vials	none		Radon in Water	
163038				✓	✓						
				✓	✓						
				✓	✓						
				✓	✓						

Comments/Special Instructions:

Rush Requested? _____ Client Code: _____ Prepaid? _____

Sampled By:	print	sign	date:	time:	Received By:	print	sign	date:	time:
Relinquished By:	print	sign	date:	time:	Received By:	print	sign	date:	time:
Relinquished By:	print	sign	date:	time:	Received By:	print	sign	date:	time:

OCL Analytical Services
35 Goshen Turnpike, Bloomingburg, NY 12721
Phone (845)733-1557 Fax (845)733-1944

Name	L B G
Address	
City, State, Zip	
Phone	

Sample Temp (c) _____
 Sample rec'd on ice? _____
 Sample set up in 6 hr? _____
 Properly preserved? _____
 Within holding times? _____
 Reviewed by _____

receiving temp of 2 to 6 C.

[illegible]

Comments/Special Instructions:	Rush Requested?	Client Code:	Prepaid?
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Sampled By:	print sign	date: time:	Received By:	print sign	date: time:
Relinquished By:	print sign	date: time:	Received By:	print sign	date: time:
Relinquished By:	print sign	date: time:	Received By:	print sign	date: time:

163038

35 Goshen Turnpiki,
OCL ANALYTICAL SERVICES
Bloomington, NY 12721

(914) 733-1557

MUNICIPAL WATER SAMPLING INSTRUCTIONS
GIARDIA/CRYPTOSPORIDIUM OR MICROSCOPIC PARTICULATE ANALYSIS

1. READ INSTRUCTIONS COMPLETELY before starting to collect samples.
2. Remove the ice pack from the box. The ice pack must be frozen and returned with the filter and the filtering unit when the are shipped back to the lab. Ice may be used instead of ice packs.
3. Select a cold water faucet with a male thread, such as the clothes washer faucet, outdoor faucet or the kitchen faucet. Flush the faucet for three minutes.
4. Screw the garden hose connection into the filter apparatus and adjust the water flow to not more than one gallon per minute. Pressure gauge should not read above 30 psi. If pressure gauge reads greater than 30 psi adjust pressure regulator.
5. Flush the sampling apparatus for twenty minutes. Turn the water off and disassemble the filter housing. Pour out the water.
6. Place the filter into the filter housing. Save the bag for shipping purposes.
7. Screw the housing into the head of the unit. Be sure that the filter and the housing are secure, or it will leak. Again, adjust the flow to not more than one gallon per minute and pressure gauge at 30 psi or lower.
8. Filter a minimum of 300 gallons of water through the unit. Record the following.
Initial reading _____ Final meter reading _____
Final -Initial reading = Total Volume of water sampled 920
9. Turn water off. **Put On Vinyl Gloves.** Open the filter and pour the water in the housing into the one gallon plastic bag.. Carefully remove the filter from the housing by sliding it into the plastic bag in which it was originally shipped. Seal the bag and place in another bag. Place double-bagged filter, bottle of water, ice pack, and sampling unit in the box and seal.
10. If you are sampling more than one site, the sampling apparatus must be cleaned between each sample, by washing the filter housing and inlet hose with warm soapy water. Rinse **thoroughly** with tap water.
11. Return the package to Orange County Lab. Please note that the analysis must be started within 48 to 96 hours from the time you conducted the filtering process.

SAMPLING LOCATION well 6
Total Volume of Water Sampled 920

SAMPLING DATE/TIME 4/8 1030am
Sampled By J. Am...

Client Name LB6

Bill to _____

Address Trumbull

Address _____

Client:

Name	L B G
Address	
City, State, Zip	
Phone	

OCL Analytical Services

35 Goshen Turnpike, Bloomingburg, NY 12721
Phone (845)733-1557 Fax (845)733-1944

Sample Temp (c)
Sample rec'd on ice?
Sample set up in 6 hr?
Properly preserved?
Within holding times?
Reviewed by

Samples should be brought to the lab on ice with a receiving temp of 2 to 6 C.

[illegible]

Comments/Special Instructions:	Rush Requested?	Client Code:	Prepaid?
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Sampled By:	print sign	date: _____ time: _____	Received By:	print sign	date: _____ time: _____
Relinquished By:	print sign	date: _____ time: _____	Received By:	print sign	date: _____ time: _____
Relinquished By:	print sign	date: _____ time: _____	Received By:	print sign	date: _____ time: _____

