#### New Gaming Facility Location Board Response to Request for Applications to Develop and Operate a Gaming Facility in New York State

#### TIOGA DOWNS RACETRACK, LLC

Exhibit VIII.C.17.a.

2005 Engineering Report

# Tioga Downs Racetrack Water and Sewer Systems Engineering Report

Tioga Downs Racetrack, LLC Town of Nichols Tioga County, New York

Prepared For:

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## WATER AND SEWER SYSTEMS ENGINEERING REPORT TIOGA DOWNS RACETRACK, LLC TOWN OF NICHOLS TIOGA COUNTY, NEW YORK

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### Tioga Park Town of Nichols Tioga County, NY

#### I INTRODUCTION

Tioga Downs Racetrack, LLC (Owner) has purchased the 140 acre Tioga Park property in the Town of Nichols, Tioga County, New York. Originally developed as a horse racing facility, the facility was only used for racing for two seasons in the late 1970's and then as a flea market and equestrian arena in recent years.

Proposed redevelopment of the property includes the construction of a new grandstand and gaming facility in the location of the existing grandstand, and a new paddock barn. The existing water and sewer facilities on the site were evaluated based on the proposed redevelopment to determine what improvements would be required. As it was determined that significant new water infrastructure would be required, the evaluation also considered a potential future hotel in the design of the new water infrastructure.

A location map, USGS vicinity map, and aerial photograph are included as Figures 1, 2 and 3.

#### **2 WATER SYSTEM**

#### 2.1 Overview

The existing water system serving the facility consists of a well, pump house, storage tank, and water distribution system. Tioga County Health Department (TCHD) has indicated that the water system will be classified as a Transient Noncommunity (TNC) water system, but that testing will be required for organics in addition to the parameters specified by Subpart 5-1 of the State Sanitary Code for TNC systems, and that a Grade C certified operator will be required for the system (see Appendix A for correspondence).

The existing water system facilities were evaluated based on the proposed redevelopment of the site to determine if improvements would be required. As it was determined that significant new infrastructure would be required, the anticipated water supply requirements of a potential future hotel were also included in the evaluation, to ensure that the new infrastructure would be adequate for the requirements of the future hotel.

#### 2.2 Evaluation of Existing Facilities

#### 2.2.1 Well

No records could be located for the existing well or well pump. Field measurements indicated that the well is approximately 81 feet deep, with a static water level approximately 45 feet below the surface. A well driller is being contracted to test the existing well to determine yield, static water levels, etc. Records from this test will be submitted as an amendment to this report. There are some difficulties with the operation of the well pump in that there are no automatic controls based on tank level, and therefore the well pump must be controlled manually using an on/off switch located in the pump house. An automatic control system will be provided for the well pump to maintain tank level within a limited operating range.

#### 2.2.2 Pump House

The existing pump house has a propane-fueled fire pump, propane gas heater and a sodium hypochlorite metering pump. The piping consists of 2" galvanized steel pipe from the well, and 6" and 10" steel piping. Some of the piping is significantly deteriorated and will be replaced, particularly the 6" and 10" piping which is badly rusted. The propane-fueled fire pump has never been connected so that it could operate, and will be removed.

#### 2.2.3 Water Storage Tank

The storage tank is 20 feet in diameter, 85 feet tall with a capacity of 200,000 gallons. The water storage tank was drained and inspected inside and out and determined to be structurally sound. The coating systems on the interior and exterior of the tank are badly deteriorated, and therefore all surfaces will be recoated. The existing interior coating system, which will be

completely removed down to bare metal prior to repainting, is not believed to contain lead but will be tested prior to removal. Samples of the sediment material found inside the tank were sent to Eastern Laboratories. Test results for this material are included in Appendix B. This sediment material will be removed and disposed of properly.

#### 2.2.4 Distribution System

The water distribution system is constructed of asbestos-cement (A-C) pipe, primarily 10" and 8" size. Water samples at two distribution points were tested for asbestos, and the results were below the detection limit of the testing procedure (<0.2 million fibers per liter (MFL)), and as well below the MCL specified by New York State regulations (7 MFL), indicating there is not currently a contamination problem from the piping. Laboratory analysis certificates are included in Appendix C.

A deficiency with the existing system is that there is a broken water main(s) in the parking lot of the grandstand area. This piping is currently not in service, but when the valves were opened water came up to the surface of the ground through cracks in the pavement. A new water distribution system will be provided from the pump house to the grandstand area to eliminate the broken piping and to address any concerns regarding future asbestos contamination of the water. The existing A-C distribution system to the horse barns and office (back track area) will remain in service as a branch system from the new distribution system, but the back track branch system will be separated from the new system with a backflow preventer.

An additional deficiency noted is that no backflow prevention exists for the hose bibbs located in each of the horse barns. A vacuum breaker will be installed on each hose bibb.

#### 2.3 Water Quality

Water sampling data obtained by Eastern Laboratories is summarized in Table 2-1, with laboratory analysis certificates included in Appendix C. All water quality parameters tested were below their respective MCLs, with the following exceptions:

- Nitrate (as N) Two samples were taken at the pump house, with results of 14.9 mg/l (Nitrate) and 12.7 mg/l (Nitrate/Nitrite). Both of these values are above the MCL of 10 mg/l. Due to the high nitrate levels, the Tioga County Health Department recommended that the raw water supply (prior to chlorination) be tested for Total Coliforms and E. Coli. The raw water tested positive for Total Coliforms, which is not unusual for raw water, but negative for E. Coli.
- <u>Chloride</u> One sample was taken at the office bathroom, with a result of 267 mg/l versus the MCL of 250 mg/l. A second sample was then taken at the pump house, with a result of 151 mg/l. The average of these two values is 209 mg/l, which is below the MCL. Therefore, no treatment measures will be necessary.

Additionally, a water sample from the office bathroom was tested for sodium, with a result of 56 mg/l. There is no designated MCL for sodium, however, Table 2 of Subpart 5-1 notes that water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Due to the fact that it is a transient non-community water system, it is believed that this sodium level should not present a problem.

Testing for organic components has not been performed, but will be completed prior to placing the system in operation.

In summary, with the exception of the nitrate levels, the existing water supply appears to be of suitable quality, with disinfection, to use for potable water in accordance with Subpart 5-1 of the State Sanitary Code. Upon completion of the well yield test the raw water will be resampled for nitrates, and sampled for organic chemicals. The results of this testing will be submitted as an amendment to this report.

Table 2-1
Drinking Water Sampling Results

Asbestos Office-Bathroom 4/19/05 Asbestos Concession Stand 4/19/05 Antimony Office-Bathroom 4/19/05 Arsenic Office-Bathroom 4/19/05 Barium Office-Bathroom 4/19/05 Beryllium Office-Bathroom 4/19/05 Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Sulfate (as N) Pump House 6/16/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/16/05 Free Residual Chlorine Office-Bathroom 4/19/05 Distribution Point Turbidity Office-Bathroom 4/19/05	<0.200 <0.200 <0.0050 <0.005 0.084 <0.0010 <0.0020	7 7 0.006 0.05 2.00 0.004	MFL <sup>1</sup> MFL <sup>1</sup> mg/l mg/l
Asbestos Concession Stand 4/19/05 Antimony Office-Bathroom 4/19/05 Arsenic Office-Bathroom 4/19/05 Barium Office-Bathroom 4/19/05 Beryllium Office-Bathroom 4/19/05 Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Mercury Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.200 <0.0050 <0.005 0.084 <0.0010 <0.0020	7 0.006 0.05 2.00	MFL <sup>1</sup> mg/l mg/l
Antimony Arsenic Office-Bathroom A/19/05 Barium Office-Bathroom Beryllium Office-Bathroom Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Cadmium Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Cyanide (total) Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Selenium Office-Bathroom Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Silver Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Chloride Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Chloride Office-Bathroom Office-Bathroom A/19/05 Chloride Office-Bathroom Office-Bathroom A/19/05 Office-Bathroom Office-Bathroom A/19/05 Sodium Office-Bathroom Office-Bathroom A/19/05 Sodium Office-Bathroom Office-Bathroom A/19/05 Sodium Office-Bathroom Office-Bathroom A/19/05 Sodium Office-Bathroom Office-Bathroom A/19/05 Nitrate (as N) Pump House Office-Bathroom Nitrate (as N) Pump House Office-Bathroom Office-Bathroom A/19/05 Nitrate/Nitrite (as N) Pump House Office-Bathroom Office-Bathroom Office-Bathroom Office-Bathroom A/19/05 Odor Office-Bathroom Of	<0.0050 <0.005 0.084 <0.0010 <0.0020	0.006 0.05 2.00	mg/l mg/l
Arsenic Office-Bathroom 4/19/05 Barium Office-Bathroom 4/19/05 Beryllium Office-Bathroom 4/19/05 Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Mercury Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Solifate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.005 0.084 <0.0010 <0.0020	0.05 2.00	mg/l
Barium Office-Bathroom 4/19/05 Beryllium Office-Bathroom 4/19/05 Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Solitate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Ditrate (as N) Pump House 6/16/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	0.084 <0.0010 <0.0020	2.00	mg/l
Beryllium Office-Bathroom 4/19/05 Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Mercury Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Solitate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Ditrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.0010 <0.0020	<del></del>	<del></del>
Cadmium Office-Bathroom 4/19/05 Chromium Office-Bathroom 4/19/05 Cyanide (total) Office-Bathroom 4/19/05 Mercury Office-Bathroom 4/19/05 Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.0020	0.004	
ChromiumOffice-Bathroom4/19/05Cyanide (total)Office-Bathroom4/19/05MercuryOffice-Bathroom4/19/05SeleniumOffice-Bathroom4/19/05SilverOffice-Bathroom4/19/05ThalliumOffice-Bathroom4/19/05FluorideOffice-Bathroom4/19/05ChlorideOffice-Bathroom4/19/05ChloridePump House6/16/05IronOffice-Bathroom4/19/05ManganeseOffice-Bathroom4/19/05SodiumOffice-Bathroom4/19/05Sulfate (as SO4)Office-Bathroom4/19/05ZincOffice-Bathroom4/19/05ColorOffice-Bathroom4/19/05OdorOffice-Bathroom4/19/05Nitrate (as N)Pump House6/16/05Nitrite (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/27/05Free Residual ChlorineOffice-Bathroom4/19/05			mg/i
Cyanide (total)  Mercury  Office-Bathroom  A/19/05  Selenium  Office-Bathroom  A/19/05  Silver  Office-Bathroom  A/19/05  Thallium  Office-Bathroom  A/19/05  Thallium  Office-Bathroom  A/19/05  Fluoride  Office-Bathroom  A/19/05  Chloride  Office-Bathroom  A/19/05  Chloride  Pump House  A/19/05  Iron  Office-Bathroom  A/19/05  Manganese  Office-Bathroom  A/19/05  Sodium  Office-Bathroom  A/19/05  Sodium  Office-Bathroom  A/19/05  Sulfate (as SO <sub>4</sub> )  Office-Bathroom  A/19/05  Color  Office-Bathroom  A/19/05  Office-Bathroom  A/19/05  Nitrate (as N)  Pump House  A/19/05  Nitrate (as N)  Pump House  A/19/05  Nitrate/Nitrite (as N)  Pump House  A/19/05  Free Residual Chlorine  Office-Bathroom  A/19/05		0.005	mg/l
MercuryOffice-Bathroom4/19/05SeleniumOffice-Bathroom4/19/05SilverOffice-Bathroom4/19/05ThalliumOffice-Bathroom4/19/05FluorideOffice-Bathroom4/19/05ChlorideOffice-Bathroom4/19/05ChloridePump House6/16/05IronOffice-Bathroom4/19/05ManganeseOffice-Bathroom4/19/05SodiumOffice-Bathroom4/19/05Sulfate (as SO4)Office-Bathroom4/19/05ZincOffice-Bathroom4/19/05ColorOffice-Bathroom4/19/05OdorOffice-Bathroom4/19/05Nitrate (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/16/05Free Residual ChlorineOffice-Bathroom4/19/05	<0.0050	0.10	mg/l
Selenium Office-Bathroom 4/19/05 Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.025	0.2	mg/i
Silver Office-Bathroom 4/19/05 Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.0002	0.002	mg/l
Thallium Office-Bathroom 4/19/05 Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.005	0.05	mg/l
Fluoride Office-Bathroom 4/19/05 Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.0010	0.1	mg/l
Chloride Office-Bathroom 4/19/05 Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.002	0.002	mg/l
Chloride Pump House 6/16/05 Iron Office-Bathroom 4/19/05 Manganese Office-Bathroom 4/19/05 Sodium Office-Bathroom 4/19/05 Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05 Zinc Office-Bathroom 4/19/05 Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	<0.2	2.2	mg/l
Iron Office-Bathroom 4/19/05  Manganese Office-Bathroom 4/19/05  Sodium Office-Bathroom 4/19/05  Sulfate (as SO <sub>4</sub> ) Office-Bathroom 4/19/05  Zinc Office-Bathroom 4/19/05  Color Office-Bathroom 4/19/05  Odor Office-Bathroom 4/19/05  Nitrate (as N) Pump House 6/16/05  Nitrite (as N) Pump House 6/16/05  Nitrate/Nitrite (as N) Pump House 6/27/05  Free Residual Chlorine Office-Bathroom 4/19/05	267	250.0	mg/l
ManganeseOffice-Bathroom4/19/05SodiumOffice-Bathroom4/19/05Sulfate (as SO4)Office-Bathroom4/19/05ZincOffice-Bathroom4/19/05ColorOffice-Bathroom4/19/05OdorOffice-Bathroom4/19/05Nitrate (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/27/05Free Residual ChlorineOffice-Bathroom4/19/05	151	250.0	mg/l
SodiumOffice-Bathroom4/19/05Sulfate (as SO4)Office-Bathroom4/19/05ZincOffice-Bathroom4/19/05ColorOffice-Bathroom4/19/05OdorOffice-Bathroom4/19/05Nitrate (as N)Pump House6/16/05Nitrite (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/27/05Free Residual ChlorineOffice-Bathroom4/19/05	0.11	0.3 <sup>2</sup>	mg/l
Sulfate (as SO <sub>4</sub> )  Zinc  Office-Bathroom  4/19/05  Color  Office-Bathroom  4/19/05  Odor  Office-Bathroom  4/19/05  Odor  Office-Bathroom  4/19/05  Nitrate (as N)  Pump House  6/16/05  Nitrite (as N)  Pump House  6/16/05  Nitrate/Nitrite (as N)  Pump House  6/27/05  Free Residual Chlorine  Office-Bathroom  4/19/05	<0.0050	0.3 <sup>2</sup>	mg/l
ZincOffice-Bathroom4/19/05ColorOffice-Bathroom4/19/05OdorOffice-Bathroom4/19/05Nitrate (as N)Pump House6/16/05Nitrite (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/27/05Free Residual ChlorineOffice-Bathroom4/19/05	56	No Designated Limits <sup>3</sup>	mg/l
Color Office-Bathroom 4/19/05 Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrite (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	24	250.0	mg/l
Odor Office-Bathroom 4/19/05 Nitrate (as N) Pump House 6/16/05 Nitrite (as N) Pump House 6/16/05 Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	0.011	5.0	mg/l
Nitrate (as N)         Pump House         6/16/05           Nitrite (as N)         Pump House         6/16/05           Nitrate/Nitrite (as N)         Pump House         6/27/05           Free Residual Chlorine         Office-Bathroom         4/19/05	5.00	15	Units
Nitrite (as N)Pump House6/16/05Nitrate/Nitrite (as N)Pump House6/27/05Free Residual ChlorineOffice-Bathroom4/19/05	<	3	Units
Nitrate/Nitrite (as N) Pump House 6/27/05 Free Residual Chlorine Office-Bathroom 4/19/05	14.9	10	mg/l
Free Residual Chlorine Office-Bathroom 4/19/05	0.04	1	mg/l
	12.7	10	mg/l
Distribution Point Turbidity Office-Bathroom 6/16/05	0.20	4.0 Max, 0.2 Min	mg/l
	<0.200	5	NTU
Total Coliforms (Raw Water) Pump House 7/14/05	Presence	Any positive sample	
Total Coliforms Office-Bathroom 4/19/05	Absence	Any positive sample	
Total Coliforms Concession Stand 4/19/05	Absence	Any positive sample	
E. Coli (Raw Water) Pump House 7/14/05	Absence	Any positive sample	
E. Coli Office-Bathroom 4/19/05	Absence	Any positive sample	
E. Coli Concession Stand 4/19/05	Absence	Any positive sample	
Total Hardness (as CaCO <sub>3</sub> ) Office-Bathroom 5/26/05	367	Not Applicable	mg/l
Total Dissolved Solids Pump House 6/16/05	778	Not Applicable	mg/l

MFL = million fibers/liter (longer than 10 microns)

<sup>&</sup>lt;sup>2</sup>If iron and manganese are present, the total concentration of both should not exceed 0.5 mg/l.

<sup>&</sup>lt;sup>3</sup>Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

#### 2.4 Flow Requirements

Design flows for the redeveloped facility are shown in Table 2-2. See Appendix D for derivation of these flows.

Table 2-2
Water System Design Flows

Facility	Average	Peak Flow	Fire Flow
	Flow (gpd)	(gpm)	
Current Redevelopment			
Grandstand/Gaming Facility	18,560	160	1000 gpm for
		(See Note 5)	90 minutes
			(see Note I)
Paddock Barn	960	(incl. w/ Grand.)	See Note 2
Office Building & Security Trailer	912	30	See Note 2
Horse Barns	1,560	(incl. w/ Office)	See Note 2
Total for Current Redevelopment	22,000	190	1000 gpm
	(15.3 gpm)		for 90 min.
			(See Note 3)
Future Development			
Hotel	9,600	108	See Note 4
Total for Current Redevelopment	31,600	298	1000 gpm
plus Future Hotel	(21.9 gpm)		for 90 min.
	· - · ·		(See Note 3)

#### Notes:

- 1. Fire protection for the Grandstand/Gaming Facility will be provided by a sprinkler system and associated fire booster pump located in the Grandstand/Gaming Facility. Water supply requirement to the Grandstand of 1000 gpm for 90 minutes, for 90,000 gallons total, is per National Fire Protection Association (NFPA) requirements. This flow must be provided to the fire pump at positive pressure (greater than 0 psi), to maintain a flooded suction on the pump.
- Proposed Paddock Barn and existing Office Building, Security Trailer, and Horse Barns do
  not have specific design fire flow requirements. Some fire protection, as capable of being
  supplied by the water distribution system, will be provided by fire hydrants on the
  distribution system.
- 3. Total fire flow requirement was assumed to be equal to the requirement for the Grandstand/Gaming Facility, as this will be the largest facility on-site. It was also assumed that it is unlikely that there would be simultaneous fires at different buildings on site.
- 4. It was assumed that the fire flow requirement for the Hotel will be less than for the Grandstand/Gaming Facility, as the Hotel will be a smaller facility than the Grandstand/Gaming Facility.
- 5. Peak flow for Grandstand/Gaming Facility per mechanical engineer for the project.

The new well pump will be sized to refill the tank in approximately a 6 hour period. Sizing the pump to account for the current redevelopment plus the future hotel therefore results in a minimum pumping rate of 88 gpm. A design pumping rate of 90 gpm will be used.

#### 2.5 Storage Requirements

Minimum storage capacity is required to be equal to the average daily consumption plus the fire flow requirement. A summary of capacity requirements is shown in Table 2-3.

Table 2-3
Water Storage Requirements

	Volume (gallons)					
Capacity Requirement	Current Redevelopment	Current Redevelopment plus Future Hotel				
Average Daily Flow	22,000	31,600				
Fire Flow	90,000	90,000				
Total	112,000	121,600				

The total capacity of the existing water storage tank is 200,000 gallons, therefore the tank is of adequate volume.

#### 2.6 Hydraulic Analysis

وفروه

Hydraulic analysis was performed to verify the capability of the existing water storage tank and proposed distribution system to provide the water flow, volume and pressure requirements for the site for the current redevelopment plus the future hotel. It was determined that the system will be adequate for both peak domestic and fire flow conditions. It will be necessary to operate the tank with the top of its operating band near the overflow of the tank (2 feet below the overflow was assumed). The volume of the operating band is recommended to be equal to the average daily flow, which equates to a band of 9.4 feet for the current redevelopment and 13.4 feet for the current redevelopment plus the future hotel. This will ensure that a minimum of 30 psi will be available at all buildings on site under peak domestic flow conditions, with the tank at any level in the operating band. This will also ensure that positive pressure can be maintained at the Grandstand facility fire pump suction for the entire fire flow duration, with the water level in the tank at the beginning of the fire flow period being at the bottom of the normal domestic operating band. Hydraulic calculations for each design condition are included in Appendix E.

#### 2.7 Proposed Improvements

Proposed improvements to place the water system in satisfactory working condition for the redeveloped site are as follows:

- 1. Perform well yield testing.
- 2. Resample the raw water for nitrates, and sample for organic chemicals.
- The existing submersible well pump will be replaced with a submersible well pump rated for 90 gpm.

- 4. The interior piping in the pump house will be completely removed, including the propane-fueled fire pump. All new piping will be installed inside the pump house.
- 5. A water meter will be installed on the well discharge piping inside the pump house, so that the amount of water pumped per day can be monitored and recorded for future system operations.
- 6. A new chemical metering pump for feeding sodium hypochlorite will be installed in the pump house, and will inject into the piping from the well. The metering pump will be interlocked with the well pump to operate when the well pump is operating, with the chemical feed rate manually adjusted. Design information for the chemical metering pump is included in Appendix F.
- 7. Power to the pump house and well will be provided from the new Grandstand facility. The electrical loads at the pump house and well will be included in the sizing of the emergency generator at the Grandstand facility.
- 8. Sediment material will be removed from the Water Storage Tank and disposed of properly.
- 9. All interior and exterior surfaces of the Water Storage Tank will be repainted.
- An impressed current cathodic protection system will be installed on the Water Storage Tank to minimize corrosion.
- 11. A control system will be provided to automatically operate the well pump based on Water Storage Tank level, utilizing a pressure transducer mounted on the piping in the pump house and a tank level meter with digital level indication and operator-adjustable setpoints for control of the well pump. The control system should be set up so that the storage tank will operate through an operating band with a volume roughly equal to the average daily flow, which will infuse water into the system to minimize freeze-up, and provide turnover of water in the tank.
- 12. A new PVC pipe (AWWA C-900) distribution system will be constructed from the pump house to the grandstand area, with a hydrant loop around the grandstand area, to address any concerns regarding future asbestos contamination of water from the existing A-C pipe. The existing A-C pipe distribution system to these areas will be abandoned in place. The existing A-C pipe serving the horse barns and office building (back track area) will remain in service, as a branch line from the new PVC distribution system, and will be separated from the new PVC distribution system with a double check valve backflow preventer.
- 13. The hose bibbs in each horse barn will be provided with vacuum breakers for backflow prevention.

#### 3 SEWAGE DISPOSAL SYSTEM

#### 3.1 Overview

The existing sewage disposal facilities are permitted under New York State Pollutant Discharge Elimination System (SPDES) Permit No. NY-0244881. This permit has been transferred from the previous property owner, Hawkins Development Company LLC, to the current Owner, Tioga Downs Racetrack, LLC. A copy of the SPDES permit is included in Appendix G. A previous engineering report for the sewage system was completed in 1996 by Fox Engineering and is included in Appendix H.

The facilities consist of two separate on-lot disposal systems identified as System #1 and System #2, both located in the infield area of the racetrack.

System #1, identified as Outfall No. 1 in the SPDES permit, has a permitted design flow of 19,900 gallons per day (gpd). This system, which serves the grandstand and its related areas, consists of two parallel septic tanks followed by a dosing chamber and three leach fields.

System #2, identified as Outfall No. 2 in the SPDES permit, has a permitted design flow of 9,900 gpd. This system, which serves the general office area and security trailer, consists of a septic tank followed by a dosing chamber and two leach fields.

The existing sewage disposal facilities were evaluated based on the proposed redevelopment of the site to determine if improvements would be required. The potential future hotel was not included in this evaluation, as it was determined that the sizing of the existing septic systems is adequate for the current redevelopment. The increased sewage disposal requirements associated with the hotel will be addressed if and when the hotel is designed.

#### 3.2 Evaluation of Existing Facilities

#### 3.2.1 System #1

System #1 has been inactive for a considerable length of time but will be placed into full service with the construction of the new grandstand and paddock barn. Investigatory field work was performed to determine if the various components of the system were still in existence and operable. A field survey located the septic tanks, dosing chambers, distribution boxes, and manholes. It was determined that these components were installed and generally in the locations shown on the existing drawings.

The various system components were exposed so that they could be examined and tests could be performed as necessary. A leakage test was performed on the sewer from the manhole on the south side of the racetrack to the flow division manhole immediately upstream of the septic tanks, by inserting a plug in the downstream end and filling the line with water from the upstream manhole. The test indicated that there is a leak in this section of the line, and a new

parallel sewer will be installed. The existing sewer will be abandoned in place as it is constructed of A-C pipe.

Water flow tests were conducted on the entire septic system, from the flow division manhole, through the septic tanks, the dosing chamber, the distribution boxes, and to the leach fields. All of the piping and equipment components for the entire septic system appeared to be in good working order. However, it was determined that although the siphons in the dosing chamber operate, the manner in which they operate is not acceptable in that the same two fields are always active and the third field is always at rest. There are no existing means to alternate the resting field, and therefore a means for alternation of the third field will be installed.

It was also determined that the leach fields were intact and properly shown on the existing drawings.

#### 3.2.2 System #2

System #2 has been in operation, serving the Park office and the security trailer. No additional facilities will be connected to the system. As the system has been in operation with no problems reported by the Owner, no tests were performed on this system.

It should be noted that System #2 was previously tested in 1996, per the 1996 Engineering Report, and a broken sewer line was identified and repaired at that time. It should also be noted that the 1996 Engineering Report proposed the addition of restrooms and kitchen facilities to the barn immediately to the north of the Office, to be connected to System #2 via an 8" sewer with a grease trap. However, these improvements were never constructed.

#### 3.2.3 Septic System Monitoring Wells

Six (6) monitoring wells were originally installed to periodically check groundwater downstream from the leaching fields. A diagram of the locations of these wells is included with the SPDES Permit in Appendix G of this report. Monitoring wells #2, 3, 4 and 6 were located, and water samples were taken from each with the exception of #3, which was dry. Monitoring wells #1 and 5 could not be located. A summary of the sampling results is shown in Table 3-1, with laboratory analysis certificates included in Appendix I. These results did not indicate any groundwater contamination from the septic systems.

Table 3-1
Septic System Monitoring Well Sampling Results

Monitoring Well	Parameter	Date	Result	Detection Limit	Units
MW-2	Nitrate	4/22/05	<0.05	0.05	mg/l
	рΗ	4/22/05	6.63	-	pH Units
	Fecal Coliforms	4/22/05	<10	10	CFU/100 ml
MW-4	Nitrate	4/22/05	<0.05	0.05	mg/l
	рН	4/22/05	9.47	-	pH Units
	Fecal Coliforms	4/22/05	<10	10	CFU/100 ml
MW-6	Nitrate	4/22/05	0.09	0.05	mg/l
	pН	4/22/05	7.22	-	pH Units
	Fecal Coliforms	4/22/05	<10	10	CFU/100 ml

#### 3.3 Flow Requirements

Design flows to each septic system for the current redevelopment are shown in Table 3-2. A complete analysis of these flows is included in Appendix D. The design flows to each system for the current redevelopment are less than the respective currently permitted capacities, and therefore an analysis of the existing septic system design parameters was not performed.

Table 3-2
Septic System Design Flows

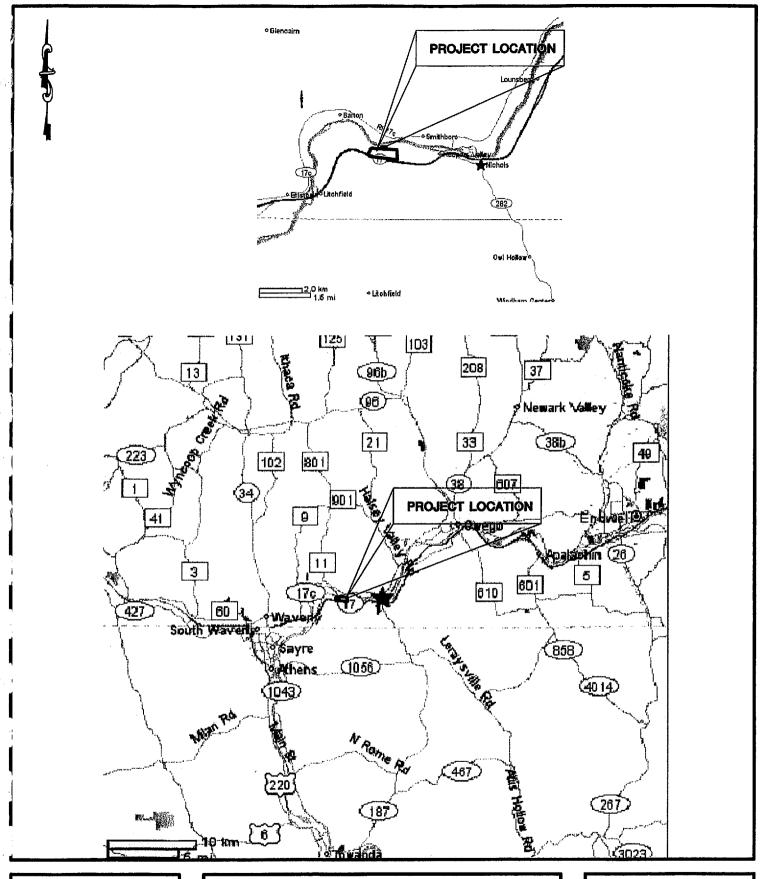
Septic System/Facility	Average Daily Flow (gpd)
System #I	
Grandstand/Gaming Facility	18,560
Paddock Barn	960
Total System #1 Design	19,520
Permitted Capacity	19,900
System #2	
Office Building & Security Trailer	912
Total System #2 Design	912
Permitted Capacity	9,900

#### 3.4 Proposed Improvements

Proposed improvements to place the sewage disposal system in satisfactory working condition for the redeveloped site are as follows:

1. On System #1, a new 8" PVC sewer collection system will be installed from the new grandstand and paddock barn to the flow division manhole immediately upstream of the

- septic tanks. The existing A-C sewer system upstream of this manhole, including the leaking 8" line that crosses the racetrack, will be abandoned in place.
- 2. On System #1, the new PVC sewer system will include an external grease trap for the grandstand kitchen waste.
- 3. On System #1, a 2000 gallon septic tank will be installed immediately downstream of the paddock barn. The effluent from this septic tank will flow through the new PVC sewer system to the existing septic system. Waste from the paddock barn will include both horse waste and sediment from washing down the floors in the stable area, and regular domestic waste from the restrooms. The septic tank will be installed to lessen the impact of these loads, particularly the washdown loads, on the existing septic tanks. The tank is sized to be roughly equal to two times the average daily flow of 960 gpd. NYSDEC's Design Standards for Wastewater Treatment Works 1988 Intermediate Sized Sewerage Facilities requires that for facilities with flows under 5000 gallons per day, septic tanks be sized for 1.5 times the average daily flow. It also indicates that for facilities with garbage grinders, due to the additional solids loading, the sizing be increased by 1/3, or to 2.0 times the average daily flow. Although the paddock barn will not have garbage grinders, the potential additional solids loading from the horse waste washdown was assumed to have the same effect and therefore the 2.0 multiplier was used.
- 4. On System #1, a valve will be installed on each of the three lines from the dosing chamber to the individual leach field distribution boxes. This will allow manual alternation of which field is off-line for recovery, with the existing dosing system automatically alternating flow to the two active leach fields. It is recommended that this manual alternation be performed monthly.
- 5. The septic tanks for both systems will be totally pumped out prior to the start of the new season.



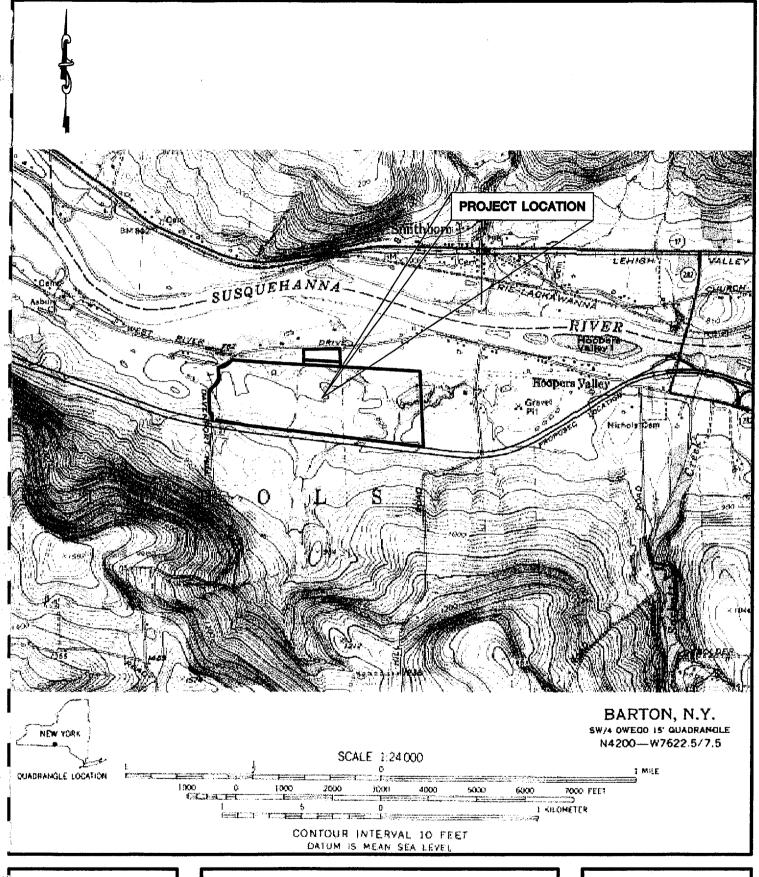


TIOGA DOWNS RACETRACK
TOWN OF NICHOLS

**TIOGA COUNTY** 

**NEW YORK STATE** 

FIGURE 1
LOCATION MAP



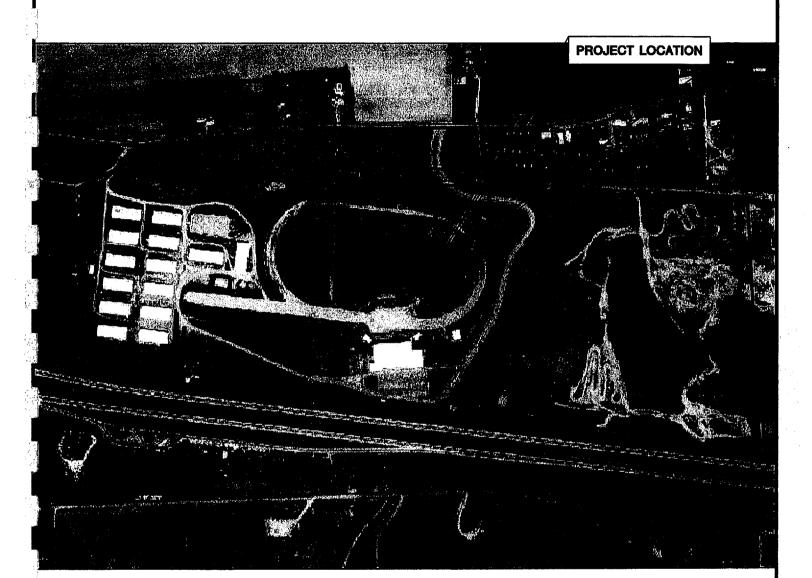


TIOGA DOWNS RACETRACK
TOWN OF NICHOLS

**TIOGA COUNTY** 

**NEW YORK STATE** 

FIGURE 2
USGS VICINITY MAP



SCALE: 1 = 600 FT



**TIOGA DOWNS RACETRACK TOWN OF NICHOLS** 

BROOME COUNTY NEW YORK STATE

FIGURE 3 **AERIAL PHOTO** 



Johannes Pecters, MPA Public Health Director

#### TIOGA COUNTY HEALTH DEPARTMENT

231 Main Street Owego, New York 13827-1697

Public Health
Environmental Health
Administration
Toll Free

(607) 687-8600 fax - 687-8486 / 2916 (607) 687-8620 fax - 687-6041 (607) 687-8630 fax - 687-8636 1-800-282-4884 (Owego)

June 30, 2005

Keystone Associates 229-231 State st. 4th floor Binghamton, NY 13901

Att: Mr. David Chase

RE: Tioga Downs Race track Public Water Supply Year 2005 Sampling Requirements

Dear Mr. Chase:

We are writing to advise you of the sampling requirements for the calendar year of 2005. These requirements are based on Part 5-1 of the New York State Sanitary Code and past sampling results.

Our system data records indicate that your public water system is classified as a Transient Non-community water supply that serves 25 persons or more. Your water system receives its water from one ground water source.

#### Bacteriology

A water sampling plan indicating where you collect your bacteriological samples from must be submitted to the Environmental Health Department for approval. You are required to collect a Monthly sample for each water supply according to your approved sampling plan. Free chlorine residual at the time of sampling must be reported on the water analysis report laboratory submitted to the Health Department. Samples that do not indicate the free chlorine residual at the time of sampling will NOT be considered as valid samples.

#### **Nitrates**

A Sample for Nitrates must be collected from your water system annually. If any monitoring results exceed the MCL of 10 mg/l you are to notify this office and collect a repeat sample within 24 hours.

#### Inorganic Sampling

Inorganic Samples must be taken before 12/31/2005. If any monitoring results exceed the MCL, you are to notify this office within 48 hours to receive confirmation-monitoring instruction.

#### VOC's

VOC sampling must be completed before 12/31/2005. If contaminants are detected, continued quarterly sampling will be required. If contaminants exceed the MCL 5 ug/l (2ug/l for vinyl chloride), you must notify this agency within 48 hours for further monitoring instructions.

Be advised that pending a venerability analysis for each well, you may qualify for a six-year sampling schedule for each well. Upon completion of the analysis, you may request a waiver to sample for VOC's every six years.

The state has the discretion to allow for testing once every three-years for the public surface water system which has three consecutive annual samples with no detection of a contaminant.

#### SOC's

SOC sampling must be completed before 12/31/2005. If contaminants above the MCL are detected you must contact this agency within 48 hours for further monitoring instructions.

#### Operator Certification

You are reminded that you must have a Grade C operator in charge of the treatment of your water supply. If there is any change to the operator of record, our office must have the name, grade, license number and expiration date of your operator for our records. Please submit this information within 10 working days of any change taking place.

#### **Operational Reports**

As a reminder operational reports must be submitted to this agency no later that the 10th day of the month following the end of the reporting period.

All other sampling requirements are waived at this time due to the population and number of service connections at your park. If the population exceeds 25 persons or 15 service connections additional sampling may be required.

You are reminded that your Department of Health approved laboratory must, in addition to providing you with a copy of the analysis results send an additional copy to the Tioga County Environmental Health Services. Copies may be faxed to Tioga County EHS at 607-687-6041.

If you have any questions regarding this matter contact this agency at 687-8620.

Sincerely,

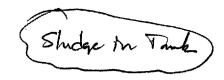
Justin W. Lewis.

Groundwater Management Specialist

CC; John Strepelis, NYSDOH, Syracuse

# APPENDIX B WATER STORAGE TANK SEDIMENT TESTING RESULTS





390 N. Pennsylvania Ar South Waverly, PA 18840-282 Phone (570) 888-016 FAX (570) 888-071

#### **Certificate of Analysis**

Keystone Associates 229-231 State Street, Fourth Floor Binghamton NY, 13901

Project: Storage Tank
Project No: [none]

Reported:

Project Manager: Edwin C. Gent, P.E.

05/10/05 16:39

H2O Storage Tank 5E05035-01 (Water)

Date Sampled: 05/03/05 15:00 Date Received: 05/04/05 17:25

1								
Analyte	Result	MCL	Units	Prepared	Analyzed			
Drinking Water Metals by E	PA 200 Serie	s Metho	ds		Allaryzed	Method	Analyst	Notes
Calcium	870	0	mg/l	05/09/05 00:00	0.07.6			
Iron	2000	0.3		· -	05/10/05 02:02	EPA 200.7	JAK	
Magnesium	21	0.5	mg/l	05/09/05 00:00	<b>#</b> 1	u	JAK	
,	31	O	mg/l	05/09/05 00:00	#	tr	JAK	
							A1 FIZ	

# APPENDIX C DRINKING WATER TESTING RESULTS

# Eastern Laboratory Services Ltd

quality m accuracy m reliability

#### **ENVIRONMENTAL**

390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

#### Certificate of Analysis

Tioga Downs Racetrack, LLC P.O. Box 509 Project: Inorganic Chemicals & Physical Characteristics
Project No: [none]

teristics Reported:

P.O. Box 509 Nichols NY, 13812 Project Manager: Mark Phifer

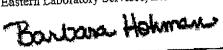
05/25/05 13:24

Office-Men's Bathroom 5D19032-01 (Water) Date Sampled: 04/19/05 12:20 Date Received: 04/19/05 15:10

5D19032-0	i (Water)					54/15/VO X5:10		
Analyte	Result	MCL	Units	Prepared	Analyzed	Method	Analyst	Notes
Conventional Chemistry Para	meters by AJ	HA/EP	A Method	§				<del></del>
	267	250	mg/l	04/28/05 14:00	04/28/05 14:00	EPA 325.3	KAL	
Chloride	. 24	250	mg/l	04/26/05 11:00	04/26/05 11:00	SM18-4500SO4-D	KAL	
Sulfate as SO4	_		- arameters					EMSL*
Miscellaneous Physical/Conve	<0.200	7	MFL	04/21/05 00:00	05/02/05 00:00	EPA 100-2		
Asbestos	•	ሳ የተፈረፈው የመ						
Chemical and Physical Paran	neters by AF	1A/A31	Color U	04/19/05 15:50	04/19/05 15:50	EPA 110.2	IC	
Color	5.00	\$15	T.O.N.	04/19/05 15:40	04/19/05 15:40	<b>EPA 140</b> .1	ΙC	
Qdor (	<1	3		04/19/05 15:40	¥ 1. 02			
Cyanide by Semi-Automated	Spectrophot	ometry a	ind FLA	04/28/05 12:00	05/02/05 00:00	EPA 335:4	ĮC	
Cyanide (total)	<0.025	0.2	mg/l	04/28/05 12:00	00/02/03 00:00	<i>2</i> , 1000		
Fluoride by Ion Selective Ele	ctrode				04/20/05 13:00	SM18-4500F-C	KAL	
Fluoride	~ō.2	2	mg/l	04/20/05 13:00	U4/20/05 15:VU	31/110-40001-C		
Mercury by EPA 245.1							JD.	
Mercury by El A 243.0	< 0.0002	0.002	mg/l	04/26/05 10:00	04/27/05 10:24	EPA 245.1	31.7	
	Cathods			_			JAK	
Metals by EPA 200 Series M	<0.0050	0.006	mg/l	05/02/05 00:00	05/02/05 10:01	EPA 200.9		
Antimony	< 0.002	0.002	mg/l	04/29/05 00:00	04/29/05 11:30	n	JAK	
Thalliuro			*					
Drinking Water Metals by I	EPA 200 Seri	U. J	mg/l	04/20/05 00:00	04/29/05 01:41	EPA 200.7	ID	
Silver	40,0010	V- X	mg/l	05/05/05 00:00	05/05/05 16:58	EPA 200.9	JAK	
Arsenic	<0.005	0.05		04/20/05 00:00	04/29/05 01:41	EPA 200.7	$\mathcal{D}$	
Barium	0.084	2	mg/l	04/20/05 00:00	u	16	CII,	
Beryllium	<0.0010			04/20/05 00:00	18	ч	Œ	
Cadmium	<0.0020			04/20/05 00:00	н	u	JD	
Chromium	< 0.0050	0.1	mg/l		п	4	JD	
Iron	0.11	0.3	mg/l	04/20/05 00:00	11	44	ЛD	
	<0.0050		mg/l	04/20/05 00:00	05/02/05 02:04	· n	JD	HLFE
Manganese	56	5 (i)	mg/i	04/20/05 00:00	PV:SV CDASDAÇU	•		LD
Sodium			is designate	05/05/05 00:00	05/05/05 10:13	EPA 200.9	JAK	
Selenium	< 0.00			04/20/05 00:00	04/29/05 01:4		${\mathbb T}$	
w ro	0.01	1 5	mg/l	04/20/05 00:00	G-limbios Anti-			

Eastern Laboratory Services, Ltd.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PA 08380

NY 11216





390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

#### Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509 Nichols NY, 13812 Project: Total Coliform

Project No: [none]
Project Manager: Mark Phifer

Reported: 07/15/05 15:02

Pumphouse Spigot 5G14115-01 (Raw Water) Date Sampled: 07/14/05 11:40 Date Received: 07/14/05 17:17

5G14115-	01 (Raw W	ater)			1	
Analyte	Result	MCL	Analyzed	Method	Analyst	Notes
Total Coliform P/A by SM9223B  Total Coliforms  E. Coli	Presence Absence	Absence Absence	07/14/05 17:20	SM18-9223B	RML RML	

(BOT)

The results in this report apply to the samples analyzed in accordance with the chal. of custody document. This analytical report must be reproduced in its entirety.





390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

#### Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Total Coliform

Project No: [none]

Project Manager: Mark Phifer

Reported:

04/20/05 14:44

Office-Mens Bathroom CWT 5D19020-02 (Drinking Water)

Date Sampled: 04/19/05 12:20 Date Received: 04/19/05 13:33

Analyie MCL Result Analyzed Method Analyst Notes Residual Chlorine, Free (Field Analysis) Prec Residual Chlorine 0.20 44 mg/ 04/19/05 12:20 Field Total Coliform P/A by SM9223B **Total Coliforms** Absence Absence 04/19/05 14:00 SM18-9223B KM E. Coli Absence Absence KM

Interpretation of Total Coliform results indicate that the sample was tested and is currently IN COMPLIANCE with the bacteriological drinking water standards, as established under the Safe Drinking Water Act of the Environmental Protection Agency.



390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

#### ertificate of Analysis

Tioga Downs Racetrack, LLC

Concession Stand-KCWT

5D19020-01 (Drinking Water)

P.O. Box 509

Nichols NY, 13812

Project: Total Coliform

Project No: Inone

Project Manager: Mark Phifer

Reported: 04/20/05 14:44

Date Sampled: 04/19/05 12:10 Date Received: 04/19/05 13:33

Analyte	Result	MCL	Anályzed	Method	Analyst	Notes
Total Coliform P/A by SM9223B					-	
Total Coliforms	Absence	Absence	04/19/05 14:0C	SM18-9223B	KM	· KITHIR ED
E. Coli	Absence	Ahsence	U	μ .	KM	

Interpretation of Total Coliform results indicate that the sample was tested and is currently IN COMPLIANCE with the bacteriological drinking water standards, as established under the Safe Drinking Water Act of the Environmental Protection Agency.





390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

reliability quality m accuracy m

#### Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Inorganic Chemicals & Physical Characteristics

Project No: [none] Project Manager: Mark Phifer Reported:

05/25/05 13:24

EMSL\* = Analyzed by NYS DOH#11606

HLFB = LFB percent recovery was high. The result may be bias high.

LDR = The reported value is above the high calibration standard, but within the linear dynamic range of the instrument and is considered an

Concession Stand-Kitchen 5D19032-02 (Water)

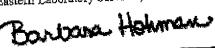
Date Sampled: 04/19/05 12:10 Date Received: 04/19/05 15:10

3,7,7,9032-0	Z ( TALLEZ)							
	Result	MCL	Units	Prepared	Analyzed	Method	Analyst	Notes
Analyte Miscellaneous Physical/Conv				'5				EMSL*
Asbestos	<0.200	7	MFL	04/21/05 00:00	05/02/05 00:00	EPA 100.2		

EMSL\* = Analyzed by NYS DOH#11606

Eastern Laboratory Services, Ltd.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Page 2 of 2



reliability quality maccuracy m

#### ENVIRONMENTAL

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#### **Certificate of Analysis**

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812.

Project: Inorganic Chemicals & Physical Characteristics

Project No: [none]

Project Manager: Mark Phifer

Reported: 07/06/05 08:29

Pumphouse 5F17016-01 (Water) Date Sampled: 06/16/05 05:30

Date Received: 06/17/05 09:16

Analyte	Result	MCL	Units	Prepared	Analyzed	Method	Analyst	Notes
Conventional Chemistry Page	rameters by A	PHA/EF	'A Metho	ods	·			
Chloride	151	250	mg/l	06/23/05 00:00	06/23/05 00:00	EPA 325.3	BH	
Nitrate as N	14.9	10	mg/i	06/17/05 00:00	06/17/05 00:00	EPA 353.2	IC	
Nitrite as N	0.04	1	mg/l	06/17/05 08:00	06/17/05 16:54	н	IC	HCCV
Total Dissolved Solids	778	<del>-500-</del> N/A	mg/1	06/20/05 00:00	06/20/05 00:00	EPA 160.1	KAL	HLFB

HCCV = Continuing Calibration Verification was above acceptance limits. Results may be biased high.

HLFB = LFB percent recovery was high. The result may be bias high.

Office-Bathroom 5F17016-02 (Water)

Date Sampled: 06/16/05 16:55 Date Received: 06/17/05 09:16

Analyte	Result	MCL	Units	Prepared	Analyzed	Method	Analyst	Notes		
Chemical and Physical Parameters by APHA/ASTM/EPA Methods										
Turbidity	< 0.200	85	NTU	06/17/05 09:00	06/17/05 15:30	EPA 180.1	ĬC			

Eastern Laboratory Services, Ltd.

Barbara Hohman

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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NY 11216

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quality m accuracy m reliability

#### Certificate of Analysis

Tioga Downs Racetrack, LLC P.O. Box 509 Nichols NY, 13812

Project: Nitrate Project No: [none] Project Manager: Mark Phifer

Reported: 06/30/05 11:01

Well House

Date Sampled: 06/27/05 12:15 Date Received: 06/27/05 15:17

	A.			Ditto xeecex			
5F27030-01 (Water	<del>/</del>					6 a la ma	Notes
		:	Prepared	Analyzed	Method	Analyst	1101,52
Res		Units					
Analyte	N APHA/E	PA Meth	od\$			IC	
Conventional Chemistry Parameters	30		06/29/05 00:00	06/29/05 00:00	EPA 353.2	10	
Nitrate/Nitrite as N	2.7 10	mg/l	00/25/02 45:04				
[ ATIT THE Y . V-X							



m accuracy m reliability

#### **ENVIRONMENTAL**

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#### **Certificate of Analysis**

Tioga Downs Racetrack, LLC

P.O. Box 509

Total Hardness as CaCO3

Nichols NY, 13812

Project: Inorganic Chemicals & Physical Characteristics

Date Sampled: 05/26/05 11:45

Project No: [none]

Project Manager: Mark Phifer

Reported:

06/01/05 10:14

Office-Bathroom 5E26091-01 (Water)

MCL

Units

Prepared

Analyzed

Date Received: 05/26/05 16:23 Method

Notes Analyst

Analyte Conventional Chemistry Parameters by APHA/EPA Methods

Result

367

05/31/05 10:45 mg/l

05/31/05 10:45

EPA 130.2

KAL

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## APPENDIX D WATER AND SEWER DESIGN FLOWS



### Tioga Downs Racetrack Design Flows

		Standard	Design		Design Flow	s
		Flow Rate/	Flow Rate/	Water	Septic	Septic
		Unit <sup>l</sup>	Unit <sup>2</sup>	System	System #1	System #2
Description	Units	(gpd)	(gpd)	(gpd)	(gpd)	(gpd)
CURRENT REDEVELOPMENT			•			
Grandstand and Gaming Facility						
Stadium Seats	1,238	5	4	4,952		
Bleacher Seats	400	5	4	1,600		
Simulcast Seats	74	5	4	296		
VLT Stations	750	5	4	3,000		
Restaurant Seats	218	35	28	6,104		
Bar / Lounge Seats	46	20	16	736		
VIP Lounge Seats	90	20	16	1,440		
Office Employees	36	15	12	432		
Subtotal			-	18,560	18,560	
Paddock Barn						
Building size (SF)	12,000	0.1	80.0	960	960	
Office Building & Security Trailer						
Office workers	5	15	12	60		
Groomers (I per 5 horses)	52	15	12	624		
Kitchens	57	5	4	228		
Subtotal			-	912	<del>-</del>	912
Horse Barns						
Horse stalls (water only)	260	6	6 -	1,560		
Total Design Flows for Current Red	evelopment	(gpd)		21,992	19,520	912

### **FUTURE DEVELOPMENT**

<u>Hotel</u>

Guest Rooms

100

120

96

9,600

(Note: Hotel septic system needs will be addressed if and when the hotel is designed.)

Total Design Flows for Current Redevelopment plus Future Hotel (gpd) 31,592

### **NOTES**

<sup>1</sup> Standard flow rate values from Design Standards for Wastewater Treatment Works - Intermediate Sized Sewerage Facilities, New York State Department of Environmental Conservation, 1988, Table 3, with exception of flows for Horse Barns, which were obtained from the Owner for water consumption by horses.

<sup>2</sup> Flow rate values may be decreased by 20% with the installation of certified water saving plumbing fixtures, in accordance with Design Standards for Wastewater Treatment Works - Intermediate Sized Sewerage Facilities, 1988, p. 10. Value for Horse Barns not decreased as it is based on water consumption by horses.

Legend	
gallons per day	gpd
gallons per minute	gpm
peaking factor	pf



### Tioga Downs Racetrack

### Design Peak Flows to Office and Horse Barn Area

Fixture Type	Quantity
Office	
Women's Restroom	
Water closet (flush tank)	2
Lavatory	2
Shower	2
Men's Restroom	
Water closet (flush tank)	4
Urinal	4
Lavatory	3
Shower	2
Kitchen	
Sink, residential	. 1
Dishwasher, residential	1
Subtotal for Office	21
Security Trailer	
Restroom	
Water closet (flush tank)	1
Lavatory	ŀ
Shower	J
Kitchen	
Sink, residential	ı
Dishwasher, residential	1
Subtotal for Security Trailer	5
Horse Barns	
Each Barn	
Hose Bibb	2
Total per Each Barn	2
Number of Barns	14
Subtotal for All Horse Barns	28
Total Fixtures for Office, Security Trailer and Horse Barns	54

Based on Table E102 in New York State Plumbing Code, for 54 fixture units, with predominantly flush tanks, peak demand would be approximately 30 gpm (by interpolation).



### **Tioga Downs Racetrack**

### Design Peak Flows to Future Hotel

Fixture Type	Quantity
Future Hotel	
Each Guest Room	
Water closet (flush valve type)	1
Lavatory	1
Shower	1
Total Fixtures per Guest Room	3
Anticipated Number of Guest Rooms	100
Total Fixtures for Future Hotel	300

Based on Table E102 in New York State Plumbing Code, for 300 fixture units, with predominantly flush valves, peak demand would be 108 gpm.

TABLE E102
TABLE FOR ESTIMATING DEMAND

SUPPLY SYST	EMS PREDOMINANTLY FO		MATING DEMAND SUPPLY SYSTEMS PREDOMINANTLY FOR FLUSH VALVES					
Load		mand	Load		Demand			
(Water supply fixture units)	(Gallons per minute)	(Cubic feet per minute)	(Water supply fixture units)	(Galions per minute)	(Cubic feet per minute			
1	3.0	0.4104	—	(ounons per initiate)	(Cabic feet per fillitud			
2	5.0	0.6840						
3	6.5	0.86892						
4	8.0	1.06944						
5	9.4	1.256592	5	15.0	2.0052			
6	10.7	1.430376	6	17.4	2.326032			
7	11.8	1.577424	7	19.8	2.646364			
8	12.8	1.711104	8	22.2	2.967696			
9	13.7	1.831416	9	24.6	3.288528			
10	14.6	1.951728	10	27.0	3.60936			
11	15.4	2.058672	11	27.8	3.716304			
12	16.0	2.13888	12	28.6	3.823248			
13	16.5	2.20572	13	29.4	3.930192			
14	17.0	2.27256	14	30.2	4.037136			
15	17.5	2.3394	15	31.0	4.14408			
16	18.0	2.90624	16	31.8	4.241024			
17	18.4	2.459712	17	32.6	4.357968			
18	18.8	2.513184	18	33.4	4.464912			
19	19.2	2.566656	19	34.2	4.571856			
20	19.6	2.620128	20	35.0	4.6788			
25	21.5	2.87412	25	38.0	5.07984			
30	23.3	3.114744	30	42.0	5.61356			
35	24.9	3.328632	35	44.0	5.88192			
40	26.3	3.515784	40	46.0	6.14928			
45	27.7	3.702936	45	48.0	6.41664			
50	29.1	3.890088	50	50.0	6.684			
60	32.0	4.27776	60	54.0	7.21872			
70	35.0	4.6788	70	58.0	7.75344			
80	38.0	5.07984	80	61.2	8.181216			
90	41.0	5.48088	90	64.3	8,595624			
100	43.5	5.81508	100	67.5	9.0234			
120	48.0	6.41664	120	73.0	9.75864			
140	52.5	7.0182	140	77.0	10.29336			
160	57.0	7.61976	160	81.0	10.82808			
180	61.0	8.15448	180	85.5	11.42964			
200	65.0	8.6892	200	90.0	12.0312			
225	70.0	9.3576	225	95.5	12.76644			
250	75.0	10.0260	250	101.0	13.50168			
275	80.0	10.6944	275	104.5	13.96956			
300	85.0	11.3628	300	108.0	14.43744			
400	105.0	14.0364	400	127.0	16.97736			
500	124.0	16.57632	500	143.0	19.11624			
750	170.0	22.7256	750	177.0	23.66136			
1,000	208.0	27.80544	1,000	208.0	27.80544			
1,250	239.0	31.94952	1,250	239.0	31.94952			
1,500	269.0	35.95992	1,500	269.0	35.95992			
1,750	297.0	39.70296	1,750	297.0	39.70296			

(continued)

# APPENDIX E WATER DISTRIBUTION SYSTEM HYDRAULIC CALCULATIONS



### **Tioga Downs Racetrack**

### Water System Hydraulics from Tank to Grandstand - Peak Domestic Flow Conditions Current Redevelopment plus Future Hotel

Tank Base Elevation Tank Overflow Height Tank Overflow Elevation Less Freeboard Less Operating Band Storage Depth Minimum Tank Level Under Domestic Flow Conditions Grandstand Floor Elevation	832.0 85.58 feet 917.6 2.0 feet 13.4 feet 902.1 825.0	<b>31,600</b> gal	20 ft dia
Peak Flow to Grandstand (A) Peak Flow to Future Hotel (B) Peak Flow to Office and Horse Barn Area (C)	160 gpm 108 gpm 30 gpm		

Assumptions: To be conservative, assume C=100, simultaneous peak flows, and all flow to Grandstand and Future Hotel through only 1 side of loop.

### **Calculated Headloss**

Description	Length (ft)	Dia. (in.)	Hazen- Williams C	Minor Loss K	Flow Q (gpm)	Velocity V (ft/s)	Headloss (ft)	-
6" Pipe from Tank through Pump House	30	6	100		298	3.38	0.39	
Entrance Loss - Projecting				8.0	(A+B+C)	3.38	0.14	
90-deg Bend				0.3		3.38	0.05	
90-deg Bend				0.3		3.38	0.05	
90-deg Bend				0.3		3.38	0.05	
Gate Valve				0.12		3.38	0.02	
Gate Valve				0.12		3.38	0.02	
90-deg Bend (6x10 increasing)				0.3		3.38	0.05	0.78
10" Pipe from Pump House to Split to Grandstand & Stables	400	10	100		298	1.22	0.43	
90-deg Bend				0.3	(A+B+C)	1.22	0.01	
45-deg Bend				0.1		1.22	0.00	
45-deg Bend				0.1		1.22	0.00	
Gate Valve				0.11		1.22	0.00	
Tee Branch				0.84		1.22	0.02	0.46
10" Pipe from Split for Grandstand/Stables to Grandstand Loop	843	10	100		268	1.09	0.74	
Gate Valve				0.11	(A+B)	1.09	0.00	
Gate Valve				0.11		1.09	0.00	
Tee Branch				0.84		1.09	0.02	0.76
Pipe from Grandstand Loop start to Domestic Service Line	192	8	100		268	1.71	0.50	
Gate Valve				0.11	(A+B)	1.71	0.00	
Tee Branch				0.84		1.71	0.04	0.54
Domestic Service Line from Grandstand Loop to Building Wall	121	4	100		160	4.08	3.55	
Gate Valve				0.11	(A)	4.08	0.03	3.57
Total Headloss from Tank to Grandstand Wali							6.13	ft
Hydraulic Grade Line at Grandstand Wall							896.0	ft
Grandstand Floor Elevation (from above)							825.0	ft
Minimum Pressure Available at Grandstand Wall							71.0	ft
							30.8	psi

## APPENDIX F CHLORINATION SYSTEM DESIGN



### Tioga Downs Racetrack Water System - Chlorination System Design

Design Criteria:

Free chlorine residual at point of use:

Minimum

0.2 mg/L

(Minimum per Subpart 5-1 of State Sanitary Code)

(MCL per Subpart 5-1 of State Sanitary Code)

Maximum 4.0 mg/L

Design chlorine dosages:

Minimum

0.4 mg/L

1.0 mg/L Average

Maximum

4.0 mg/L

Well Pumping Rate:

90 gpm

Average Daily Water Use:

22,000 gpd

(Current redevelopment)

**Chlorine Feed Pump** 

Sodium Hypochlorite Solution: Option 1:

12.5 percent

125,000 parts per million (ppm)

Option 2:

5.25 percent

52,500 parts per million (ppm)

Metering Pump Rate [gph] =

(well pumping rate [gpm]) x (dosage [ppm]) x 60 min/hr

chlorine solution strength [ppm]

Minimum required pumping rate calculated with minimum dosage and 12.5% solution.

Minimum =

Maximum required pumping rate calculated with maximum dosage and 5.25% solution.

0.017 gph

Maximum =

52,500

0.411 gph

Required Pumping Range =

0.017

to

22,000

0.411 gph

Therefore, use a LMI Milton Roy Model P14 metering pump rated at 0.001 to 0.58 gph.

### Sodium Hypochlorite Usage

Average Sodium Hypochlorite Usage [gpd] =

(average daily water use [gpd]) x (dosage [ppm])

chlorine solution strength [ppm]

Using 12.5% Solution

0.176 gpd

1.23 gallons per week

Using 5.25% Solution

22,000 1.0

125,000

0.419 gpd

52,500

2.93 gallons per week

### **Chlorine Contact Time**

### Chlorine Contact Time in Water Storage Tank

Full Volume of Water Storage Tank:

200,000 gallons

Operating Band(=Avg. Daily Water Use):

22,000 gallons

(Current redevelopment)

Average Operating Volume of Water Storage Tank:

189,000 gallons

Contact Time in Water Storage Tank

8.6 days

### Minimum Chlorine Contact Time

Conditions:

All flow to distribution system directly from well (usage less than well pumping rate).

Minimum desired chlorine contact time to first usage point (Office) = 30 minutes.

Water Volume in **Piping** Length (ft) Dia. (in.) (gal) Piping Description 1,632 10" Pipe from Pump House to Split to Grandstand & Stables 400 10 397 270 6 Pipe from Split for Grandstand/Stables to Office 2.029 Total Volume in Piping from Pump House to Office

	Entire		
	Facility	Office	Total
Average Daily Flow (gpd)	22,000	912	
Hours of Operation per Day	20	20	
Average Flow during Hours of Operation (gpm)	18.3	8.0	
Peak 30-minute flow PF (assumed)	., 4	8	
Peak 30-minute flow (gpm)	73.3	6.1	
Volume in Water Line (gallons)	1,632	397	2,029
Contact Time in Piping (minutes)	22.3	65.2	87



### Configuration Data 35251 Electron

Model P14 1 - 95181

**Electronic Metering Pumps** 



Speed (stroking frequency) fixed and stroke length manually adjustable.

P02 --- 0.20 GPH (0.79 l/h) --- 150 psi (10.3 Bar) P03 --- 0.40 GPH (1.6 l/h) --- 110 psi (7.6 Bar) P04 --- 0.58 GPH (2.2 l/h) --- 250 psi (17.3 Bar)

P05 --- 1.00 GPH (3.8 l/h) --- 110 psi (7.6 Bar) P06 --- 2.00 GPH (7.6 l/h) --- 50 psi (3.5 Bar)

**Dual Manual Control** 

Speed (stroking frequency) and stroke length manually adjustable.

P12 --- 0.20 GPH (0.79 I/h) --- 150 psi (10.3 Bar) P13 --- 0.42 GPH (1.6 I/h) --- 110 psi (7.6 Bar)

P14---0.58 GPH (2.2 l/h) --- 250 psi (17.3 Bar) P15---1.00 GPH (3.8 l/h) --- 110 psi (7.6 Bar)

P16---2.00 GPH (7.6 l/h) --- 50 psi (3.5 Bar)

### Voltage Code

1 ----- 120 VAC US Pluo ...

2 ----- 240 VAC US Plug

3 ----- 220-240 VAC DIN Plug

5 ----- 240-250 VAC, UK Plug

6 ----- 240-250 VAC, Aust./NZ Plug

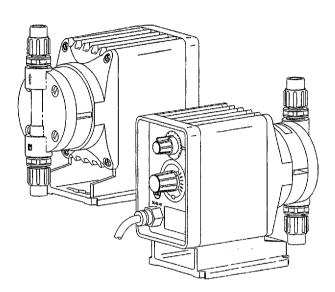
7 ----- 220 VAC, Swiss Plug

### Liquid End

See next page for complete liquid end specifications and selection.

### **Specifications**

Series		es Per nute stable) Max	Stroke Length (Adjustable) Recommended Minimum	Average Input Power @ Max Speed	Shipping Weight
P02, P03	fixed	- 60	30%		
P04 P05 P06	fixed	- 100	20%		
P12, P13	.6	60	30%	22 watts	7.6 lbs (3.5 kg)
P14 P15 P16	1	100	20%		

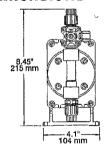






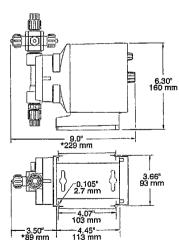


### **Dimensions**



\*Dimensions shown are maximums for targest available Liquid End.

Dimensions will vary depending on Liquid End selected.





8 Post Office Square Acton, MA 01720 USA TEL: (978) 263-9800 FAX: (978) 264-9172 http://www.lmipumps.com



### **Configuration Data & Materials of Construction**

Drive	Liquid	uld Size Materials of Construction			Tubing & Connections			
Assembly	End No.	Code	Head & Fittings	Balls -	Liquifram™	Check Valve	Accessory	Discharge Suction
	350SI†	0.5	Acrylic / PGC"	Ceramic	Fluorofilm™	PGC" / Polyprel®	4FV4	PE .250" O.D.
P02 🖫 -	351SI†	0.5	PGC" / PGC"	Ceramic	Fluorofilm"	PGC™ / Polyprel®	4FV	PE ,250" O.D.
P04 💹 -	352SI <sup>†</sup>	0.5	PVDF / PVDF	Ceramic	Fluorofilm"	PVDF / Polyprel®	4FV	PE ,250" O.D.
P12 🖫 -	353SI <sup>†</sup>	0.5	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / PTFE	4FV	PE ,250" O.D.
P14 📆 -	156	0.5	Acrylic / PP	316 S.S.	Fluorofilm"	Hypalon®		PE .5" O.D. Vinyl .938" O.D.
	257	0.5	316 S.S.	316 S.S.	Fluorofilm <sup>™</sup>	316 S.S.		Pipe 1/4" NPT M
	390SI†	0.9	Acrylic / PGC"	Ceramic	Fluorofilm'*	PGC™ / Polyprel®	4FV	PE .375" O.D.
P03 🌃 - 📗	391SI†	0.9	PGC" / PGC"	Ceramic	Fluorofilm"	PGC" / Polyprel®	4FV	PE ,375" O.D.
P05 🔄 -	392SI†	0.9	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
P13 🖫 -	393SI†	0.9	PVDF / PVDF	Ceramic	Fluorofilm"	PVDF / PTFE	4FV	PE .375" O.D.
P15 🖫 -	297	0.9	316 S.S.	316 S.S.	Fluorofilm"	316 S.S.		Pipe 1/4" NPT M
	86	0.9	Acrylic / PP	316 S.S.	Fluorofilm"	Hypalon®		PE .5" O.D. Vinyl .938" O.D.
	360SI†	1.8	Acrylic / PGC™	Ceramic	Fluorofilm"	PGC™ / Polyprel®	4FV	PE .375" O.D.
206 💹 - 🛚	361SI <sup>†</sup>	1.8	PGC™ / PGC™	Ceramic	Fluorofilm "	PGC" / Polyprel®	4FV	PE .375" O.D.
P16 🔣 -	362SI†	1.8	PVDF / PVDF	Ceramic	Fluorofilm"	PVDF / Polyprel®	4FV	PE .375" O.D.
	363SI†	1.8	PVDF / PVDF	Ceramic	Fluorofilm**	PVDF / PTFE	4FV	PE .375" O.D.
	277	1.8	316 S.S.	316 S.S.	Fluorofilm**	316 S.S.		Pipe 1/4" NPT M
	76	1.8	Acrylic / PP	316 S.S.	Fluorofilm"	Hypalon®	·	PE .5" O.D. Vinyl .938" O.D

See front page for voltage code specifications.

Fluorofilm™ is a copolymer of PTFE and PFA. Polyprel® is an elastomeric PTFE copolymer.

Polypref is a registered trademark of Liquid Metronics, Inc. Flourofilm, Liquifam, PGC are trademarks of Liquid Metronics, Inc. Hypalon is a registered trademark of E. I. du Pont de Nemours & Co., Inc.

### **Output Information**

Series	Gallons   Min	er Hour Max	Liters p Min	er Hour Max	mL/cc pe Min	r Minute Max	mL/cc p Min	er Stroke Max	the property will good to be take the company of the	ım İnjection essure
P02	0.063	0.21	0.237	0.79	3.94	13	0.07	0.22	150 psi	(10.3 Bar)
P03	0.125	0.42	0.473	1.6	7.89	26	0.13	0.44	110 psi	(7.6 Bar)
P04	0.117	0.58	0.442	2.2	7.36	37	0.07	0.37	250 psi	(17.3 Bar)
P05	0.200	1.0	0.757	3.8	12.62	63	0.13	0.63	110 psi	(7.6 Bar)
P06	0.400	2.0	1.510	7.6	25.23	126	0.25	1.26	50 psi	(3.5 Bar)
P12	0.001	0.21	0.002	0.79	0.04	13	0.07	0.22	150 psi	(10.3 Bar)
P13	0.001	0.42	0.005	1.6	0.08	27	0.13	0.44	110 psi	(7.6 Bar)
▶ P14	0.001	0.58	0.004	2.2	0.07	37	0.07	0.37	250 psi	(17.3 Bar)
P15	0.002	1.0	0.008	3.8	0.13	63	0.13	0.63	110 psi	(7.6 Bar)
P16	0.004	2.0	0.015	7.6	0.25	126	0.25	1.26	50 psi	(3.5 Bar)

AND THE PROPERTY OF THE PROPER

<sup>†</sup> To specify 'A" NPT male, change "I to "P". To specify black, UV resistant tubing, change "I to "U". To specify Bleed 4FV, change 'S' to "B". To specify 3FV, change 'S' to T".

**<sup>3</sup>FV** indicates that the pump is equipped with an LMI Three Function Valve (pressure relief, priming aid, line drain).

<sup>4</sup>FV indicates that the pump is equipped with an LMI Four Function Valve. This diaphragm ype, anil- eyhor/pressure relief valve is installed on the pump head. It provides anii-syphon protection and aids in priming, even under pressure.

### Specification Sheet

### Series P

### **GENERAL**

Chemical metering pumps shall be positive displacement, Liquifram™ type pumps that are UL and CUL approved. Output volume shall be adjustable while pumps are in operation from zero to maximum capacity of:

P02, P12 - 0.21 GPH (0.79 liters per hour)
P03, P13 - 0.42 GPH (1.6 liters per hour)
P04, P14 - 0.58 GPH (2.2 liters per hour)
P05, P15 - 1.0 GPH (3.8 liters per hour)
P06, P16 - 2.0 GPH (7.6 liters per hour)

Chemical metering pumps shall be capable, without a hydraulically backed diaphragm, of injecting solutions against pressures up to:

P02, P12 - 150psig (10.3 Bar) P03, P13 - 110psig (7.6 Bar) P04 P14 - 250psig (17.3 Bar) P05, P15 - 110psig (7.6 Bar) P06, P16 - 50psig (3.5 Bar)

### SERIES PO

The stroke frequency will be fixed at the following rates.

P02, P03 - 60 strokes per minute P04, P05, P06 - 100 strokes per minute

Stroke length shall be adjustable by readily accessible dial knob located opposite the liquid handling end.

### SERIES P1

Adjustment shall be by means of readily accessible dial knobs, one for changing stroke length and the other for changing stroke frequency. Both knobs are to be located opposite the liquid handling end.

### DRIVE

The pump drive shall be totally enclosed with no exposed moving parts. Solid state electronic pulser shall be fully encapsulated and supplied with quick connect terminals at least 3/16" (4.75 mm) wide. Electronics shall be housed in chemical resistant enclosure at the rear of the pump for maximum protection against chemical spillage. Electrical power consumption shall not exceed 22 watts per hour under full speed and maximum pressure conditions. Pump weight shall not exceed 14 lbs (6.5 kg).

### **AUTOMATIC PRESSURE RELIEF**

To eliminate need for pressure relief valve, Liquifram™ shall automatically stop pulsating when discharge pressure exceeds pump pressure rating by not more than 35%.

### MATERIAL

Chemical metering pump housing shall be of chemically resistant glass fiber reinforced thermoplastic. All exposed fasteners shall be stainless steel. Chemical metering pump valves shall be ball type, with ceramic balls<sup>1</sup>. Valve seat and seal ring shall be renewable by replacing the combination seat-seal ring<sup>2</sup> or cartridge valve assembly. Pump head shall be of transparent acrylic<sup>3</sup> material capable of resisting the pumped chemical. Fittings and connections at pump head shall be PVC<sup>4</sup>.

### **CHECK VALVES AND TUBING**

A total of 16 ft (4.8 m) of polyethylene tubing<sup>5</sup> shall be provided per pump complete with compression connections. A foot valve with integral one piece strainer shall be provided for the suction line, and an injection check/back pressure valve with ½" NPT male connection for the injection point. The injection check valve shall incorporate a dilating orifice which prohibits scale formation and accumulation of crystalline deposits.

### Notes:

- 1. Type 316 stainless steel or PTFE may be specified.
- 2. Hypalon®, PTFE or Polyprel® may be specified.
- 3. PVDF, PVC, Polypropylene, or Type 316 stainless steel may be specified.
- 4. PVDF, Polypropylene, or Type 316 stainless steel may be specified.
- 5. 6 ft. (1.8 m) of vinyl suction tubing may be specified in place of polyethylene for the suction side only. 1/4" pipe thread may be specified.



8 Post Office Square Acton, MA 01720 USA TEL: (978) 263-9800 FAX: (978) 264-9172 http://www.lmipumps.com



### New York State Department of Environmental Conservation Division of Environmental Permits, Region 7

1285 Fisher Avenue, Cortland, New York 13045-1090

Phone: (607) 753-3095 • FAX: (607) 753-8532

Website: www.dec.state.ny.us

April 6, 2005

Andrew Sapienza Newmark & Company Real Estate, Inc. 125 Park Ave. New York, NY 10017

RE:

TIOGA DOWNS RACETRACK, LLC DEC# 7-4928-00021/00001 - SPDES# NY 024 4881 NICHOLS (T) - TIOGA COUNTY TRANSFER OF PERMIT

Dear Mr. Sapienza:

This letter is written in response to the transfer application received October 8, 2004. My apologies for the delay.

To complete the transfer of this application, the following items are required:

- 1. The original transfer application submitted to this office is being returned. Please have Mr. Gural and Mr. Hawkins sign and date the application.
- 2. Along with issuing the transfer of the permit we would like to re-issue the permit in its entirety to you. Enclosed, for your information, is a copy of the existing permit. Also enclosed is a partially completed *Application Form D* and the transfer application referenced above. Please review this form and correct any incorrect items and complete those items that we left blank.
- 3. Engineering Report It is our understanding that Keystone Trozze representatives are working on an engineering report for our review. Please have this report forwarded to us at your earliest convenience.
- 4. Monitoring Wells Please be aware that the installation of three monitoring wells may be required as a condition of permit transfer.

If you have any questions, please feel free to call me.

Sincerely,
Machael A. Bany M.

Michael K. Barylski

Deputy Regional Permit Administrator

cc: Adam Starowicz, w/enclosures Mark Parker, w/enclosures

Mark Phifer w/enclosures

REGION

RightFAX

(10/01)

Date.



Name

### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

elini Application For Permit Transfer and Application for Transfer of Pending Application (in Accordance with Uniform Procedures, 6NYCRR Part 621)

NOTE: Please read ALL instructions before completing this application. Please TYPE or PRINT clearly in ink. PART 1 - THAN SCETEE (New Count HC) pelaks // int kensi LIST PENDING APPLICATION NUMBER(S) 1. LIST PERMIT NUMBER(S) AND THEIR EFFECTIVE AND EXPIRATION DATES

IN # SP DES # 41 If other than an indvidual, provide Taxpaver ID Number 20-12804 TELEPHONE NUMBER (Davime) STREET ADDRESS, CITY (212)372 PARK Municipality/Governmental Agency TRANSFEREE IS A/AN: apply) 3. NAME OF FACILITY/PROJECT 4. FACILITY CONTACT NAME TELEPHONE NUMBER (Daytime) (607) COUNT 5. HAS WORK BEGUN ON THE PROJECT? Approximate completion date: Yes No lf "No," proposed starting date: If there will be any modifications to the current or proposed operation or construction, the transferee must attach a statement specifying the details 6. CERTIFICATION: This certifies that the transferee seeks to be the legally responsible party for operations or project development either authorized by the permits identified above or proposed in applications identified above. The transferee has a copy of the permit(s) and/or application(s) and understands and will comply with all conditions in the referenced permit(s) and supports the content of referenced application(s). Facility operations/project scope/discharges/emissions will remain the same as authorized or as proposed in pending applications. Further, thereby affirm that under penalty of perjury that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Signature of Transferee PARTZ-TRANSFEROR (Present of comer Owner/Operator)Lessen/Applicant) COMPLETES: If other than an individual, provide Taxpaver ID Number TELEPHONE NUMBER (Daytime) STREET ADDRESS, CITY, STATE, ZIP CODE ) 2. NAME OF FACILITY/PROJECT, if different from Facility Name in Part 1: Printed Name and Title of Transferor Date Signature of Transferor PARTMENT OF ENVIRONMENTAL CONSERVATION COMPLETES. Hand Sales and Design . Transferee subject to conditions of original permit, without exception. Transfer of permit approved, effective as of Transfer of permit approved, with the following modifications or contingencies related to this Permit Transfer: See attached revised permit page(s): See attached for additional information required. Transfer of application approved. Transfer denied, new application required. Please complete the endosed permit application and return it to the undersigned Regional Permit Administrator at the address listed on the reverse side of this from. PERMIT ADMINISTRATOR

Signature.

### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



### APPLICATION FORM "D" for a State Poliutant Discharge Elimination System (SPDES) Permit

(A SPDES Application PLEASE PRINT OR TYPE	When Signed by a Permit Issuing	; Official	Becomes a SF	DES Permi	t)
APPLICATION TYPE  XXNew	IF RENEWAL OR MODIFICATION, CI	VE PREVIC	DUS NUMBER		
OWNER'S NAME (Corporate, Partnership, Individual Hawkins Development Co.	l)	I	F OWNERSHIP orporate Inc	lividual 🔲	Partnership Public
OWNER'S MAILING ADDRESS (Street, City, State, PO Box 800, Harpursvill	Zip.Code)				
REFER ALL CORRESPONDENCE TO: (Name, Title : James Hawkins, Owner, F	nd Address)	lle,	NY 1378		ione number 07 693-4295
FACILITY NAME Tioga Park	FACILITY LOCATION (Street West River Dr				own or village of Nichols
Tioga County Sout	xplicit directions to location h side of West Rive	r Rđ.	0.7 mil	e west	of Cole Hill
NATURE OF BUSINESS OR FACILITY Flea Market and Equestr	ian Arena	с-ехр	'	Workers	VED (See Instructions) S <del>Lached paperw</del>
FREQUENCY OF DISCHARGE All Year? Yes XX No. If No. Specify	Number of Months 6 All Wee	k?	Yes XX No If	No, Specify N	wumber of Days 2
	R PROCESSES& eryllium		Copper	Cyanide	None of These
DISCHARGE DATA (Use additional forms, if necess	rry) (See Instructions)				
OUTFALL NO. Proposed Replacement Expansion	t TYPE OF WASTE Sanitary	TYPE Pri Set	of treatment mary tling/	Tile	DESIGN FLOW 19,900
SURFACE DISCHARGE If YES, Name of I	eceiving Waters		Classification	Waters Inde	
	earest Surface Water- nna River	_	Distance 1900 Ft.	soil type Unn	Depth of Water Table 5+ ft.
OUTFALL NO. Proposed Replacement Replaceme	Sanitary	Prı	of TREATMENT mary	Tile	DESIGN FLOW 9900 9-825 Gal/Day
SURFACE DISCHARGE If YES, Name of I	eceiving Waters	500	Classification	Waters Inde	ex Number
	earest Surface Water nna River	and the second second second second	Distance 1900 Ft.	SOIL TYPE Hgn	Depth of Water Table 5+ ft.
OUTFALL NO. Proposed Replacement Expansion		TYPE	OF TREATMENT		DESIGN FLOW  Gal/Day
SURFACE DISCHARGE If YES, Name of I	eceiving Waters		Classification	Waters Inde	ex Number
SUBSURFACE DISCHARGE If YES, Name of N Yes No	earest Surface Water		Distance Ft.	SOIL TYPE	Depth of Water Table
hereby affirm under penalty of perjury that in belief. False statements made herein are punishable	ormation provided on this form and any at as a Class A misdemeanor pursuant to Sec	tached sup	plemental forms is of the Penal Law	true to the be	est of my knowledge and

PRINTED NAME Owner James W. Hawkins APPLICATION NUMBER PERMIT VALIDATION SECTION (Department of Environmental Conservation Use Only) NY- 0244881 This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental EXPIRATION DATE Conservation Law of New York State and in compliance with the provisions of the Federal Water EFFCTIVE DATE 6\_

County

72

Basin

Basin

Region

Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972 (33 U.S.C. §1251 et. seq.) (hereinafter referred to as"the Act"), and subject to the attached flonditions.

Signature of Permit Issuing Official

CARD

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Major Compact CARD

Area 78

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Pages 2,3, Latitude

TITLE

ATTACHMENTS:

Longitude CARD Lim ind 59 7

91-20-2b (1/89)		SPDES No.:	NY 0244881
		Part 1, Page	of4
M. Well EFFLUENTLIMITATION	NS AND MONITORING REQUIREMENTS		
During the period beginning E	DP and lasting and lasting and lasting and lasting and monitored by the	until EDP +	5 YEARS
		permittee as specified	1 Delow:
LIMITATIONS APPLY:	[X] All Year [ ] Seasonal from	to	·
Outfall Number:			·
•	EFFLUENT LIMITATIONS		
[X] Flow [] BOD, 5 - Day [] BOD, 5 - Day [] UOD (2) [] Solids, Suspended (TSS) [] Solids, Suspended (TSS) [] Effluent disinfection required: [	30 day arithmetic mean 30 day arithmetic mean 7 day arithmetic mean 30 day arithmetic mean 7 day arithmetic mean ] All Year [] Seasonal from 30 day geometric mean shall not exce 7 day geometric mean shall not exce Daily Maximum Range Daily Maximum Maximum Maximum	mg/l and mg/l and mg/l and mg/l and mg/l and to eed 200/100 ml	lbs/day (1 lbs/day (1 lbs/day lbs/day lbs/day lbs/day  mq to 9.0 St
	MONITORING REQUIREMENTS	}	
Parameter [X] Flow [ ] MGD [X] G [ ] BOD, 5 - Day, mg/l	Frequency	Sample Type ater Meter(5)	Sample Location Influent Effluent
[ ] Solids, Suspended, mg/l [X] Coliform, Fecal, No./100 ml <sup>(3)</sup> [ ] Nitrogen, TKN (as N), mg/l	2/Year G	rab (4)	X
<ul> <li>[ ] Ammonia (as NH<sub>3</sub>), mg/l</li> <li>[X] pH, SU (standard units)</li> <li>[ ] Solids, Settleable, ml/l</li> <li>[ ] Chlorine, Total Residual, mg/l<sup>(3)</sup></li> <li>[ ] Phosphorus, Total (as P), mg/l</li> </ul>		rab (4)	<u> </u>
[] Temperature, Deg		rab (4)	X
NOTES: (1) and effluent values sha	Il not exceed % and % of influence and shall be computed as follows:	ent values for BOD <sub>5</sub>	& TSS respectively

 $UOD = 1.1/2 \times CBOD_5 + 4.1/2 \times TKN$  (Total Kjeldahl Nitrogen) (3) Monitoring of these parameters is only required during the period when disinfection is required.

(4) Each of the 6 Monitoring Wells will be sampled Apr.1 & Sept.30.(5) Daily water use readings from the Water Supply Meter in GPD.

SPDES No.: NY 0244881

Part 1, Page 3 of 4

### **DEFINITIONS OF DAILY AVERAGE AND DAILY MAXIMUM**

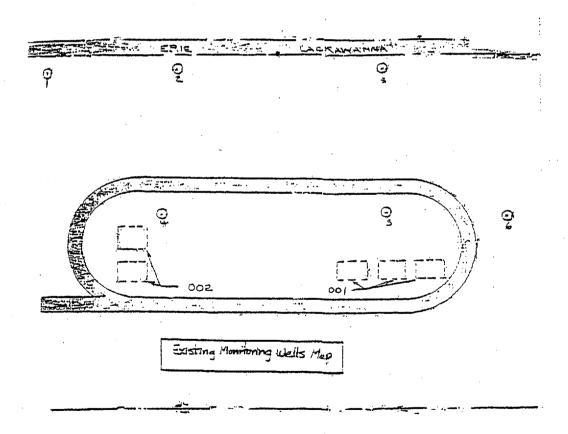
The daily average discharge is the total discharge by weight or in other appropriate units as specified herein, during a calender month divided by the number of days in the month that the production or commercial facility was operating. Where less than dally sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges in appropriate units as specified herein divided by the number of days during the calender month when measurements were made.

The daily maximum discharge means the total discharge by weight or in other appropriate units as specified herein, during any calender day.

### MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with monitoring requirements specified in this permit, at the location(s) indicated below: (Show sampling locations and outfalls with sketch or flow diagram as appropriate)

Samples will be taken at the 6 Monitoring Wells shown on the following site map.



91-20-21	

SPDES No.:	NY	02448	381	
				•
Part 1, Page	4	of	4	

### RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- The permittee shall also refer to the General Conditions (Part II) of this permit for additional information concerning a) monitoring and reporting requirements and conditions.
- The monitoring information required by this permit shall be summarized, signed and retained for a period of three b) years from the date of the sampling for subsequent inspection by the Department or its designated agent. Also:
  - [ ] (if box is checked) monitoring information required by this permit shall be summarized and reported by submitting completed and signed Discharge Monitoring Report (DMR) forms for each period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

Submit sampling results to : Tioga County Health Department 231 Main Street Owego, New York 13827 Attn: Gary Rice

### Send the first copy

Department of Environmental Conservation Regional Water Engineer 615 Erie Blvd., West Syracuse, New York 13024

- A monthly "Wastewater Facility Operation Report..." (form 92-15-7) shall be submitted (if box is checked) to the [X] Regional Water Engineer and/or [X] County Health Department or Environmental Control Agency listed above.
- d) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in the attached General Conditions (Part II).
- Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test e) procedures have been specified in this permit.
- If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved f) under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording on the Discharge Monitoring Reports.
- g) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit
- h) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- i) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approvalpursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockerfeller State Plaza, Albany, New York 12201

The following special conditions are to be attached to the SPDES Permit for the Tioga Park Race Track:

- 1. Henceforth when referring to wells No. 1 thru 6 in the following paragraph, it shall mean those monitoring wells as shown on page 3 of this permit, monitoring locations for the Tioga Park Race Track, Town of Nichols, Tioga County, and so labeled No. 1 thru 6.
- 2. The permittee will sample wells No. 1 thru 6 as a safeguard measure to protect those water supply wells of the surrounding residences and prevent degradation of the ground water.
- 3. All wells No. 1 thru 6, shall be sampled prior to the commencement of the septic systems operation. This initial sample will serve as a base for water quality standards against which all future samples will be compared.
- 4. Sampling and analytical testing will be done by a New York State Department of Health ELAP certified environmental laboratory for the parameter listed on this permit.
- 5. Wells No. 1 thru 6 shall be a minimum 14 inch in diameter, and referenced to a common datum.
- 6. Wells No. 1 thru 3 are to be permanent with the bottom 10 ft. consisting of semi-continuous screen, the top of which is to be 5 ft. below the springtime water table. Wells No. 4 thru 6 shall be temporary with a single well point 3 ft. long, the top of which is to be 10 ft. below the springtime water table. These Wells shall be sampled semi-annually on April 1 and September 30, unless otherwise required by this Department.
- 7. Sampling will consist of pH, nitrate and fecal coliform samples from each well, No. 1 thru 6. Daily Flow readings from the water supply metering device shall be recorded and submitted monthly. The results shall be sent to the Syracuse office of this Department and to the Tioga County Health Department. Standards for total coliform shall comply with N.Y.S. Department of Health requirements for potable water.
- 8. If it is deemed necessary, additional wells will be constructed as required by this Department.
- 9. If wells No. 1 thru 3 are found to have high concentrations of contaminants which contravene potable water standards, the owner shall install remedial measures, such as a package wastewater treatment plant, which shall discontinue the discharge of the tile field wastes. Wells No. 1 thru 6 shall then be monitored as prescribed by this Department. If necessary, the race track owner will install chlorination equipment on those surrounding residences wells or necessary equipment as to allow those residences to continue the use of their wells.

HARPURSVILLE

### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION State Pollutant Discharge Elimination System (SPDES) NOTICE / RENEWAL APPLICATION / PERMIT



Please read ALL instructions on the back before completing this application form. Please TYPE or PRINT clearly in ink.

PART 1 - NOTICE

Date: 04/16/2001

Permittee Contact Name, Title, Address

Facility and SPDES Permit Information

HAWKINS DEVELOPMENT CO, LLC JAMES HAWKINS PO BOX 800

NY 13787

Name: TIOGA PARK

Ind. Code: 8999 County TIOGA DEC No.: 7 -4729 -0002\/0000/

SPDES No.: 024 4881

Expiration Date: 08/01/2001

Application Due By: 02/02/2001

Are these name(s) & address(es) correct? if not, please write corrections above.

The State Pollutant Discharge Elimination System Permit for the facility referenced above expires on the date indicated.

Submit this application by the "Application Due By" date listed above in order to keep continuous coverage under your permit.

CAUTION: This short application form and attached questionnaire are the only forms acceptable for permit renewal. Sign Part 2 below and mail this form and the completed questionnaire using the enclosed envelope. Effective April 1, 1994 the Department no longer assesses SPDES application fees.

If there are changes to your discharge, or to operations affecting the discharge, then in addition to this renewal application, you must also submit a <u>separate</u> permit modification application to the Regional Permit Administrator for the DEC region in which the facility is located, as required by your current permit. See the reverse side of this page for instructions on filling a modification request.

			•
PART 2 - RENE	WAL APPL	ICATION	en.
CERTIFICATION: I hereby affirm that under penalty of perjury that the inf the best of my knowledge and belief. False statements made herein are pun	formation provi nishable as a C	ded on this form and all attac lass A misdemeanor pursuan	hments submitted inspevith is true to t to section 210.45 grane Penal Law
James W. Hawkins	· · · · · · · · · · · · · · · · · · ·	President	N 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Name of person signing application (see Instructions on back)	Title	5-18-01	5 77
Signature	Date	<u> </u>	DEC. 25.5
PART 3 - PERMIT (Below	v this line -	Official Use Only)	
Effective Date: 8/1/DI Expiration Date: 8/1/	<u>l</u>		
Permit Administrator	Address:	Bureau of Environme	
harland Kingla	7/20	50 Wolf Road, Alban	y, NY 12233-1750
Signature	Date	18 15 06	
This permit together with the previous valid permit for the constitute authorization to discharge wastewater in accordance.	ance with a	all terms, conditions and	d limitations specified in the
previously issued valid permit, modifications thereof or issued a	is part of thi	is permit, including any	special or general conditions

attached hereto. Nothing in this permit shall be deemed to waive the Department's authority to initiate a modification of this permit on the grounds specified in 6NYCRR §621.14, 6NYCRR §754.4 or 6NYCRR §757.1 existing at the time this permit is

Attachments: General Conditions dated 170

issued or which arise thereafter.



### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONVERVATION

Please enter the numbers from your current permit DEC ID 17 - 4929 - 00621 / 00001.
SPDES Number NY 024 488)

### QUESTIONNAIRE for SPDES Private, Commercial & Institutional (PCI) Renewal Applications

Please answer the following questions about your discharge and return this form with your SPDES Application form. Use additional sheets as necessary.

When v	vas your	current permit issued (ie: signed by a Department representative)? Date//
Yes	No	
	<b>U</b>	Has the SPDES permit for your facility been modified in the past 5 years?
		Have any changes been made to your disposal system? If yes, please describe:
		Has there been an increase in wastewater discharge quantities to or from your disposal system above what was listed (see design flow) on your permit? If yes, explain:
	Ø.	Have there been a physical expansion or other modifications to your facility? If yes, please describe:
	M	Has there been a change in the type, size or nature of the activity or business being conducted at your facility? If yes, please describe:

### New York State Department of Environmental Conservation

Division of Environmental Permits, 4th Floor

625 Broadway, Albany, New York 12233-1750 **Phone:** (518) 402-9167 • **FAX:** (518) 402-9168

Website: www.dec.state.ny.us



June 25, 2004

HAWKINS DEVELOPMENT CO, LLC JAMES HAWKINS PO BOX 800 HARPURSVILLE, NY 13787

Re:

Department Initiated Permit Modification

DEC ID: 749280002100001 SPDES Number: NY 0244881

### Dear Permittee:

The purpose of this correspondence is to notify you of a Department initiated modification to the above-referenced State Pollutant Discharge Elimination System (SPDES) permit due to an overall regulatory change in NYS law governing SPDES permits. As a procedural matter, all SPDES permittees are being sent a copy of this correspondence and the attached cover sheet specific to their permit. This modification is undertaken in accordance with the provisions of the Uniform Procedures Act [6 NYCRR 621.14(a)(4)] and is due to the amendment of the existing regulation governing the administration of SPDES permits (6 NYCRR 750). The amendments incorporate provisions of the 'Part II General Conditions' supplement that serves as an additional set of conditional requirements to your SPDES permit. Please be advised that the amendments to 6 NYCRR 750 do not substantively affect ALL SPDES permittees, however all are being notified of the changes so that they may review them for individual applicability. These amendments may be found in 6 NYCRR 750 in Section 750-2, entitled 'Operating in Accordance with a SPDES Permit.' You may access this regulation from the internet on the Department's website at http://www.dec.state.ny.us/website/regs/750.htm html for http://www.dec.state.ny.us/website/dow/part750.pdf for a two sided format suitable for binding and copying.

The amendment of 6 NYCRR 750 duplicates many of the provisions of the 'Part II General Conditions' supplement, and includes some revisions and additions to those conditions. The following is a general list of locations within section of 6 NYCRR 750-2 that contain new and significant information pertaining to your permit.

- 750-2.1 General Provisions of a SPDES Permit
  - (b), (f), and (k)
- 750-2.3 Inspection and Entry
  - (f)
- 750-2.4 Operator and Permitee Liability
  750-2.5 Routine Monitoring, Recording, and Reporting
  (a)- (2)-(iii) and (v); (4); (5)

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(b)- (1); (2); (3)
(c)- (1); (2)-(vii)
(d)-(1)-(i) and (ii); (2); (3)-(iv)
750-2.6 Special Reporting Requirements for Dischargers that are not POTWs
750-2.7 Incident Reporting
750-2.8 Disposal System Operation and Quality Control
(a)- (1); (2)-(i); (5); (6)
(c)-(2)
(d)
(e)
(f)
750-2.9 Additional Conditions Applicable to Publicly Owned Treatment Works
(a)-(2);(4)
(b)-(1); (2); (3); (4); (5); (6); (7)
750-2.10 Special Provisions- New or Modified Disposal Systems or Service
Areas
```

(a); (b); (d); (e); (f); (g); (h); (i) 750-2.11 Closure Requirements for Disposal Systems

Also, please note that the telephone number designated by the Regional Water Engineer to receive after business hours reports (as set forth in 6 NYCRR 750-1.2(a)(73) is now (518)-457-7362.

The Department initiated modification to your permit deletes the 'Part II General Conditions' and all references to them from your permit, and further amends the permit requiring you to comply with 6 NYCRR 750-2. The specific language of the modification is contained in the attached modification page that is to be appended to your existing permit.

The Department's Uniform Procedures Act affords permittees the right to comment on Department initiated permit changes [6 NYCRR 621.14(d)]. After reviewing the content of 6 NYCRR 750-2 and its effect on your SPDES permit, should you have any objections to the permit modification, you may submit a written statement to the Department giving reasons why the permit should not be modified, request a hearing, or both. Any statement or request for hearing must be made within 15 calendar days of the mailing of this letter. Failure to submit a timely request or statement will result in the modification of your permit, becoming effective July 12, 2004.

If you have any questions on this action, please contact Andrea Sheeran at the above address, or by telephone at (518) 402-9179.

Sincerely,

William R. Driene

William R. Adriance Chief Permit Administrator

cc: RPA RWE BWP file

### New York State Department of Environmental Conservation Division of Environmental Permits, 4th Floor

625 Broadway, Albany, New York 12233-1750 **Phone:** (518) 402-9167 • **FAX:** (518) 402-9168

Website: www.dec.state.ny.us



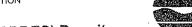
### STATEMENT OF STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT MODIFICATION TO BE KEPT WITH SPDES PERMIT NUMBER NY 0244881. TIOGA PARK DEC ID 749280002100001 EFFECTIVE DATE JULY 12, 2004

Per Department of Environmental Conservation amendment to the regulations governing the administration of the State Pollutant Discharge Elimination System Permit, this permit is hereby modified to mandate compliance with New York State Environmental Conservation Law, 6 NYCRR Part 750 entitled <u>State Pollutant Discharge Elimination System (SPDES) Permits</u>.

This Department initiated modification to your permit deletes the former 'Part II General Conditions' requirements and all references to them from your permit, and further amends the permit requiring you to comply with 6 NYCRR 750-2, entitled <u>Operating in Accordance</u> with a SPDES Permit.

### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### APPLICATION FORM "D"



### for a State Pollutant Discharge Elimination System (SPDES) Permit (A SPDES Application When Signed by a Permit Issuing Official Becomes a SPDES Permit)

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Fox
Engineering

### TODD B. SCHMIDT, P.E.

Licensed Professional Engineer in PA and NY

RR 2 BOX 41-G HALLSTEAD, PA 18822 PHONE/FAX (717) 879-2676

### ENGI REPORT

for the

TIOGA PARK SEWAGE SYSTEM

Town of Nichols, Tioga County, New York

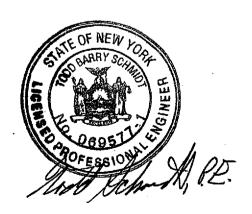
Hawkins Development Co., LLC Mr. James W. Hawkins PO Box 800 Harpursville, NY 13787 (607) 693-4295

Fox Project No. 516R16



Fox
Engineering

RR 2 Box 41-G Hallstead, PA 18822 Phone/Fax (717) 879-2676



June, 1996

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### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### APPLICATION FORM "D" for a State Pollutant Discharge Elimination System (SPDES) Permit



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### Introduction

Mr. James W. Hawkins has purchased the 140 acre parcel of property in the Town of Nichols, Tioga County, commonly known as Tioga Park. Approximately 20 years ago, a horse racing facility was constructed on the site, used for two racing seasons and closed for the last 19 years. Mr. Hawkins is planning to reopen the facility as a combination flea market and stadium for equestrian events. The purpose of this report is to show that the existing sewage facilities are capable of safely handling the projected sewage flows during operation.

### Site And Vicinity Characteristics

The surrounding land is relatively flat with low rolling hills. All the sand and gravel materials necessary for building the parking areas, track and roads were excavated from a quarry on the east end of the site. The soils are very well drained and composed mostly of sand and gravel materials. Please refer to the attached Soil Survey Map for the location of each soil type. The soil types found on the site are listed below.

Howard gravelly loam (Hgn, Hgh, Hgr, Hgt)

Unadilla silt loam (Unn)

Tioga silt loam (Ts)

Middlebury silt loam (Mi)

These soils are all moderately well drained to well drained. The soils do *not* form a corrosive environment. These two factors lead us to conclude that the buried components of the sewage system are still in good shape.

### Description of the Site

The property is located in the Susquehanna River basin less than a mile to the south of the Susquehanna River. The property is fairly flat with a gentle slope toward the north. Most of the land is open field with low brush at the east and west ends. Less than 10% of the property has mature tree cover. All of the property is stabilized with either brushy vegetation, grasses, gravel roads or pavement.

There are approximately 14 horse barns, a large grandstand building, jockeys' quarters, pump house and a small office building. See the attached aerial photograph and original Site Plan for more details on size and location of the buildings.

### Past Uses of the Property

According to historical records and interviews with knowledgeable people, the properties which make up Tioga Park have consistently been used for farming. There is *no* evidence that any commercial or industrial activities have taken place on the project site prior to the construction of the horse race track. Members of the Ostrander family owned the property from 1927 to 1975, at which time it was sold to James Nuckel and developed into what it is today. Members of the Wilson family owned the property prior to 1927. All evidence points to the property being used as farmland prior to 1975.

It is highly unlikely that past uses of the property have made a negative impact on its ability to handle sewage as designed.

### Current and Past Use of Adjoining Properties

### East

The properties to the east are owned by Lynn Bailey, Danny Rogers and Alfred Christiansen. Mr. Bailey's property is currently used as a hay field. Mr. Rogers property is largely unused. Mr. Christiansen's property is currently the site of his tire business. It is highly unlikely that any activities at the Park will have a negative impact on the adjoining properties from an environmental point of view. *North* 

The park is bounded on the north by an abandoned segment of railroad bed formerly owned by the Lackawanna Railroad. Currently, the railroad bed is owned by the Town of Nichols and is not in use.

The park is also bordered on the north by properties of Arthur & Candace Frank and properties of Wilford Frutiger. The Frank property is primarily a swamp between the railroad bed and West River Road.

The property owned by Wilford Frutiger is currently operated as a small mobile home park with less than five homes. The Tioga Park sewage system is not likely to have a negative effect on the on-site water well since the sewage system is sited at least 900 feet away from the well.

### West

The property to the west of Tioga Park is owned by Howard and Carol Visscher. The property is currently used as farmland. It is highly unlikely that the Tioga Park Sewage facilities will have a negative impact on the adjacent fields which are cultivated with forage crops.

### South

1

The park is bordered on the south by the Southern Tier Expressway, State Route 17. The closest well to the South is at least 900 ft from the nearest absorption field. The land to the south is at a higher elevation than the absorption fields at Tioga Park.

### Proposed Usage and Sewage Flows

The new owner of Tioga Park is planning to reopen the facility with a slightly different focus than what it was used for in the past. Mr. Hawkins is planning to convert 5 of the existing barns into areas for flea market vendors to sell their goods. One of the barns will be used primarily for food vending for various outdoor events. The grandstand building will be refurbished to host equestrian events in a new arena to be constructed in front of the grandstand and a portion of the building will be a restaurant. The projected peak sewage flows for each system are calculated below:

The large sewage system near the Grandstand (System #1) will serve approx. 3,200 patrons during peak usage. The grandstand currently has approx. 1,850 seats. Mr. Hawkins is planning to add an additional 1,350 seats. The proposed restaurant will

have approx. 100 table seats. The sewage flows are calculated below using Expected Hydraulic Loading Rates from Table #3 in *Design Standards for Wastewater Treatment Works*, 1988 published by N.Y. D.E.C.

3,200 Stadium Seats @ 5 gal./day/seat =	16,000 GPD
100 Restaurant Seats @ 35 gal./day/seat =	3,500 GPD
Total:	19,500 GPD

The smaller sewage system near the Barn Area (System #2) will serve the daily sewage from the small office, kitchen waste from finger food vendors with disposable dishes & utensils, and sanitary waste from the flea market patrons. The office will have less than 10 employees. The kitchen waste will be calculated based upon the expected number of patrons @ 3 gal/person/day (this figure was taken from PA Code, Title 25, Chapter 73.17, Sewage Flows). The sanitary waste from flea market patrons are calculated based upon square footage of the shopping areas.

Office Employees: 10 @ 15 gal./day=	150 GPD
Food Vendor Kitchen Waste (disposable utensils):	
1000 patrons @ 3 gal./person/day=	3,000 GPD
Shopping Area:	
5 Barns x 13,500 ft²/barn x 0.1 gal./day=	6,750 GPD
Total:	9,900 GPD

### Original Design Information

The sewage system design is shown on the Original Site Plan (very large drawing). As far as we can see, the sewage system was constructed according to the plans. The original design criteria is provided in a 12/18/75 letter to Patrick E. Mullins, PE (NY D.E.C.) from Peter E. Mayer, PE (Job & Job Consulting Engineers). The letter is provided in the Appendix to this report.

The letter states that the percolation rate for three tests was 1.2 minutes per inch. This indicated that the soils are well drained. System #1, which serves the Grandstand area, was originally designed to handle 20,500 gallons per day. System #2, which serves the barn area, was designed to handle 11,400 gallons per day. Since the original projected flows exceeded 30,000 GPD, 6 monitoring wells were installed to monitor the groundwater for contamination. The groundwater in the wells was sampled and analyzed for contamination. The available records on the project *do not* indicate any groundwater contamination. The sewage flows which we project are less than the original flows and should not cause any problems.

### Existing Sewage Facilities

The sewage facilities at Tioga Park consist of two independent systems which serve two distinct areas of the site.

- 1. The Grandstand Area (System #1) provides sanitary facilities for the patrons and a proposed small restaurant in the grandstand building.
- 2. The Barn Area (System #2) provides sanitary facilities for the flea market patrons, food concession area and office personnel.

### System #1 - Grandstand Area

System #1 consists of 8" asbestos concrete (AC) pipe coming from the grandstand building into a grease trap. From there, it joins up with another 8" AC pipe from the jockey's room and goes under the track to a manhole in the infield. At the manhole, the sewage flow splits and goes into two, side-by-side 11,300 gallon septic tanks. Both septic tanks drain into a concrete dosing chamber with three siphons. Each siphon alternately doses three separate 95 x 100 absorption fields through 6" AC pipe and 15 way distribution boxes. Each drain field consists of 15 laterals. Each lateral is 95 ft. long in a 2' wide trench surrounded by gravel. See the attached drawings for a layout of System #1.

According to *Design Standards for Wastewater Treatment Works, 1988* the septic tanks for daily flows greater than 15,000 GPD are required to be equivalent in size (or larger) than the daily flow. The existing tanks have a capacity of 22,600 gallons, which is large enough to handle the projected 19,500 GPD for System #1. The drain field has an effective absorption area of 8,550 ft². With 19,500 GPD of discharge, the Application Rate is calculated to be 2.28 gal/day/ft². Using the 1.2 min/in. percolation rate (from the 12/18/75 letter to Patrick E. Mullins, PE) the recommended application rate is 1.20 gal/day/ft². Our proposed application rate is higher than the rate specified in the DEC *Design Standards for Wastewater Treatment Works, 1988,* however, we feel strongly that the isolation distances at the site and soil conditions will allow the higher application rate to function properly.

### System #2 - Barn Area

System #2 consists of an 8" AC building sewer pipe from the building into a manhole. From the manhole, the pipe runs directly into a grease trap. From the grease trap the 8" AC pipe runs approx. 365 feet to a manhole on the inside of the track. The manhole is connected to a 11,300 gallon septic tank. The septic tank discharges to the dosing tank via 6" AC pipe (this is the pipe that was broken, but has been repaired). The dosing tank contains two siphons which alternately activate to dose the two separate absorption areas. The two 86'x95' absorption fields are dosed in an alternating fashion through 6" AC pipe and 13 way distribution boxes. Each drain field consists of 13 laterals. Each lateral is 95 ft. long in a 2' wide trench surrounded by gravel. See the attached drawings for a layout of System #2.

According to Design Standards for Wastewater Treatment Works, 1988 the septic tanks for daily flows between 5,000 and 15,000 GPD are required to be 3,750 + 0.75Q, where Q=daily flow in gallons. The existing tank has a capacity of 11,300 gallons, which is large enough to handle the projected 9,900 GPD for System #2. The drain field has an effective absorption area of 4,940 ft². With 9,900 GPD of discharge, the Application Rate is calculated to be 2.00 gal/day/ft². Using the 1.2 min/in. percolation rate (from the 12/18/75 letter to Patrick E. Mullins, PE) the recommended application rate is 1.20 gal/day/ft². Our proposed application rate is higher than the rate specified in the DEC Design Standards for Wastewater Treatment Works, 1988, however, we feel strongly that the isolation distances at the site and soil conditions will allow the higher application rate to function properly.

### Physical Evaluation of Existing Sewage Systems

The existing sewage systems were evaluated on April 8, 1996, and June 5, 1996. The first inspection resulted in the discovery of a broken pipe between the septic tank and the dosing tank on System #2 near the barn area.

### Broken Pipe, System #2

The 6" asbestos concrete pipe which carries wastewater from the septic tank to the dosing tank was cracked due to insufficient supporting material beneath the center of the pipe. As the ground settled, the weight of the ground above the pipe caused it to fracture on the bottom.

The pipe was repaired on June 5, 1996, by encasing the broken section of pipe in 3500 psi concrete as shown on attached Drawing #R-1. Some of the material below the pipe was removed and replaced with compacted material. The repair of the pipe with concrete was chosen to patch the leak in the pipe, provide additional strength to the pipe and avoid a major disturbance to the existing system if new lengths of pipe were installed. Also, since the existing pipe contains asbestos, replacement pieces are very difficult to find.

Thousands of gallons of water were run through the system(s) and into the absorption fields with no apparent discharge to the surface. Each manhole, septic tank access and dosing tank access was checked to verify that the system was flowing properly. There were no apparent blockages in the system.

### Proposed Changes to Sewer System

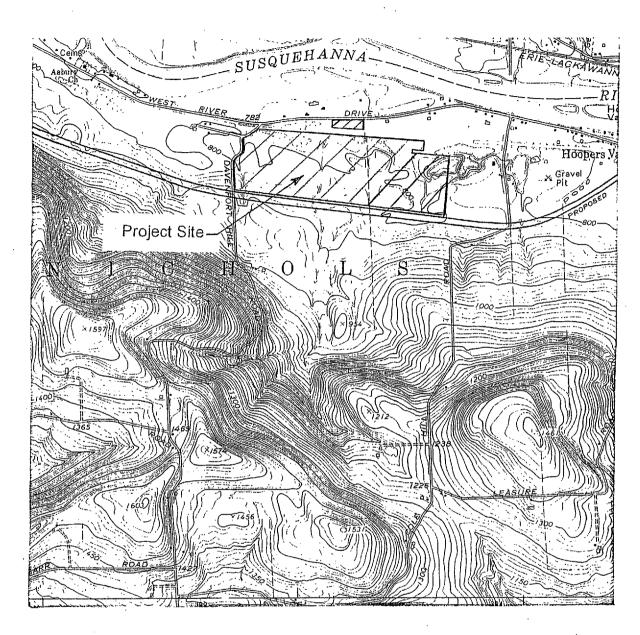
The food vendors for the flea market will setup shop in the existing barn labeled "Receiving" on the site plan by Fox Engineering. Interior plumbing will be installed in the building to supply restrooms and kitchen facilities with potable water. The waste will be piped out of the building via 8" solid PVC pipe to a new grease trap. From the new grease trap, the new 8" line will go directly into an existing sewer manhole adjacent to

the Office building. A 6" cleanout will be extended to grade at the midpoint between the new grease trap and existing manhole. The proposed new line is highlighted in pink on a marked-up print in the Appendix.

## Conclusions

The existing sewer system at Tioga Park is capable of handling the projected sewage flows which will be generated at the site. The system is in good working order and has been designed to safely handle large quantities of wastewater. The key factor in the success of the system(s) is the excellent soil available at the site. I feel strongly that the sewer system is in good working order and will adequately serve the facility for its intended purpose.

## **APPENDIX**



U.S.G.S. Topographic Map Name:

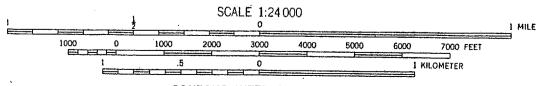
Barton, NY 7.5 Min. Series

LOCATION MAP
Tioga Park Property

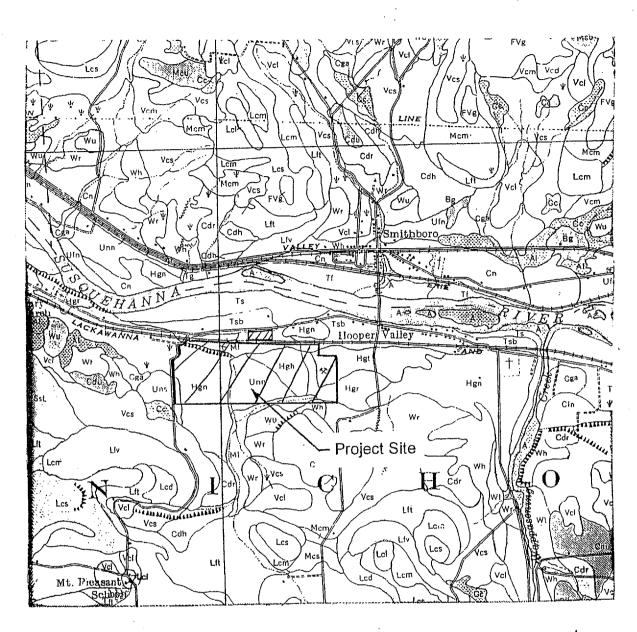
Town of Nichols Tioga County, NY



Fox Engineering



CONTOUR INTERVAL 20 FEET NATIONAL GEODETIC VERTICAL DATUM OF 1929



Sheet No. 4

Soil Map Tioga County, NY

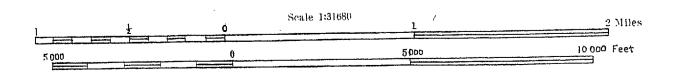
## SOIL SURVEY MAP

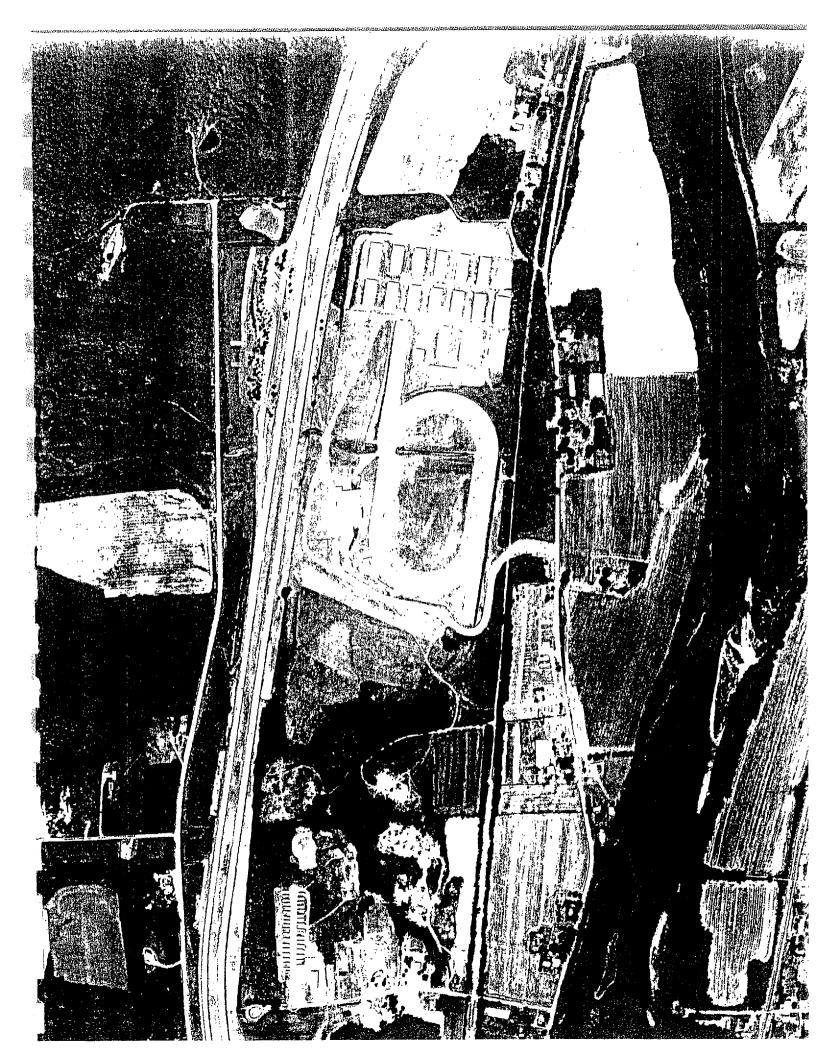
Tioga Park Property

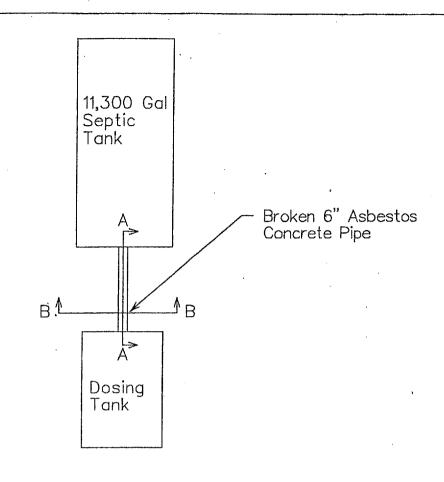
Town of Nichols Tioga County, NY

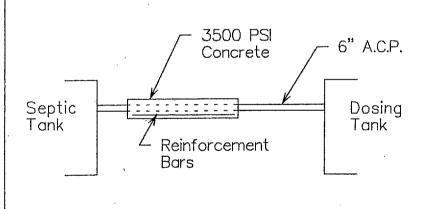


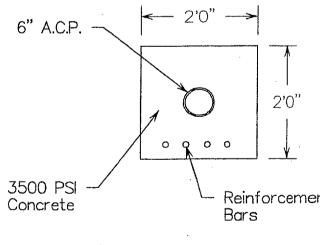
Fox Engineering











Section A-A

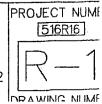
Section B-B

	SCALE: 1" = 1"
6/5/96	FILE: 516R16R1
DRAWN	SHEET TITLE
~ ~	
CHECKED	Tioga Park Pipe Repair
	D = 1 = 1

で 一番

TIOGA PARK SEWAGE SYSTEM
Town of Nichols, Tioga Co., NY
Hawkins Development Co., LLC
P.O. Box 800
Harpursville, NY 13787

FOX
Engineering
R.R. #2 Box 41—G
Hallstead, PA 18822
(717) 879—2676





## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## FOR STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

<u></u>		
i Ngjar	(Please Print or Type) <u>Complete Both Sides</u>	The same of the sa
<b>,</b> _=	Name, Location, Mailing Address, and Telephone No. of Facili	tv Producing Discharge:
. •		
ž.	A. Facility Name Tioga Park	
٠.	B. Street Address South of West River Drive, North o	f Poute 17
i . ,	(Give N,S,E,W Side of Street if N	los. not Available)
; ;		
	C. R.D. or Box No D. Post Office Nichols	E. State New York
	F. Zip 13812 G. Location Abutting East (Approx. Distance)(N,S,E,	Of Davenport Hill Road
•	(Approx. Distance)(N,S,E,	W) (Cross Street)
	v o T. Nama Nichola T. Municipality	Nichols
	H. Community Name Nichols I. Municipality (City	, Town, or Village)
r	J. County Tioga K. Telephone	No
		(Area Code)
2.	Applicant Name (Give Corporate, Partnership, or Owner's Name	•)
<del></del> .		
	CIB INTERNATIONAL INC.	
	Applicant's Mailing Address (if Different Than Facility Add	mans).
3.	Applicant's Malling Address (if Different Than Facility Add.	(655):
	A. Street Address 281 Liberty Street B. R.D.	or Box No.
		•
	C. Post Office <u>Little Ferry</u> D. State New Jersey	E. Zip <u>0/643</u>
v.	F. Telephone No. 201 / 440-4700	
	(Area Code)	
· 		
		~ H 6 F 1
4.	Nature of Business <u>Race Track</u>	5. No. of Employees 100
6.	Frequency of Discharge	
	A. Period: (x) All Year or Specify Months:	
	B. (x) All Week or Specify No. of Days Per Week:	
	The state of the s	Secretary and the second of th
7.	Does your discharge contain or is it possible for your disc	harge to contain one or
	more of the following substances added as a result of your	operations, activities,
2	or processes:	
	(A) None	Vice driving (A) chromium
1	() ammonia () cyanide () aluminum () beryllium ( () copper () lead () mercury () nickel () seleni	man ( ) zinc ( ) phenols
	Copper ( ) lead ( ) mercury ( fintoketa) ( see and	licable item(s)

FOR D.E.C. USE ONLY Stream Waters Index Class Number	AL OUTFALLS, ADD SHEETS) t, lavatory, shower, etc.)  "Municipal Sewer System n Lagoon None type 23 - Trickling Filter(s) n of Existing n of Existing n to discharge waste to plete table below: Nearest Surface Water hanna River hanna River	
Cutfall Status See Code) (See Code) 30 See below 30	(FOR ADDITIONAL Backwash 6 Other (Specify) cean, lake, stream, etc.) 11- lerground Well 14 - Evaporation Nos. where Applicable) - 20 - N 22 - Activated Sludge of any tylent of Existing 33 - Expansion of stream - If it is intended in the Subsurface discharge, compostations of stream - If it is intended in a sand, etc.) Name of Ne nd-gravel Susqueha Susqueha	
Point of Treatment Discharge Units (See Code) (See Code) (12 21,25 12 21,25	where tes 5- scharge etc.) Combine ing tank Leaching ng 32- nrge, gi system's scharge 791	familiar with the informat:
Outral Type of Maximum Flow No: (See Code) (gal/day)  1.3 20,500 2 1.3 11,400	Waste (Use 3-Kitchen Discharae ce (i.e. ti Sewer Syste t Units Exi Settling (i Settling (i V Settling (i V Settlin	Fritzy that I am familia

É am familiar with the information contained in the application and that to the best of accura and knowledge and belief such information is true, complete,

F. J. Renz Jr.-President Printed Name and Title of Person signing Mr.

Must be corporate official, owner, or partner (or manager of Facility obly

if owned by a corporation.))

Patrick E. Mullins, P.E., Senior Sanitary Engineer N.Y. State Dap't. of Environmental Conservation Rocm 310
14 Enwley Street
Binghamton, New York 13901:

Re: Tioga Park Race Track Michols, New York Our Map No. 47-19

## Dear Mr. Mulling:

Based upon the data furnished you in our letter dated September 12, 1975 and the requirements of the New York "Standards for Waste Treatment Horzs, Institutional and Commercial Sewage Facilities," we have prepared a design for the sowage disposal system for the Tioga Perk Race Track.

Test pits and percolation tests were performed by Carl J. Winterberger, Civil Engineer, of Vestal, New York. Three (3) copies of Mr. Winterberger's report are attached for your information and the locations of these tests are shown on the plans accompanying this report. The maximum percolation rate for the three (3) tests taken was 1.2 minutes per inch.

The area subject to the least disturbance in the project is the track infield and it was therefore selected as the location for the disposal system. This area also provides suple expansion expebilities. The system itself was divided into two (2) independent systems to spread the fields over a larger area and to avoid crossing the existing intermittent drainage channel that must be maintained through the infield.

The project has two (2) distinctive operating areas:

- 1) the Barn area containing living and enting facilities for the resident and day staff, but excluding any laundry facilities
- 2) the Grandstand erea, providing canitary familities for the racing patrons, related survice personnel and limited enack ber concessions

The separation of the disposal facilities provides individual facilities for these two (2) assess of activity.

12/18/15

## The following daily requirements were enticipated:

1) Barn erse:

2) Grandstand area:

Racing Patrons (Max.) 4000 3 5 GPPD = 20000 GPD Service Personnel 100 @ 5 GPPD = 500 GPD Total Daily Volume = 20500 Gel.

Although the flow from each of these facilities is greater than 4,000 gallons per day and it is permitted to size the septic tanks at one half the daily flow, we felt the sporadic character of the discharge warranted the use of tanks capable of holding approximately the entire daily flow to insure an adequate detention period. For this reason a uniform tank size of 11,300 gallons was selected, utilizing a single tank for the Barn area and two parallel tanks for the Grandstand area.

The disposal fields were designed on the basis of the above-computed daily flow; namely, 11,400 gallons for the Barn area and 20,500 gallons for the Grandstand area.

The trench lengths were based upon 2' wide trenches with an application rate of 2.4 gallons per square foot per day, as determined from the per-colation rate of 0-5 minutes per inch.

The lengths of the tile system for both disposal areas are in excess of 1,000 lineal feet, requiring desing equipment.

Dosing is to be provided by means of two (2) 3" alternating siphons for the Barn area and three (3) 4" plural alternating siphons for the Grandstand area.

Peak hour discharge for the Barn area was estimated to be 34 GPM. The average discharge of the 3" siphon is 72 GPM, or 212% of this peak.

Peak hour discharge for the Grandstand area was estimated to be 85 GPM. The average discharge of the 4" siphon is 165 GPM, or 194% of peak.

Dosing tank volumes were based upon 75% of the total interior volume of the 4" tile lines being doesd. These tank volumes were set between operating levels of the siphons.

P. E. Millins, P.E.
HY State Dugt. of Env't'L. Conservation
Binchanton, E. Y. 3 -

12/18/75

Six (6) copies of plans incorporating the above data are attached for your approval, together with three (3) completed copies of Application Ferm D.

The commers are most envious to proceed with construction of this facility and we will be happy to provide any additional data or information whatso-ever concerning the project that may help expedite your review.

Very truly yours,

JOB AND JOB CONSULTING ENGINEERS

By:

Peter E. Mayer, P.E.

PEN: KIBJ: js Encs. The plans ( w/o the sent stary ) are

DA = 2/27/76

That pro in Waste Pisposal System For

Traga Park Race Track, Michols (1), Traga County Tale temby sp. and pure parts Ant. 170 of ECL &

6 NYCER 652 1 , or do to proting it mo

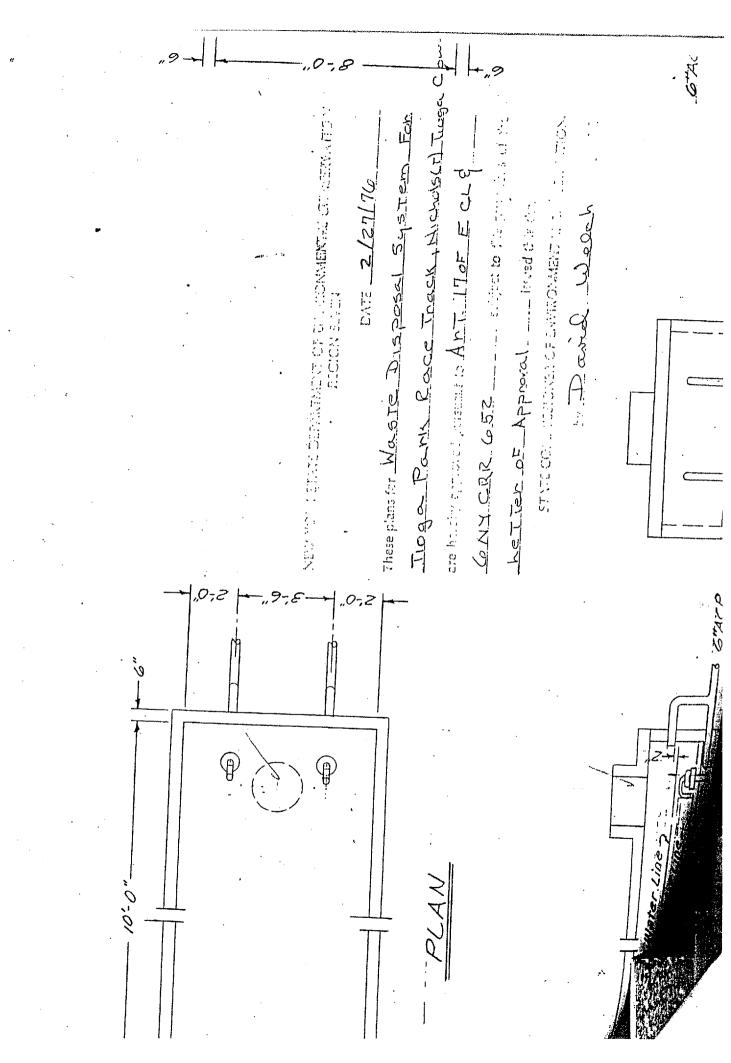
Letter of Approval of search and a second second second

sampling well.

GENERAL SITE PLAN TIOGA PARK RACE TRACK SHOWING SUB-SURFACE SEWAGE DISPOSAL FIELDS IN RELATION TO EXISTING WELLS IN VICINITY SITUATED IN THE

TOWN OF NICHOLS

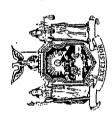
TIOGA COUNTY DECEMBER 11-1975 DECEMBER II, 1975



# UNIVERSITY OF THE STATE OF NEW YOR

Commemorating 100 Years of Professional Regulation 1891–1991

## EDUCATION DEPARTMENT



BE IT KNOWN THAT

## TODD BARRY SCHMIDT

HAVING GIVEN SATISFACTORY EVIDENCE OF THE COMPLETION OF PROFESSIONAL AND OTHER REQUIREMENTS PRESCRIBED BY LAW IS QUALIFIED TO PRACTICE AS A

# PROFESSIONAL ENGINEER

IN THE STATE OF NEW YORK

IN WITNESS WHEREOF THE EDUCATION DEPARTMENT GRANTS THIS LICENSE UNDER ITS SEAL AT ALBANY, NEW YORK THIS ELEVENTH DAY OF AUGUST,

LICENSE NUMBER 069577



I homen Sold

AND COMMISSIONER OF EDUCATION

AND COMMISSIONER OF EDUCATION

EXECUTIVE SECRETARY
STATE BOARD FOR
ENGINEERING AND LAND SURVEYING



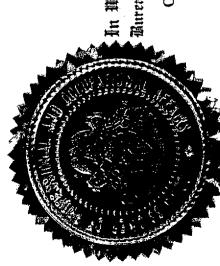
## Wureau of Penfessional and Occupational Affairs Department of State

TO ALL TO WHOM THESE PRESENTS SHALL COME GREETING,

STATE REGISTRATION BOARD FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS

## TODD BARRY SCHMIDT

TRAINING AND PRACTICAL EXPERIENCE AND ALL OTHER MATTERS REQUIRED BY LAW AND IN ACCORDANCE HAVING SUBMITTED SATISFACTORY EVIDENCE OF FITNESS AS TO AGE, CHARACTER, ABILITY, TECHNICAL WITH THE PROVISIONS OF THE ACT OF THE GENERAL ASSEMBLY APPROVED MAY 23, 1945, IS GRANTED THIS CERTIFICATE OF REGISTRATION AND IS HEREBY AUTHORIZED TO PRACTICE AS A



## PROFESSIONAL ENGINEER

IN THE COMMONWEALTH OF PENNSYLVANIA

In Witness Whereut, we have hereunto set aur Hand und caused the Seal of the Amean of Professional and Occupational Affairs to be affixed at Harrishurg.

OCTOBER 21, 1992

LICENSE NUMBER: PE-043509-R

BUREAG OFFREEESIGNAL AND CONTRIBUTED AND STATE OF STATE O	
The University of the State of Pew Pork  This is to certify that qualifications for professional	

PRACTICE IN NEW YORK STATE HAVING BEEN APPROVED

## THE STATE EDUCATION DEPARTMENT

HAS REGISTERED

2523609

SCHMIDT TODD BARRY RR2 BOX 41G HALLSTEAD

PA 18822-0000

FOR PRACTICE IN NEW, YORK STATE AS A (N)

PROFESSIONAL ENGINEER

02/28/98

069577-1

LICENSE/CERTIFICATE NO.

SIGNATURE OF REGISTRANT

COMMISSIONER OF EDUCATION

REGISTRATION CERTIFICATE --- NOT A LICENSE



RR 2 Box 41-G Hallstead, PA 18822 Ph/Fax (717) 879-2676

July 2, 1996

Mr. Scott D. Cook
New York State Department of Environmental Conservation
Region 7 Water Quality Unit, Suite 203
615 Erie Blvd. West
Syracuse, NY 13204-2400

RE: Tioga Park SPDES Permit Additional Information Town of Nichols, Tioga County, NY

Dear Mr. Cook:

Item #5:

In response to your letter dated June 28, 1996, we are happy to provide the following information and additional drawings.

Item #1: The design flow for outfall #002 should be changed to 9,900 GPD on the permit application to reflect the calculations in the Engineering Report.

Item #2: At this time there are no definite plans for the Jockey's Room. We anticipate that the building will be converted into a dressing room for performers or be converted into a three bedroom apartment for temporary usage. This will generate 400 GPD of sanitary wastewater at the very most. Therefor, the total daily flow for outflow #001 will be 19,500 GPD + 400 GPD = 19,900 GPD.

Item #3: The proposed new Grease Trap and 8 inch line connecting the new food service area to outfall #002 will be done according to attached Drawings #D-1 and D-2 dated 6/28/96. The Grease Trap will be 750 gallons in size constructed of precast concrete. This design conforms to DEC Design Standards for Wastewater Treatment Works, 1988.

There are no flow measurement devices on the water supply system or either septic system on the project site. We propose to install a water flow meter on the discharge to the water storage tank as shown on the attached water supply schematic diagram. This flow meter will give us a running total of all water flow from the pump house into the water distribution system.

A copy of the original monitoring wells location map is attached to this correspondence. The Applicant is willing to perform groundwater

monitoring for Bacteria and Nitrates at the six indicated locations. We respectfully request that there be a one year time limitation on groundwater monitoring. If all water samples show a permissible level of these substances during the one year timeframe, we request that further monitoring be omitted from the SPDES permit requirements.

Attached, you will find a copy of an Engineer's Certification for the septic systems (Outfalls #1 & #2) at Tioga Park. After a physical review of the systems, it is my opinion that the systems will function properly as designed and installed.

If you have any questions about the information contained in this letter or the attached drawings, please do not hesitate to contact me at (717) 879-2676. Thank You.

Sincerely,

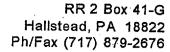
Todd B. Schmidt, PE Principal Engineer

Enclosures

cc: Mr. James W. Hawkins - Hawkins Development Co.

Mr. Lawrence C. Anderson - Hinman, Howard & Kattell

Mr. Gary Rice - Tioga County Health Department





June 28, 1996

Mr. Scott D. Cook New York State Department of Environmental Conservation Region 7 Water Quality Unit, Suite 203 615 Erie Blvd. West Syracuse, NY 13204-2400

RE: Engineer's Certification for the Tioga Park Septic Systems Town of Nichols, Tioga County, NY

Dear Mr. Cook:

The existing sewage systems at the Tioga Park horse race track in the Town of Nichols, Tioga County, NY were inspected on April 8, 1996, and June 5, 1996 by Todd B. Schmidt, PE of Fox Engineering. The first inspection resulted in the discovery of a broken pipe between the septic tank and the dosing tank on System #2 near the barn area.

The pipe was repaired on June 5, 1996, by encasing the broken section of pipe in 3500 psi concrete as shown on attached Drawing #R-1. Some of the materials below the pipe were removed and replaced with compacted material. The repair of the pipe with concrete was chosen to patch the leak in the pipe, provide additional strength to the pipe and avoid a major disturbance to the existing system if new lengths of pipe were installed. Also, since the existing pipe contains asbestos, replacement pipes are very difficult to find.

Thousands of gallons of water were run through each system and into the absorption fields with no apparent discharge to the surface. Each manhole, septic tank access and dosing tank access was checked to verify that the system was flowing properly. There were no apparent blockages in either system.

It is my opinion that the existing sewer systems at Tioga Park are capable of handling the projected sewage flows which will be generated at the site. The systems are in good working order and have been designed to safely handle large quantities of wastewater. The key factor in the success of the systems is the excellent soil available at the site. I feel strongly that the sewer systems are in good working order and will adequately serve the facility for its intended purpose.

If you have any questions about the information contained in this letter or the attached drawings, please do not hesitate to contact me at (717) 879-2676. Thank You.

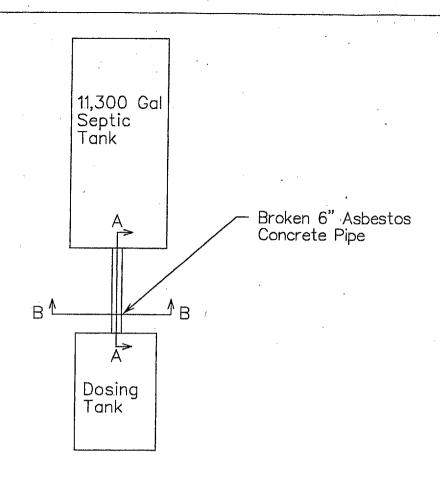
Sincerely,

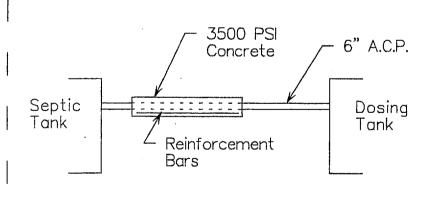
Todd B. Schmidt, PE Principal Engineer

cc: Mr. James W. Hawkins - Hawkins Development Co.

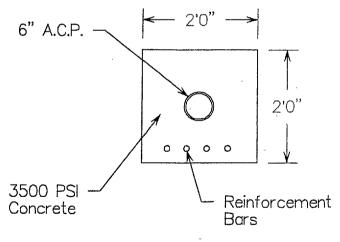
Mr. Lawrence C. Anderson - Hinman, Howard & Kattell

Mr. Gary Rice - Tioga County Health Department







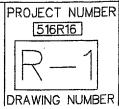


Section B-B

DATE	SCALE: 1" = 1"
3/5/96	FILE: 516R16R1
DRAWN	SHEET TITLE
T.B.S.	Tiona Park
HECKED	Tioga Park Pipe Repair Detail
T.B.S.	Detail

TIOGA PARK SEWAGE SYSTEM
Town of Nichols, Tioga Co., NY
Hawkins Development Co., LLC
P.O. Box 800
Harpursville, NY 13787
(607) 693-4295

FOX
Engineering
R.R. #2 Box 41—G
Hallstead, PA 18822
(717) 879—2676



Existing Monitoring Wells Map

New York State Department of Environmental Conservation Region 7 Water Quality Unit, Suite 203 615 Erie Blvd. W., Syracuse, NY 13204-2400 (315) 426-7500



Michael Zagata Commissioner

June 28, 1996

Todd B. Schmidt, P.E. Fox Engineering RR 2 Box 41-G Hallstead, PA 18822

RE: Tioga Park
(T) Nichols
Tioga County, NY

Dear Mr. Schmidt:

This Department and the Tioga County Health Department have jointly reviewed the SPDES permit application and engineering report for the above referenced facility. As we discussed in our June 25th phone conversation, the following comments are to be addressed prior to final Departmental engineering plan review & approval and subsequent issuance of the SPDES permit:

- 1. The design flow for outfall # 002 (barn area) from the engineering report is 9,900 GPD and the design flow listed on the permit application for this outfall is 9,825 GPD. The design flows should be same in both cases.
- 2. What is the planned use of the Jockey's Room and what type of facilities are located in this building? This is a potential flow increase to the wastewater treatment system that has not been addressed in the report.
- 3. The engineering plan show the addition of a 500 Gal. Grease Trap and an 8 inch line connecting the new food service area to Outfall # 002. The minimum required size for Grease Traps are 750 Gals as stated in our design standards. The plans must reflect the minimum required size of the Grease Trap.
- 4. A flow measurement devise will be required to be incorporated into the wastewater treatment system to determine the actual flows entering the system. Actual water use records or water supply well pump readings will be acceptable, but actual flow readings into each system would be much preferable to ensure the systems do not fail due to hydraulic overloading.

5. The original SPDES permit for this facility had a set of special conditions attached to it concerning 6 groundwater monitoring wells and the required sampling of the wells. Please provide the locations and working conditions of the monitoring wells on a site map or plans. This facility will be required by its SPDES permit to do groundwater sampling and monitoring. The reasoning behind this monitoring is to protect the groundwater and local drinking water supplies from Bacteria and Nitrate contamination. Both of these parameters are major health concerns for drinking water supplies originating from groundwater sources.

Please submit revised Engineering Plans or Specifications to this office addressing the above comments. If you have any further questions feel free to contact this office at (315) 426-7500.

Sincerely,

Scott D. Cook

Environmental Engineering Technician 3

Scott D. Cool

cc: Gary Rice Tioga County Health Dept.

# APPENDIX I SEPTIC SYSTEM MONITORING WELL TESTING RESULTS

quality m accuracy m reliability

## **ENVIRONMENTAL**

390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

## **Certificate of Analysis**

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Turn 3 5D25045-02 (Waste Water)

Project: Monitoring Wells

Project No: [none]

Project Manager: Mark Phifer

Reported:

05/25/05 13:24

(MW-Z'

Date Sampled: 04/22/05 13:55 Date Received: 04/22/05 16:50

Analyte	Result	Detection Limit	Units	Prepared	Analyzed	Method	Analyst	Notes		
Conventional Chemistry Parameters by APHA/EPA Methods										
Nitrate as N	< 0.05	0.05	mg/l	04/27/05 00:00	04/27/05 00:00	EPA 353.2	ĬC			
pН	, 6.63		pH Units	04/22/05 16:50	04/22/05 17:00	EPA 150.1	IC	pHD		

Qualifiers:

= The maximum holding time is 1 hour according to NY ELAP or 15 minutes according to PA Critical pHD Elements.

Eastern Laboratory Services, Ltd.

Barbana Hohman

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

PA 08380

NY 11216

Page 2 of 3



## ENVIRONMENTAL

390 N. Pennsylvania Avc. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717



## Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Fecal Coliform

Project No: [none]

Project Manager: Mark Phifer

Reported:

05/25/05 13:26

Well--Turn 3 5D22109-03 (Drinking Water)

Date Sampled: 04/22/05 15:05

Date Received: 04/22/05 16:46

Analyte

Result

MCL

Analyzed

Method

Analyst

Notes

Fecal Coliform in Water by Membrane Filtration

Fecal Coliforms

<10

<0

CFU/100 ml

04/22/05 17:00

SM18-9222D

SK

Note: Detection Limit is 10 CFW100 ml per Trang Cole.

Eastern Laboratory Services, Ltd.

Boutsona Hohman

Reviewed by Barbara Hohman, QA Manager

The results in this report apply to the samples analyzed in accordance with the chal. of custody document. This analytical report must be reproduced in its entirety.

PA 08380

NY 11216



quality maccuracy meliability

## ENVIRONMENTAL

390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717

## **Certificate of Analysis**

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Monitoring Wells

Project No: [none]

Project Manager: Mark Phifer

Reported:

05/25/05 13:24

Infield 5D25045-03 (Waste Water)

Date Sampled: 04/22/05 15:05 Date Received: 04/22/05 16:50

Analyte	· Result	Detection Limit	Units	Prepared	Analyzed	Method	Analyst	Notes
Conventional Chemist	ry Parameters by A	PHA/E	PA Method	S				
Nitrate as N	<0.05	0.05	mg/l	04/27/05 00:00	04/27/05 00:00	BPA 353.2	IC	
pН	9.47		pH Units	04/22/05 16:50	04/22/05 17:05	EPA 150.1	IC	pHD

Qualifiers:

pHD

= The maximum holding time is 1 hour according to NY BLAP or 15 minutes according to PA Critical Elements.

Eastern Laboratory Services, Ltd.

Borbana Hehman

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

PA 08380

NY 11216

Page 3 of 3



stem Laboratory Services Ltd quality m accuracy m reliability ENVIRON.

390 N. Pennsylv South Waverly, PA 1884. Phone (570) 888-FAX (570) 888-0,

## Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Fecal Coliform

Project No: [none]

Project Manager: Mark Phifer

Reported:

05/25/05 13:26

Well--Infield 5D22109-01 (Drinking Water)

Date Sampled: 04/22/05 15:05

Date Received: 04/22/05 16:46 Notes Method

Fecal Coliform in Water by Membrane Filtration

Pecal Coliforms

Analyte

<10

Result

<0

CFU/100 tol

04/22/05 17:00

Analyzed

SM18-9222D

SK

Analyst

NOTE: Detection limit is 10 CFU/100 ml per Tracy Cole.

## ESLICI Eastern Luboratory Services Ltd

quality m accuracy m reliability

## **ENVIRONMENTAL**

390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 PAX (570) 888-0717

## Certificate of Analysis

Tioga Downs Racetrack, LLC

P.O. Box 509

Nichols NY, 13812

Project: Monitoring Wells

Project No: [none]
Project Manager: Mark Phifer

Reported:

05/25/05 13:24

Turn 2 5D25045-01 (Waste Water) (MW-6)

Date Sampled: 04/22/05 14:15 Date Received: 04/22/05 16:50

Analyte	Result	Detection Limit	Units	Prepared	Analyzed	Method	Analysi	Notes		
Conventional Chemistry Parameters by APHA/EPA Methods										
Nitrate as N	0.09	0.05	mg/l	04/27/05 00:00	04/27/05 00:00	EPA 353.2	IC			
pН	. 7.22		pH Units	04/22/05 16:50	04/22/05 17:08	EPA 150.1	IC	pHD		

Qualifiers.

 $\alpha$ Hg

The maximum holding time is 1 hour according to NY ELAP or 15 minutes according to PA Critical Elements.

Eastern Laboratory Services, Ltd.

Boutana Hohman

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

PA 08380

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## ENVIRONMENTAL

390 N. Pennsylvania Ave. South Waverly, PA 18840-2826 Phone (570) 888-0169 FAX (570) 888-0717



## **Certificate of Analysis**

Tioga Downs Racetrack, LLC P.O. Box 509

Nichols NY, 13812

Project: Fecal Coliforn

Project No: [none]

Project Manager: Mark Phifer

Reported:

05/25/05 13:26

Well-Turn 2 5D22109-02 (Drinking Water)

Date Sampled: 04/22/05 15:05 Date Received: 04/22/05 16:46

Notes

Analyte Fecal Coliform in Water by Membrane Filtration

Fecal Coliforms

Result

<0

MCL

CFU/100 ml

04/22/05 17:00

Analyzed

SM18-9222D

Method

SK

Analyst

Note: Detection limit is 10 CFU/100 ml per Tracy Cole.

astern Laboratory Services, Ltd.

PA 08380

NY 11216

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The results in this report apply to the samples analyzed in accordance with the chai. of custody document. This analytical report must be reproduced in its entirety.