OFFICE OF ADJUDICATIONS

IN THE MATTER OF	:	*APPLICATION #200502057* *PERMIT ID # UI10000431*
DDR GUILFORD, LLC	:	*AUGUST 21, 2007*

PROPOSED FINAL DECISION

I
SUMMARY

DDR Guilford, LLC (DDR or applicant) has filed an application with the Department of Environmental Protection[1] (DEP or staff) for a permit to discharge wastewaters from its planned retail development project to be constructed on property located at and adjacent to 1919 Boston Post Road in Guilford. General Statutes §22a-430; Regs., Conn. State Agencies §§22a-430-3 and 22a-430-4. Specifically, the applicant intends to construct and operate an on-site, advanced wastewater treatment and renovation system (Zenon system) to treat domestic sewage wastewater discharged from the planned facility.

The DEP published a tentative determination to approve this application, and staff has prepared a revised draft permit that would authorize the discharge (Attachment A). Hearings were held in Guilford for the receipt of public comment and were continued at the DEP in Hartford. The parties are the applicant and DEP staff. The Committee to Save the Guilford Shoreline also participated in this proceeding as an intervenor.

The application and the terms and conditions of the revised draft permit are consistent with all applicable statutory and regulatory standards. §22a-430; §§22a-430-1 through 22a-430-8. If constructed and operated as proposed, this wastewater treatment system will protect the

[1] Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division.

waters of the state from pollution. I therefore recommend issuance of the revised draft permit following staff approval of the applicant's plans and specification for its project.

II

DECISION

A
FINDINGS OF FACT

1
Procedural History

1. DDR submitted its application for a discharge permit on or about August 15, 2005. Following its review of the application, including supplemental materials, the DEP determined that the proposed wastewater treatment system met its design requirements and issued a tentative determination to issue the permit on September 5, 2006. Staff has submitted into the record a revised draft permit that would authorize the proposed discharge. (Exs. DEP-1, 4a; test. R. Lorentson, 3/6/07, pp. 191,192.)

2. A petition requesting a public hearing was timely filed by the Committee to Save the Guilford Shoreline (CSGS), through its representative Charles H. Magby. On October 25, 2006, CSGS was granted status as an intervening party pursuant to General Statutes §22a-19(a). CSGS made allegations of unreasonable impairment of natural resources in its petition to intervene, including facts that set forth issues that were directly related to the subject permit application and specific draft permit terms.[2] (Ex. DEP-2.)

3. Following a November 20, 2006 status conference, the applicant and CSGS exchanged requests for production of documents; CSGS also served staff with a production request. As part of its response to the request of CSGS, staff provided an explanation of data used and/or omitted from its evaluation of the twelve facilities located in Connecticut that are currently permitted to operate a Zenon system.

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[2] All documents pertaining to the procedural history that are not specifically cited are contained in the docket file maintained by the Office of Adjudications and are part of the record in this matter. General Statutes §4-177(d).

4. The parties were directed to comply with a scheduling order, which required the exchange of prehearing information among all parties and attendance at the prehearing conference.[3] The applicant and staff filed and served the other parties with their prehearing information within the timeframe provided in the scheduling order. CSGS failed to exchange *any* prehearing information with staff. In a prehearing filing served on the applicant and filed with this office, CSGS failed to identify any witnesses or testimony it intended to present at the hearing. CSGS filed copies of two reports as proposed exhibits that were irrelevant to the subject permit application and also submitted three, new, non-specific issues it intended to raise during the hearing, not the specific environmental issues set forth in its petition to intervene. No member of CSGS represented the committee at the prehearing conference and CSGS failed to demonstrate good cause for its lack of participation.

5. In a February 2, 2007 Prehearing Conference Summary and Order, CSGS was notified of actions taken during the prehearing conference.[4] Specifically, its list of issues and proposed exhibits were ruled irrelevant to the subject matter of the proceeding. In addition, CSGS was no longer entitled to continue as a full party but could participate as an intervenor with restrictions on further participation, including the ability to cross-examine witnesses or speakers. In denying its request for reconsideration, CSGS was advised that its failure to provide sufficient prehearing information, failure to attend the prehearing conference without good cause, and introduction of new issues not contemplated by §22a-19, had denied the applicant and staff the opportunity to adequately prepare their cases and therefore violated the DEP Rules of Practice.[5]

6. Notwithstanding its status as an intervenor, CSGS was permitted to raise any issues it deemed relevant to the application and to propose evidence in support of its position during the hearing. Magby testified under oath regarding the department's recent evaluation of the

[3] Prehearing information includes a list of proposed legal issues to be decided, proposed witnesses and summaries of planned testimony and copies of all exhibits a party intends to offer during the hearing. The purpose of the prehearing conference is to focus the issues for hearing and to stipulate to proposed witnesses and exhibits. Rulings made during the conference are binding on the parties. Regs., Conn. State Agencies §22a-3a-6(p)(3).
[4] The DEP Rules of Practice provide that if a party or intervenor fails without good cause to attend the prehearing conference, the hearing officer may proceed with the conference and make binding decisions. Regs., Conn. State Agencies §22a-3a-6(p)(3).
[5] Sanctions may be imposed on any party or intervenor for failure to attend a prehearing conference or to be substantially unprepared for such conference. §22a-3a-6(p)(6).

performance of permitted Zenon systems in Connecticut. Mr. Magby was permitted to question witnesses primarily for the purpose of clarifying testimony, not for purposes of cross-examination. Magby also submitted a list of questions he intended to raise during the continued hearing.[6] The applicant and staff were directed to address relevant questions, directly or as part of their evidence, and did so during the evidentiary portion of the hearing. CSGS did not offer any additional evidence during any part of the hearing. (Test. Magby, 2/27/07, pp. 24-28.)

7. Hearings were conducted on February 27, 2007 and March 6, 2007, and the record closed on March 13, 2007. The parties and CSGS filed proposed findings of fact and conclusions of law on April 28, 2007.[7] The applicant requested and was granted permission to file a reply brief to the proposed findings and conclusions submitted by CSGS.

2
The Applicant

8. The applicant is a Delaware limited liability company and a wholly owned subsidiary of Developers Diversified Realty Corporation, a fully integrated company that develops and manages shopping centers across the country. The applicant has indicated its commitment to comply with all the terms and conditions of the draft permit with sufficient resources available to operate its proposed treatment system at an anticipated annual cost of $100,000. (Ex. APP-1; test. J. Grafmeyer, pp. 8-14, J. Whitcomb, pp. 100,101,111,112,116.[8])

9. The applicant has not been convicted in any jurisdiction of a criminal violation of environmental law; has not suffered the imposition of any civil penalty in any state or federal administrative proceeding; and has not been issued any order or adverse judgments by any state or federal court or any state or federal administrative agency. (Ex. APP-1; test. J. Grafmeyer, 3/6/07, pp. 10-11.)

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[6] During the public comment portion of the hearing, a number of public speakers sought to question the parties. An informal question and answer session was provided during that hearing, however, formal questioning of the parties was prohibited pursuant to Regs., Conn. State. Agencies §22a-3a-6(t). Members of the public were invited to submit written questions to me that I would address, if appropriate, during the continued session (evidentiary portion) of the hearing.

[7] I have reviewed the parties' post-hearing submissions. To the extent that I have relied on any proposed finding of fact or conclusion of law, I have incorporated such finding or conclusion as part of this Proposed Final Decision.

[8] All references to testimony from this point forward will be to testimony presented during the March 6, 2007 hearing session.

3
The Proposed Facility

10. The wastewater treatment system will serve the proposed multi-tenant, high-end, dry retail (clothing and other dry goods) complex to be constructed on property located at and adjacent to 1919 Boston Post Road in Guilford. The proposed development will consist of fifteen retail stores with approximately 150,000 square feet of retail space and one restaurant with seating for 121 customers. The majority of the tenants are expected to be high-end national retailers. (Ex. APP-7; test. J. Grafmeyer, p. 9, J. Whitcomb, p. 63.)

4
The Site

11. The site consists of approximately twenty-eight acres and is located between Interstate 95, exit 57, to the east and Route 1 to the south, and is adjacent to Spinning Mill Brook to the north and Joan Drive to the west. The site is surrounded by commercial properties and a transfer station located across Route 1, residential properties and a conservation area across Spinning Mill Brook and the ramps to and from Interstate 95. The site is not located in an aquifer protection area, has no natural diversity database indicators on current mapping and no archeological significance in the development area. The site is also beyond the coastal area boundary. (Exs. APP-1, 7, 12, 15; test. J. Whitcomb, pp. 68-69, 127-128, R. Lorentson, p. 210.)

12. The site is a flat, raised plain consisting primarily of ledge with very little overburden. The proposed development will be located on the upper plateau of the site and on the lower section near Joan Drive. Prior attempts to develop the property involved small commercial or retail facilities that were limited in size to conform to the design criteria for standard septic systems. Partial development was conducted on the site during the mid-1990s, which provided an access road and made certain topographical changes. (Exs. APP-1, 16; test. J. Whitcomb, pp. 65, 66, 68.)

5
Proposed Discharge

13. The discharge from the proposed system will be treated domestic wastewater, resulting from toilets, urinals, sinks and food preparation. The applicant anticipates its final design plan will include water conservation efforts and such building design features as low-flow water devices for toilets and urinals, and automatic shutoff systems for sinks to minimize the discharge flow. In addition, at least sixty percent of the treated effluent will be reused at least three times for non-contact purposes prior to discharge to the soil-based treatment system. No additional water will be added to the system to dilute effluent concentrations in the discharge. (Ex. APP-1; test. J. Whitcomb, pp. 95, 96, R. Lorentson, p. 192.)

14. Stormwater discharges from the site will not be combined with the wastewater discharge. Stormwater discharges will be the subject of a separate permit, which will require a spill prevention and control plan that provides for the cleaning agents (chlorine), and other chemicals (alum, carbon, lime) associated with the operation and maintenance of the wastewater treatment system to be stored in small quantities, indoors, in spill-proof containers. Chemicals used in the treatment system, in the quantities that will be stored on site, will not pose a danger to the environment. (Test. D. Boucher, p. 27, J. Whitcomb, p. 96-99.)

6
Discharge Volume

15. The maximum volume of wastewater that will be permitted to enter the advanced treatment system is 18,700 gallons per day (gpd). This is the rate of flow that the collection system and advanced treatment system are designed to accommodate. The maximum design flow was calculated by using the Connecticut Public Health Code, Technical Standards, design flow of 0.1 gallons per square foot per day for retail and 10 gallons per meal served for restaurants.[9] The average daily flow rate that will be permitted for treatment is two-thirds of the design flow or 12,467 gpd. (Ex. APP-7, ex. DEP-4a; test. J. Whitcomb, pp. 85-86, R. Lorentson, p. 192.)

[9] The applicant calculated the maximum design flow of 18,700 gpd based on three seatings at the restaurant or 363 meals @ 10 gallons per meal or 3,630 gpd plus the gross 150,000 square foot retail area @ 0.1 gallons per square foot or 15,000 gpd. (Ex. App-7; test. J. Whitcomb, pp. 85-86.)

16. The applicant intends to reuse at least sixty percent of the treated effluent for non-contact purposes within the dry retail portion of the development. Based on the reuse rate, the maximum daily disposal volume of 7,400 gpd is the permitted discharge from the advanced treatment system to the soil-based treatment system. The applicant does not expect this peak flow to occur on a daily basis or even frequently. The average daily disposal volume permitted is 4,933 gpd. The soil-based treatment system would be designed and constructed to accept the maximum disposal volume of 7,400 gpd. (Ex. APP-7, ex. DEP-4a; test. J. Whitcomb, pp. 93-94, R. Lorenston, p. 192.)

7
Subsurface Advanced Wastewater Treatment System
a
Overview of the Proposed System

17. The proposed system consists of a sanitary collection system, trash trap, flow equalization tank, Zenon components, ultraviolet disinfection, reuse and dosing tanks, and lateral sand filters. The entire system is below ground surface except for a control building that will contain small portions of the system such as blowers. The treatment system is located on the high portion of the site in tanks under pavement. All system components are connected and covers are sealed for odor and air control. Air will be piped into the control building and discharged through an activated carbon filter system. The control building will be insulated for sound. The applicant has not proposed and the system will not include a bypass component. (Ex. APP-11; test. J. Whitcomb, pp. 74, 75, 82, 83, 84.)

18. Wastewater is initially collected through the sanitary collection system and travels by gravity feed to a wet well at the northeast end of the site. A grinder pump will operate from the wet well and deliver wastewater to the settling tank/trash trap located near the retail building closest to Joan Drive. The trash trap, a five to seven thousand gallon tank, holds the wastewater for several hours during peak flows. The tank includes a trash rack and traps for such solids as personal hygiene items, plastic bags or items large enough to be held by the trap that should not go through the proposed system. When the tank overflows, wastewater will travel through a force main that runs parallel to the sanitary collection system to the flow equalization tank (FET). (Exs. APP-11, 16; test. J. Whitcomb, pp. 75, 150-152.)

19. The FET is designed to equalize the volume and characteristics of the influent to ensure that the biological environment of the treatment system will be maintained at optimum levels. The tank will be sized to provide up to twenty-four hours of detention. Two grinder pumps within the tank will alternately discharge flow to the Zenon components of the system at appropriate intervals. The computer program that controls all operations from the FET to the lateral sand filter controls the two pumps. (Ex. APP-7; test. J. Whitcomb, pp. 75, 101, 102, 153-157.)

20. The flow travels from the FET through the Zenon components where the wastewater receives treatment for nitrogen, bacteria, viruses and phosphorus. The system is designed to lower turbidity and suspended solids. The flow will be re-circulated through the Zenon components up to ten times before passing to an Ultra-violet (UV) disinfection treatment chamber. The UV disinfection is necessary to provide treated water suitable for reuse in non-contact situations. The UV would remove any remaining bacteria and most viruses. A turbidity meter will be installed just upstream of the UV chamber to the test the flow for clarity, thereby increasing the effectiveness of the UV treatment. If turbidity exceeds a certain level, the flow is recycled through the Zenon system prior to UV disinfection. (Ex. APP-7; test. J. Whitcomb, pp. 78, 165-168, 170.)

21. Following UV treatment, at least sixty percent of the effluent will be recycled. Flow travels to the reuse tank, where it is dyed blue, a requirement in the draft permit. Reuse water will be piped to the retail outlet buildings. The applicant intends to maximize reuse and expects a higher actual reuse volume than the sixty percent used in the system design. (Exs. APP-7, 11, ex. DEP-4a; test. J. Whitcomb, pp. 79, 83, 84, 172, 173.)

22. Overflow from the reuse tank travels to the dosing tank, which is located at the low end of the site, toward Joan Drive. The tank is controlled by two pumps that direct treated wastewater to the lateral sand filter system (LSF). The LSF is required to renovate any remaining bacteria, viruses and phosphates. The filter, located along the ridge on the northeast portion of the site, will be constructed as three separate segments. Each segment treats one-third of the effluent, which will be applied at a dosing rate of 0.6 gallons per square foot. Effluent

passes through the LSF to the soils in the upland area to the south of Spinning Mill Brook and travels with the ground water toward the brook. (Exs. APP-7, 11; test. J. Whitcomb, pp. 79, 80, 173-175.)

b
The Zenon System

23. The Zenon system includes a membrane bioreactor (MBR), which is an activated sludge process that filters solids out of the wastewater. Membrane bioreactors were first developed for small commercial or industrial uses (500 - 1,000 gpd) in the early 1970s. MBR systems have increased in size over the past ten years and current capacity ranges from several hundred to 40,000,000 gpd in commercial and residential development and institutional applications worldwide. There are 350 Zenon systems installed and operating worldwide. (Ex. APP-11; test. M. Sherman, pp. 47-49.)

24. The proposed Zenon system is a pre-engineered modular treatment system that consists of a biological aerated process and membrane ultrafiltration for solids removal. The components include a pre-anoxic tank, aeration tank, post-anoxic tank, and bioreactor tank that contains the ultrafiltration membrane. Other components include chemical feed systems, pumps and a control panel. The system is initially "seeded" with sludge waste (bacteria) pumped from another Zenon facility and fed into the biological reactor. (Ex. APP-7; test. D. Boucher, pp. 23, 35-37, M Sherman, pp. 36, 37, 52-53; J. Whitcomb, p. 157 - 158.)

25. Effluent is pumped from the FET at predetermined volumes and intervals to the first Zenon component, the pre-anoxic tank, where denitrification occurs by oxygen deprivation converting the nitrate form of nitrogen to nitrogen gas. The flow travels by gravity feed to the aeration tank, which includes fine bubble aeration to raise dissolved oxygen levels and nitrify the bacteria. Flow is held in the aeration tank until dissolved oxygen reaches the optimum level as determined by a sensor that is tied to the bubble aeration system. Flow then travels to the post-anoxic tank where additional denitrification occurs. (Exs. APP-7, 11; test. J. Whitcomb, pp. 75, 76, 157-163.)

26. During the nitrification/denitrification process a carbon source called MicroC will be added to the wastewater to promote nitrification. To maintain the biological process, proper pH levels will be sustained by the addition of sodium hydroxide in the aeration tank and alum, a coagulant, will be added to facilitate the removal of phosphorus from the wastewater, if necessary. Chemicals will be added to the system by dosing pumps. Aeration will be supplied by process air blowers located in the control building. (Exs. APP-7, 11; test. J. Whitcomb, pp. 76, 77, 98, 157-163.)

27. Wastewater flows from the post-anoxic tank to the bioreactor tank with the ultrafiltration membrane. The tank operates with high mixed liquor suspended solids[10] and constant aeration so that the biological medium is active to complete the breakdown and transformation of the wastewater. Two cassettes containing thin, hollow strands of polyvinyl diflouride with microscopic pores (nominal porosity size is 0.04 microns) are immersed into the effluent. The effluent is drawn through the membrane by low-pressure vacuum pumps. The membrane filters suspended solids, bacteria and most viruses before sending ten percent of the flow to the UV disinfection tank and ninety percent to the denitrification return line where it is re-circulated through the system for a total of ten passes. (Exs. APP-7, 10, 11; test. D. Boucher, pp. 37, 38, J. Whitcomb, pp. 76, 103, 164-166.)

28. The filter pumps are programmed to "backpulse", or reverse flow, approximately every fourteen minutes, using a small charge of chlorine or sodium hydrochloride, to clear the pores and dislodge any particles that may adhere to the membranes. The chlorine is almost entirely transformed by the "mixed liquor" suspended solids prior to the effluent leaving the chamber. The aeration or recirculation of the mixed liquor also serves to remove solids from the membrane. The cleaning process is necessary to maintain the effectiveness of the filtration membranes. (Exs. APP-7, 11; test. D. Boucher, p. 26, 27, 31-33, J. Whitcomb, pp. 97, 166-170.)

c
Lateral Sand Filters

29. The LSF system will be located under pavement and constructed at existing grade to a depth of approximately sixteen to twenty feet. The base of the filter will be sand covered by an

impermeable barrier of plastic or rubber, which will be covered by select fill material as specified by the Connecticut Department of Public Health for septic systems. Fill material will be laboratory tested prior to construction of the LSF to ensure that its permeability and grain size are within the design specifications. The applicant will be required to conduct extensive testing of the fill material during construction to verify its permeability, compaction and phosphorus absorption characteristics. (Ex. APP-13; test. J. Whitcomb, pp.90-92, R. Lorentson, p. 193)

30. The LSF is designed to accept the design flow of 7,400 gpd. The size of the LSF is based on the long-term acceptance rate (LTAR)[11] of the proposed absorption system at the soil interface. The DEP accepts a maximum LTAR of 1.2 gallons per square foot per day of leaching field bottom area. Each segment of the LSF will be 120 feet long and thirty-five feet wide creating an infiltration area of 12,600 square feet, which provides for a distribution rate of 0.6 gallons per square foot per day per segment. (Ex. APP-6; test. R. Lorentson, p. 193.)

31. The DEP also requires at least two feet of separation fill between the bottom of the leaching system and the mounded water level (unsaturated zone) to renovate any viruses that remain in the treated effluent. The LSF is designed to maintain an unsaturated zone directly under the low-pressure distribution bed at a depth of at least three feet. The LSF must also have sufficient hydraulic capacity to accept the design flow on a continuous basis. The proposed depth of approximately thirteen feet for each segment provides sufficient capacity to transmit the design flow of 7,400 gpd within the fill material while pollutant renovation occurs, including a twenty-five percent hydraulic reserve. (Ex. APP-7, ex. DEP-6; test. J. Whitcomb, pp. 92, 93, R. Lorentson, p. 193)

32. Effluent will travel from the reuse tanks to the dosing tank, which is located at the low end of the site toward Joan Drive. The dosing tank will contain pumps that automatically discharge equal volumes of treated wastewater to each of the three filter segments or leaching beds that make up the LSF. Effluent will be dispersed in each segment through a low-pressure distribution bed that will run along the top of the segment and provide equal dispersion of

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[10] The established bacteria suspended in the system that treats the effluent. (Test. D. Boucher, p. 37.)
[11] The infiltrative surface loading rate at which a subsurface wastewater absorption system continuously accepts effluent for a long period of time. LTAR is a function of wastewater and soil characteristics. (Test. R. Lorentson, p. 193.)

effluent and maintain the unsaturated area directly below the distribution bed. (Exs. APP-7, 13; test. J. Whitcomb, p. 178.)

33. The LSF must be designed to provide sufficient "resident" or "travel" time for bacteria removal prior to discharge to the groundwater. The DEP requires three to six weeks, however, given the advance treatment processes, three weeks is sufficient for this facility. Travel time depends on the permeability and porosity of the fill and the gradient of groundwater flow. Travel time, based on a conservatively high permeability value for the fill, requires a separation distance of fifty-two feet. Each segment of the proposed LSF will contain at least fifty-two feet of select fill material to satisfy this requirement. When the fill material has been identified and/or during construction testing of the fill, the length and/or gradient of the system will be modified to provide the bacterial travel time required. A riprap embankment will be installed at the outlet end of the LSF. (Exs. APP-7, 13; test. J. Whitcomb, pp. 89, 90, 118, R. Lorentson, p. 194.)

d
Operation and Maintenance

34. The draft permit will require the applicant to employ a wastewater treatment facility operator who is certified by the DEP at the class of the facility, which is Class III for the proposed facility. A Class III operator must have at least four years experience in the operation of a wastewater treatement facility. The applicant intends to hire an operator with proven successful experience with Zenon systems of the size proposed for the facility. The selected operator will work collaboratively with the project engineers and the manufacturer's representatives during an extended commissioning phase to ensure that the operator understands all aspects of the operation. (Exs. DEP-4a, 12; test. J. Whitcomb, p. 115, R. Lorentson, p. 196.)

35. The operator will be required to be on-site at least three hours per day during a five-day workweek, which is more than adequate to ensure proper operation and maintenance of the system. The operator will be expected to conduct a series of quality control tests during daily visits including visual inspections and tests for influent/effluent pH and dissolved oxygen levels, nitrate/nitrite and phosphorus levels, and balanced recycled and incoming flow rates. (Exs. DEP-4a, 12; test. D. Boucher, pp. 19-21, J. Whitcomb, p. 115, R. Lorentson, p. 196.)

36. The entire system, including the Zenon components, consists primarily of tanks, pumps and gauges and will require some periodic inspections, adjustments and cleaning. With proper maintenance, there is minimal risk of system failure. A number of the components have duplicate parts including many of the pumps and the bioreactor membranes. Each duplicate part is capable of processing the daily flows and is used alternately with its counterpart under normal operation. In the event one part fails, the system is designed to activate the duplicate part to prevent disruption to the treatment process. (Ex. APP-7; test. D. Boucher, pp. 21-31.)

37. The draft permit requires monthly inspections of the traps, pumps, Zenon components, blowers, chemical feed systems, and UV disinfection system. The trash rack and tank must be pumped and cleaned annually; the depth of sludge accumulated in the tank must be measured during pumping. The applicant will also be required to conduct quarterly inspections of the distribution system and surface condition of the LSF, including the depth of ponding in the LSF and quarterly tests of the emergency generator. Sludge waste generated by the system must be hauled to a permitted facility by a licensed carrier. (Ex. DEP-4a; test. J. Whitcomb, p. 126.)

38. The plant will operate using a programmable logic controller (PLC). The PLC will control all operations from the equalization tank to the dosing pumps at the LSF. The PLC will activate alarms connected to the system components to notify the system operator of any system or equipment problem. Any "alarm condition" will be automatically dialed out to the operator twenty-four hours per day, seven days per week. (Ex. APP-7; test. D. Boucher, p. 22, J. Whitcomb, pp. 153-154.)

39. There is minimal risk of the sanitary collection system and the treatment system components failing, if properly maintained. The manufacturer, GE Zenon, provides a mechanical warranty for parts and a process warranty that guarantees that the wastewater will be treated to comply with the permit limits and Water Quality Standards. (Test. D. Boucher, pp. 25, 31, M. Sherman, p. 49-50.)

f
Monitoring

40. The draft permit requires the applicant to monitor the untreated effluent in the FET and the treated effluent at the dosing tank on a bi-weekly basis. The applicant must maintain records of the total flow for each day of discharge and must report on a discharge monitoring report (DMR) the total flow and number of hours of discharge for the day of sample collection and the average daily flow for each sampling month. More frequent monitoring may be required to operate the facility in accordance with applicant's approved Operations and Maintenance Manual. Copies of all DMRs must be submitted to the DEP, Guilford Water Pollution Control Authority and the Guilford Health Department. (Ex. DEP-4a.)

41. Groundwater monitoring is also required by the permit and must be conducted in accordance with a plan approved by the DEP. Two groundwater monitoring wells will be located at each outlet end of the LSF to monitor the efficacy of the filters. Groundwater monitoring wells will also be located along the wetland boundary on site. Quarterly samples from the wells will be analyzed for fecal coliform, various nitrogen compounds, pH and phosphorus. (Ex. DEP-4a; test. J. Whitcomb, p. 100.)

8
Water Quality

42. The site is located in the watershed of the West River in Guilford. Water quality on the property is GA, which indicates that groundwater in the area is, at a minimum, suitable for drinking or other domestic use without treatment. There is no municipal sewer available to service this site and it is situated on a high plain without sufficient land area to adequately dilute nitrogen.[12] The site is suitable to treat bacteria, viruses and phosphorus with a constructed soil-based treatment system, however, insufficient soil cover in some areas of the site and hydraulic limitations in other areas do not allow for a conventional septic and soil-based treatment system

[12] A conventional septic and soil-based treatment system would require adequate groundwater dilution from rainfall to reduce nitrogen to meet the required levels. The process is dependent on land area and the hydraulic conditions at the site. (Test. J. Whitcomb, p. 64.)

to treat nitrogen. (Exs. APP-1, 7; test. J. Whitcomb, pp. 64, 87, 105-108, R. Lorentson, pp. 192-193.)

43. Permits to discharge to Class GA groundwaters are authorized provided the discharge is treated domestic sewage or from a septage treatment system or other wastes of natural origin, is easily biodegradable and poses no threat of pollution to the ground water. The DEP therefore required the applicant to demonstrate that the groundwater impacted by the treated wastewater will be protected and maintained at allowable levels established by the Connecticut Water Quality Standards[13]. (Exs. DEP-4a, 7; test. R. Lorentson, p. 198.)

44. The proposed system will treat the wastewater generated at the site to at least drinking water standards at the points of environmental concern for the pollutants that are likely to be present. The points of environmental concern are the end of the LSF where the treated effluent enters the natural soil and groundwater and the upland wetland boundaries downgradient from the LSF. The four major contaminants that are regulated for this type of discharge are: bacteria, viruses, phosphorous and nitrogen. (Ex. DEP-4a; test. R. Lorentson, pp. 193-195.)

45. The ultrafiltration and UV systems will treat the effluent for bacteria and viruses. For purposes of removing bacteria from the discharge, the applicant used a conservatively high permeability value for the select fill material to demonstrate that the LSF is designed such that the treated effluent will travel through the LSF for at least twenty-one days before reaching the outlet end of the LSF. (Exs. APP-7, 13; test. J. Whitcomb, pp. 117,118, R. Lorentson, p. 194.)

46. For virus removal, the applicant is required to demonstrate that there will be at least two feet of unsaturated fill between the bottom of the leaching bed and the mounded water level created by the discharge. The applicant used a conservatively low value for the select fill material to demonstrate that there is at least three feet of unsaturated fill between the bottom of the leaching area and the mounded water level. (Exs. APP-7, 13; test. J. Whitcomb, p.121, R. Lorentson, p. 194.)

[13] DEP Water Quality Standards set objectives for future and existing water quality and establish a general program to implement these goals. (Ex. DEP-6.)

47. The applicant must demonstrate that the proposed system is able to renovate the effluent to eliminate phosphorus in the wastewater. The applicant, using standard phosphorus removal calculations, has shown that the LSF is designed to renovate six months of phosphorus production within eighteen feet of the application point based on a strong phosphorus load of fifteen milligrams per liter (mg/l). The advanced treatment system is designed to include a pump feed for alum, a coagulant, that will remove phosphorus from the effluent. This system will not be used unless monitoring data indicates the presence of phosphorus at the end of the LSF. (Ex. APP-7, test. J. Whitcomb, pp. 80, 122, 123, R. Lorentson, p. 195.)

48. Nitrogen must be treated to meet the discharge criterion of ten mg/l before the discharge reaches the downgradient wetland boarder. The draft permit limits the daily nitrogen load to twenty mg/l, however the average load is limited to seven mg/l based on a twelve-month rolling average. The proposed Zenon system is designed to reduce nitrogen in the effluent to meet these limits. Additional nitrogen renovation is expected to occur in the natural soils between the LSF and the downgradient wetland boarder. (Ex. DEP-4a; test. J. Whitcomb, p. 124, R. Lorentson, p. 195.)

9
Alternatives

49. The applicant's site investigation results indicate that the soil conditions and hydraulic features of the project area are not suitable for conventional septic tank and soil-based wastewater treatment, particularly for nitrogen removal. The applicant cannot connect to a municipal sanitary sewer line because the closest line is located in another municipality with private properties situated between the line and the project site. (Exs. APP-1, 7; test. J. Whitcomb, p. 134, R. Lorentson, 192-195.)

50. The applicant considered several alternatives to the Zenon system including the Amphidrome and FAST systems and rotating biological contactors. The applicant selected a membrane bioreactor system (Zenon or Amphidrome) because it allowed reuse of treated effluent, which will reduce discharge volumes. The applicant initially considered the

Amphidrome system for this project but ultimately selected the Zenon system because it had a longer record of performance. (Test. J. Whitcomb, pp. 72, 73, 134,135.)

10
Potential Off-Site Impacts

51. A residential development is located to the north of the site across Spinning Mill Brook. Property owned by The Guilford Land Conservation Trust also lies across Spinning Mill Brook. Certain residential properties are located to the east across the Brook at the same elevations as the project site. The properties on the opposite side of the Brook will not be affected by the discharge as the treated effluent will be of drinking water quality as it leaves the LSF and before it reaches the Brook. In addition, nitrogen levels of an average seven mg/l will be further renovated and diluted in the natural soils downgradient of the LSF prior to reaching the wetland boundaries and Spinning Mill Brook. (Ex. APP-16; test. J. Whitcomb, p. 127-128, R. Lorentson, p. 195.)

52. Commercial and municipal properties are located across Route 1; Interstate 95 on/off ramps are located to the east of the site. The LSF system is located in the northeast corner of the site and will not discharge toward or near the on/off ramps or Route One. (Ex. APP-16; test. J. Whitcomb, pp. 127-128.)

11
Zenon Performance Appraisal

53. In Fall, 2006, staff evaluated the performance of the twelve permitted Zenon systems then operating in Connecticut (appraisal). Staff determined that treated effluent met permit limits for biochemical oxygen demand, total suspended solids and pathogens at all but one facility. Staff identified six facilities where treated effluent contained significantly high levels of total nitrogen, total phosphorus, or both in excess of permit limits. Staff determined that the excessive nitrogen and phosphorus levels were due to improper operation and maintenance of the treatment system, component failure, improper design, or the introduction of a toxic substance into the wastewater flow. (Ex. DEP-13; test. R. Lorentson, pp. 207 - 210, 216.)

54. By March, 2007, five of the six facilities achieved compliance or were expected to demonstrate compliance with permit limits following the installation of phosphorus treatment equipment, identification and removal of infiltrating toxic substances, replacement of an undersized pressure pump, and improved operations, including better management of the hydraulic loading to the affected system. DEP staff continues to work with the sixth facility to identify the cause for excessive total nitrogen levels and to correct the problem. (Test. J. Whitcomb, pp. 129, 130, R. Lorentson, pp. 208 - 211.)

55. Permit limits are applied to the treated effluent at the point it is discharged from the advanced treatment system. At that point, the effluent is not representative of the final discharge quality as it will pass through the soil-based treatment system before reaching the points of environmental concern. Groundwater monitoring data collected within the zone of influence at the site of most of the permitted Zenon systems indicate consistent compliance with permit limits for total nitrogen, total phosphorus and fecal coliform. (Ex. DEP-13; test. R. Lorentson, pp. 220-221.)

56. Following its review of the permitted Zenon systems, staff revised the requirements for approval of plans and specifications of such systems. The approval process now requires the applicant to have the system operator review the design plans and specifications prior to submission to the DEP. As-built plans must also be submitted that have been verified by the manufacturer of the system to be installed in substantial compliance with the approved plans and specifications. The facility Operation and Maintenance Manual must be reviewed by the system operator who shall verify that the manual provides for proper operation and maintenance of the treatment system. (Ex. DEP-13; test. J. Whitcomb, pp. 111 - 115, test. R. Lorentson, pp. 203 - 204.)

57. Staff also made the following revisions to the draft permit that is the subject of this proceeding:

a. Total nitrogen in the effluent discharged to the dosing tank cannot exceed seven milligrams per liter (mg/l) based on a twelve-month rolling average;

b. Discharge Monitoring Reports (DMR) shall include detailed explanations of any violations of the permit limits and of corrective action taken and/or a schedule for the completion of any corrective action that must be taken;

c. The applicant, with the concurrence of the technology manufacturer, design engineer and system operator, must verify that the system is operating properly and in compliance with permit limits within three months of permit issuance; and

d. The applicant must submit a biennial permit compliance audit to the Commissioner and the local water pollution control authority and health department. The audit must be performed by a qualified, licensed professional engineer and include a summary of compliance with permit terms and conditions and a detailed description of all remedial actions taken or proposed to address any violation or deficiency discovered during the audit. (Exs. DEP-4a, 13; test. J. Whitcomb, pp. 110 - 115, test. R. Lorentson, pp. 203 - 204.)

58. The proposed system design incorporates wastewater treatment components that are not utilized on the previously permitted systems, including the proposed ten-fold recycling of effluent through the Zenon components. The post-anoxic denitrification process is also an additional feature to the proposed system. Other factors that distinguish this system from the appraised systems include the requirement for additional testing of the system prior to full operation to prepare the "as-built" plans and the required interactions between the system designer, builder, operator and manufacturer. The applicant also intends to retain a Class III operator with proven experience and to procure appropriate warranties from the system manufacturer. (Test. J. Whitcomb, pp. 110-115, 129-132.)

B
CONCLUSIONS OF LAW

1
THE APPLICATION AND REVISED DRAFT PERMIT COMPLY WITH THE PROVISIONS OF GENERAL STATUTES §22a-430 AND ITS IMPLEMENTING REGULATIONS

The applicant is required to obtain a permit for the discharge of domestic wastewater into the waters of the state. The Commissioner, in consideration of the applicant's permit application, must determine whether the discharge will cause pollution of the waters of the state or whether the applicant's proposed system to treat the discharge will protect the waters of the state from pollution. If the Commissioner determines that the proposed treatment system will protect the waters of the state, the applicant will then be required to submit plans and specifications for the proposed treatment system for the Commissioner's approval. After installation of the proposed system, in full compliance with the approved plans and specifications, the Commissioner will issue the permit for the proposed discharge. General Statutes §22a-430(a) and (b).

A
REGS., CONN. STATE AGENCIES §22A-430-3

Section 22a-430-3 provides certain general conditions for water discharge permits. Section 22a-430-3(b) provides that a permit must incorporate all applicable regulatory provisions, either expressly or by reference, including that section and §22a-430-4. §22a-430-3(b)(1)(C). The attached draft permit reflects compliance with this requirement. Section 22a-430-3(e) provides that once the permit is issued, the applicant is under a duty to comply with its terms and conditions. The applicant has indicated its intent and ability to comply with all terms of the draft permit.

Section §22a-430-3(f) provides that the applicant must properly operate and maintain the facility and treatment system. Proper operation includes compliance with permit limits, adequate funding, adequate operator staffing and adequate controls including quality assurance procedures. The draft permit requires the employment of a Class III certified operator, who would be responsible for ensuring that the wastewater management operates within the limits of

the permit. The applicant would also be required to comply with the schedule that, at a minimum, sets forth the inspection and maintenance required by the permit. All inspections and monitoring, including any conducted by the applicant more frequently than as provided in the permit, must be reported to the DEP. The draft permit provides that the Commissioner must approve the applicant's Operation and Maintenance Manual. In addition, the DEP may enter the property to conduct its own inspection or to review records. §22a-430-3(c).

The draft permit also reflects compliance with §22a-430-3(j) in that the applicant would be required to conduct ongoing monitoring and testing, including groundwater testing, and reporting according to a prescribed schedule to assure compliance with the permit limits. The applicant would maintain a record of the total flow for each day of discharge and report on a discharge monitoring report the total flow and number of hours of discharge for the day of sampling collection and the average daily flow for each sampling month. The permit provides that any violation of the limits specified must be included in the discharge monitoring report along with any corrective action taken or scheduled.

In addition to the foregoing, the record shows that the applicant intends to reuse a significant portion of the wastewater and install water conservation fixtures to minimize the amount of wastewater discharged as required by §22a-430-3(o). The applicant intends to maintain practices and procedures designed to prevent or minimize and control unplanned releases of the chemicals that will be used in connection with the treatment system as provided in §22a-430-3(p). The system is designed to evaluate and maintain proper wastewater strength and flow rates to prevent noncompliance with permit limits as provided in §22a-430-3(r). Therefore, the record shows ample evidence that the applicant's proposed wastewater treatment system and the terms and conditions of the draft permit are consistent with the applicable provisions of §22a-430-3 of the implementing regulations.

B

REGS., CONN. STATE AGENCIES §22a-430-4

Section 22a-430-4 sets forth the procedures and criteria for issuing water discharge permits including the required application information and preliminary review procedures. §§22a-430-4(a) through (d). Section 22a-430-4(e)(1) provides that in arriving at a determination on an application, the Commissioner must find that the requirements enumerated in that section are met. The evidence in the record supports a conclusion that the proposed treatment system and the permit terms and conditions would satisfy the following relevant provisions of §22a-430-(e)(1):

> *The effluent limitations and conditions listed in subsection (l) of this section, including any case-by-case determinations made under subsection (m) of this section. §22a-430-4(e)(1)(A).*

The draft permit sets out the applicable limitations and/or conditions. The regulated pollutants for this discharge include bacteria, viruses, phosphorus and nitrogen. Although no advance treatment would be required to achieve compliance with DEP standards for bacteria, viruses and phosphorus, the proposed treatment system, which is designed to achieve the nitrogen limits, would treat all regulated pollutants to acceptable levels. The draft permit requires continuous and periodic inspection, monitoring, maintenance and the sampling/recording of the effluent quality of the wastewater before it is discharged. The draft permit imposes various reporting requirements to ensure compliance with the effluent limitations stated in the permit. The permit also sets out conditions restricting the substances that may be discharged to the system.

> *The sludge disposal requirements listed in subsection (g) of section 22a-430-3 of the Regulations of Connecticut State Agencies. §22a-430-4(e)(1)(D).*

Subsection (g) requires that the applicant "dispose of screenings, sludges, chemicals and oils and any solid or liquid wastes resulting from the wastewater treatment processes at locations approved by the commissioner for disposal of such materials, or by means of a waste hauler licensed under the provisions of the Connecticut General Statutes." The applicant will have

sludge wastes generated by the wastewater treatment system hauled to a permitted treatment facility by licensed carrier.

The bypass provisions of subsection (k) of section 22a-430-3 of the Regulations of Connecticut State Agencies. §22a-430-4(e)(1)(E).

Subsection (k) prohibits any bypass of the collection or pretreatment system unless the bypass is approved by the Commissioner for essential maintenance, or is unavoidable and there are no feasible alternatives to bypassing the system. The applicant has not requested approval for a bypass of the collection or treatment system.

The resource conservation requirements of subsection (o) of section 22a-430-3 of The Regulations of Connecticut State Agencies. §22-430-4(e)(1)(F).

The resource conservation provisions require the Applicant to maintain practices and facilities that would produce the minimum amount of wastewater to the maximum extent practicable and prohibit the addition of water to dilute effluent concentrations in the discharge. As discussed, the applicant intends to reuse at least sixty percent of the treated effluent prior to discharge to the LSF. In addition, the applicant intends to include water conservation efforts and building design features to minimize the discharge flow. No additional water will be added to the proposed system to dilute effluent concentrations in the discharge.

The spill prevention and control requirements of subsection (p) of section 22a-430-3 of the Regulations of Connecticut State Agencies. §22a-430-4(e)(1)(G).

Subsection (p) requires a spill plan to prevent, minimize and control leaks or other unplanned releases of all toxic and hazardous substances. The various chemicals that may be used in the wastewater treatment system, in the quantities that will be stored on the site, will not pose a danger to the environment, however, the applicant will include such chemicals in a spill prevention and control plan for all substances of concern on the site.

The instrumentation and related requirements of subsection (q) of section 22a-430-3 of the Regulations of Connecticut State Agencies.

Subsection (q) does not apply to this application because the proposed system would discharge domestic and not process wastewater. However, the record reflects a number of

system features that monitor, record and/or control the functions of the system and the characteristics of the discharge including locations for visual inspection, recording and alarm mechanisms, operation and maintenance requirements, and control over the wastewater generated by the system. Therefore, although this provision does not apply to this application, the proposed system will be controlled, inspected and monitored as required in the draft permit.

The equalization requirements of subsection (r) of section 22a-430-3 of the Regulations of Connecticut State Agencies. §22a-430-4(e)(1)(I).

Subsection (r) provides that treatment facilities must be designed to "prevent upsets, malfunctions or instances of noncompliance resulting from variations in wastewater strength or flow rate, and shall include…equalization facilities separate from the treatment facilities." The proposed system includes a flow equalization tank to provide consistent flow through the Zenon components to ensure optimum treatment. The draft permit provides requirements for testing the wastewater at the point of the FET. The system is designed to meet the requirements of subsection (r); the likelihood of an upset, malfunction or instance of noncompliance due to variations in wastewater strength or flow rate is unlikely.

2
THE PROPOSED TREATMENT SYSTEM WOULD PROTECT THE WATERS OF THE STATE FROM POLLUTION

In order to issue a permit for any discharge of water, substance or material into the waters of the state, the Commissioner must determine that a "proposed system to treat such discharge will protect the waters of the state from pollution." §22a-430(b). Given that the groundwater classification for the property on which this proposed system would be built and operated is GA, the DEP required the applicant to demonstrate that the discharge would be consistent with the standards set forth in its Water Quality Standards for groundwater classified as GA. Therefore, the applicant is required to show that the wastewater will be treated to a level such that the discharge at any point of environmental concern is of drinking water quality.

The proposed wastewater treatment system will satisfactorily treat the relevant pollutants as required to comply with the applicable standards. The treatment system, prior to discharge to the LSF, will remove most bacteria and viruses and is capable of treating phosphorus if needed.

Conservative analyses demonstrate that the LSF will provide an effluent travel time of at least twenty-one days as required to eliminate any remaining bacteria and viruses from the discharge. The LSF will also provide at least a three-foot unsaturated zone, which satisfies the DEP requirement of a two-foot minimum separating distance between the bottom of the leaching structure and the mounded water level. In addition, the LSF is designed to provide more than adequate capacity to remove a six-month production of phosphorus. The Zenon components will treat nitrogen to meet the required standard at the point that the treated wastewater flows into the sand filter and before the discharge will reach the property line or point of environmental concern. The design of the proposed system is such that effluent from the LSF will meet drinking water quality standards at the points of environmental concern for the pollutants of concern (bacteria, viruses, phosphorus and nitrogen).

The permit requires monitoring and reporting to the DEP and provides for an inspection, operation and maintenance schedule, including a biennial audit to be conducted by a licensed professional engineer to evaluate compliance with permit terms and conditions. The effluent will be monitored at various points throughout the system and groundwater will be monitored at the outlet end of the LSF system and at points of environmental concern.

The Zenon system is an established technology. The membrane bioreactor process has been used successfully since the early 1970s. Zenon systems are used in Connecticut and throughout the world, often in commercial developments. The DEP Zenon performance evaluation identified various causes for excessive nitrogen and phosphorus levels at several sites currently permitted to operate Zenon systems. Staff has addressed those issues in the revised draft permit and the proposed system design provides for greater nitrogen removal capability than the systems presently operating in Connecticut.

The proposed system, including the Zenon technology and lateral sand filter, is superior to other alternatives considered by the applicant. The system is designed to recycle at least sixty percent of all wastewater, a feature not generally available with other systems. The Zenon technology has a longer history of success than the only other alternative for recycling, the Amphidrome system. While routine operation attention, including monitoring and maintenance, would be provided in compliance with the draft permit, constant care is not required. In

addition, the proposed system is alarmed at key points of operation and would include redundant components to insure continuous operation.

The maximum volume of wastewater discharge to be permitted would be 7400 gallons per day, a peak flow that is not anticipated to occur on a daily basis or even frequently. The size and design of the LSF and the analysis of the site to accept the discharge was based on this maximum rate.

The treated effluent will have no impact on surrounding properties. It is not possible for the groundwater flow to affect the commercial properties or the transfer station located on the opposite side of Route 1. The conservation area and residential properties on the adjacent side of Spinning Mill Brook will not be adversely affected because the discharge will be of drinking water quality. The remainder of the side is surrounded by ramps to Route I-95.

Finally, the law requires the applicant to submit plans and specifications to the DEP and to agree to certain permit conditions so that the proposed system will treat the discharge so as to protect the waters of the state from pollution. Regs., Conn. State Agencies §22a-430-4(k). The proposed wastewater treatment system will prevent pollution to the waters of the state and maintain a high water quality in compliance with applicable DEP regulations and the Water Quality Standards.

3

CSGS INTERVENTION

CSGS intervened pursuant to General Statutes §22a-19 by alleging that the proposed discharge would be reasonably likely to unreasonably pollute the waters of the state and by providing specific facts that provided notice to the parties of the *environmental* issues it purportedly intended to raise at the hearing. §22a-19(a); *Nizzardo v. State Traffic Cmsn.,* 259 Conn. 131 (2002). See also *Mystic Marinelife Aquarium, Inc. v. Gill,* 175 Conn. 483 (1978) (petition limited to allegations of environmental issues). Intervening party status must be granted when a verified petition is filed that meets the requirements of §22a-19 and *Nizzardo.* Regs., Conn. State Agencies §22a-3a-6(k)(A). CSGS satisfied all these relevant requirements and was granted intervening party status in this matter.

CSGS argues that "'[u]nder §22a-19 intervention is a matter of right once a verified pleading is filed …, whether or not the allegations ultimately prove to be unfounded.' *Red Hill Coalition, Inc. v. Town Plan and Zoning Com'n, 212 Conn. 727, 734 (1989).*" CSGS claims that "[t]here is no basis in law for the notion that a bona fide 22a-19 intervenor can have any status in a proceeding other than as a party to such proceeding, or that such party status can be revoked or diminished, regardless of the ultimate adjudication of the validity of the pleadings." It is axiomatic that obtaining the status of an intervening party is a matter of right, regardless of the eventual merit of that party's allegations. However, once the threshold requirements of intervention are satisfied and this status is achieved, an intervening party has not only the same rights but also the same obligations as any other party to maintain party status. Therefore, having obtained party status, CSGS had the same rights and was subject to the same obligations as all other parties to the proceeding. Regs., Conn. State Agencies §22a-3a-6(k)(8).

CSGS had the burden of making the requisite *prima facie* case of unreasonable pollution based on the issues specified in its petition to intervene. *Quarry Knoll II Corp. v. Planning and Zoning Cmsn,* 256 Conn. 674, 736 n. 33 (2001). In order to meet this affirmative obligation, CSGS had to proceed on the issues that had been the basis of its intervention petition. Instead, prior to the hearing, CSGS abandoned these specific issues set forth in its petition and raised new issues unrelated to the subject application.[14] After obtaining party status, CSGS could not substitute the issues on which it had obtained that status, and of which the parties had been notified, with issues that were, at best, superficially relevant.

The allegations contained in a petition for intervention are not only the basis for party status but are also the foundation for the case that intervening party is now obliged to present. No party, including an intervening party, can unilaterally decide to abandon their stated issues, which were properly noticed to all other parties, with new issues of questionable relevance. Fairness dictates that all parties be subject to the same procedural rules.

[14] In fact, these issues would appear to require policy determinations beyond the scope of this proceeding and my jurisdiction.

All parties, including CSGS, are obliged to comply with all procedural requirements, which include any relevant provisions of the DEP Rules of Practice and any directive or order issued by a hearing officer. Regs., Conn. State Agencies §22a-3a-6(k)(8). All parties to this proceeding were directed to identify and exchange prehearing information, including proposed witnesses and exhibits and the list of issues for hearing. §22a-3a-6(q)(2). All parties were required to attend the prehearing conference to review and act on the prehearing information. §22a-3a-6(p). The exchange of prehearing information and participation in the prehearing conference are essential to a fair disposition of the proceeding. Attendance at the conference is sufficiently important that the DEP Rules of Practice specifically provide for sanctions for failure to attend without a showing of good cause and indicate the likelihood of prejudice to other parties for such "disobedience". §22a-3a-6(p)(6).

The record clearly shows that CSGS did not fulfill its procedural obligations. CSGS did not exchange any significant prehearing information with the parties, thereby failing to propose testimony or relevant evidence in support of the issues raised in its petition.[15] Perhaps more significantly, CSGS, which did not attend the prehearing conference, became bound by the decisions made during that conference concerning all matters pertinent to the hearing. §22a-3a-6(p)(3). By failing to attend the conference CSGS effectively waived its right to be involved in setting the subsequent course of the proceeding.[16]

Intervention as a matter of right not only obliges CSGS to take affirmative steps to meet its burden of proof and to comply with the procedural requirements for this proceeding, but also subjects CSGS to the same sanctions as all other parties to a proceeding. The DEP Rules of Practice provide that a hearing officer may impose sanctions that are just and appropriate, "including *but not limited to* a continuance of the proceeding, exclusion of testimony or other evidence, and the drawing of an adverse inference against the non-complying party or intervenor." (Emphasis added.) §22a-3a-6(e).

[15] DEP staff expressly indicated it had not received any prehearing information. The applicant was sent a list of issues and evidence by CSGS, but the list is not responsive to the directive to provide prehearing information.
[16] CSGS never offered good cause for its absence at the hearing.

CSGS failed to proceed on the issues it had alleged to gain status as an intervening party. Once granted that status, it not only changed its issues, but also failed to provide prehearing information so the parties could be apprised of the proposed evidence on which it would make its claim. CSGS failed to attend the prehearing conference, and did not offer good cause for its voluntary failure to appear. CSGS failed to meet its prehearing obligations as a party in this proceeding. Accordingly, appropriate sanctions were imposed, effectively revising the status of CSGS from *intervening party* to that of an *intervenor.* The Uniform Administrative Procedures Act and the DEP Rules of Practice provide for intervenor status, which acknowledges that the participation of that intervenor is necessary for the interests of justice, but, allows a hearing officer to place specific restrictions on the involvement of that intervenor, including its right to cross-examination. §4-177a(d); §22a-3a-6(d). CSGS, by failing to meet its obligations as a party, would be allowed to participate in this proceeding, but had lost its right to do so as a party.

CSGS claims that I do not have the express or implied authority to nullify the status and attendant rights of a party that are conferred by statute. CSGS argues that its status as an intervening party cannot be revoked by administrative sanction and that such a sanction is beyond the scope of available sanctions authorized by law. Section 22a-3a-6(e) of the Rules of Practice provides that a I may impose such sanctions I deem just and appropriate under the circumstances, "*including, but not limited to*" certain express sanctions that effectively place limitations on the participation of any party or intervenor. As acknowledged by CSGS, §22a-3a-6(e) authorizes sanctions that include the exclusion of testimony or other evidence and the drawing of an adverse inference against any non-complying party or intervenor.

The rule is clear; the list of sanctions provided does not exhaust the scope of available sanctions. The requirement is only that I consider the sanction to be just and appropriate. In this instance, CSGS did not produce any testimony or other evidence other than the testimony of Mr. Magby. CSGS effectively nullified its status and attendant rights when it abandoned its original issues that provided the basis for its intervention. In fulfillment of my obligations to conduct a fair hearing, free of delay and harassment, I imposed just and appropriate sanctions.

CSGS also argues that the sanctions were not proportional to the violation, a consideration that is required for imposing sanctions for violation of a discovery order. However, in this case, there was no violation of a discovery order. Even if there were, the DEP Rules of Practice require no such consideration. The rules clearly reflect a preference for expedient and fair hearings and the importance of full participation in prehearing activities. The rules expressly provide for sanctions for any failure to participate.

CSGS also claims that its substantial rights were violated by the restrictions imposed on its ability to cross-examine witnesses. However, as noted by CSGS, the Rules of Practice authorize a hearing officer to restrict an *intervenor's* participation including its ability to cross-examine, "to the extent necessary to promote justice and the orderly conduct of the proceedings." §22a-3a-6(k)(7). Also, as acknowledged by CSGS, the UAPA also provides that a hearing officer may restrict an intervenor's ability to cross-examine to "promote the orderly conduct of the proceedings." General Statutes §4-177a(d).

CSGS finally argues that denial of its right to cross-examine was not harmless error and caused it substantial prejudice as its ability to produce evidence or expert testimony to counter the evidence of the applicant had "been stripped away by the adjudicating officer." CSGS was fully able to produce evidence or expert testimony but chose not to do so, resulting in my sanctions against it. Moreover, the record reflects that CSGS obtained discovery and had the opportunity to fully participate in the proceeding but failed to do so. Also, even after its participation was restricted, CSGS was permitted to present its case during the hearing but only testified regarding the DEP Zenon evaluation. CSGS was also permitted to propose evidence in support of those issues and did not. At all times, CSGS had the ability to produce evidence of unreasonable pollution and chose not to do so.

In addition to presenting its issues of concern, CSGS was permitted to examine witnesses for the applicant and the DEP to clarify their testimony during the evidentiary portion of the hearing. CSGS also filed a post-hearing brief. Regs., Conn. State Agencies §22a-3a-6(x). CSGS will be able to file exceptions and/or a request for oral argument on this proposed decision, §22a-3a-6(y)(3), and can move for the Commissioner to reconsider her final decision.

§22a-3a-6(z). Finally, as an intervenor, CSGS will not be denied judicial review of this decision, as it may ultimately appeal this final decision to Superior Court. §4-183.

The sanctions imposed on CSGS were just and appropriate under the circumstances and a proper remedy to provide a fair process for all parties. Despite its voluntary failure to meet its obligations as a party and the resulting proper change in status to intervenor, CSGS was still permitted to participate in an significant manner at the hearing and will have every opportunity to ask for post-decision remedies, avoiding any substantial prejudice to it or the presentation of its concerns.

4

THE DISCHARGE IS NOT REASONABLY LIKELY TO UNREASONABLY POLLUTE, IMPAIR OR DESTROY THE PUBLIC TRUST IN THE WATER AND OTHER NATURAL RESOURCES OF THE STATE

CSGS initially alleged that the proposed wastewater treatment system "involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water, or other natural resources of the state." §22a-19. The determination that pollution is unreasonable in any given circumstance is left to the trier of fact based on the evidentiary record. *Gardiner v. Conservation Commission,* 222 Conn. 98 (1992).

CSGS had the burden of proving under §22a-19 that the applicant's proposed wastewater treatment system is reasonably likely to create or cause unreasonable pollution. *Manchester Environmental Coalition v. Stockton,* 184 Conn. 51, 57-58 (1981). The determination of unreasonable impairment should be reviewed and evaluated "through the lens" of the statutory and regulatory schemes under §22a-430 and §§22a-430-1 through 22a-430-8. See *Waterbury v. Washington,* 260 Conn. 506, 549-51 (2002) (claim of unreasonable impairment reviewed and evaluated through the lens of the entire statutory scheme, if any, that the legislature has created to regulate the conduct underlying the impairment). Section 22a-430 and its implementing regulations require that CSGS demonstrate that the applicant's wastewater treatment system

would not protect the waters of the state from pollution. As previously discussed, CSGS failed meet its burden.

During the public comment portion of the hearing, CSGS and a number of speakers referenced the DEP *Zenon Performance Appraisal* (appraisal). Comments were primarily focused on staff's findings regarding the permit compliance rates for total nitrogen and phosphorus for a number of the facilities and on the accuracy and absence of data. Based on these findings, speakers, including CSGS, expressed their belief that the appraisal established that the proposed treatment system would fail and operate out of compliance.

Although the appraisal identified compliance issues, staff concluded that factors other than system failure were the identified causes for the permit violations. The appraisal also showed that all facilities had demonstrated compliance with permit limits for all other pollutants of concern. Notwithstanding the data staff relied on, the record reflects that all but one facility was quickly and easily brought into compliance without significant changes to the Zenon treatment system.

The record indicates that after reviewing the performance of the permitted Zenon systems, staff revised the proposed draft permit to include terms and conditions that address a number of the issues identified by the appraisal. The record also shows that the applicant's proposed treatment system design incorporates components that are apparently not part of the systems previously permitted, including the recycling of effluent through the Zenon system and the additional post-anoxic, denitrification tank. There is no basis in the record for a determination that the proposed Zenon system will fail and operate out of compliance with permit limits.

It is evident that the proposed wastewater treatment system will not cause unreasonable pollution. The system has been designed and will be operated to effectively treat nitrogen and all pollutants to prevent the pollution of the waters of the state. The water quality in the groundwater and in Spinning Mill Brook will be maintained. The discharge from the system will meet applicable Water Quality Standards thereby ensuring consistency with the state's goal of maintaining GA groundwater quality in the area.

In the absence of a determination of unreasonable pollution, it is not necessary to consider whether there exists a reasonable and prudent alternative to the applicant's proposed system in accordance with §22a-19(b). *Nizzardo v. State Traffic Cmsn,* supra, 259 Conn. 190. Notwithstanding, it is evident from the record that the applicant considered and properly dismissed alternatives to its proposed Zenon system.

III

CONCLUSION

The application complies with all applicable statutory and regulatory standards. General Statutes §22a-430; Regs., Conn. State Agencies §§22a-430-1 through 22a-430-8. The applicant has demonstrated it will comply with the terms and conditions of the revised draft permit, which are consistent with the provisions of §22a-430 and its implementing regulations. The proposed treatment system will treat wastewater to a level to prevent pollution and the high water quality required by the DEP Water Quality Standards. The requested discharge permit will not cause pollution of the waters of the state. §22a-430.

IV

RECOMMENDATION

The applicant should be authorized to submit construction plans and specifications to construct the proposed wastewater treatment system as provided in §22a-430. Once the applicant has demonstrated that the system has been constructed in compliance with the approved plans and specifications, the revised draft permit should be finalized and issued to the applicant.

_/s/ Jean F. Dellamarggio____
Jean F. Dellamarggio
Hearing Officer

APPENDIX A

P A R T Y L I S T

Proposed Final Decision concerning DDR Guilford, LLC
Application No. 200502057

PARTY	REPRESENTED BY
	The Applicant
DDR Guilford	John W. Knuff, Esq. Brian J. Wheelin, Esq. Hurwitz Sagarin Slossberg & Knuff 147 North Broad Street P.O. Box 112 Milford, CT 06460
Department of Environmental Protection Bureau of Material Management & Compliance Assurance Subsurface Disposal Section 79 Elm Street Hartford, CT 06106	Robert Lorentson
	Intervenor
Committee to Save the Guilford Shoreline, Inc.	Charles Magby 310 Stepstone Hill Guilford, CT 06437

UIC PERMIT

issued to

DDR Guilford, LLC
330 Enterprise Parkway
Beachwood, OH 44122

Location Address:
1919 Boston Post Road
Guilford, CT

Draft

Facility ID: 060-108 **Permit ID:**UI0000431 **Permit Expires:**

Watershed: West River **Basin Code:** 5110

SECTION 1: GENERAL PROVISIONS

(A) This permit is issued in accordance with section 1421 of the Federal Safe Drinking Water Act 42 USC et. seq. and section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended.

(B) DDR Guilford, LLC, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

(a) Definitions
(b) General
(c) Inspection and Entry
(d) Effect of a Permit
(e) Duty
(f) Proper Operation and Maintenance
(g) Sludge Disposal
(h) Duty to Mitigate
(i) Facility Modifications; Notification
(j) Monitoring, Records and Reporting Requirements
(k) Bypass
(l) Conditions Applicable to POTWs
(m) Effluent Limitation Violations (Upsets)
(n) Enforcement
(o) Resource Conservation
(p) Spill Prevention and Control
(q) Instrumentation, Alarms, Flow Recorders
(r) Equalization

Section 22a-430-4 Procedures and Criteria

(a) Duty to Apply
(b) Duty to Reapply
(c) Application Requirements
(d) Preliminary Review
(e) Tentative Determination
(f) Draft Permits, Fact Sheets
(g) Public Notice, Notice of Hearing
(h) Public Comments
(i) Final Determination
(j) Public Hearings
(k) Submission of Plans and Specifications. Approval.
(l) Establishing Effluent Limitations and Conditions
(m) Case by Case Determinations
(n) Permit issuance or renewal
(o) Permit Transfer
(p) Permit revocation, denial or modification
(q) Variances
(r) Secondary Treatment Requirements
(s) Treatment Requirements for Metals and Cyanide
(t) Discharges to POTWs - Prohibitions

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(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action, including but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157 of the CGS.

(E) No provision of this permit and no action or inaction by the Commissioner of Environmental Protection ("the Commissioner") shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(F) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.

(G) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

(H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the RCSA.

(I) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the CGS).

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA.

(B) In addition to the above the following definitions shall apply to this permit:

"Annual" in the context of an activity or sampling frequency, shall mean that the sampling or activity must be completed in the month of February.

"Bi-weekly" in the context of a sampling frequency, shall mean that samples shall be taken twice a month, a minimum of two weeks apart.

"Quarterly", in the context of an activity or sampling frequency, shall mean that the sampling or activity is required to be completed in the months of February, May, August, and November.

"3 times per year", in the context of a maintenance frequency, shall mean the maintenance must be performed at least 3 times during the period of May to November.

"12 month rolling average" means the average of the current month's sampling in mg/l (the current monthly average) averaged with the averages of the previous eleven months.

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SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner has made a final determination and found that the system installed for the treatment of the discharge, will protect the waters of the state from pollution**.** The Commissioner's decision is based on **Application No. 200502057** for permit issuance, received on September 2, 2005 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge 7,400 gallons per day of domestic sewage in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Safe Drinking Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Safe Drinking Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The use of sewage system additives, as defined in section 22a-460(g) of the CGS, are prohibited unless such additive is registered with the Commissioner in accordance with section 22a-462-3 of the RCSA. The Commissioner in no way certifies the safety or effectiveness of any registered additive.

(B) Oils, greases, industrial or commercial wastes, toxic chemicals, wastes from water treatment systems, or other substances, that will adversely affect the operation of the subsurface sewage treatment and disposal system, or, which may pollute ground water, shall not be discharged to the subsurface sewage treatment and disposal system.

(C) The Permittee shall assure that groundwater affected by the subject discharge shall conform to the Connecticut Water Quality Standards.

(D) Any limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements of this permit begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

(E) The discharge shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the tables below.

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TABLE A		
Discharge Serial No. 301-2		Monitoring Location: EQ
Wastewater Description: Domestic sewage		
Monitoring Location Description: Equalization tank		
Average Daily Flow: 12,467 gallons per day		Maximum Daily Flow: 18,700 gallons per day
PARAMETER	**INSTANTANEOUS MONITORING**	
	Sample Type	Sample Frequency
Biochemical Oxygen Demand	Grab	Bi-weekly
Total Suspended Solids	Grab	Bi-weekly
Ammonia	Grab	Bi-weekly
Nitrate Nitrogen	Grab	Bi-weekly
Nitrite Nitrogen	Grab	Bi-weekly
Total Kjeldahl Nitrogen	Grab	Bi-weekly
Total Phosphorus	Grab	Bi-weekly
Alkalinity	Grab	Bi-weekly
pH	Grab	Bi-weekly

TABLE B	
Discharge Serial No. 301-2	Monitoring Location: DT

Wastewater Description: Treated effluent				
Monitoring Location Description: Dosing tank				
Average Daily Flow: 4,933 gallons per day		Maximum Daily Flow: 7,400 gallons per day		
PARAMETER	**INSTANTANEOUS MONITORING**			
	Average Monthly Limit	Sample Type	Maximum Daily Limit	Sample Frequency
Biochemical Oxygen Demand	20 mg/l	Grab	30 mg/l	Bi-weekly
Total Suspended Solids	20 mg/l	Grab	30 mg/l	Bi-weekly
Total Nitrogen		Grab	20 mg/l	Bi-weekly
Ammonia		Grab		Bi-weekly
Nitrate Nitrogen		Grab		Bi-weekly
Nitrite Nitrogen		Grab		Bi-weekly
Total Kjeldahl Nitrogen		Grab		Bi-weekly
Total Phosphorus		Grab	15 mg/l	Bi-weekly
PH		Grab		Bi-weekly
Escherichia coli	4 col/100 ml	Grab		Bi-weekly
Alkalinity		Grab		Bi-weekly
Total Oil & Grease		Grab		Bi-weekly
Ethanol		Grab		Bi-weekly
Turbidity		Grab		Continuous

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(1) The pH of the discharge shall not be less than 6 nor greater than 9 Standard Units at any time and shall be monitored on a bi-weekly basis. The Permittee shall report pH values, specifically maximum and minimum, for each day of sample collection and for each month.

(2) Total nitrogen shall not exceed 7 mg/l based upon a 12 month rolling average.

(3) The Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report on the discharge monitoring report the total flow and number of hours of discharge for the day of sample collection and the average daily flow for each sampling month.

(4) The Permittee shall ensure that at all times, the recycled water is colored blue.

(5) All samples shall be comprised of only those wastewaters described in this schedule, therefore, samples shall be taken prior to combination with wastewaters of any other type and after all approved treatment units, if applicable. All samples taken shall be representative of the discharge during standard operating conditions.

(6) The Permittee shall employ a wastewater treatment facility operator who will be responsible for the operation of the wastewater treatment facility. Such wastewater treatment facility operator shall be certified as a facility class III operator pursuant to Section 22a-416(d) of the Connecticut General Statutes and regulations adopted thereunder.

(7) The monitoring and sampling required within this permit is a minimum for reporting purposes only. More frequent monitoring and sampling of the treatment system may be required to operate the facility and to obtain acceptable results for the parameters being monitored as required by the Operation and

Maintenance Manual approved by the Commissioner.

(F) The treatment facilities shall be monitored, inspected and maintained in accordance with the following schedule:

TABLE C		
INSPECTION, MONITORING, or MAINTENANCE	**DISCHARGE SERIAL NO.**	**MINIMUM FREQUENCY**
Mechanical inspection of grease trap baffles	301-2	Monthly
Pump out grease trap	301-2	Quarterly
Mechanical inspection of pump chamber	301-2	Monthly
Pump out pump chamber	301-2	Every 3 Years
Depth of sludge in settling tank	301-2	During Pump Out
Pump out settling tank	301-2	Annually
Pump out/clean trash rack and traps	301-2	Annually
Visual inspection of Zenon system	301-2	Monthly
Mechanical inspection of blowers	301-2	Monthly
Mechanical inspection of chemical feed systems	301-2	Monthly
Visual inspection of UV-disinfection system	301-2	Monthly
Visual inspection of distribution chamber	301-2	Quarterly
Visual inspection of surface condition of leaching field	301-2	Quarterly
Depth of ponding in leachfield	301-2	Quarterly
Water meter readings of water usage	301-2	Weekly
Test run of emergency generator	301-2	Quarterly
NOTE: The Guilford Sanitarian shall be notified at least one week prior to pumping of pump chamber, septic tank and grease trap. Verification of all pump outs shall be attached to the monitoring report and a copy of the report shall be sent to the Guilford Director of Health.		

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(G) The Permittee shall perform the following ground water monitoring in accordance with the monitoring plan approved by the Commissioner.

TABLE C (GROUNDWATER MONITORING)			
DISCHARGE SERIAL NO. 301 A.		**MONITORING LOCATION:** W-downgradient	
MONITORING WELL NO:. (as named on AS BUILT)		**DESCRIPTION**: monitoring wells in lateral sand filter and downgradient of lateral sand filter	
PARAMETER	**UNITS**	**MINIMUM FREQUENCY OF SAMPLING**	**SAMPLE TYPE**
Coliform, Fecal	col/100ml	Quarterly	Grab
Groundwater Depth	Ft, in	Quarterly	Instantaneous
Nitrogen, Ammonia	mg/l	Quarterly	Grab
Nitrogen, Nitrate	mg/l	Quarterly	Grab
Nitrogen, Nitrite	mg/l	Quarterly	Grab
Nitrogen, Total Kjeldahl	mg/l	Quarterly	Grab
Nitrogen, Total	mg/l	Quarterly	Grab
pH	S.U.	Quarterly	Instantaneous
Phosphorus, Total	mg/l	Quarterly	Grab

Draft

SECTION 5: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES AND REPORTING REQUIREMENTS

(A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall employ methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40 CFR 136.4.

(B) The results of chemical analysis and treatment facilities monitoring required by Section 4 shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance, at the following address, by the end of the month following the month in which the samples are taken. The report shall also include a detailed explanation of any violations of the limitations specified and corrective actions performed, and a schedule for the completion of any corrective actions remaining.

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(C) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results reported to the Commissioner within 30 days of the exceedance.

(D) Copies of all DMRs shall be submitted concurrently to the local Water Pollution Control Authority (hereinafter "WPCA").

(E) Copies of all DMRs shall be submitted concurrently to the Guilford Health Department.

SECTION 6: COMPLIANCE SCHEDULE

(A) On or before three (3) months after issuance of this permit the Permittee shall verify in writing to the Commissioner that the alternative treatment technology is operating in accordance with the approved plans and specifications and is achieving compliance with all permit limits and conditions. The Permittee shall obtain written concurrence from the design engineer, the technology provider and the wastewater treatment facility operator who will be responsible for the operation of the wastewater treatment facility.

(B) The Permittee shall, within seven days of the issuance of this permit, record on the land records, of the Town of Guilford, a document indicating the location of the zone of influence created by the subject discharge, as reflected in the application for this permit. The Permittee shall obtain the Commissioner's written approval of such document before recording it.

(C) The Permittee shall, within seven days of the issuance of this permit, record a copy thereof on the land records, in the Town of Guilford.

(D) Every two years, on or before the anniversary date of the issuance date of this permit, the Permittee shall submit the results of a detailed permit compliance audit to the Commissioner. Such audits shall be performed within sixty (60) days prior to the anniversary date. The compliance audits shall be performed by a qualified professional engineer licensed to practice in Connecticut with the appropriate education, experience and training which is relevant to the work required.

Each audit shall evaluate compliance with all permit terms and conditions for the preceding two-year period. The evaluation shall review all pertinent records and documents as necessary, including Discharge Monitoring Reports (DMRs); laboratory reports; operation and maintenance plans and performance logs/records; equipment specifications and maintenance schedules; engineering drawings; and spare parts inventory.

Each audit report shall include a description of all records and documents used in the evaluation, a summary of compliance with permit terms and conditions, and detailed descriptions of all remedial actions taken or proposed to address each violation or deficiency discovery.

(E) A copy of each audit shall be submitted concurrently to the local WPCA and to the local Health Department.

This permit is hereby issued on

Gina McCarthy
Commissioner

GM/bl

cc: Guilford Health Dept.
Guilford Water Pollution Control Authority
DMR

DATA TRACKING AND TECHNICAL FACT SHEET

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PERMIT #: UI0000431 **APPLICATION #:** 200502057 **DEP/WPC#: 060-108**

DISCHARGER NAME AND ADDRESS DATA

Permittee:DDR Guilford, LLC

Mailing Address:	**Location Address:**
Street: 3300 Enterprise Parkway	Street: 1919 Boston Post Road
City: Beachwood ST: OH Zip 44122	City: Guilford St. CT Zip: 06437
Contact Name: Daniel Herman	**Contact Name:**

PERMIT DURATION

5 YEAR ( ) 10 YEAR (X) 30 YEAR ( )

DISCHARGE CATEGORIZATION

POINT**( )** NON-POINT**(X)** GIS #_____

NPDES**( )** PRETREAT**( )** GROUND WATER(UIC)**(X)** GROUND WATER (OTHER)**( )**

MAJOR**( )** SIGNIFICANT MINOR**( )** MINOR**(X)**

COMPLIANCE SCHEDULE **YES** ___ **NO** X

POLLUTION PREVENTION**( )** TREATMENT REQUIREMENT**( )** WATER CONSERVATION**( )**

PERMIT STEPS ( ) WATER QUALITY REQUIREMENT**( )** REMEDIATION**( )** OTHER**( )**

OWNERSHIP CODE

Private**(X)** Federal**( )** State**( )** Municipal(town only)**( )** Other public**( )**

UIC PERMIT INFORMATION

Total Wells **1** Well Type **5W12**

PERMIT FEES

DISCHARGE CODE **312000a** REPRESENTING DSN **301-2** ANNUAL FEE $885.00

DEP STAFF ENGINEER/ANALYST **Bob Lorentson**

PERMIT TYPE

New**(X)** Reissuance**( )** Modification**( )** Subsection-e**( )**

NATURE OF BUSINESS GENERATING DISCHARGE

Retail plaza with one restaurant.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 301-2 represents a subsurface wastewater renovation and discharge system serving a proposed plaza. The system includes wastewater collection, grease removal, settling, equalization, denitrification, microfiltration and ultraviolet disinfection. Treated water will be recycled to non-contact fixtures at the retail establishments. Excess treated water will be pressure dosed to a lined constructed lateral sand filter and will result in non-point discharge to wetlands adjacent to a tributary to the West River. The treatment system is designed for 18,700 gallons per day. Design flow to the constructed lateral sand filter is 7,400 gallons per day. The proposed development has not received any local permits or approvals and local applications have not been made.

RESOURCES USED TO DRAFT PERMIT

__ Federal Effluent Limitation Guideline 40CFR
name of category

__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

X Department File Information

X Connecticut Water Quality Standards

__ Anti-degradation Policy

__ Coastal Management Consistency Review Form

__ Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X Best Professional Judgement (See Other Comments)

X Case by Case Determination (See Other Comments)

GENERAL COMMENTS

Several changes have been made to the draft permit since the public comment period expired. All changes either add new conditions, make existing conditions more stringent or simply clarify existing language. A new public notice is therefore not required for the revised draft permit. The changes are summarized below.

- Definitions for "annual", "quarterly" and "12 month rolling average" have been revised to clarify the language. The definition for " semi-annual" has been deleted as there is no reference to this term in the permit.
- Paragraph 4(E)(2) has been revised to lower the 12 month rolling average limit for total nitrogen from 10 mg/l to 7 mg/l. 7 mg/l is the Zenon effluent design criteria for total nitrogen and provides an additional factor of safety to account for any other non-point sources of nitrogen that may exist.
- Paragraph 4(E)(6) has been revised to clarify the wastewater treatment facility operator certification requirements.
- A Section 6 Compliance Schedule has been added, with paragraphs A,D and E being new permit conditions. Paragraphs B and C were relocated here from paragraphs 1(B)(I) and (J). Paragraphs 6(A) and (D) are new conditions intended to keep the permittee on top of the proper operation and maintenance of the wastewater treatment facility by requiring early and periodic professional evaluations, and to provide the Commissioner with the results of such evaluations. These conditions were added in response to reviews of the performance of other alternative treatment facilities in Connecticut where it was apparent in a few of the facilities that an appropriate level of attention to facility operation and maintenance was not being provided. Paragraph 6(E) simply requires that the reports developed of the periodic evaluations be also forwarded to the Guilford Water Pollution Control Authority and to the Guilford Health Department.

OTHER COMMENTS

September 2, 2005	Application received
April 2006	Engineering report revised
June 21 2006	Revised application received
September 7, 2006	Tentative Determination to issue permit was public noticed