

April 10, 2014

Raymond Turri, President  
Woodridge Lake Sewer District  
113 Brush Hill Road  
P.O.Box 258  
Goshen, CT 06756

Re: Woodridge Lake Sewer District—July 2013 Preliminary Summary Report and October 2013  
Groundwater Disposal Investigation Report for the Wastewaters Facilities Plan

Dear Mr. Prickett:

The Department has reviewed Woodridge Lake Sewer District's (WLSD) Preliminary Summary Report dated July 2013 ("July 2013 Report") and the Groundwater Disposal Investigation Report dated October 2013 ("October 2013 Report"). These reports intend to summarize the results of a technical investigation of WLSD's existing onsite subsurface disposal system and its capacity to accept and further renovate pretreated domestic sewage, and present feasible alternatives for meeting WLSD's long term domestic sewage handling needs. Please note that comprehensive technical comments on the October 2013 report based on Department staff review are provided as an appendix to this letter (see "Appendix A—Technical Review Comments"). Further, please be aware that the Department cannot evaluate the validity of the work performed until all of the necessary supporting data required under the approved scope of services is submitted. In addition, the Department has several comments on information and issues presented in the July 2013 Report; a complete discussion of the Department's comments on the July 2013 Report is provided below.

**Hydraulic Capacity of Existing Ridge and Furrow Beds:**

The July 2013 Report states that the hydraulic capacity of the existing ridge and furrow beds ranges from 125,000 to 195,000 gallons per day under seasonal high groundwater conditions. A prior comprehensive hydraulic capacity analysis submitted to the Department in 1995 on behalf of WLSD that considered actual site conditions, including seasonal high groundwater, soil permeability rates, groundwater gradients and depth to bedrock, is in direct conflict with the July 2013 Report; however, there is no notation or comparative discussion contained within the July 2013 Report to addresses any factual differences between the site investigations.

**Request to Increase Discharge Flow from 100,000 gpd to 125,000 gpd:**

The July 2013 Report contains a request for an increase in the allowable average daily discharge flow. Presently, WLSD is authorized under the 1989 Consent Order to discharge an average daily flow of 100,000 gallons per day of domestic sewage to its onsite treatment and disposal system. Average daily flow is defined as the average of all total daily flows measured

during the calendar month. In general, a typical facility would be permitted to discharge an average daily flow of 100,000 gallons per day to an onsite treatment and disposal system only if such system has been sufficiently designed to accept, renovate and transmit directly to groundwaters a maximum daily discharge flow of 150,000 gallons per day.

In other words, both the system and the site must have adequate hydraulic capacity to accept and renovate potential peak flows, rather than average flows, prior to reaching an environmental point of concern (e.g., potable well, watercourse, or property line). Therefore, in order to protect against a hydraulic overload of the system or other system failure, the Department considers the potential maximum daily discharge flow to be the operative design flow for purposes of evaluating site and system hydraulic capacity. Regarding your request to increase the allowable average daily flow under the 1989 Consent Order from 100,000 to 125,000 gallons per day, please note that the Department would only consider such a request if the hydraulic and renovative capacity of both the system and the site is adequate to meet potential daily peak flows, which WLSD has not yet satisfactorily demonstrated. Moreover, WLSD has not expressed any intent to provide equalization prior to discharge in order to mitigate or otherwise manage peak flows.

**Request for Pathogen Removal Pretreatment in Lieu of Meeting Required Vertical Separating Distance and Effluent Time of Travel:**

The July 2013 Report contains a request for a reduction to standard design requirements for vertical separating distance and effluent travel time. Department design guidelines for large-scale onsite wastewater renovation systems provide for numerous options for proper renovation and disposal of a range of microbial pollutants in order to protect the environment and human health and welfare. Considering that groundwaters classified as GAA or GA under the CT Standards for Water Quality are maintained as suitable for drinking water and other domestic uses without treatment, it is of critical important that proper treatment of pathogens including bacteria, viruses and protozoa be provided to ensure the protection of public health and safety.

Department design guidelines incorporate specific design standards aimed to ensure that proper pathogen renovation, i.e. a 5 Log<sub>10</sub> (or 99.999%) reduction, will be achieved through conventional passive means when:

- Domestic sewage is pretreated in a septic tank, percolates through the biomat within a properly designed leaching system and moves through three feet of suitable aerobic soil; and
- 56 days of travel time is provided in the saturated zone between the leaching system and certain sensitive receptors (e.g. water supply well cone of depression, surface water supply for public/community drinking water, or a private drinking water supply well or an impoundment used for aquaculture; or 21 days of travel time is provided to all other points of concern.

Onsite systems designs that incorporate adequate vertical separating distance to mounded seasonal high groundwater and adequate horizontal travel time to the nearest point of environmental concern are known to provide the necessary pathogen renovation by passive means. The concept of relaxing, even in part, these passive design requirements in lieu of an equivalent level of pathogen pretreatment would necessitate the inclusion of additional safeguards to ensure proper design, operation, maintenance, funding, administration and

oversight of the wastewater pretreatment system. Accordingly, the Department would anticipate that any discussion of this concept would include provisions for ensuring, at a minimum:

- The proposed treatment and disposal system is necessary to address a pollution problem at an existing facility, the site lacks sufficient land area (or potential purchase/easement) to meet full design requirements, and no further development or other intensification of flow will occur.
- The type and degree of pretreatment provided will reliably produce effluent of drinking water quality that is acceptable to both the Department and the CT Department of Public Health, and will protect all existing and designated uses of both groundwaters and surface waters;
- Control and operation of the treatment and disposal system will be maintained by a municipal WPCA and the municipality will own or otherwise control/monitor the GW zone of influence;
- The system owner and operator ensure that the onsite system receives and discharges only domestic sewage, a local water conservation program is enacted, and a sewer ordinance developed in conformance with DEEP guidelines is established;
- The discharge authorization ensures compliance with Water Quality Standards and also requires increased hours of certified operator oversight, greater frequency of effluent monitoring and reporting, and an adequate inventory of spare parts and equipment;
- A program for in-stream water quality monitoring for any GW plume that reaches a surface waterbody.

The issues as discussed in the July 2013 Report appear to assume that potential relaxation of such passive system design requirements would not necessitate any additional technical, regulatory or administrative controls. Accordingly, the technical information, cost estimates and feasibility discussions contained with WLSA's report are incomplete as they fail to account for any such provisions.

#### **General Comments:**

Table 7-1 (Design Influent Flows and Loads) in the July 2013 Report indicates that maximum daily flow is 390,000 gallons per day. The Report also states that the hydraulic capacity of the existing beds ranges from 125,000 to 195,000 gallons per day. The Department understands this to mean that the site lacks hydraulic capacity to accept more than 195,000 gallons per day of the stated maximum daily flow. Additionally, the Report does not include any proposal for equalization of treated effluent to manage peak flow and avoid overloading the leaching system. Without such equalization, the hydraulic capacity of the leaching beds will be exceeded creating overland flow and a point source discharge to surface waters that would also necessitate an NPDES discharge permit. Presently, the Department would not issue an NPDES permit for such a discharge to SA waters as it is not consistent with CT's Water Quality Standards.

The cost estimate associated with the on-site wastewater treatment and disposal alternative is incomplete and does not incorporate costs for many of the issues raised in this letter. Therefore, in the Department's judgment, the cost estimate provided for the onsite

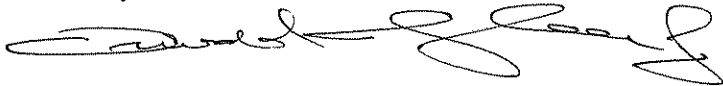
alternative is inaccurate and significantly understated. For example, the cost estimate provided for the onsite alternative does not include equalization necessary to manage peak flows which the Report estimates as \$2M to \$9M.

Moreover, ignoring the water quality standards and the DEEP criteria to achieve those standards is counterproductive especially after our meeting of September 27, 2010 where representatives from WLSD, Woodard & Curran, and DEEP discussed these issues. There was also no discussion of reworking the existing ridge and furrow beds to address breaches and short circuiting identified or pressure distribution required to maintain unsaturated flow conditions. If peak flows were allowed to by-pass the land treatment there was no consideration for phosphorus removal.

In summary, based on the information provided to date by WLSD, and as stated in the 2009 letter to WLSD and reiterated at our meeting of September 27, 2010, the Department cannot concur that construction of an on-site wastewater treatment and disposal alternative with a toe of slope discharge at the proposed flows is the most technically feasible and cost-effective solution that meets all regulatory requirements. It is in the Department's opinion that connection into the Torrington WPCA still remains a technically and economically feasible alternative wastewater management option that must be explored further.

On or before May 16, 2014, please provide a response to the comments contained in this letter. If you have any questions or wish to schedule a meeting to discuss any of these comments, please contact Joseph Wettemann at 860-424-3803.

Sincerely,



Oswald Inglese, Jr.  
Director  
Water Permitting and Enforcement Division  
Bureau of Materials Management and Compliance Assurance



Denise Ruzicka  
Director  
Planning and Standards Division  
Bureau of Water Protection and Land Reuse

OI-DR/jw

cc: David Prickett - Woodard & Curran

**Appendix A--Technical Review Comments**  
**CT DEEP--MMCA**  
**Water Permitting and Enforcement Division**

Town: DEP/WPC:		Project: Woodridge Lake Sewer District Groundwater Disposal Investigation Report—Dated October 2013		Sheet #
DWG. No. Or Page No.	Item No.	<input type="checkbox"/> Drawings <input checked="" type="checkbox"/> Report <input type="checkbox"/> Letter	Reviewed by: Joe Wettemann	Action
		Review of Report submitted October 18, 2013		
Page 3-4	1	<p>Installation of wells.</p> <p>The following wells are not located on Figure 3-1:</p> <p>Well Number A11-1  Well Number A11-2D  Well Number A11-2S  Well Number A11-5  Well Number A-5-MW-1D  Well Number A-5-MW-1S  Well Number A-8-MW-2D  Well Number A-8-MW-2S</p> <p>Existing well below bed A8 not labeled? Figure 3-1</p> <p>Well Number A-8-MW-3  Well Number A-8-MW-4  Well Number A-8-MW-6  Well Number F-5-MW-1  Well Number F-5-MW-2  Well Number F-5-MW-3D and 3S  Well Number G-1-MW-1, 2, 3</p>		
Page 3-6	2	<p>Test Pits: Test Pits 9 &amp; 10 are not located on site plan Figure 3-1</p> <p>Test Pit Number TP-1 did not identify till or mottling</p> <p>Test pits no groundwater levels, no mottling</p> <p>What are Josh Bowe's credentials?</p>		
Page 4-1	3	<p>Table 4-1 Monitoring Network Wells</p> <p>Wells not located on any plan. Why not monitor W6 located on plan in downgradient berm?</p> <p>Appendix C Manual water level records.</p> <p>Don't provide groundwater elevations</p> <p>Don't provide groundwater depth below surface</p>		

Town: DEP/WPC:	Project: Woodridge Lake Sewer District Groundwater Disposal Investigation Report—Dated October 2013	Sheet #
	Only groundwater depth as it related to top of casing.	
Page 4-2	4 USGS Well # provided is for Granby well not Sharon.	
Page 5-1	5 5.1.1 Bed Testing and Schedule of Measurements State: “It was determined that the testing conducted during 2012 seasonal high conditions were less than representative long term seasonal high conditions. Therefore, flow rates during the testing periods were adjusted to maintain 1.5 separation corrected for typical seasonal high groundwater conditions. Show calculations for each bed tested.	
Appendix B	6 For monitoring well data in Appendix B, what is the corresponding depth below grade?	
Page 5-1	7 5.1 Testing Overview As ground surface and top of monitoring well casing elevations are not provided, groundwater depth below grade is available for comparison	
Page 5-3	8 Table 5-2 Allowable Mounding Summary Min DWT index – for F-5 is correct. Why are different values used for A-8, A-11, and G1?	
Page 5-2	9 Last sentence before table 5-1 is incomplete * If the flow rate during the testing period was adjusted to maintain a 1.5 separation distance to SHWT, then the application rate cannot be averaged over the entire period of the test. Application rate during equilibrium is the appropriate loading rate.	
Page 5-4	10 Table 5-3 Bed Loading Rate and Equilibrium Summary Provide date used to calculate application rate over equilibrium period.	
	11 Figure 5-1, 5-2, 5-3 and 5-4 Change left hand side of graph to: average depth of water (feet below grade)	
	12 Figure 5-4 Bed G-1 Loading Test. Bed never reached equilibrium. See Appendix C Manual Water Level Data. Bed G-1 Manual Water Level Data. Monitoring Well G1-1 was dry the entire test. How can you say equilibrium was reached?	
Page 6-1	13 6.3 Groundwater level response to flow testing. 6.3.1 Bed F-5 Discussing monitoring wells F5-2, F5-1 and F5-3D that are not located on a plan. Provide A site plan for each bed tested depicting the locations of all new wells, existing wells and test pits in the area (as partial depicted in figure 3-1). Boring logs of well numbers A-8-MW-2D, A-8-MW-2S and A-8-MW-3 with groundwater at 3.98, 4.91 and 4.21 on 11-28-11 suggests a higher adjusted	

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	SHWT. Plug data into adjusted SHWT equation. Using these adjusted SHWT and W&C Loading rate groundwater mounds to bottom of bed, no separating distance.	
Page 6-1	14 Groundwater Level Responses to Flow Testing. 6.3.1 Bed F-5 State: to achieve equilibrium in the bed wells, flow rates were adjusted and spreader hoses were moved to account for this bedrock high and differing response from the North side of the bed to the South. How will this adjustment be made throughout the site with distribution purposed to maintain separating distances? Appendix A Borings – Groundwater readings for F-5-MW-3S and F-5-MW-2 adjusted for SHWT are 1.99 to 2.67 feet below grade, respectively. Appendix B groundwater level graphs of F5-1 and F5-3D indicate a mound of 1.50 to 2.25 feet, respectively. Not knowing the locations of the monitoring wells (not clearly depicted on plan), I have to conclude there is not 3' separating distance. Why was W-6 depicted on site plan not monitored or if it was, not reported?	
Page 6-2	15 6.3.2 Bed A-8 Appendix A, Boring Logs, groundwater at A-8MW-2D at 3.98 ft. Adjusted for SHWT using USGS data for Sharon well on 11/28/11 equates to 2.92 feet. Well number A-8-MW-3 with groundwater at 4.21 feet on 11/28/11 adjusted for SHWT using USGS data from Sharon well on 11/28/11 (same day as boring) equates to SHWT 3.04 feet below grade. The groundwater level graphs in Appendix B for A8-2D and A8-3 indicate a greater than 1.5 foot and 3.75 foot mound respectively. Don't have 3 foot separating distance. Don't have 1.5 foot separating distance. Application rate is too high. Appendix C manual water level data, bed A-8, TP-2, dry, where is effluent going?	
Page 6-2	16 6.3.3 Bed A-11 Appendix A, Boring logs, groundwater at well number A11-1 and A11-2S adjusted for SHWT using USGS data from the Sharon well on 3/27/12 equates to 2.08 and 2.03 feet, respectively. Appendix B, groundwater level graphs indicate a mound in A11-1 of 1.5 feet. Don't have 1.5 or 3 foot separating distance. Application rate is too high. Monitoring well W-52 120 feet down slope of Bed A11 "remained dry over the entire testing period." Where was the effluent going? Into the bedrock?	
Page 6-2	17 6.3.4 Bed G-1 State: "Well G-1 remained dry through the entire testing period." The "prominent" response in G1-3 and G1-4 was not due to the discharge but to the 2.5 inches of rain on 4-23-12. As was stated Well G-1 remained dry, G-2 little fluctuation, TP7 little fluctuation, and W-28 dry. With little or no response	

		from loading or 2.5 inches of rain on 4-23-12 it appears effluent in the east side of Bed G-1 is travelling in fractured bedrock.	
Page 6-3	18	<p>State: "Pre-testing water levels in G1-2 which indicate that groundwater elevation was approximately 1.13 feet below the top of bedrock surface" should have been a red flag.</p> <p>Figure 6-1 Interpreted May Water Table</p> <p>Groundwater counters need to be depicted on a plan with topographic contours. What monitoring wells data was used to create Figure 6-1 and 6-2? Provide data.</p>	
Page 6-9	19	<p>6.7 Surficial Hydrogeologic Setting</p> <p>Figure 6-4 Don't identify hydraulic conductivity tests located on map.</p>	
Page 6-9	20	Figure 6-3 Saturated Soil Thickness Map depicts the area downgradient of Bed A11 as having a saturated soil thickness of 5.01-10 feet. How is that possible when W-52 remained dry during the load test?	
Page 6-9	21	<p>Figure 6-5 Interpreted Transmissivity Map.</p> <p>In areas where there is no groundwater above bedrock with no saturated soils the transmissivity is zero. Darcy's law assumes the media is homogeneous and isotropic. Plugging in transmissivities based on hydraulic conductivities of soil mixed with weathered rock and bedrock is not valid.</p> <p>If the transmissivities represented were valid if they were plugged into Darcy's equation, what would be the results?</p>	
Page 6-13	22	<p>Travel Time Analysis</p> <p>Cannot use the hydraulic conductivity of fractured bedrock from the slug tests to calculate bacteria travel time. There is no renovation in fractured bedrock. Consultants familiar with our process know bacteria travel time cannot be calculated in fractured bedrock.</p>	
Page 6-14	23	Travel through fractured bedrock is unpredictable. State: "assuming that flow travels through the layer on top of the bedrock down slope (and not into bedrock), discharge from many beds on site will have greater than 21 days of travel time." During loading of Bed A-8, TP-2 was dry. Where is effluent going – not travelling on top of bedrock. During loading of Bed A-11, monitoring well W-52 remained dry. Where is effluent going? During loading of Bed G-1, well G-1 remained dry and G-2 and TP-7 very little fluctuation, and W-28 dry. Where is effluent going? It's not on top of the bedrock. Need to demonstrate where 21 day travel time was actually met.	
Page 7-1	24	<p>7. Site Capacity 1<sup>st</sup> paragraph</p> <p>State: "Type A8 and G1 beds were assigned a capacity of 1.2 gpd/sf." Bed A8 was overloaded according to comment 15 and therefore does not have an application rate of 1.2 gpd/sf. G beds are underline by shallow depth to bedrock with groundwater and effluent travelling in the fractured bedrock.</p>	



		Have not demonstrated that any beds in this area meet 21 day travel time.	
Page 7-1	25	State: "A11 beds were assigned the lowest observed capacity of 0.19 gpd/sf owing to the lower conductivities and moderate gradients." The lowest observed capacity was not 0.19 gpd/sf. The lowest observed capacity was 0.08 gpd/sf for Bed A-11 during the equilibrium period.	
Page 7-1	26	State: "The type F5 beds were assigned a capacity of 0.53 gpd/sf." The appropriate capacity is 0.43 gpd/sf which was recorded during the equilibrium period.	
Page 7-1	27	State: "In calculating the site capacity, observations of standing water in the beds were used to either remove the bed for consideration or to assign an adjustment based on approximate percentage of dry bed." When were these observations made? SHWT? How was it determined what percentage of the bed would be used? Provide notes of observations.	
Page 7-1	28	State: "Additionally, the capacity of beds that are adjacent to each other were adjusted in the analysis in an effort to eliminate excess mounding by use of the adjacent beds." How were the adjustments made to adjacent beds? Provide calculations.	
Page 7-1	29	Stated: "An example of excess mounding was measured in Bed A-8 during the antecedent period." Yet no adjustment for loading in the beds above and below Bed A-8 is made during low water table conditions. Load test was done during low groundwater conditions. By stacking the flow in the A beds (A4, A6, A8, A10, A12, A15, A17) during seasonal high groundwater conditionals, what will be the separating distance to SHWT. Bed A8 mounded the ground water 1.5 to 3.75 feet during the load test. Discharging to 6 beds above and below – in the same hydraulic window- the separating distance to SHWT is maintained?	
Page 7-1	30	Figure 7-1 Interpreted Seasonal High Water Table Shaded colors of SHWT elevations are difficult to interpret. Provide SHWT contours along with topographic contours so the figure can be easily read.	
	31	Figure 7-2 Interpreted Unsaturated Thickness at SHWT. As the unsaturated thickness is in 5 foot intervals to be conservative, not knowing if the thickness is 0.01 or 5 feet the 0.01 must be used. Therefore none of the area shaded as 0.01 – 5.0 can be used as beds that will meet the groundwater separation distance.	
Page 7-1	32	Second paragraph state: "The beds which may be used under seasonal high conditions are pictured in figure 7-3." On April 2, 2012 when I visited the site, groundwater was several feet below seasonal high conditions based on the Sharon USGS well. The following beds had partial ponding: A1, F1, F4, B-9, B-6, B-4. If these beds had ponding during lower than normal precipitation and lower than normal ground water, how can they be used during SHWT conditions and maintain a separating distance to groundwater. Why are beds A2, A1, A5, A7, A9, B-1, B10, B2, B3, B4, B5, B6, B7, B9, F5, G3, G5, G6	

		represented on figure 7-3 as beds available under SHWT conditions when they have no flow in table 7-1 Site Capacity Analysis Under Adjusted Bed Capacity?	
Page 7-1	33	Third paragraph state: "Under high water table conditions, special care must be taken to evenly distribute flow across the site such that no single area is overwhelmed by the flow to the beds." Flow cannot be evenly distributed across the site because of different loading rates for different beds. Does the current distribution system have the ability to distribute different flow to different beds throughout the site?	
Page 7-1	34	Also state: "Based on site testing completed, it is reasonable to use more than one bed in the A-8 area as long as dosed beds are not immediately adjacent to each other in the direction of the predominant gradient (i.e. there is an intermediate bed that is not being dosed on the upgradient or downgradient sides)." What data allowed you to make this assumption? Under seasonal high groundwater conditions and flows of 125,000 gpd, all of the beds A4, A6, A8, A10, A12, A15 and A17 will be loaded. How does this work? Contradicts your statement "as long as dosed beds are not immediately adjacent to each other in the direction of predominant gradient."	
	35	Table 7-1 Site Capacity Analysis Why is bed A7 assigned an application rate for a bed type of A8 when beds A5 and A9, above and below A7, are assigned an application rate for bed type A11? Why is bed A3 assigned an application rate for a bed type of A8 when beds A1, A2 and A5 above and below bed A3 are assigned an application rate for bed A11? Bed D1 with bedrock to be grade downgradient of the beds cannot be used unless 21 day travel time can be met. G-beds are shallow to bedrock and effluent is travelling in bedrock. Cannot demonstrate 21 day travel time will be met.	
Page 8-1	36	8. Site Engineering Considerations State: "Given that the WLS D collection system is 40 years old, the presence of leaking pipes has the ability to adversely impact site hydraulic capacity... etc." But no recommendation is made. No discussion to upgrade the distribution piping system. No discussion to rework the beds for partial bed use, to remove vegetation, repair berms, and install sand. Mention new flow meters and valves to be installed at each bed but no discussion of how a uniform distribution would be accomplished in each bed to prevent localized mounding. No discussion to address short circuiting from beds to drainage swales as I witnessed when I was on-site 4-30-12 (bed A4 was being loaded and it was short circuiting to the drainage swale through the new gravel road). None of these required upgrades have been included in your cost estimates for comparison of alternatives.	
Page 9-1	37	9. Summary and Conclusions second bullet. State: "As a conservative approach to travel time analysis, we used the	

		<p>hydraulic conductivities measured in the more conductive weathered bedrock zones for travel time analyses.” This is not conservative. Cannot use hydraulic conductivity of fractured bedrock to calculate bacteria travel time. There is no renovation in fractured bedrock.</p> <p>Have not demonstrated what the hydraulic capacity is during seasonal high groundwater conditions or during dry conditions. The analysis ignores DEEP criteria for groundwater discharges and the water quality standards. No indication as to how peak flows (400,000 gpd) are handled.</p>	
Page 9-1	38	<p>5<sup>th</sup> bullet state: “The mounding data indicated that in order to effectively distribute flow, beds immediately adjacent to each other should not be used for simultaneous discharge.” Table 7-1 site capacity analysis indicates that for a flow of 125,000 gallons beds A4, A6, A8, A10, A12, A15 and A17 all immediately adjacent to each other and stacked on the slope are used at the same time. Your implementation is not supported by your findings or conclusions.</p>	
Page 9-1	39	<p>6<sup>th</sup> bullet state: “Leaking pipes have the ability to adversely impact the hydraulic capacity.” No proposal to replace distribution system or determination of cost.</p>	
Page 9-1	40	<p>7<sup>th</sup> bullet state: “Using controls to monitor groundwater levels and distribute flow, combined with careful operation, will allow WLS D to utilize select adjacent beds for 50% of their uninfluenced capacity.” How did you arrive at 50%? Provide calculations.</p>	
Page 9-1	41	<p>8<sup>th</sup> bullet state: “We believe that a very high level of treatment and disinfection provides a level of pathogen and virus reduction far in excess of that achieved by a 21-day travel time.” How does the proposed discharge meet the water quality standards?</p>	
Page 9-1	42	<p>Last bullet state: “Sufficient separation can be provided via native soils or engineered soils.” There are no discussions of engineered soils anywhere else in the report. Engineered soils add a substantial cost to the project. No determination of quantity of engineered soils or the cost associated with placement and distribution of flow.</p>	
	43	<p>The field flow testing program approved March 8, 2012 stated the report would provide “conclusions as to project requirements for meeting the Department’s criteria for a discharge to the groundwater of the state.” There are no conclusions in the report as to whether the discharge can meet the Department’s criteria.</p>	
	44	<p>The final report also did not address “proposed engineering enhancements to address groundwater separation and breakout” as required by the approved study.</p>	