

BB DEVELOPMENT, LLC

Site Location of Development Act // Natural Resources Protection Act
Phase I – Oxford Casino – Oxford

EXCERPTS FROM THE DEPARTMENT'S RECORD
AGENCY REVIEW COMMENTS

- Department of Inland Fisheries & Wildlife – fisheries comments, dated January 21, 2011 with applicant response dated January 27, 2011
- Department of Inland Fisheries & Wildlife – wildlife comments, dated January 26, 2011
- Division of Watershed Management comments, dated January 25, 2011
- Department of Health and Human Services – Division of Environmental Health, Subsurface Wastewater Disposal System Approval, dated February 16, 2011
- Bureau of Remediation and Waste Management, Division of Environmental Assessment comments, dated December 30, 2010 and January 3, 2011 with applicant response dated January 14, 2011 (plus attachment Sweet Associates January 5, 2011)
- BRWM, Division of Environmental Assessment comments, dated February 6, 2011 and March 9, 2011
- Maine Natural Areas Program, date January 3, 2011

Comments - Environmental Project Review	
Maine Department of Inland Fisheries and Wildlife	
Fisheries Division Comments – Region A	
Applicant's Name: BB Development, LLC	
Project #: L-25203-28-A-N L-25203-TE-B-N	Regulatory Agency: MDEP
Project Type: Casino	Project Manager: Beth Callahan
Comments Due Date: 1/27/2011	Date Comments Sent: 1/21/2011
Project Location	
Town: Oxford	County: Oxford
Waterbody: Little Androscoggin R, Unnamed Tributary to Hogan P, Hogan P	
Fisheries Biologist: James Pellerin	

After review of the application and consideration of the proposal's probable effect on the environment, and on our agencies programs and responsibilities, we provide the following comments:

I. Project Description/Resource Affected:

This project involves the construction of a resort casino, parking areas, and associated support facilities on a 97.3 acre parcel of land located in Oxford, Maine. The development is quite a distance from the Little Androscoggin River, but the applicant indicates some of the treated stormwater from the building and parking areas will be redirected to this watershed. The Little Androscoggin River is stocked annually by the MDIFW with brook, brown, and rainbow trout. In addition, wild brook trout populations are present throughout the system, as well as a variety of other sport and nonsportfish species. MDIFW has no resource information on the unnamed tributary to Hogan Pond, which is located within the parcel being developed. It is likely that lower portions of this stream system at least support some of the same fish species located in Hogan Pond. Hogan and Whitney Ponds support a variety of warmwater sportfish (i.e. bass, pickerel) and nonsportfish species.

II. Comments/Recommended Considerations or Conditions:

Fisheries Considerations:

I have reviewed the application and offer the following comments for consideration:

- (1) The applicant has proposed 100' undisturbed buffers on either side of the identified stream thread. MDIFW's regional buffer policy is to provide 100' undisturbed buffers from the stream/or its associated wetlands. This is particularly important when those wetlands have a strong hydrological connection to the stream system. Although there is a description of wetland D associated with the stream, there were no photos. It is unclear how important these wetlands are to the stream functions and whether or not the buffers should be redrawn from the wetland edge to afford better resource protection. On a similar note, wetland C appears to be a headwater wetland to the stream system that may or may not be strongly connected hydrologic ally to the stream system. If it is, then more wetland protection may be warranted with the intent of benefitting the stream resource.

(2) In reference to stormwater pond i8W the application states, "Normally an underdrained gravel outlet would be designed to treat increases in water temperature prior to discharge. In the case of pond i8W, discharged water will travel through approximately 700 feet of underground pipe and approximately 1,700 feet of overland flow (via MDOT ditch) before reaching a natural resource. This is expected to mitigate temperature increase." This may likely be the case, but may not depending on velocity of water in the pipe, re-warming while in the detention ponds and the characteristics of the MDOT ditch. Consequently, MDIFW would prefer that the outlet system design encourages onsite infiltration.

Feel free to contact us if you have any additional questions or concerns.

Wildlife Considerations:

Will be responding separately.

Check if requesting copy of draft findings of fact and order.

Signature: _____

John Boland, Director
Bureau of Resource Management

Date:



Main-Land Development Consultants Inc.

P.O. Box Q LIVERMORE FALLS, ME 04254

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www.main-landdevelopment.com

January 20, 2011

Beth Callahan
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333-0017

RE: 10-093 Oxford Resort Casino DEP # L-25203-28-A-N/L-25203-TE-B-N
Maine IF&W Fisheries Comments

Dear Beth:

We are in receipt of comments from the Maine Department of Inland Fisheries and Wildlife. The comments, dated 2011-01-21, were performed by Mr. James Pellerin.

- 1. The applicant has proposed 100' undisturbed buffers on either side of the identified stream thread. MDIFW's regional buffer policy is to provide 100' undisturbed buffers from the stream/or its associated wetlands. This is particularly important when those wetlands have a strong hydrological connection to the stream system. Although there is a description of wetland D associated with the stream, there were no photos. It is unclear how important these wetlands are to the stream functions and whether or not the buffers should be redrawn from the wetland edge to afford better resource protection. On a similar note, wetland C appears to be a headwater wetland to the stream system that may or may not be strongly connected hydrologic ally to the stream system. If it is, then more wetland protection may be warranted with the intent of benefitting the stream resource.*

Former Maine DEP staffer Eric Ham (who indicated he would welcome questions despite his move to Maine DOT), and Maine DEP staffer Colin Clark both were on site and observed the stream, the streams starting point, and the wetlands in the area. We recommend talking to both for input. Please note that the stream is minor and intermittent in nature. Nearby and adjacent wetlands are very similar to adjacent uplands.

Further, to be clear, we cannot support 100 foot buffers when the Department rules are clear that 75 feet is the required buffer width. However, in order to obtain approval for the project in as timely a manner as possible, the applicant agrees to provide 100 foot buffers as requested by Maine IF&W.

That all said, we understand that Maine DEP is planning a site walk, perhaps as early as next week. We offer no opposition if Maine IF&W would like to attend.

- 2. In reference to stormwater pond i8W the application states, "Normally an underdrained gravel outlet would be designed to treat increases in water temperature prior to discharge. In the case of pond i8W, discharged water will travel through approximately 700 feet of underground pipe and approximately 1,700 feet of overland flow (via MDOT ditch) before reaching a natural resource. This is expected to mitigate temperature increase." This may likely be the case, but may not depending on velocity of water in the pipe, re-warming while in the detention ponds and the characteristics of the MDOT ditch. Consequently, MDIFW would prefer that the outlet system design encourages onsite infiltration.*

We have reviewed the areas immediately downstream of the MDOT storm drain network, the ditches and swales, and the receiving area. Further, we have discussed this issue at length with the Maine DEP stormwater engineer. He agreed that a gravel trench outlet at pond i8W could be omitted in this case.

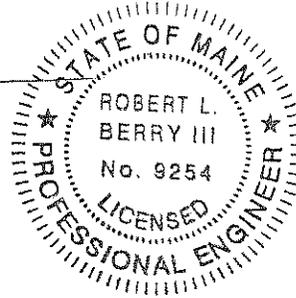
Beth, thanks once more for your work on this important project. I understand that this brings us up to date on comment responses. As per your usual and excellent habit, please forward any other comments as soon as possible. It seems that we're starting to close in on a substantially completed review.

Sincerely,

Main-Land Development Consultants, Inc.



Robert L. Berry III, P.E.
Acting President – Project Manager



Cc: BB Development, LLC
1570 Main St
xford, ME 04270



Paul R. Lepage
Governor



Commissioner

DEPARTMENT OF INLAND FISHERIES AND WILDLIFE

Wildlife Division – Region A
358 Shaker Rd.
Gray, ME 04039
Phone: (207) – 657-2345 x 110
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Scott.Lindsay@maine.gov

January 26, 2011

Beth Callahan
Maine Dept. of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, ME 04333

RE: Oxford Resort Casino: #L-25203-28-A-N, # L-25203-TE-B-N

Dear Ms. Callahan,

I have reviewed the above referenced permit application materials for the proposed Oxford Resort Casino. This project site occurs on 97.3 acres of undeveloped land adjacent to Route 26 and Rabbit Valley Rd. in the Town of Oxford.

Based upon a review of our most current data, there are no known essential or significant wildlife habitats within or adjacent to this project site. There are no known occurrences of state or federally listed threatened or endangered wildlife species. Wetlands, totaling about 7 acres were delineated in late summer/fall by Gallant and Stratton. None of these wetlands qualify as Inland Wading Bird & Waterfowl Habitats. Since the timing of the surveys is outside the survey period required for vernal pool surveys, it cannot be conclusively determined if vernal pools are present or not. Gallant and Stratton did indicate that no topographical features were found that suggested vernal pools were present.

Though most types of development may reduce the quantity and quality of available wildlife habitats for a variety of species, negative impact can be minimized by maintaining as much undeveloped open space as practical, limiting disturbance to wetland areas, particularly those of open water type, and maintaining forested travel corridors of at least 75 feet in width.

I have attached a map showing the approximate location of this project site and any wildlife habitats of record in the vicinity.

Sincerely,

Scott Lindsay

Scott Lindsay
Regional Wildlife Biologist

Site Location of Development
TECHNICAL REVIEW MEMORANDUM
Bureau of Land and Water Quality

TO: **Beth Callahan, Project Manager**
FROM: **David A. Waddell -- Division of Watershed Management**
DATE: **January 25, 2011**
RE: **Oxford – Oxford Resort Casino, Phase 1**

I have reviewed the additional information that was submitted on 1/20/11 by the applicant in response to my memo of 1/13/11 and a subsequent meeting with the applicant's agent on 1/19/11. I have found that this response has addressed all of my concerns with this project at this time and that the project appears to meet the standards set forth in the Chapter 500 rules. I recommend approval of the project in its current form.

APPLICANT: BB Development, LLC

DEP#: L-25203-28-A-N

Town: Oxford

Engineer who prepared application: Mainland Development Consultants, Inc.

Parcel Size: 97.3 acres

Site Description: Farm fields, wetlands, and forest with a moderate slope overall.

Project description: 65,000 sqft with parking for 1060 cars interior roads and improvements.

Size of new impervious area: 12.90 acres

Size of new developed area: 27.63 acres

Watershed (waterbody): Little Androscoggin River and Hogan Pond

Watershed type: Other and most-at-risk lake.

PLANS USED FOR REVIEW:

Pre-development: Plan Sheet D1.0, "Pre-Development Drainage Plan," revised 12-22-10

Post-development: Plan Sheet D2.0, "Post-Development Drainage Plan," revised 12-22-10

Erosion and Sediment Control Plans: Plan Sheets C3.1 and C3.2, "Grading and Erosion Control Plan," revised 12-22-10

Note: Other plans may have been reviewed that are not noted here.

STORMWATER MANAGEMENT

The applicant is proposing a commercial lot construction of a 65,000 sqft building, associated parking and lot improvements referred to as the Oxford Resort Casino. This project lies within the watershed of the Little Androscoggin River and Hogan Pond. This proposed project will create 27.63 acres of developed area and 12.90 acres of impervious area. This project has been determined to trigger the "Stormwater Law" and must meet the Basic, General, and Flooding Standards. Under the General Standards the applicant is applying the phosphorus methodology to address impacts to Hogan Pond. As such, the applicant is required to use the Phosphorous Methodology outlined in "Phosphorous Control in Lake Watersheds: A Technical Guide to Evaluating New Development" to assess the development. This project is being reviewed under the 2006 Stormwater Management rules and the design and sizing of the proposed BMPs for this project are based on the "Stormwater Management for Maine" January 2006.

Stormwater quality treatment and flooding mitigation will be achieved with detention over wet pond structures.

BASIC STANDARDS:

Note: *As always the applicant's erosion control plan is a good starting point for providing protection during construction. However, based on site and weather conditions during construction, additional erosion and sediment control measures may necessary to stop soil from leaving the site. In addition, other measures may be necessary for winter construction. All areas of instability and erosion must be*

repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. Approval of this plan does not authorize discharges from the site.

Approval recommended for this section.

GENERAL STANDARDS

Non-linear Portion

Percent of Impervious Treated: 105% (95% required)

Percent of Developed Treated: 88% (80% required)

Phosphorus to Hogan Pond

Per Acre Phosphorus Budget (PAPB): 0.045 lbs / acre / yr

Project Acreage (eligible for allocation)(A): 89.47 acres

Project Phosphorus Budget (PPB): 4.01 lbs / yr

Total Phosphorous Mitigation Credit (SEC + STC): 0.15 lbs / yr

Total Pre-treatment Phosphorus Export (Pre-PPE): 7.42 lbs / yr

Total Post-treatment Phosphorous Export (Post-PPE): 2.79 lbs / yr

Project Phosphorus Export: 2.636 lbs / yr

Level of Control: adequate

Pond i9W drains into pond i8W and both pond hold the appropriate channel protection volume. For this project only, the gravel outlet for the wet pond has been waived due to the nature of the receiving channel and that the pond discharges to a stormdrain and travels underground for several hundred feet prior to discharge.

Proposed Condition: The applicant will retain the services of a professional engineer to inspect the construction and stabilization of the four stormwater management ponds to be built on the site. Inspections shall consist of weekly visits to the site to inspect the installation of each pond's embankment construction, stormwater inlet, underdrained gravel outlet (if applicable), gravel outlet filter material makeup and placement (if applicable), outlet control structure, clay liner (if applicable), and emergency spillway construction from initial ground disturbance to final stabilization of the pond. If necessary, the inspecting engineer will interpret the pond's construction plan for the contractor. Once the ponds are constructed and stabilized, the inspecting engineer will notify the department in writing within 14 days to state that the ponds have been completed. Accompanying the engineer's notification must be a log of the engineer's inspections giving the date of each inspection, the time of each inspection, and the items inspected on each visit, and include any testing data or sieve analysis data of the gravel filter media. An inspection of the underdrained gravel outlet shall also be performed by a professional engineer one year after the final stabilization of the pond. The engineer will notify the department as to the outlet's effectiveness and determine any maintenance items that are needed.

Approval recommended for this section.

FLOODING STANDARDS

The applicant has provided evidence in the form of a Hydro-cad model that shows the project meets the flooding standard requirement of maintaining the preconstruction peak flows for the 2, 10, and 25 year, 24 hour storm at the property boundary.

Approval recommended for this section.

MAINTENANCE:

NOTE: The applicant and contractor will be responsible for the maintenance of all proposed stormwater management structures, i.e. ponds, swales, culverts and discharge outlets during construction.

Thereafter, each stormwater management structure should be cleaned and cleared of debris yearly at a

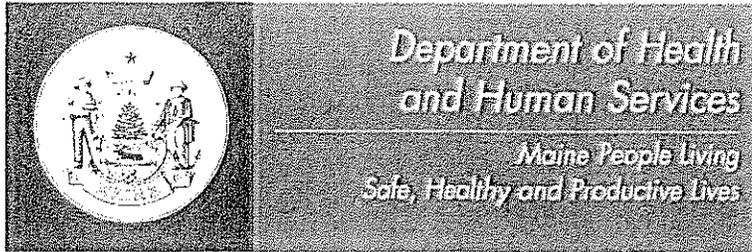
minimum. Sweeping of all pavements is recommended on an annual basis. The DEP may request to inspect the site at a future date.

For this project, BB Development, LLC; shall be responsible for the long-term inspection and maintenance of the stormwater management system according to the plan provided by the applicant.

Approval recommended for this section.

DESIGN REVIEW RESPONSIBILITY

This review only ensures that the proposed plan is meeting the minimum standards set by the department for erosion control management and for stormwater management. It does not guarantee that the design is appropriate for the level of work suggested and for the functionality of the facility.



Department of Health and Human Services
Maine Center for Disease Control and Prevention
286 Water Street
11 State House Station
Augusta, Maine 04333-0011
Tel: (207) 287-5672
Fax: (207) 287-4172; TTY: 1-800-606-0215

February 16, 2011

Main-Land Development Consultants, Inc.
Attn.: Thomas R. DuBois, P.E.
P. O. Box Q
Livermore Falls, ME 04254

Subject: Approval, Engineered Subsurface Wastewater Disposal System, Oxford Resort Casino, Route 26, Oxford

Dear Mr. DuBois:

The Division of Environmental Health has completed a review of a design for an engineered subsurface sewage disposal system design, to serve Oxford Resort Casino. The HHE-200 Form was prepared by Darryl N. Brown, S.E. The system was designed by Main-Land Development Consultants, Inc., with plans signed and stamped by you.

Hereafter, the term "design engineer" shall refer collectively to Main-Land Development Consultants, Inc., its staff, and its representatives unless otherwise specified; and the term "owner" shall refer collectively to BB Development, LLC, its staff, and its representatives unless otherwise specified.

Design Flow

The design flow is 22,395 gallons per day (gpd), based upon Table 501.2 of the Maine State Plumbing Code, Subsurface Wastewater Disposal Rules (Rules) and extrapolation from water use records from a similar facility. The design flow of 22,395 gpd is approved with the notation that the suitability of the design flow is the responsibility of the design engineer.

Treatment Tank(s)

The design includes one 8,000 gallon external grease interceptor; and one 16,000 gallon septic tank followed in series by one 18,000 gallon septic tank.

An OxyPro advanced wastewater treatment unit would be installed following the septic tanks. It would be comprised of six modules, and sized to treat up to 65,000 gpd.

Disposal Areas

The proposed disposal area consists of two groups of Eljen GSF units. "Leachfield A" would be comprised of 18 rows of 48 GSF units. "Leachfield B" would be comprised of 18 rows of 48 GSF units. Both groups would be supplied via a central 12 outlet effluent distribution box.

Soils

The soils are shown as 3C and 3D per the Rules on the soil test pit logs prepared by Darryl N. Brown, S.E.

Well Setback

There are no potable water supply wells reported within 300 feet of the proposal.

Mounding Analysis

The proposed system design, including a proposed upslope curtain drain, will not result in groundwater mounding sufficient to intrude into the disposal area, according to the calculations provided by the design engineer. Reference: Report dated 12/10/10 by Sweet Associates.

Site Transmission Analysis

The proposed system design, including a proposed upslope curtain drain, demonstrates that there are sufficient soils down-gradient to prevent the effluent from surfacing within 50 feet of the disposal field, according to the calculations provided by the design engineer. Reference: Report dated 12/10/10 by Sweet Associates.

Interagency Review

The proposal is under concurrent review by the Maine Department of Environmental Protection, pursuant to the Site Location of Development Act.

Findings

The system design meets the Rules, unless otherwise noted. Therefore, the design is approved with the following conditions and comments:

1. The owner must retain the design engineer to oversee construction. The constructed system may not be used unless all pertinent requirements of the Rules have been met.
2. Construction shall not commence until the owner has obtained the necessary plumbing permit from the Local Plumbing Inspector (LPI).
3. The design engineer shall provide sufficient supervision to assure that the system is constructed as designed and in accordance with the code and other regulations. Attention shall be given to site preparation, fill selection and placement, installation of pipes, mechanical and electrical systems.
4. The design engineer shall provide the owner and this office with a brief report on the construction including any unexpected conditions encountered and any changes made from the approved drawings. The LPI must not issue the Certificate of Approval until the LPI has received the aforementioned report from the design engineer.
5. The design engineer shall test all systems prior to acceptance by the owner. The testing shall determine whether the components were correctly installed and whether they function as designed. This includes confirmation that flow dividing devices or configurations function as intended.
6. The design engineer, with the concurrence of the LPI shall determine when the site conditions are suitable for construction.
7. Construction shall cease whenever the design engineer determines that the site conditions, or workmanship, or materials are unacceptable.
8. The owner and design engineer shall inform the LPI of the proposed construction schedule and shall also inform the LPI of the progress of construction. They shall cooperate fully with the LPI in scheduling any inspections and providing any equipment necessary for the inspection.
9. The design engineer shall provide the owner with an Operations and Maintenance Manual containing written recommendations for the operation and maintenance of the system including inspection and pumping schedules and record keeping procedures.
10. The owner shall operate the system within the requirements of Rules and the limitations of this design.

11. The owner shall inform the LPI and the design engineer of any operational problem and/or malfunction.
12. The Local Plumbing Inspector shall inspect the engineered disposal system in accordance with Section 111.0 of the Rules. In addition, the property owner shall retain the design engineer to inspect the construction of the system. The inspection shall be sufficient for the design engineer to determine that the system was installed as designed.
13. This approval is only for the rules administered by this office and it does not consider other federal, state or local regulations. The owner is responsible for compliance with any other pertinent regulations.
14. By accepting this approval and the associated plumbing permit, the owner agrees to comply fully with the conditions of approval and the Subsurface Wastewater Disposal Rules.

Based upon this approval of the design, the LPI may issue the permit required for an engineered system.

Because installation and owner maintenance has a significant effect on the working order of onsite sewage disposal systems, including their components, the Division makes no representation or guarantee as to the efficiency and/or operation of the system.

Sincerely,



James A. Jacobsen
Project Manager, Webmaster
Division of Environmental Health
Drinking Water Program
Subsurface Wastewater Unit
e-mail: james.jacobsen@maine.gov

xc: File
Rodney Smith, L.P.I.
John Hopeck, MDEP via e-mail
Robert Lally, BB Development LLC, via e-mail

Callahan, Beth

From: Hopeck, John T
Sent: Monday, January 03, 2011 1:28 AM
To: Callahan, Beth
Cc: Hallowell, Dawn
Subject: casino
Attachments: casino2.doc

Okay, look this over carefully and get back to me with any questions. In general, the jump from Phase I to full build out is too big to just let it go without a look at the performance of their water systems, particularly in the absence of evidence of on-site well performance. Let me know what you think; hope all is well there.

- John

1/3/2011

REVIEW MEMORANDUM

December 30, 2010

To: Beth Callahan, Project Manager, Division of Land Resource Regulation

From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Oxford Resort Casino, Oxford

- 1) The soil data presented are generally consistent with the soils map, but some information on the map is missing or ambiguous. Specifically, the copy of the map received for review shows TP 20 in two locations, and does not clearly show locations for test pits 12, 40, 115, 116, and 117. A revised copy of the soils map clearly showing these exploration locations and clarifying the location of TP 20 should be submitted for review and approval as soon as possible.
- 2) According to the application, work required to remove contaminated soils from the site has not been completed, and the final report on this has not been prepared. According to page 3 of the December 17th Phase 2 report, "approximately 20 to 40 cubic yards of petroleum-impacted soil" must still be removed from the site. In addition, this report states that a dug well and drilled well serving a nearby property had not been tested for evidence of hydrocarbon contamination as of the date of the report. This work and any other remaining work preparing the site for construction must be completed as soon as possible, and final reports, including laboratory data and information on the removal and disposal of impacted soils, must be submitted for review and approval as soon as possible. The applicant should be aware that not completing this work prior to submission of the application creates the potential for delays in approval of construction until outstanding issues have been resolved.
- 3) Disposal of any hazardous or special waste from the existing structures to be demolished is addressed only to the extent that the Department will be notified if asbestos-containing materials are found. The Site Location project manager should be provided with a list of all hazardous and special wastes removed from the site, and documentation demonstrating that these materials have been disposed of appropriately.
- 4) Section 5 of the geotechnical report included in Section 11 of the application describes dewatering, presumably of excavations, and the general detail for retaining walls shows a blanket drain. Given the nature of the soils at this site, it is possible that installation of drainage may be required in many areas; outlets of such drains, if and where such drainage is found to be necessary, should be stabilized to avoid adverse effects on vegetation and stability due to saturation of the soil at the outlets.
- 5) Section 15(A)(2) states that water from on-site wells could be used for irrigation "if public water becomes available after wells have been drilled". However, the water usage estimate in the determination of well feasibility is based entirely on the presumed wastewater generation, and does not include an allowance for irrigation water. If

irrigation is planned for the site, an appropriate volume should be included in the water-use estimate, and a revised suitability report should be prepared and approval, or an alternate source of off-site water should be identified so that any restrictions on its use can be identified and addressed through the permit process.

- 6) Section 15(A)(2) also states that the applicant “proposes to drill a well and perform tests concurrent with the early review process”. According to Section 16 of the application, the drilling of the first well for testing on the site will occur “later in January or February of 2011”. This obviously means that the applicant is intending to submit a substantial volume of material, all of which will require careful assessment, due to issues described further below, well into the review process. The applicants should understand that, by proceeding in this manner, they are creating potential for delay in approval of installation and use of on-site wells at the projected rate. In the absence of this information, the applicant has yet to determine the number and location of wells on the site, or the size of any water storage tank (see Section 16, page 1), at least some of which will also require Department review.
- 7) Section 15(A)(2) also states that existing on-site wells will be abandoned in accordance with published Department guidance “and current State of Maine Well Driller’s Rules governing well abandonment”. Department guidance on well abandonment should apply in the event of any apparent conflict or ambiguity between the two.
- 8) Page 4 of the December 10, 2010 Groundwater Supply Feasibility Analysis states that, because the “annual water requirement for the first phase...is only slightly higher than the estimated annual bedrock recharge...under ideal conditions, the elevation of the groundwater table in the bedrock aquifer off-site will not be lowered significantly”. This is not correct. The portion of the aquifer underlying the site cannot be seen in isolation from those portions adjacent to it, as extraction of water from underneath the site will induce a response throughout the adjacent aquifer system than will affect offsite areas, proportional to the volume removed and the proximity of those areas to the point of removal. The impact on offsite areas will not be limited to only the amount by which annual withdrawal exceeds annual recharge. Instead, the boundaries of the area contributing recharge to the onsite bedrock aquifer will expand onto adjacent properties, as the system responds to maintain groundwater flow to areas downgradient of the property; while there may be a lag in response of the system, it will not result in extremely steep gradients along the property lines and only minimal impacts beyond those. It is more likely that impacts may extend offsite where any onsite wells are close to the property line, while some areas of the applicant’s parcel may show no measurable groundwater drawdown due to the wells. Consequently, the duration of any pump test and the location of monitoring wells for that test are very significant; these are not discussed in the information received for review. The proposal described in the December 17, 2010 report describes measurement of well yield and water quality in adjacent wells, but does not include any discussion of measurement of water level in on-site or off-site wells. Obviously many domestic wells have a high enough yield and low enough usage that they can continue to function with some amount of decline in water level, even under drought conditions. The particular elevation at which any water-

bearing fracture is intercepted by a particular well may also be highly relevant on a case-by-case basis, as would perhaps be the elevation of the pump or pump intake; changes in well depth, pump type or intake elevation, or other generally similar measures could be alternatives for any impacted homeowners, if they find them acceptable. However, the information on yield is not directly valuable in assessing aquifer response to the pumping wells. Any test of the aquifer must be sufficiently long, and in a well or set of wells with sufficient yield to sustain a high enough pumping rate, that the aquifer is stressed adequately; otherwise the results of the test are likely to be inconclusive as a predictor of future impacts on offsite wells, particularly under full build-out. I strongly recommend that the applicant work with the Department in preparation for any aquifer tests, so that it is more likely that test results will be useful to all parties.

- 9) According to page 2 of the December 17 groundwater feasibility report, few or no observable changes “in off-site well yield will be considered favorable for the expansion of groundwater withdrawals to accommodate full site build out”. Clear adverse impacts to offsite wells would certainly indicate that there were problems with supporting full build out with on-site water, but it is less clear that minimal impact from use of 22,395 gallons per day would demonstrate that 65,000 gallons per day could be supported from the same site, particularly given that the applicant has already estimated that the Phase I usage is approximately equal to the present recharge rate. In the absence of aquifer test results, it is difficult to assess the effects of increased use, however, the applicant should consider that it may not be feasible to apply for on-site water usage at full build out at this time. Instead, an interim plan of measurement of water level in a select number on-site and off-site wells, almost certainly many fewer wells than the applicant has proposed for measurement of yield and other testing, in combination with water-use data and other relevant information, could be implemented during Phase 1 construction and operation to define a reasonable range of possible impacts beyond the property.
- 10) Section 5 of the Spill Prevention, Control, and Countermeasures Plan submitted in Section 15 of the application is ambiguous, referring to both storage of the fuel tank within a concrete tank, and also a “containment berm utilizing 6” of sand over an impervious surface...sized for containment of spillage”. Section 7 of this plan refers only to “a refueling area berm sufficient in size to handle the vehicles” and includes no mention of the concrete containment structure. A concrete containment with suitable volume and appropriate cover to prevent accumulation of precipitation is preferable to a sand berm, which presents significant problems with maintenance and stability, particularly in areas where it is subject to vehicle and foot traffic. The applicant should revise appropriate sections of the plan to clearly describe the concrete containment structure surrounding the tank, including appropriate details for construction. A bermed refueling area would provide useful supplemental protection, if the applicant desires to construct this measure, but suitable construction details and maintenance information (see also Section 8 of the SPCC plan) should be provided.
- 11) Section 6(B) of the Spill Prevention, Control, and Countermeasures Plan submitted in Section 15 of the application discusses response procedures, but does not clearly identify the reportable quantities for spills. All petroleum spills must be reported to the

Department, unless specific arrangements have been made with the Bureau of Remediation and Waste Management, so the plan must be revised to clearly state that all spills should be reported and that spills must be reported within two hours of the time at which they are discovered.

- 12) Design flows for the wastewater disposal system are based on average daily flows calculated from the highest quarter of usage at Hollywood Slots. While the per-seat number obtained appears generally reasonable, it is not clear that the applicant has assessed whether or not the three-month cumulative water usage that is the basis of the calculation includes significant peak periods that would potentially stress an on-site disposal system. This is most likely not a risk for Phase I if the system to be used at full build out is constructed for Phase I. The applicant should describe what measures, if any, have been taken to estimate possible peak flows, and should plan to refine the estimated design-flow number based on observed water-use data from this site. A report describing any refinement of the design-flow number and assessment of whether or not any problem might exist for management of peak flows with the system, should be submitted for review and approval prior to construction of additional phases of the project. This report should also discuss the results of operation of the pretreatment system and visual inspection of the disposal area up to that point (see below).
- 13) The mounding analysis for the wastewater disposal system suggests mound heights of two feet or greater at the downgradient end of the disposal field. This is generally consistent with some preliminary analysis by the Department, although more detailed analysis is ongoing. This mounding analysis appears to be calculating the height of the mound above the native material, and assumes a two-foot thick layer with a permeability of 50 ft/day above that material. Design drawings for the disposal field show the disposal units (detail B2 on drawings C7.2 and C7.3) contained within a layer of coarse to medium sand with a total thickness of thirteen inches. The cross section of leachfield A as shown in drawing C7.2 is more consistent with the modeling assumptions of the mounding analysis, but the cross section of leachfield B shown in drawing C7.3 appears to show less than two feet below the units in rows 1 through 7 at the uphill end of the system. The authors of the mounding analysis should clarify how this design affects the assumptions of their model. Note also that a mound height beneath the disposal system of much greater than two feet will, in some cases, result in mounding above the height of the Elgen units as those units are shown in both cross sections. It is understood that the mound height is expected to be less at the uphill end of the disposal system, and that the point of injection of the wastewater within the layer might not have a significant effect on the mound height, given the difference in head between the treatment system outlet and the disposal field, but the authors of the mounding analysis should address this point specifically. Specific design aspects of the separation of any wastewater mound from elements of the disposal system, including any potential for mounding to or above the elevation of the Elgen units, should be addressed in the review by the Department of Health and Human Services.
- 14) The applicant is proposing to use a pretreatment system for wastewater in order to reduce pollutant loading to groundwater and to reduce the load of potentially clogging materials

to the disposal bed. Due to the large size of these beds and the absence of other convenient options for wastewater disposal, proper functioning of the disposal beds is critical to the applicant's operation, so that any reasonable measures that can be employed to prolong the life of the disposal beds should be considered. According to information submitted, the treatment system "can be expected to have a combined BOD and TSS of less than 30 mg/L, and nitrogen of less than 10 mg/L"; because of the proposed treatment efficiency, the nitrate-nitrogen impact assessment has not been reviewed in detail. Lack of specific comment on this assessment should not be taken as an indication the Department endorses the methods or conclusions of this assessment, or would find them acceptable in another application or in this case if the treatment system were to be removed or failed to provide the specified effluent quality. The information submitted notes that "periodic checks on the effluent quality" are necessary "to make sure that the process is operating efficiently". The minimum schedule for such checks appears to be the 2-year schedule provided in the manufacturer's documentation included in Section 17 of the application. Other than dissolved oxygen, monitoring parameters are not specified; I would suggest that effluent be analyzed for at least BOD, TSS, nitrate-nitrogen, and total nitrogen on a quarterly basis. Because of the importance of maintaining proper functioning of the disposal system, this sampling should continue for as long as this system is in use; significant changes to or discontinuance of the pretreatment system should require Department review and approval. Water-quality data, inspection reports, and other relevant information should be maintained at the site and be available for inspection by the Department. In the event that the effluent fails to meet the water-quality goals defined above, the applicant should notify the Department within five business days, and a confirmation resample should be taken within two days, of the date that the applicant receives results indicating potential problems with system operation. Based on the results of the confirmation resample, the water quality as shown by the initial sample, any previous data, or other information available to the Department, the applicant may be required to develop and implement a remedial action plan to address problems with system operation. Because of the substantial increase in wastewater volume anticipated with expansion to full build out, prior to the start of construction beyond the proposed Phase I, the applicant should submit a report on the operation of the system to date, including all water-quality data obtained (see above).

- 15) The proposed disposal area is located some distance from the site. The applicant should conduct a visual inspection of the disposal area no less often than quarterly, and with particular attention to periods of high groundwater in the spring of the disposal field. Areas of thick or high grass growth, soft spots, odors, or other indicators of potential problems should be recorded, and the Department should be notified immediately in the event of any indication of effluent breakout or other system failures. Results of these inspections should be maintained onsite with other information on wastewater system performance.

Callahan, Beth

From: Hopeck, John T
Sent: Tuesday, January 04, 2011 2:56 AM
To: Callahan, Beth
Subject: casino
Attachments: casino3.doc

Hi Beth. Found some additional issues relating to missing or incomplete subsurface data. Let me know how it's going and if you need anything else. Some parts of this I don't have the software here to work with and will have to wait until I get back.

- John

REVIEW MEMORANDUM

January 3, 2011

To: Beth Callahan, Project Manager, Division of Land Resource Regulation

From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Oxford Resort Casino, Oxford

Continued review of the information submitted in support of this project has identified additional inconsistencies and missing information.

- 1) Comparison of test pit logs with data on the pond plans and profiles shows numerous places where the explorations do not reach to the depth of the proposed stormwater ponds. The deepest test pits, belonging to the series TP-A through TP-R, generally reach depths of 9.5 to 10 feet, while the stormwater ponds along the east side of the property extend to depths between fifteen and twenty feet below existing grade, and these explorations extend to or only slightly below the depth of other proposed ponds on the site. Consequently, it is not clear that bedrock will not be encountered at the depths of the proposed ponds. Since the applicant is proposing installation of a low-permeability liner in order for these to function as wetponds, groundwater quality issues are of less concern provided that these liners are installed properly. However, if bedrock is encountered, the applicant may require blasting to remove rock in order to complete the ponds to design depth. The proposal by the applicant to submit a complete blasting plan after ledge is encountered could introduce delays in preparation and review of this plan, during the construction process. Instead, the applicant should agree at this point that any blasting conducted on the site will be consistent with Department standards for air overpressure, ground vibration, flyrock control, and record keeping. Specifically:
 - a) Air overpressure must not exceed the limits specified at Department Rules Chapter 375.10(C)(4)(c)
 - b) For any blast at which ground vibration is monitored, the applicable limit on ground vibration at inhabitable structures not owned or controlled by the developer is the frequency-dependent standard in Figure B-1 of Appendix B, U.S. Bureau of Mines Report of Investigations 8507.
 - c) Flyrock must be controlled so as to remain on the project site and to not enter a protected resource unless alteration of that resource has been previously approved
 - d) Blast record keeping should be consistent with the information required by 38MRSA§490-Z(14)(L). Note that blast records are not generally considered incomplete if only missing the blaster's social security number.
- 2) Some plans show additional test pit locations not mentioned in the material received for review and for which no logs or other information has been received. For example, the Site Utility Plan (drawing C4.1) shows a set of test pits numbered TP2-1 through at least (some test pit numbers are obscured) TP2-8. Complete information, including logs and locations, for all subsurface explorations at the site must be submitted for review and approval.



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January 14, 2011

Beth Callahan
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333-0017

Dear Beth:

We received Mr. Hopeck's comments regarding soils, groundwater, water supply, and wastewater. Below are his comments-provided for ease of reference, and our responses. Mr. Sweet from Sweet Associates responded to some of the comments; his responses are attached.

From the comments dated 2010-12-30, received 2011-01-03.

- 1) The soil data presented are generally consistent with the soils map, but some information on the map is missing or ambiguous. Specifically, the copy of the map received for review shows TP 20 in two locations, and does not clearly show locations for test pits 12, 40, 115, 116, and 117. A revised copy of the soils map clearly showing these exploration locations and clarifying the location of TP 20 should be submitted for review and approval as soon as possible.*

The soils map and logs have been updated, and are attached for review.

The issue with the duplication of TP 20 is resolved. One of them (near the center of the property) is now correctly designated as TP 40 (one of the missing test pits).

The locations of TP 12, 115, 116 and 117 did not get printed on the original soils map. The attached revised copy of that map now shows the locations. The logs for those test pits have already been submitted.

- 2) According to the application, work required to remove contaminated soils from the site has not been completed, and the final report on this has not been prepared. According to page 3 of the December 17th Phase 2 report, "approximately 20 to 40 cubic yards of petroleum-impacted soil" must still be removed from the site. In addition, this report states that a dug well and drilled well serving a nearby property had not been tested for evidence of hydrocarbon contamination as of the date of the report. This work and any other remaining work preparing the site for construction must be completed as soon as possible, and final reports, including laboratory data and information on the removal and disposal of impacted soils, must be submitted for review and approval as soon as possible. The applicant should be aware that not completing this work prior to submission of the application creates the potential for delays in approval of construction until outstanding issues have been resolved.*

The comment response is contained in the narrative by Mr. Richard Sweet, Sweet Associates.

- 3) *Disposal of any hazardous or special waste from the existing structures to be demolished is addressed only to the extent that the Department will be notified if asbestos-containing materials are found. The Site Location project manager should be provided with a list of all hazardous and special wastes removed from the site, and documentation demonstrating that these materials have been disposed of appropriately.*

The applicant takes no exception to this comment.

Please note that since the initial submission, the Oxford Fire Department has asked for and been given permission to burn the two old residences on the property as a training exercise. The applicant is working in conjunction with Maine DEP and Acadia Contractors, LLC to inspect the properties for hazardous and special wastes. Once a report is available, a list of hazardous materials and their disposal method will be submitted to the Department. Once this is completed, the buildings will be burned by the OFD.

- 4) *Section 5 of the geotechnical report included in Section 11 of the application describes dewatering, presumably of excavations, and the general detail for retaining walls shows a blanket drain. Given the nature of the soils at this site, it is possible that installation of drainage may be required in many areas; outlets of such drains, if and where such drainage is found to be necessary, should be stabilized to avoid adverse effects on vegetation and stability due to saturation of the soil at the outlets.*

The applicant takes no exception to this comment.

- 5) *Section 15(A)(2) states that water from on-site wells could be used for irrigation "if public water becomes available after wells have been drilled". However, the water usage estimate in the determination of well feasibility is based entirely on the presumed wastewater generation, and does not include an allowance for irrigation water. If irrigation is planned for the site, an appropriate volume should be included in the water-use estimate, and a revised suitability report should be prepared and approval, or an alternate source of off-site water should be identified so that any restrictions on its use can be identified and addressed through the permit process.*

In consultation with the Landscape Architect, no irrigation should be necessary. He has selected plants that will do well with the normal amount of rain-fall for the Oxford area. The key to the plants health is supplying the appropriate depth of topsoil which in turn will hold nutrients and water. We have specified these topsoil depths on the landscaping plan. Therefore, the on-site wells need not have extra capacity for irrigation.

Should public water become available in time and should the on-site wells be available for irrigation water, then the applicant may choose to change plant species and irrigate. The applicant is aware that this is a change to the project and will require an MDEP modification application.

- 6) *Section 15(A)(2) also states that the applicant "proposes to drill a well and perform tests concurrent with the early review process". According to Section 16 of the application, the drilling of the first well for testing on the site will occur "later in January or February of 2011". This obviously means that the applicant is intending to submit a substantial volume of material, all of which will require careful assessment, due to issues described further below, well into the review process. The applicants should understand that, by proceeding in this manner, they are creating potential for delay in approval of installation and use of on-site wells at the projected rate. In the absence of this information, the applicant*



has yet to determine the number and location of wells on the site, or the size of any water storage tank (see Section 16, page 1), at least some of which will also require Department review.

We understand the concern is that if we drill wells now- during the review process- it could generate extra paperwork, which generates extra review time, which could jeopardize the approval date.

On the other hand, the normal procedure is to drill wells *after* approval, with Conditions of Approval that require drilling, well reports, water tests etc.

It seems counter-productive to penalize an applicant that strives to work pro-actively to provide more information sooner than normal.

In a telephone conversation, the project analyst agreed. She indicated that we should proceed with well-drilling. If the well reports, lab tests and other information are available, we might submit them for review. If not, it can be handled as a CoA per the norm.

- 7) *Section 15(A)(2) also states that existing on-site wells will be abandoned in accordance with published Department guidance "and current State of Maine Well Driller's Rules governing well abandonment". Department guidance on well abandonment should apply in the event of any apparent conflict or ambiguity between the two.*

The applicant takes no exception to this comment.

- 8) *Page 4 of the December 10, 2010 Groundwater Supply Feasibility Analysis states that, because the "annual water requirement for the first phase...is only slightly higher than the estimated annual bedrock recharge...under ideal conditions, the elevation of the groundwater table in the bedrock aquifer off-site will not be lowered significantly". This is not correct. The portion of the aquifer underlying the site cannot be seen in isolation from those portions adjacent to it, as extraction of water from underneath the site will induce a response throughout the adjacent aquifer system than will affect offsite areas, proportional to the volume removed and the proximity of those areas to the point of removal. The impact on offsite areas will not be limited to only the amount by which annual withdrawal exceeds annual recharge. Instead, the boundaries of the area contributing recharge to the onsite bedrock aquifer will expand onto adjacent properties, as the system responds to maintain groundwater flow to areas downgradient of the property; while there may be a lag in response of the system, it will not result in extremely steep gradients along the property lines and only minimal impacts beyond those. It is more likely that impacts may extend offsite where any onsite wells are close to the property line, while some areas of the applicant's parcel may show no measurable groundwater drawdown due to the wells. Consequently, the duration of any pump test and the location of monitoring wells for that test are very significant; these are not discussed in the information received for review. The proposal described in the December 17, 2010 report describes measurement of well yield and water quality in adjacent wells, but does not include any discussion of measurement of water level in on-site or off-site wells. Obviously many domestic wells have a high enough yield and low enough usage that they can continue to function with some amount of decline in water level, even under drought conditions. The particular elevation at which any water-bearing fracture is intercepted by a particular well may also be highly relevant on a case-by-case basis, as would perhaps be the elevation of the pump or pump intake; changes in well depth, pump type or intake elevation, or other generally similar measures could be alternatives for any impacted homeowners, if they find them acceptable. However, the information on yield is not directly valuable in assessing aquifer response to the pumping wells. Any test of the aquifer must be sufficiently long, and in a well or set of wells with sufficient yield to sustain a high enough pumping rate, that the aquifer is stressed adequately; otherwise the results of the test are likely to be inconclusive as a predictor of future impacts on offsite wells, particularly under full build-out. I*



strongly recommend that the applicant work with the Department in preparation for any aquifer tests, so that it is more likely that test results will be useful to all parties.

The comment response is contained in the narrative by Mr. Richard Sweet, Sweet Associates.

- 9) *According to page 2 of the December 17 groundwater feasibility report, few or no observable changes "in off-site well yield will be considered favorable for the expansion of groundwater withdrawals to accommodate full site build out". Clear adverse impacts to offsite wells would certainly indicate that there were problems with supporting full build out with on-site water, but it is less clear that minimal impact from use of 22,395 gallons per day would demonstrate that 65,000 gallons per day could be supported from the same site, particularly given that the applicant has already estimated that the Phase I usage is approximately equal to the present recharge rate. In the absence of aquifer test results, it is difficult to assess the effects of increased use, however, the applicant should consider that it may not be feasible to apply for on-site water usage at full build out at this time. Instead, an interim plan of measurement of water level in a select number on-site and off-site wells, almost certainly many fewer wells than the applicant has proposed for measurement of yield and other testing, in combination with water-use data and other relevant information, could be implemented during Phase I construction and operation to define a reasonable range of possible impacts beyond the property.*

The comment response is contained in the narrative by Mr. Richard Sweet, Sweet Associates.

Further, while we have worked to consider the full build-out in all aspects of the Phase 1 design, and while we appreciate the thought the Department has put into preparing for the full build-out, it is important to note that the application contains only Phase 1. The master plan was shown for reference only; future phases are not included at this time.

We hope that the results of the well drilling and Phase 1 water usage and monitoring will show that the wells have plenty of capacity for the full build-out with no measurable affect on neighboring properties. If, however, alternative water supply sources become necessary to meet the requirements of the next Phase, then alternative water supply sources will be proposed when that application is submitted for Department review.

- 10) *Section 5 of the Spill Prevention, Control, and Countermeasures Plan submitted in Section 15 of the application is ambiguous, referring to both storage of the fuel tank within a concrete tank, and also a "containment berm utilizing 6" of sand over an impervious surface...sized for containment of spillage". Section 7 of this plan refers only to "a refueling area berm sufficient in size to handle the vehicles" and includes no mention of the concrete containment structure. A concrete containment with suitable volume and appropriate cover to prevent accumulation of precipitation is preferable to a sand berm, which presents significant problems with maintenance and stability, particularly in areas where it is subject to vehicle and foot traffic. The applicant should revise appropriate sections of the plan to clearly describe the concrete containment structure surrounding the tank, including appropriate details for construction. A bermed refueling area would provide useful supplemental protection, if the applicant desires to construct this measure, but suitable construction details and maintenance information (see also Section 8 of the SPCC plan) should be provided.*

The SPCC Plan has been updated. Fuel storage will occur within a concrete containment box.

- 11) *Section 6(B) of the Spill Prevention, Control, and Countermeasures Plan submitted in Section 15 of the application discusses response procedures, but does not clearly identify the reportable quantities for spills.*



All petroleum spills must be reported to the Department, unless specific arrangements have been made with the Bureau of Remediation and Waste Management, so the plan must be revised to clearly state that all spills should be reported and that spills must be reported within two hours of the time at which they are discovered.

The SPCC Plan has been updated as requested, and is attached for review.

- 12) *Design flows for the wastewater disposal system are based on average daily flows calculated from the highest quarter of usage at Hollywood Slots. While the per-seat number obtained appears generally reasonable, it is not clear that the applicant has assessed whether or not the three-month cumulative water usage that is the basis of the calculation includes significant peak periods that would potentially stress an on-site disposal system. This is most likely not a risk for Phase I if the system to be used at full build out is constructed for Phase I. The applicant should describe what measures, if any, have been taken to estimate possible peak flows, and should plan to refine the estimated design-flow number based on observed water-use data from this site. A report describing any refinement of the design-flow number and assessment of whether or not any problem might exist for management of peak flows with the system, should be submitted for review and approval prior to construction of additional phases of the project. This report should also discuss the results of operation of the pretreatment system and visual inspection of the disposal area up to that point (see below).*

The Design Engineer used a number of Safety Factors along the way in calculating a Design Flow, as well as in the actual design itself. First, in regard to Design Flow, as stated in Section 17 of the SLODA, the per-seat calculation from Hollywood Slots for the three-month peak flow was 8.57 gallons per day, per seat. The actual flow used was 10 gallons per day per seat, which is a 14% increase over the calculated flow rate.

Second, the Hollywood Slots flow rate did not consider, or “back out” of the flow rate the employees within the facility, either for the restaurant, or for the “floor” of the Casino. Therefore, by including the flow rate from the employees in this overall Design Flow, the Design Engineer has, in effect, calculated a Safety Factor of 2,625 gallons per day (175 employees at 15 gallons per day). This results in an additional 12% increase over the three-month peak rate of flow.

Combining these two factors, there is additional capacity based on the increased flow per seat of 1,419 gallons per day $[(10-8.57) \times 992 \text{ seats}]$, and 2625 gallons per day based on the employee calculation safety factor, for a total increase in the design flow of 4,044, or 18%.

In the actual leachfield design, the Design Engineer also included a Safety Factor for the size of the leachfield. Backing into a Design Flow Rate, based on the number of GSF units, the actual capacity of the leachfield is 25,135 gallons per day. This is an 11% increase over the stated Design Flow. This additional Safety Factor, combined with the two stated above, results in an increase of 29% over the flows anticipated based on the Hollywood Slots flow rates.

Having stated the three different ways the Design Engineer factored in potential peak flows for this system, there is always room for caution. Therefore, it is proposed that the applicant monitor the water use for this project with a meter on its water source, to prove out the design. The applicant proposes daily monitoring of its water use. There is ample



room to install additional rows of GSF Units along the downhill side of these leachfields, should monitoring show that the system is undersized. If flows are found to exceed the capacity of the leachfield (25,135 gallons per day) for more than four days per month, additional rows will be added to the leachfield to accommodate the increased flow rate. This work will be done within three months of identification of this overage (to allow for winter conditions).

Second, the applicant proposes that the wells installed down gradient from the proposed leachfields be monitored on a quarterly basis for water elevation, as a check on the adequacy of the soil to assimilate the wastewater.

Lastly, the applicant is in complete agreement that, prior to construction of subsequent phases, a full assessment of the adequacy of the existing system be conducted, and submitted for review and approval. The applicant fully intends to design future phases based on the information gathered for this initial phase of construction and use.

- 13) *The mounding analysis for the wastewater disposal system suggests mound heights of two feet or greater at the downgradient end of the disposal field. This is generally consistent with some preliminary analysis by the Department, although more detailed analysis is ongoing. This mounding analysis appears to be calculating the height of the mound above the native material, and assumes a two-foot thick layer with a permeability of 50 ft/day above that material. Design drawings for the disposal field show the disposal units (detail B2 on drawings C7.2 and C7.3) contained within a layer of coarse to medium sand with a total thickness of thirteen inches. The cross section of leachfield A as shown in drawing C7.2 is more consistent with the modeling assumptions of the mounding analysis, but the cross section of leachfield B shown in drawing C7.3 appears to show less than two feet below the units in rows 1 through 7 at the uphill end of the system. The authors of the mounding analysis should clarify how this design affects the assumptions of their model. Note also that a mound height beneath the disposal system of much greater than two feet will, in some cases, result in mounding above the height of the Elgen units as those units are shown in both cross sections. It is understood that the mound height is expected to be less at the uphill end of the disposal system, and that the point of injection of the wastewater within the layer might not have a significant effect on the mound height, given the difference in head between the treatment system outlet and the disposal field, but the authors of the mounding analysis should address this point specifically. Specific design aspects of the separation of any wastewater mound from elements of the disposal system, including any potential for mounding to or above the elevation of the Eljen units, should be addressed in the review by the Department of Health and Human Services.*

The comment response is contained in the narrative by Mr. Richard Sweet, Sweet Associates.

- 14) *The applicant is proposing to use a pretreatment system for wastewater in order to reduce pollutant loading to groundwater and to reduce the load of potentially clogging materials to the disposal bed. Due to the large size of these beds and the absence of other convenient options for wastewater disposal, proper functioning of the disposal beds is critical to the applicant's operation, so that any reasonable measures that can be employed to prolong the life of the disposal beds should be considered. According to information submitted, the treatment system "can be expected to have a combined BOD and TSS of less than 30 mg/L, and nitrogen of less than 10 mg/L"; because of the proposed treatment efficiency, the nitrate-nitrogen impact assessment has not been reviewed in detail. Lack of specific comment on this assessment should not be taken as an indication the Department endorses the methods or conclusions of this assessment, or would find them acceptable in another application or in this case if the treatment system were to be removed or failed to provide the specified effluent quality. The information submitted notes that "periodic checks on the effluent quality" are necessary "to make sure that the process is operating efficiently". The minimum schedule for such checks appears to be the 2-year schedule provided in the*



manufacturer's documentation included in Section 17 of the application. Other than dissolved oxygen, monitoring parameters are not specified; I would suggest that effluent be analyzed for at least BOD, TSS, nitrate-nitrogen, and total nitrogen on a quarterly basis. Because of the importance of maintaining proper functioning of the disposal system, this sampling should continue for as long as this system is in use; significant changes to or discontinuance of the pretreatment system should require Department review and approval. Water-quality data, inspection reports, and other relevant information should be maintained at the site and be available for inspection by the Department. In the event that the effluent fails to meet the water-quality goals defined above, the applicant should notify the Department within five business days, and a confirmation resample should be taken within two days, of the date that the applicant receives results indicating potential problems with system operation. Based on the results of the confirmation resample, the water quality as shown by the initial sample, any previous data, or other information available to the Department, the applicant may be required to develop and implement a remedial action plan to address problems with system operation. Because of the substantial increase in wastewater volume anticipated with expansion to full build out, prior to the start of construction beyond the proposed Phase I, the applicant should submit a report on the operation of the system to date, including all water-quality data obtained (see above).

The comment response is contained in the narrative by Mr. Richard Sweet, Sweet Associates.

- 15) *The proposed disposal area is located some distance from the site. The applicant should conduct a visual inspection of the disposal area no less often than quarterly, and with particular attention to periods of high groundwater in the spring of the disposal field. Areas of thick or high grass growth, soft spots, odors, or other indicators of potential problems should be recorded, and the Department should be notified immediately in the event of any indication of effluent breakout or other system failures. Results of these inspections should be maintained onsite with other information on wastewater system performance.*

The applicant takes no exception to this comment. The subsurface disposal fields will be inspected as requested.

From the comments dated 2011-01-03, received 2011-01-04.

- 1) *Comparison of test pit logs with data on the pond plans and profiles shows numerous places where the explorations do not reach to the depth of the proposed stormwater ponds. The deepest test pits, belonging to the series TP-A through TP-R, generally reach depths of 9.5 to 10 feet, while the stormwater ponds along the east side of the property extend to depths between fifteen and twenty feet below existing grade, and these explorations extend to or only slightly below the depth of other proposed ponds on the site. Consequently, it is not clear that bedrock will not be encountered at the depths of the proposed ponds. Since the applicant is proposing installation of a low-permeability liner in order for these to function as wetponds, groundwater quality issues are of less concern provided that these liners are installed properly. However, if bedrock is encountered, the applicant may require blasting to remove rock in order to complete the ponds to design depth. The proposal by the applicant to submit a complete blasting plan after ledge is encountered could introduce delays in preparation and review of this plan, during the construction process. Instead, the applicant should agree at this point that any blasting conducted on the site will be consistent with Department standards for air overpressure, ground vibration, flyrock control, and record keeping. Specifically:*
- a) *Air overpressure must not exceed the limits specified at Department Rules Chapter 375.10(C)(4)(c)*
 - b) *For any blast at which ground vibration is monitored, the applicable limit on ground vibration at inhabitable structures not owned or controlled by the developer is the frequency-dependent standard in Figure B-1 of Appendix B, U.S. Bureau of Mines Report of Investigations 8507.*
 - c) *Flyrock must be controlled so as to remain on the project site and to not enter a protected resource unless alteration of that resource has been previously approved*



- d) *Blast record keeping should be consistent with the information required by 38MRS §490-Z(14)(L). Note that blast records are not generally considered incomplete if only missing the blaster's social security number.*

The applicant takes no exception to this comment, and agrees to the above requirements.

- 2) *Some plans show additional test pit locations not mentioned in the material received for review and for which no logs or other information has been received. For example, the Site Utility Plan (drawing C4.1) shows a set of test pits numbered TP2-1 through at least (some test pit numbers are obscured) TP2-8. Complete information, including logs and locations, for all subsurface explorations at the site must be submitted for review and approval.*

The soils map and logs have been updated, and are attached for review.

Regarding test pits on the Site Utility Plan (drawing C4.1) – test pits numbered TP 2-1 through TP 2-8. These test pit designations reflect a typo in the labeling. They are actually test pits TP 21 through TP 28.

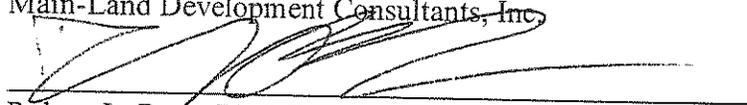
Complete information, including logs and locations have been submitted for those test pits (TP 21 through TP 28).

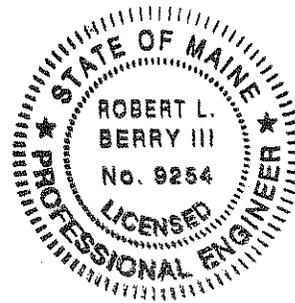
Lastly, more information on the final soil removal pertaining to the Phase II ESA is available and attached for review.

Beth, thank you for expediting your review and coordination efforts. Similarly, we would like to thank Mr. Hopeck for such a quick response to our application.

Sincerely,

Main-Land Development Consultants, Inc.


Robert L. Berry III, P.E.
Senior Engineer – Project Manager



Cc: BB Development, LLC
1570 Main St
Oxford, ME 04270



January 5, 2011

**RESPONSE TO REVIEW MEMORANDUM
DATED DECEMBER 30, 2010
OXFORD RESORT CASINO, OXFORD**

Following are our responses to the Review Memorandum from John Hopeck to Beth Callahan, dated December 30, 2010. The same numbering sequence found in the Review Memorandum will be used here.

2. The work related to the petroleum-impacted soil is ongoing and nearing completion. A final report will be submitted at the time of completion.

8. Groundwater drawdown: Our preliminary calculations for this site were done to see how a groundwater budget would compare rainfall and water use within the casino property. What it did show was that infiltrating precipitation on the casino acreage will roughly match the water withdrawal by the casino in Phase I, but not in following Phases. It is clear that water use by the casino will affect groundwater beyond the property boundaries. The underlying granitic bedrock has an aquifer within a complex system of fractures that are impossible to predict without an on-site pumping/monitoring well test and until that testing is done, we cannot make any predictions on the effects of drawdown on-site or off-site. Our plan is to conduct an extensive pump and drawdown test that will be coordinated with well yield and water quality testing on neighboring wells to determine the off-property aquifer drawdown and resulting off-site well effects. Prior to that testing, we will discuss our plans with the Department to make sure we are all in agreement with the proper testing procedure.

9. We agree that regardless of the pump/drawdown testing done prior to the Phase I completion, monitoring a combination of on-site and off-site wells during use of the Phase I operations will be useful to determine "a reasonable range of possible impacts beyond the property" prior to full build out. We will provide a list of wells and schedule of testing that will be ongoing during the use of the Phase I casino.

13. Mounding Analysis: The Eljen GSF Detail shown in drawings C7.2 and C7.3 give a picture of the complete Eljen unit taken from the Eljen manual. The 6-inches of medium to coarse sand below the fabric is part of the Eljen unit, so the bottom of the sand is the bottom of the Eljen unit and not part of the specified sand detailed in the mounding analysis.

Our model assumes that because the sand between the bottom of the Eljen unit and the ground surface has a permeability of 50 feet per day, the highest portion of the mound will shift to the lowest downslope row of Eljens with a gradually decreasing mound approaching the highest Eljen row. Because of this, the elevation of each Eljen row increases its distance above the ground surface in the downslope direction, therefore, no mounding into the Eljen units is expected. The distribution into the system will initially load the highest rows of Eljens, with less water flowing into each lower row through a series of drop boxes. Since the pretreatment system will discharge a

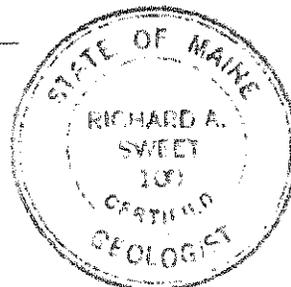
very low BOD/TSS wastewater to the disposal field, the water will move out to the end of the highest rows by the force of volume and not initially at least because of the presence of a biomat. The projected water flow in Phase I should be enough to cause water to flow out of the three highest drop boxes, which means it is probable that the six highest Eljen rows will receive water every day. An advantage to this distribution method is that effluent will be pushed the full length of the disposal field in spite of the lack of a biomat. It is possible that mounding will be higher than expected in these upper rows and if so, the drop boxes can be modified with Equalizers to force a measured amount of water into lower rows as needed to adjust the location and level of mounding. Shallow monitoring wells will be installed in the disposal field to allow us to observe the actual mounding prior to installation of the lower full build out field and to allow adjustment of the upper field.

14. We agree with the comments regarding pretreatment system monitoring, therefore, we propose the following:
- A. Test the effluent from the pretreatment system on a quarterly basis.
 - B. Analyze for: BOD, TSS, nitrate-nitrogen, total nitrogen, and dissolved oxygen.
 - C. Testing of the system will continue for as long as the system is in use.
 - D. Any changes in the system or discontinuance will require Department review and approval.
 - E. Water quality data inspection reports and other relevant information will be maintained at the site and will be available for inspection by the Department.
 - F. In the event the effluent fails to meet the water quality goals of less than 30 mg/L, combined BOD/TSS, and less than 10 mg/L nitrogen, the operator will notify the Department within five business days. A confirmation re-sample will be taken within five business days of the date the operator receives results indicating the system is not operating properly.
 - G. Prior to the start of construction beyond Phase I, the applicant will provide the Department with a report of the system operation to date, including all water quality data.



Richard A. Sweet
Certified Geologist #100

RAS/smh



REVIEW MEMORANDUM

February 6, 2011

To: Beth Callahan, Project Manager, Division of Land Resource Regulation

From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Oxford Resort Casino, Oxford

- 1) The applicant has submitted a revised soils map showing the locations of the missing test pits and correcting the misnumbering of TP40. The test pits are generally consistent with the revised map.
- 2) The applicant has submitted a report, dated January 10th, 2011, describing the final clean up and off-site well testing related to a spill at the site of this project. According to this report, a total of 81.05 tons of contaminated soil were removed from the site for disposal. The report states that “no laboratory result approached the Action Levels for the chemical/hydrocarbon fractions listed.” Verification of the final processing of this material had not been received as of the date of the report; this verification should be sent to the project manager for confirmation and to complete the file as soon as it has been received by the applicant. This report also states that, although sampling of all the previously described wells on the adjacent property was attempted, the property owner “was uncomfortable allowing us to sample the unused dug well and the drilled well used in the barn.” Consequently, only the drilled well serving the house was sampled. Results from this analysis were not available as of the date of this report, and should be submitted for review and approval as soon as they are available.
- 3) The applicant states that the existing residences will be burned as part of a training exercise by the Oxford Fire Department, but that, prior to this exercise, “a list of hazardous materials and their disposal method will be submitted to the Department.” By way of clarification, this list should include any and all other structures on the site, and include evidence of appropriate disposal of any wastes identified; this list does not need to duplicate material already submitted in the Phase 1 and Phase 2 assessments and similar documents, although those should be referenced as appropriate.
- 4) The applicant has agreed that foundation outlets should be stabilized to reduce adverse effects on vegetation and stability in the area of the outlets.

- 5) The applicant states that irrigation will not be necessary and will not be used at this site, and that plant species have been chosen for the landscaping that should not require irrigation. However, if public water is extended to the site, the applicant may wish to use the on-site well water for irrigation, allowing different species to be used in landscaping the site. Therefore, the intent is that well water would be used for irrigation only if all other water needs of the site are met by the offsite water utility. The approval should explicitly state that no irrigation is approved at present; the applicant states that it is understood that use of the on-site wells for irrigation would be a modification of the permit and would require Department approval.

- 6) The normal process for a project requiring a large volume of on-site water would be for pump tests and other preliminary exploration to have been conducted prior to submission of the application. This would allow the applicant substantially greater certainty in the design of the water system to serve the facility and evaluation of the potential need for off-site water or other measures. However, the applicant chose not to develop this information prior to submission of the application, and the present application actually contains less information than a typical application proposing this volume of extraction. While there may have been valid reasons for this, it does reduce the amount of information available to the Department to determine that water can be provided to the development in the volume determined to be necessary without adverse impact on offsite or onsite resource or offsite wells. Consequently, given the applicant's deadline, it may be necessary to approach this in a series of sequential conditions, rather than through a single condition, or no special condition at all, which would actually be the normal and preferred procedure. First, it will be necessary to review and approve the results of the initial pump test of wells on the property to determine whether adequate yield can be obtained without unreasonable adverse impact on offsite water supplies. Note that as of this date, no information has been received from the applicant describing any potential pump test or pumping well location beyond that in the original application. It may be most efficient to separate this conditional approval from that for use of the water supply, so that the applicant could proceed with drilling of wells and construction of the water supply system while the water storage system and long-term water-level monitoring was still under design and review. That is, this permit for the first phase of the project would have two separate conditions, one requiring review and approval of a report describing the results of an aquifer test designed in consultation with the Department, and a second, requiring review and approval of a plan for long-term monitoring of aquifer performance, including target levels based on the pump test results and other relevant criteria. It is clear, as noted by the applicant, that expansion requiring increased use of on-site water will require modification of the

permit and additional data. In anticipation of expansion of the development, it is important that the ongoing monitoring of water levels be sufficient to collect adequate data to support the expanded use. The long-term water-use and water-level monitoring are therefore extremely important, and, as noted above, it may be advantageous to separate the details of that program from the review of the Phase I pump-test data, in order to allow construction and installation of the water system.

- 7) The applicant has agreed that existing wells on the site will be abandoned and that Department guidance on well abandonment should apply in the event of any apparent conflict or ambiguity between that guidance and applicable sections of the Well Driller's Rules.
- 8) The applicant agrees that water use by the proposed facility will impact areas beyond the property boundary during Phase I, and that "an extensive pump and drawdown test...coordinated with well yield and water quality testing on neighboring wells" is necessary "to determine the off-property aquifer drawdown and resulting off-site well effects". No information describing a proposal for this plan has been received for review as of the date of this memo.
- 9) The applicant agrees that "monitoring a combination of on-site and off-site wells during...Phase I operations will be useful" to evaluate conclusions of the aquifer testing and to predict the possible impacts of greater withdrawals during subsequent phases of the development. The applicant states that "a list of wells and schedule of testing that will be ongoing during...Phase I" will be submitted. No information describing this proposed monitoring plan has been received for review as of the date of this memo. As described above, in the interest of allowing further review and approval to proceed and given the possibility of access to town water for at least later phases of the proposed development, it may be advantageous to establish two separate special conditions regarding water supply for Phase I, one dealing with the aquifer test and described in paragraph 8 of this and the previous memo to be completed prior to construction, and a second condition dealing with monitoring to be completed prior to operation but no later than a specified date sufficiently prior to operation that background conditions can be obtained.
- 10) The applicant has submitted a revised Spill Prevention, Control, and Countermeasures Plan. Based on this plan and on the applicant's response to the previous memo, it appears that an onsite fuel tank for use during construction will be stored within a roofed portable concrete containment structure. Section 3 of the revised plan indicates that this containment will be located on a "bermed containment pad" which "will also serve as spill containment for refueling the

equipment by a commercial fuel truck located on the pad”. Is the intention to have both a fuel storage tank and a commercial fuel truck on site, or does “equipment” in this case refer only to the fuel storage tank in the containment structure? As noted in the previous memo, suitable construction details and maintenance information should be provided for any earthen berm structure proposed for around the fuel storage tank or in other areas of the site, specifically addressing issues with maintenance and stability, particularly in areas where the berm is subject to vehicle and foot traffic.

- 11) The applicant has added (See Section 6(B) of the plan) language stating that all spills must be reported to the Department and that spills must be reported within two hours of the time at which they are discovered.
- 12) The applicant describes that design flows were assumed at a value greater than that of the average flow from Hollywood slots, but indicates that no attempt was made to identify whether or not those averages included periods of peak usage that could affect water needs or wastewater treatment, or whether water use was actually relatively constant over the period measured. The applicant states, however, that water usage will be monitored on a daily basis, along the lines proposed in the previous memo. The applicant proposes that if peak usage periods are identified such that “flows are found to exceed the capacity of the leachfield... for more than four days per month”, the disposal system will be expanded. Depending on the spacing and duration of the periods of high flow, and the volumes of flow during other periods, it may also be possible to provide additional temporary wastewater storage with lower risk of interruption to the system operation and potentially lower cost. The applicant also proposes quarterly monitoring of water levels in existing wells downgradient from the proposed wastewater disposal system. Because of the apparent distance of these wells from the disposal system, it is likely that excessive flows and mounding will result in breakouts upslope of these wells before large changes in water level are observed, but they may provide useful information on water levels in the area downgradient of the disposal field, and this monitoring should be specifically incorporated in a revised operations and maintenance plan if the applicant is to conduct it. The applicant also concurs with the Department that a full assessment of the operation of the system should be conducted and submitted for review and approval prior to construction of subsequent phases of the development.
- 13) The applicant states that the six inches of coarse sand shown in detail B2 on drawings C7.2 and C7.3 is considered part of the Eljen unit, and not part of the two-foot layer of coarse sand specified in the mounding analysis. That this coarse sand layer is distinct from the sand that is part of the Eljen unit is not clear from detail D3 in drawings C7.2 and 7.3, and this drawing should be clarified and

resubmitted. This drawing should also make clear that the “specified sand” of Detail D3 refers to the specifications provided in Detail A1. (Note also that the references to “Section 804.2.2 of the Maine rules” in Detail D3 do not appear to be consistent with the subsurface disposal rules in effect as of the date of submission of the application or with the current (January 2011) wastewater disposal rules, and should be revised appropriately.) Although not explicitly stated in the response, it appears that this layer will provide for drainage even when the Eljen unit is less than two feet from the native material surface, as described in the previous memo. While the response is not strictly correct that “each Eljen row increases its distance above the ground surface”, given the cross-sections submitted for review, the response does note the possibility “that mounding will be higher than expected” in the higher rows of the system, and that this could be accommodated with minor changes (not requiring review) to the wastewater distribution system. The response to this item in the January 5, 2011 from Sweet Associates mentions installation of “shallow monitoring wells...in the disposal field to allow us to observe the actual mounding”. It is not clear from the materials received for review if these wells are to be the same as those references in the applicant’s response to paragraph 12 of the previous memo; certainly wells within the area of the disposal field are more likely to identify unexpected conditions and potential failure than the existing wells. No information describing numbers and locations of these shallow wells has been received for review as of the date of this memo.

- 14) The applicant has agreed to conduct monitoring according to the outline proposed in the previous memo. Specifically, this will include the following elements:
 - a. Quarterly monitoring of effluent for BOD, TSS, nitrate-nitrogen, total nitrogen, and dissolved oxygen.
 - b. Sampling according to this schedule should continue for as long as this system is in use.
 - c. Any changes to or discontinuance of the pretreatment system should require Department review and approval.
 - d. Water-quality data, inspection reports, and other relevant information should be maintained at the site and be available for inspection by the Department.
 - e. In the event that the effluent fails to meet the water-quality goals defined above, the applicant should notify the Department within five business days, and a confirmation resample should be taken within five days, of the date that the applicant receives results. Note that my original memo called

for a two-day delay in the event problems are observed. As a practical matter, confirmation resamples are most useful the sooner they can be obtained, in order to identify problems that may recur but may not be constant and as a check against laboratory error. In practice, particularly if the applicant is contracting out the sampling as part of operation and maintenance two-day service for a matter not related to system failure may be difficult to arrange. Consequently, I am willing to consider a longer interval provided that all data collected subsequent to Phase I are submitted annually to the Department for review, in a format acceptable to the Department. I do not anticipate that there will be any need for analysis or a report of any sort to accompany these data under normal circumstances. Based on the results of the confirmation resample, the water quality as shown by the initial sample, any previous data, or other information available to the Department, the applicant may be required to develop and implement a remedial action plan to address problems with system operation.

- f. Prior to the start of construction beyond the proposed Phase I, the applicant should submit a report on the operation of the system to date, including all water-quality data obtained (see above).
- 15) The applicant has agreed to conduct physical inspection of the area at and around the wastewater disposal system, following the standards described in the previous memo.
- 16) The applicant has agreed to the blasting specifications provided in the previous memo. As noted in that memo, as long as the low-permeability liner specified in the application is installed properly, groundwater concerns are minimized; however, it is essential that that liner be installed in the ponds. The applicant should notify the Department if bedrock is encountered during excavation of the ponds. Due to the potential for additional cost and delay if bedrock is discovered during construction rather than identified ahead of time, I would strongly suggest that the applicant conduct additional borings to depths somewhat greater than the proposed pond excavations, in order to determine whether or not bedrock will be encountered so that the construction schedule and budget can be established accordingly. Since, according to the information submitted, equipment will be onsite in the near future in order to drill the test wells, conducting these additional explorations at that time could reduce at least mobilization costs. Logs, locations, and other relevant information for any additional explorations should be submitted for review and approval prior to construction of the ponds.

17) The applicant states that the test pits numbered TP 2-1 through TP2-8 are mislabeled and are actually test pits TP 21 through TP 28. However, comparison of drawings C4.1 and C4.2 with either the previously submitted or the revised version of drawing S2.1 shows that TP 2-1 through TP2-8 do not generally appear in the same locations as TP 21 through TP 28, and that drawings C4.1 and C4.2 frequently show locations for explorations of both TP 2-1 through TP2-8 and TP 21 through TP 28. The original memo noted that TP 2-1 through TP2-8 were examples of additional test pits not found in the logs or other data submitted and not the only anomalous numberings observed. Others shown on drawings C4.1 and/or C4.2 include TP 1-1 through 1-5, in the corner of the property near the intersection of Route 26 and Rabbit Valley Road, and TP 4-1, located between logged explorations TP 48 and TP 49. It is possible that some explorations may be mislocated as well as mislabeled; the applicant should check all relevant records to be certain that complete data and correct locations have been submitted and that there is not extraneous information in the files for these drawings.

REVIEW MEMORANDUM

February 6, 2011

To: Beth Callahan, Project Manager, Division of Land Resource Regulation

From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Oxford Resort Casino, Oxford

- 1) The applicant has submitted a revised soils map showing the locations of the missing test pits and correcting the misnumbering of TP40. The test pits are generally consistent with the revised map.
- 2) The applicant has submitted a report, dated January 10th, 2011, describing the final clean up and off-site well testing related to a spill at the site of this project. According to this report, a total of 81.05 tons of contaminated soil were removed from the site for disposal. The report states that "no laboratory result approached the Action Levels for the chemical/hydrocarbon fractions listed." Verification of the final processing of this material had not been received as of the date of the report; this verification should be sent to the project manager for confirmation and to complete the file as soon as it has been received by the applicant. This report also states that, although sampling of all the previously described wells on the adjacent property was attempted, the property owner "was uncomfortable allowing us to sample the unused dug well and the drilled well used in the barn." Consequently, only the drilled well serving the house was sampled. Results from this analysis were not available as of the date of this report, and should be submitted for review and approval as soon as they are available.
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- 6) The normal process for a project requiring a large volume of on-site water would be for pump tests and other preliminary exploration to have been conducted prior to submission of the application. This would allow the applicant substantially greater certainty in the design of the water system to serve the facility and evaluation of the potential need for off-site water or other measures. However, the applicant chose not to develop this information prior to submission of the application, and the present application actually contains less information than a typical application proposing this volume of extraction. While there may have been valid reasons for this, it does reduce the amount of information available to the Department to determine that water can be provided to the development in the volume determined to be necessary without adverse impact on offsite or onsite resource or offsite wells. Consequently, given the applicant's deadline, it may be necessary to approach this in a series of sequential conditions, rather than through a single condition, or no special condition at all, which would actually be the normal and preferred procedure. First, it will be necessary to review and approve the results of the initial pump test of wells on the property to determine whether adequate yield can be obtained without unreasonable adverse impact on offsite water supplies. Note that as of this date, no information has been received from the applicant describing any potential pump test or pumping well location beyond that in the original application. It may be most efficient to separate this conditional approval from that for use of the water supply, so that the applicant could proceed with drilling of wells and construction of the water supply system while the water storage system and long-term water-level monitoring was still under design and review. That is, this permit for the first phase of the project would have two separate conditions, one requiring review and approval of a report describing the results of an aquifer test designed in consultation with the Department, and a second, requiring review and approval of a plan for long-term monitoring of aquifer performance, including target levels based on the pump test results and other relevant criteria. It is clear, as noted by the applicant, that expansion requiring increased use of on-site water will require modification of the

permit and additional data. In anticipation of expansion of the development, it is important that the ongoing monitoring of water levels be sufficient to collect adequate data to support the expanded use. The long-term water-use and water-level monitoring are therefore extremely important, and, as noted above, it may be advantageous to separate the details of that program from the review of the Phase I pump-test data, in order to allow construction and installation of the water system.

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resubmitted. This drawing should also make clear that the “specified sand” of Detail D3 refers to the specifications provided in Detail A1. (Note also that the references to “Section 804.2.2 of the Maine rules” in Detail D3 do not appear to be consistent with the subsurface disposal rules in effect as of the date of submission of the application or with the current (January 2011) wastewater disposal rules, and should be revised appropriately.) Although not explicitly stated in the response, it appears that this layer will provide for drainage even when the Eljen unit is less than two feet from the native material surface, as described in the previous memo. While the response is not strictly correct that “each Eljen row increases its distance above the ground surface”, given the cross-sections submitted for review, the response does note the possibility “that mounding will be higher than expected” in the higher rows of the system, and that this could be accommodated with minor changes (not requiring review) to the wastewater distribution system. The response to this item in the January 5, 2011 from Sweet Associates mentions installation of “shallow monitoring wells...in the disposal field to allow us to observe the actual mounding”. It is not clear from the materials received for review if these wells are to be the same as those references in the applicant’s response to paragraph 12 of the previous memo; certainly wells within the area of the disposal field are more likely to identify unexpected conditions and potential failure than the existing wells. No information describing numbers and locations of these shallow wells has been received for review as of the date of this memo.

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- 16) The applicant has agreed to the blasting specifications provided in the previous memo. As noted in that memo, as long as the low-permeability liner specified in the application is installed properly, groundwater concerns are minimized; however, it is essential that that liner be installed in the ponds. The applicant should notify the Department if bedrock is encountered during excavation of the ponds. Due to the potential for additional cost and delay if bedrock is discovered during construction rather than identified ahead of time, I would strongly suggest that the applicant conduct additional borings to depths somewhat greater than the proposed pond excavations, in order to determine whether or not bedrock will be encountered so that the construction schedule and budget can be established accordingly. Since, according to the information submitted, equipment will be onsite in the near future in order to drill the test wells, conducting these additional explorations at that time could reduce at least mobilization costs. Logs, locations, and other relevant information for any additional explorations should be submitted for review and approval prior to construction of the ponds.

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REVIEW MEMORANDUM

March 9, 2011

To: Beth Callahan, Project Manager, Division of Land Resource Regulation

From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Oxford Resort Casino, Oxford

- 1) The applicant has submitted a copy of a final cleanup report, together with related information, for the affected areas discovered at this site. This information includes a statement that 81.05 tons of contaminated soil were removed to be stockpiled offsite and “reused as a paving or construction fill product”. These may be acceptable uses of this material, although final decisions concerning suitable disposal are left to the Bureau of Remediation and Waste Management. The information submitted also includes results of water-quality testing at the Hall residence; analyte concentrations did not exceed quantitation limits.
- 2) The applicant has submitted a revised Spill Prevention, Control, and Countermeasures Plan, eliminating references to the pad area surrounding the fixed storage tank. The applicant has, however, added the possibility of truck-mounted tanks for refueling equipment. While these are not unusual, they were not previously referenced in the plan, and a minor addition should be made to include spill equipment for any truck equipped with such a tank; specifically, any truck so equipped should also carry a suitable shovel and container for excavation and temporary storage of any contaminated soils. Any contaminated soils should be stored in a manner that minimizes the potential for discharge and is consistent with applicable safety requirements. All contaminated materials should be removed from the site and disposed of properly as quickly as possible. Because this is a minor change to the plan at this stage, it would be acceptable for a copy including this change to be submitted to the project manager prior to construction.
- 3) The applicant has agreed to condition approval of the water supply system as proposed in the previous memo.
- 4) The applicant has submitted a revised plan set and maintenance plan for the wastewater disposal system. The plan set clarifies issues related to the fill specifications noted in the previous memo, and shows the location of monitoring wells to be installed within each of the disposal areas. The Monitoring Well Inspection and Maintenance log sheet included with the plan and the text of the Operation section of the plan indicate that water levels in monitoring wells are to be measured monthly and water quality data are to be collected quarterly; monitoring parameters include BOD, TSS, Nitrate-nitrogen, total nitrogen, and

dissolved oxygen. Operational monitoring of the treatment system effluent for these parameters is discussed in previous memoranda and other documents. The log notes that, if “tested parameters exceed anticipated levels” the operator will “report findings to the Design Engineer and the Maine DEP”; these levels are not specified but should be noted in the approval as equivalent to the minimum treatment standards previously defined for the wastewater treatment system.

- 5) The applicant now states that that the test pits numbered TP 2-1 through TP2-8 are not mislabeled but that they, as well as TP 1-1 through 1-5, and TP 4-1, are soil explorations related to investigations of onsite soil contamination and other issues. If so, then logs are generally available in the file for these explorations.

Maine Natural Areas Program

17 Elkins Lane

State House Station #93

Augusta, Maine 04333

Date: January 3, 2011

To: Beth Callahan, Maine DEP

From: Don Cameron, Ecologist

DEC

Re: Rare and exemplary botanical features, Oxford Resort Casino (L-25203-28-A-N),
Oxford, Maine.

I have searched the Natural Areas Program's Biological and Conservation Data System files for rare or unique botanical features in the vicinity of the proposed site in response to your request of December 28, 2010 for our agency's comments on the project.

According to our current information, there are no rare botanical features that will be disturbed within the project site. We therefore have no reservations regarding the proposed project as currently planned.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact our office if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.
