Exhibit 9A
Iowa Department of Natural Resources
Wastewater Engineering Section

Preliminary Review of Antidegradation Alternatives Analysis

For situations where a DNR construction permit will be required for construction, installation or modification of a disposal system this document is intended to *supplement* Chapter 11 of the Iowa Wastewater Facilities Design Standards to satisfy the requirements of the Iowa Antidegradation Implementation Procedure. When a DNR construction permit will not be required this document may be used as guidance in development of an alternatives analysis to demonstrate compliance with Iowa's antidegradation policy (567 IAC 61.2(2)). **Where antidegradation applies and construction is required, DNR-approval of the antidegradation alternatives analysis is required prior to submittal of a facility plan.**

1. ____ Is the preferred alternative a non-degrading alternative as defined in the Iowa Antidegradation Implementation Procedure and agreed to by the DNR? If "yes", the remainder of this checklist does not need to be completed.

2. ____ Has the alternatives analysis been dated and certified by an engineer licensed to practice within the State of Iowa?

3. ____ Is an executive summary of the alternatives analysis provided including descriptions of the purpose(s) of the project and/or analysis, a summary of the results of the analysis and identification of the preferred alternative?

4. ____ Have public notification & intergovernmental coordination and review requirements as described in Sections 4.1 & 4.2 of the Iowa Antidegradation Implementation Procedure been fulfilled?

   ☐ Public notice with 30-days notification and proof of publication

   ☐ Public notice copied to applicable agencies (include date):

   EPA Region VII _____
   U.S. Fish & Wildlife Service _____
   Iowa DNR Field Office _____
   Industrial contributors, if applicable _____
   County department of environmental health _____
   Other state whose waters may be affected _____
   Other interested parties _____

   ☐ Summary of comments received and responsiveness summary included?

5. ____ Are the existing and design wastewater flows and loadings for the planning period identified?

6. ____ Are the receiving stream network use designations and impairment status identified?

7. ____ Are the existing NPDES effluent limits and proposed effluent limits (based on both calculated numeric water quality criteria wasteload allocations and any applicable approved TMDL wasteload allocations) for all discharging alternatives identified?

8. ____ Are all pollutants of concern including the assigned Tier protection level for each POC identified?

9. ____ Alternatives and estimated present worth values:

Alt. No.	Description	Present Worth Value
1.		$
2.		$
3.		$
4.		$
5.		$
6.		$
7.		$
8.		$

10. ____ Were present worth values for annual operating costs developed using the discount rate published in the Federal Register per 18 CFR 704.39? One website that lists historic and current discount rates is http://www.economics.nrcs.usda.gov/cost/priceindexes/rates.html. Applicable rates are shown under the "WRDA 1974 Section 80(a)" heading and are for the Federal Fiscal Year (e.g., FY 2010 = 10/1/09 - 9/30/2010).

Discount Rate Used _____

11. ____ Classification and reasonableness of alternatives evaluated:

Alt. No.	BPCA, NDA or LDA?	Is the Alternative Reasonable?			
		Practicable?	Economically Efficient?	Affordable?	Reasonable?
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

12. ____ Does the analysis include a description and schematic of each alternative evaluated?

13. ____ Does the analysis include a pollutant-by-pollutant comparison of degradation for each discharging alternative found to be reasonable?

14. ____ Preferred Alternative: _____

15. ____ Is the preferred alternative the least degrading reasonable alternative?

16. ____ For alternatives found to be practicable and economically efficient but not affordable, is the basis for the affordability determination explained and documented?

☐ DNR Affordability Analysis worksheet included

17. ____ Is demonstration of the project Social and Economic Importance (SEI) included within the alternatives analysis?

Definitions

"Affordability" is an evaluation of the applicant's ability to pay for a given alternative as described in Section 3.2 of the Iowa Antidegradation Implementation Procedure. *Alternatives identified as practicable and economically efficient are considered affordable if the applicant does not provide an affordability analysis.*

"Base Pollution Control Alternative" means the most cost-effective alternative necessary to meet the more stringent of technology-based state/federal effluent guidelines or water quality-based limits.

"Detailed Evaluation" or "Evaluated in Detail" as used in this document means an analysis of a pollution control alternative in terms of its practicability (including anticipated treatment/pollutant removal capability vs. anticipated effluent limitations, if applicable), economic efficiency and affordability.

"Economic Efficiency" is an evaluation of pollution control costs as described in Section 3.2 of the Iowa Antidegradation Implementation Procedure.

"Practicability" is the evaluation of a given alternative's effectiveness, reliability and potential environmental impacts as described in Section 3.2 of the Iowa Antidegradation Implementation Procedure.

"Reasonable" means practicable, economically efficient and affordable.

"Screening Analysis" as used in this document means analysis of multiple pollution control alternatives that may include their practicability (including anticipated treatment/pollutant removal capability vs. anticipated effluent limitations, if applicable), economic efficiency and affordability. If the alternative is found not to be practicable then the analysis may exclude determinations of economic efficiency and affordability. Likewise, if the alternative is found to be practicable but not economically efficient, the analysis may exclude determination of affordability.

Acronyms

BPCA: The Base Pollution Control Alternative as defined above

LDA: Less-Degrading Alternative as defined in the Iowa Antidegradation Implementation Procedure

NDA: Non-Degrading Alternative as defined in the Iowa Antidegradation Implementation Procedure

POC: Pollutants of Concern as defined in the Iowa Antidegradation Implementation Procedure

Alternatives Considered

Alternatives including the Base Pollution Control Alternative (BPCA), non-degrading alternatives and less-degrading alternatives must be considered within the alternatives analysis.

1. The alternatives analysis must identify and include a detailed evaluation of the BPCA.

2. A screening analysis of NDAs as described in Section 3 of Iowa's Antidegradation Implementation Procedure must be provided within the alternatives analysis.

   All potentially practicable NDAs should be considered in the screening analysis. The analysis must clearly demonstrate that the NDAs are not reasonable for the department to consider allowing degradation to result from the proposed new or expanded discharge.

   The applicant should be aware that further evaluation of any NDAs not evaluated within the alternatives analysis may be required as the result of DNR review.

3. A screening analysis of LDAs as described in Section 3 of Iowa's Antidegradation Implementation Procedure must be provided within the alternatives analysis. The analysis must explain how each LDA evaluated would reduce POC loading(s) to the receiving stream below levels that would be provided by the BPCA.

   If more than one LDA is found to be reasonable, the alternative that results in the least degradation will be department's preferred alternative.

   The applicant should be aware that further evaluation of any LDAs not evaluated in detail within the alternatives analysis may be required as the result of DNR review.

Practicability, Economic Efficiency and Affordability

1. The practicability of each alternative shall be evaluated. Potential factors affecting the practicability of any given pollution control method are generally described in Section 3.2 of the Iowa Antidegradation Implementation Procedure. Factors that may affect the practicability of a given alternative that are not enumerated in the Antidegradation Implementation Procedure must be clearly explained within the alternatives analysis and will be reviewed on a case-by-case basis.

2. For alternatives found to be practicable, the economic efficiency shall be evaluated in terms of cost comparison as described in Section 3.2 of the Iowa Antidegradation Implementation Procedure.

3. For alternatives found to be both practicable and economically efficient, the affordability should be evaluated as described in Section 3.2 of the Iowa Antidegradation Implementation Procedure. If affordability is not evaluated for an alternative that is found to be both practicable and economically efficient, it will be assumed to be affordable.

Social and Economic Importance

Where the preferred alternative (the least degrading alternative that is reasonable) consists of the BPCA or an LDA, the applicant must demonstrate the Social and Economic Importance (SEI) of the project as described in Section 4.1 of the Iowa Antidegradation Implementation Procedure.