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 the Iowa Wastewater Facilities Design Standards to satisfy the requirements of the Iowa Antidegradation Implementation Procedure (Iowa AIP). 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 AIP 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 the public notification and intergovernmental coordination and review requirements as described in Sections 4.1 & 4.2 of the Iowa AIP been fulfilled?
   - ☐ Public notice with 30-days notification and proof of publication
   - ☐ Public notice copied to applicable agencies (include date):

Required Agencies	**Date**
EPA Region VII	
US Fish & Wildlife Service	
Iowa Environmental Council	
Environmental Law & Policy Center	
Winnebago Tribe of Nebraska	
Sac and Fox Tribe of the Mississippi in Iowa	
Iowa DNR Field Office	
County Environmental Health Department	

Other Agencies (where applicable)	**Date**
Iowa League of Cities (municipal projects only)	
Other state whose waters may be affected	
Industrial contributors	
Other applicable agencies	

   - ☐ 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 all practicable alternatives developed using the same discount rate?

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.					

☐ For NDA and LDA Alternatives that are eliminated because they are not economically efficient, does the analysis provide an explanation of how the additional costs are disproportionate to the possible environmental gain resulting from their implementation? Note that this is separate from the 115% non-binding guideline.

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 a demonstration of the projects' 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 AIP. *Alternatives identified as practicable and economically efficient are considered affordable if the applicant does not provide an affordability analysis.*
- "Base Pollution Control Alternative" or "BPCA" 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 AIP.
- "Practicability" is the evaluation of a given alternative's effectiveness, reliability and potential environmental impacts as described in Section 3.2 of the Iowa AIP.
- "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, 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 AIP
- NDA: Non-Degrading Alternative as defined in the Iowa AIP
- POC: Pollutants of Concern as defined in the Iowa AIP
- SEI: Social and Economic Importance as defined in the Iowa AIP

Alternatives Considered

Alternatives including the BPCA, NDA, and LDA must be considered in the alternatives analysis.

1. The alternatives analysis must identify and include a detailed evaluation of the BPCA.
2. The alternatives analysis must include a screening analysis of NDAs as described in Section 3 of the Iowa AIP.
    a. 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.
    b. 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. The alternatives analysis must include screening analysis of LDAs as described in Section 3 of the Iowa AIP.
    a. The screening 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.
    b. If more than one LDA is found to be reasonable, the alternative that results in the least degradation will be department's preferred alternative.
    c. 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

The practicability of each alternative shall be evaluated in the alternatives analysis.

1. Potential factors affecting the practicability of any given pollution control method are generally described in Section 3.2 of the Iowa AIP. Factors that may affect the practicability of a given alternative that are not enumerated in the Iowa AIP must be clearly explained in 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 AIP.

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 AIP. 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 SEI of the project as described in Section 4.1 of the Iowa AIP.