

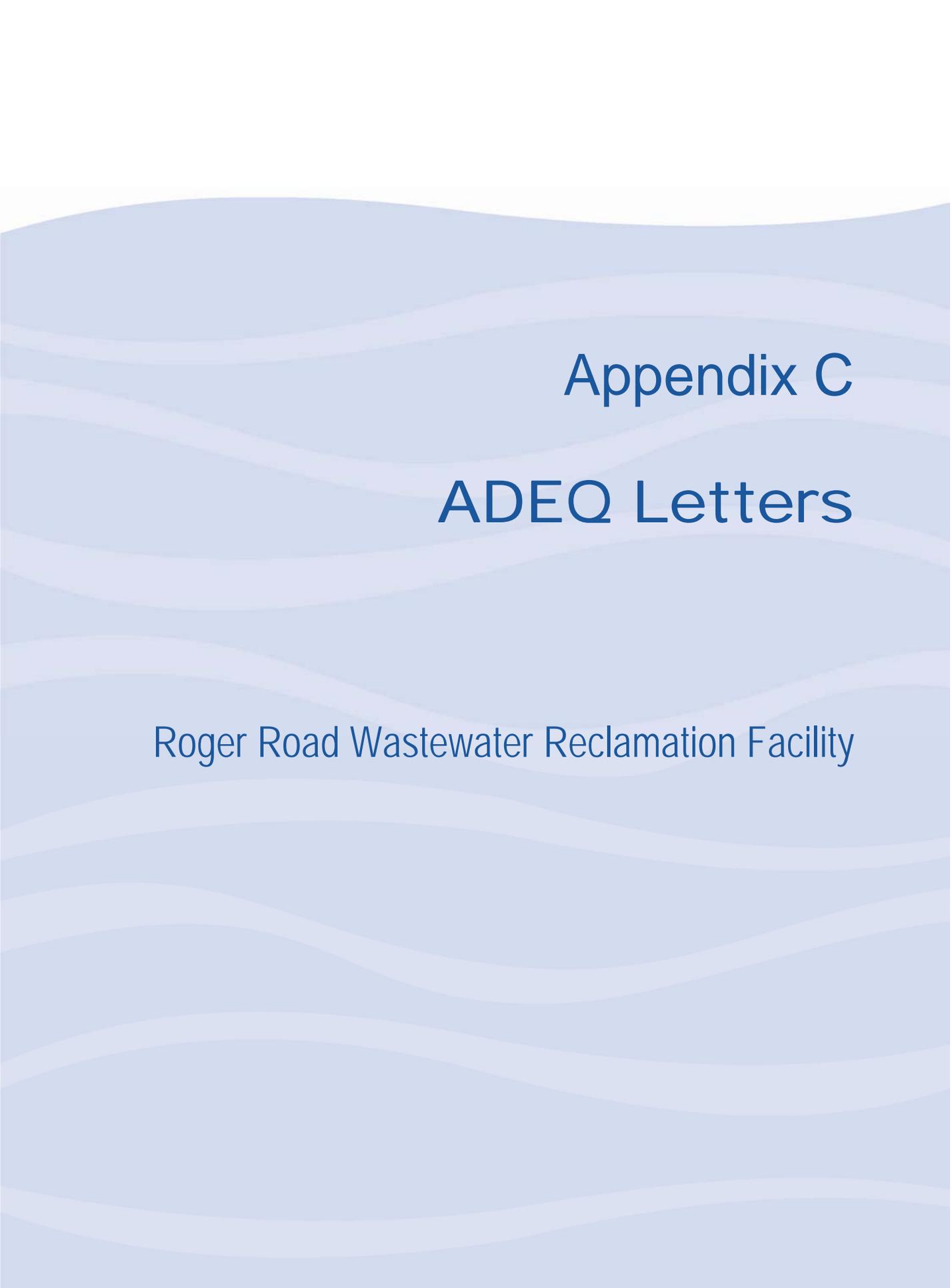
**Regional Optimization Master Plan  
Final Report**



APPENDIX C

ADEQ Letters





# Appendix C

## ADEQ Letters

Roger Road Wastewater Reclamation Facility



RECEIVED

JAN 31 2007

GREELEY & HANSEN  
Phoenix, AZ

**PIMA COUNTY**  
**WASTEWATER MANAGEMENT DEPARTMENT**  
201 NORTH STONE AVENUE  
TUCSON, ARIZONA 85701-1207

**MICHAEL GRITZUK, P.E.**  
DIRECTOR

PH: (520) 740-6500  
FAX: (520) 620-0135

January 26, 2007

Joan Card  
Water Quality Division Director  
Arizona Department of Environmental Quality  
1110 W. Washington  
Phoenix, AZ 85007

**RE: Roger Road Wastewater Treatment Facility (WWTF) AZPDES Permit No. AZ0020923**

Dear Ms. Card:

This letter is written in response to the requirement contained in Part VI *Special Conditions, B(1) Ammonia Toxicity Variance Terms and Conditions* of the Pima County Roger Road Wastewater Treatment Facility AZPDES permit AZ0020923 issued on March 2, 2006 which requires modifying the Roger Road facility to remove nitrogen ammonia to below toxic levels.

The Pima County Wastewater Management Department (PCWMD) retained the services of Greeley and Hansen Engineers to perform a comprehensive evaluation of the long range planning goals for our Department that we have termed the Regional Optimization Master Plan or ROMP. The purpose of the ROMP study was to perform a holistic evaluation of current treatment plant conditions and continued viability in relation to current and anticipated community needs and regulatory requirements. A key topic addressed in ROMP was the development of a plan to comply with the AZPDES permit requirement and also included odor control, pathogen reduction and improvements in the quality of Biosolids production.

As the results of the ROMP study have the potential to impact numerous stakeholders within Pima County, not just PCWMD, a comprehensive stakeholder panel was solicited for participation. Participants included a scientific peer review panel consisting of Tucson Water, Town of Marana, Town of Oro Valley, Metropolitan Water District, the Pima County Board of Supervisors appointed Wastewater Advisory Committee, Pima Association of Governments, Raffelis Financial Consultants, Brown and Caldwell Engineering, Malcolm Pirnie Engineering, Black and Veatch Engineering, and Pima County Natural Resources Parks and Recreation Department. Evaluation criteria consisted of the following:

- Evaluate and recommend facility operations needed to meet current and anticipated future regulatory requirements
- Evaluate and recommend facility operations needed to meet the anticipated capacity demand through 2030
- Evaluate and recommend facility changes to assure reliable and effective future operability
- Evaluate and recommend facility operations to meet the needs of the Tucson Water reclaimed water system
- Evaluate and recommend facility operations to minimize financial impacts on Department ratepayers
- Evaluate and recommend facility operations to meet community needs

This evaluation of the facility configuration concluded with the following recommendations:

- **Roger Road WWTF** - Construct a new 32 MGD water reclamation treatment plant with a 5-stage Bardenpho treatment process adjacent to the existing Roger Road WWTP and decommission the existing facility
- All Biosolids generated in the new water reclamation facility will be conveyed to and processed at a Regional Biosolids Facility to be located at the Ina Road WPCF.
- **Plant Interconnect** – Construct a new plant interconnect pipeline between the new water reclamation treatment facility and the existing Ina Road WPCF.
- Expand the existing 37.5 MGD Ina Road WWTP to a capacity of 50 MGD.
- All facilities will be designed to meet the capacity needs to 2030.

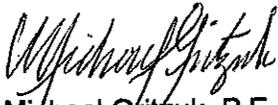
When implemented, these recommendations are intended to achieve the AZPDES permit required reduction of ammonia to below toxic levels at the effluent discharge point of the new facility by the year 2015 as indicated in the permit.

The above ROMP plan was presented to the Pima County Board of Supervisors (BOS) on January 16, 2007 at which time the Board approved the plan and authorized the submission of this letter to you.

Additionally, it should be noted that while the preliminary cost estimate for these improvements (Ina and Roger Road upgrades) is approximately \$501,000,000 based upon 2006 unit cost estimates, this figure is expected to increase as cost estimates are further refined during the completion of the ROMP and due to cost escalations during the years of implementation of the ROMP. These projected costs far exceed the Department's funding ability through current system revenues. Several bond packages are necessary to fund these desired improvements. For these reasons, Pima County Board of Supervisors must also authorize an increase in revenues sufficient to pay for this effort.

We will keep you updated on the progress of this project as more information becomes available and welcome your comments to this plan. Please feel free to contact me at (520) 740-6500 if you have any questions.

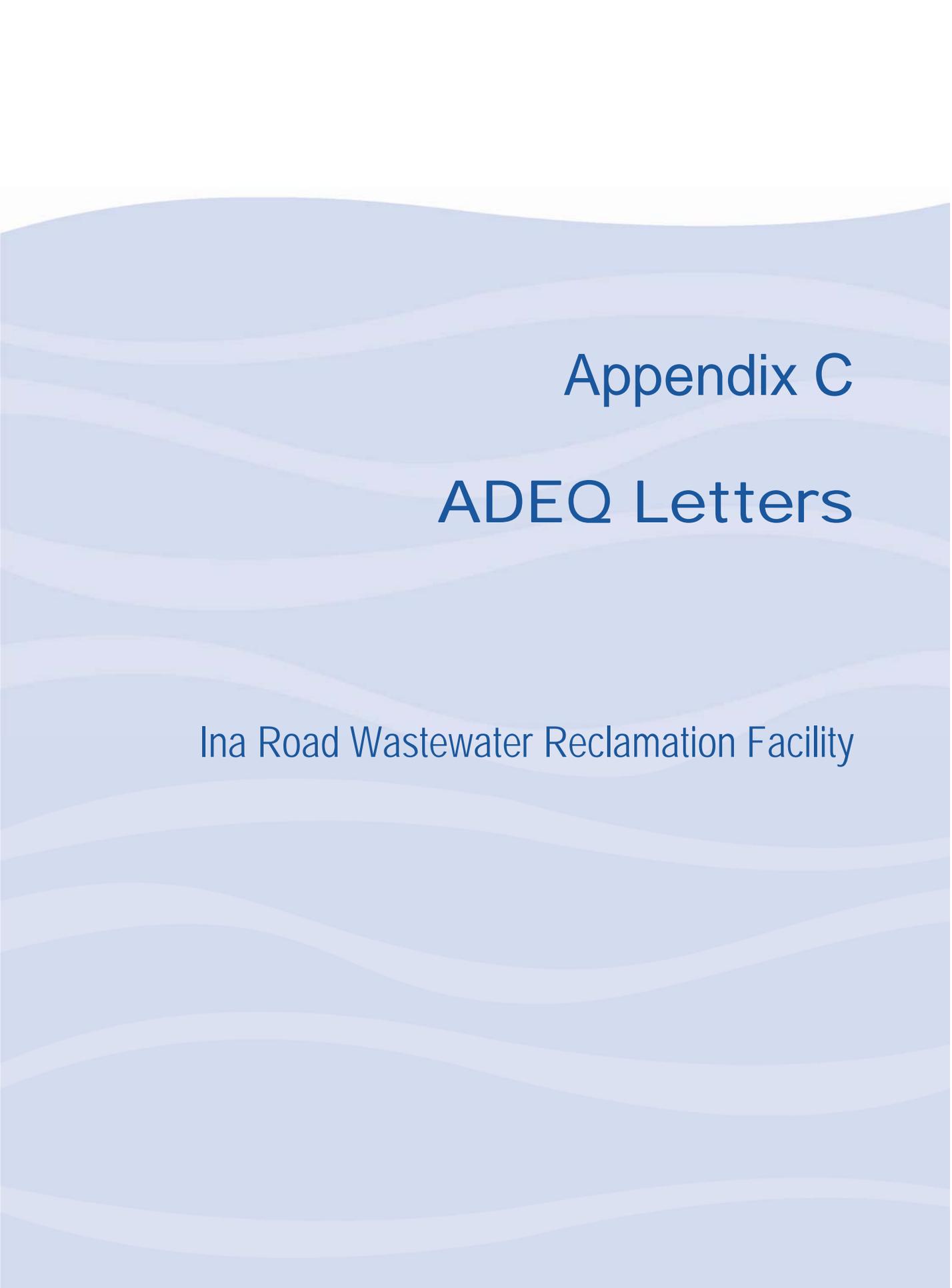
Sincerely,



Michael Gritzuk, P.E.  
Director

MG:mo

- c: The Honorable Chair and Members of the Pima County Board of Supervisors  
C.H. Huckelberry, County Administrator  
John M. Bernal, P.E., Deputy County Administrator – Public Works  
Susan Keith, Director- ADEQ Southern Regional Office  
Paul M. Bennett, P.E., Deputy Director – Planning & Engineering  
Mike Bunch, Deputy Director – Conveyance & Development Services  
Jackson Jenkins, Deputy Director – Treatment  
Jeff Nichols, C.P.A., Controller  
Andrew Richardson, Principal, Greeley & Hanson  
Jerry Bish, P.E., Greeley & Hanson

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# Appendix C

## ADEQ Letters

Ina Road Wastewater Reclamation Facility



**PIMA COUNTY  
WASTEWATER MANAGEMENT DEPARTMENT**

201 NORTH STONE AVENUE  
TUCSON, ARIZONA 85701-1207

January 26, 2007

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PH: (520) 740-6500  
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Joan Card  
Water Quality Division Director  
Arizona Department of Environmental Quality  
1110 W. Washington  
Phoenix, AZ 85007

**RE: Ina Road Water Pollution Control Facility (WPCF) AZPDES Permit No. AZ0020001**

Dear Ms. Card:

This letter is written in response to the requirement contained in Part VI *Special Conditions, B (1) Ammonia Toxicity Variance Terms and Conditions* of the Pima County Ina Road Wastewater Treatment facility AZPDES permit AZ0020001 issued on January 2, 2006 to modify the Ina Road facility to remove nitrogen ammonia below toxic levels.

The Pima County Wastewater Management Department (PCWMD) retained the services of Greeley and Hansen Engineers to perform a comprehensive evaluation of the long range planning goals for our Department that we have termed the Regional Optimization Master Plan or ROMP. The purpose of the ROMP study was to perform a holistic evaluation of current treatment plant conditions and continued viability in relation to current and anticipated community needs and regulatory requirements. A key topic addressed in the ROMP was the development of a plan to comply with the AZPDES permit requirement and also included odor control, pathogen reduction and improvements in the quality of biosolids production.

As the results of the ROMP study have the potential to impact numerous stakeholders within Pima County, not just PCWMD, a comprehensive stakeholder panel was solicited for participation. Participants included a peer review panel consisting of Tucson Water, Town of Marana, Town of Oro Valley, Metro Water, the Pima County Board of Supervisors appointed Wastewater Advisory Committee, Pima Association of Governments, Raftelis Financial Consultants, Brown and Caldwell Engineering, Malcolm Pirnie Engineering, Black and Veatch Engineering, and Pima County Natural Resources Parks and Recreation Department. Evaluation criteria consisted of the following:

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- Evaluate and recommend facility operations to meet the needs of the Tucson Water reclaimed water system
- Evaluate and recommend facility operations to minimize financial impacts on Department ratepayers
- Evaluate and recommend facility operations to meet community needs

This evaluation of the facility configuration has been and consists of the following recommendations:

- **Ina Road WPCF** - Conversion of the existing High Purity Oxygen treatment train to a five stage Bardenpho treatment process capable of reducing nutrient concentration to levels required by the AZPDES permit at a treatment capacity of 50 MGD.
- Improvements will also include the development of a Regional Biosolids Treatment Facility at the Ina Road facility. Roger Road biosolids will also be treated and processed at the Regional Biosolids Facility located at the Ina Road WPCF.

When implemented, these recommendations are intended to achieve the AZPDES permit required reduction of ammonia to below toxic levels at the Ina Road effluent discharge point by year 2014, as indicated in the permit.

The above ROMP plan was presented to the Pima County Board of Supervisors (BOS) on January 16, 2007, at which time the Board approved the plan and authorized the submission of this letter to you.

Additionally, it should be noted that while the preliminary cost estimate for these improvements (Ina and Roger Road upgrades) is approximately \$501,000,000 based upon 2006 unit cost estimates, this figure is expected to increase as cost estimates are further refined during the completion of the study and due to cost escalations during the years of implementation of the ROMP. These projected costs far exceed the Department's funding ability through current system revenues. Several bond packages are necessary to fund these desired improvements. For these reasons, Pima County will need to request and receive voter approval as design efforts are initiated. Similarly, the Pima County BOS must also authorize an increase in revenues sufficient to fund this effort.

We will keep you updated on the progress of this project as more information becomes available and welcome your comments on this plan. Please feel free to contact me at (520) 740-6500 if you have any questions.

Sincerely,



Michael Gritzuk, P.E.  
Director

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- c: The Honorable Chair and Members of the Pima County Board of Supervisors  
C.H. Huckelberry, County Administrator  
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