COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF NORTHERN KENTUCKY	)	
WATER DISTRICT FOR APPROVAL OF	)	CASE NO. 2014-00151
THE TAYLOR MILL TREATMENT PLANT	)	
BASIN AND ELECTRICAL REPAIRS,	)	
ISSUANCE OF A CERTIFICATE OF	)	
CONVENIENCE AND NECESSITY AND	)	
APPROVAL OF FINANCING	)	

APPLICATION FOR APPROVAL OF CONSTRUCTION AND FINANCING

Northern Kentucky Water District (NKWD), by counsel, petitions for an order approving the construction of improvements to the Taylor Mill Treatment Plant as described below pursuant to KRS 278.020. Approval of the financing pursuant to KRS 278.300 is also requested.

In support of the application, the following information is provided:

1. NKWD's office address is 2835 Crescent Spring Rd., Erlanger, KY 41018-0640. Its principal officers are listed in its current Annual Report on page 6, which is filed with the Commission as are its prior years Reports and is incorporated by reference.

Its contact officer is:

Jack Bragg, Vice President Finance
2835 Crescent Spring Rd.
Erlanger, KY 41018-0640
(859) 578 9898 Phone
(859) 578-3668 fax
jbragg@nkywater.org

2. NKWD is a non-profit water district organized under Chapter 74 and has no separate articles of incorporation;

3. A description of NKWD's water system and its property stated at original cost by accounts is contained in its Annual Report.

4. NKWD serves retail customers in Kenton, Boone and Campbell Counties and sells water at wholesale to non-affiliated water distribution systems in Kenton, Boone, Pendleton and Campbell Counties.

5. NKWD proposes to construct new facilities as described in Exhibit A.

The project involves the structural rehabilitation of the basins and tunnel housing the preliminary treatment processes at the Taylor Mill Treatment Plant, as well as the replacement of the Filter Building roof and skylights. The improvements include removing soft concrete and replacing with new concrete in walls and elevated slabs; repair cracks in the floor and walls; installing seals at all twelve expansion joints; repairing lost metal and recoating rake arms that collect the settled solids in the bottom of the basins; and replacing tube settlers. The estimated cost for these repairs and equipment replacement is $600,000.

The motor starters are original equipment and in need of replacement. Because of their age, parts are difficult to procure and typically require several days for delivery when located. Four of the six starters are located outside. These are the only units within the District that are not located indoors. These units start pumps that are critical for supplying water to about 60% of Northern’s customers. The electrical improvements will include modifications to the third floor of the Filter Building to house the motor starters; new motor starters for existing pumps; and modifications to increase air flow to the pump room. Because of the amount of heat generated, it is also recommended the room housing the motor starters be air conditioned for longevity of the equipment. The estimated cost for the electrical improvements is $900,000. This work was included in the Advanced Treatment project as part of the $5.9 million in electrical improvements.

During the detailed design process, it was determined that it would be advantageous for optimized treatment and pumping operations to convert two of the existing pumps (Pump Nos. 5 and 6) from constant speed to variable frequency drives (VFDs). To facilitate the heavier loads from the VFDs, the Filter Building roof that was already scheduled for replacement will need to be replaced with a lighter roofing system.

Also included in the project is replacement of four of the six Taylor Mill pumps because of age. This work was included in the District's 2013 Five Year Capital Budget for $932,750 in 2014 for one pump and $2,798,250 for three pumps in 2016.

The estimated cost of the total project with engineering, construction, and contingencies is $4,000,000.

This project will be paid from the District's Five-Year Capital Budget, PSC No. 212 "TMTP Electrical and Basin Improvements" with a budget of $4,000,000 which includes construction cost, engineering, and contingencies. A summary of the project costs is provided below:

- Design Engineering $ 200,000
- Construction Engineering $ 75,000
- Contractor's Bid $ 3,468,997
- Misc. & Contingencies $ 256,003

Total Project Cost $ 4,000,000

The project will be funded through multiple sources. The District intends to apply $1,000,000 of SRF Loan F13-012 to this project. The project is partially funded through the District's Operational Capital Budget in the amount of $2,483,000. It is proposed that the remaining $517,000 be taken from contingencies leftover in Bond Anticipation Note 2011.

6. The construction is in the public interest and is required to allow NKWD to continue to provide adequate service to its customers. The project, its cost, need and other details are contained in Exhibit A. The District has received all approvals from the DOW for the Plans and Specifications and funding for these improvements. See Exhibit B.

7. The total financing will be approximately $4,000,000. The $1,000,000 SRF portion of the funding is part of a $4,000,000 loan from the Kentucky Infrastructure Authority, which is also part of the funding for the project in Case 2014-00100 currently pending with the Commission. The remaining funds from that loan will be used for related water improvement projects as described in below. Approval for the construction and financing of those projects will be sought at the time of the receipt of bids for each of those projects. NKWD requested approval of the total $4,000,000 loan in Case 2014-00100. See Exhibit D for details of the loan, the remaining projects to be funded and the KIA approval letter. These projects were included in the five year capital budget filed as Exhibit R in Case No. 2012-00072. The application for approval of the remaining project associated with this loan is expected to be filed within several weeks.

PSC Ref. No.		PROJECT	SRF Loan Amount	Other Funding	Total Projected Cost to Complete
207	184-0470	Annual General Facility R&R - Plants, Tanks, P.S. 2011-36" Raw Water Line	$928,000	$496,000	$1,424,000
212	184-0476	TMTP Electrical & Basin Improvements	$1,000,000	$3,000,000	$4,000,000
128	184-0749	36" Licking River Crossing	$2,072,000	$734,000	$2,806,000
			$4,000,000		

8. Easements and rights of way are not required, see Exhibit B.

9. This service will not compete with any other utility in the area.

10. The proposed construction project identified in Exhibit A is scheduled to begin construction in upon PSC approval and substantially completed in 12 months, beginning in June, 2014 and completed in June, 2015. Board approval of the final bids for the project is included in Exhibit C. The bids were opened February 25, 2014 and are subject to acceptance for 120 days. **The bids will expire June 25, 2014**.

11. No new franchises are required. A copy of the DOW letter approving the Plans

and Specifications for the proposed improvements is attached as Exhibit B.

12. Construction descriptions are in Exhibit A and Bid Documents. Facts relied on to justify the public need are included in the project descriptions in Exhibit A.

13. Maps of the area showing location of the proposed facilities are in Exhibit A.

14. The construction costs will be funded by as described above.

15. Estimated operating costs for operation and maintenance, depreciation and debt service after construction are shown in Exhibit D.

16. A description of the facilities and operation of the system are in Exhibit A.

17. A full description of the route, location of the project, description of construction and related information is in Exhibit A.

18. The start date for construction is June, 2014. The proposed in-service date is June, 2015. The total estimated cost of construction at completion is referenced in Exhibits A, B and D.

19. CWIP at end of test year is listed in the Annual Report incorporated by reference.

20. Plant retirements are listed in Exhibit B and the Annual Report. No salvage values are included as booked.

21. The use of the funds and need for the facilities is justified based on a the engineering report included as Exhibit A

22. No rate adjustment is being proposed.

23. The following information is provided in response to 807 KAR 5:001 (8):

a. Articles of Incorporation – None. NKWD is a statutorily created water district under KRS Chapter 74;

24. The following information is supplied pursuant to 807 KAR 5:001(9):

a. Facts relied upon to show that the application is in the public interest: See Exhibit A.

25. The following information is provided as required by 807 KAR 5:001 (11):

a. A general description of the property is contained in the Annual Report,

b. No stock is to be issued; No bonds are to be issued in this case;

c. There is no refunding or refinancing;

d. The proceeds of the financing are to construct the property described in Exhibit A.

e. The par value, expenses, use of proceeds, interest rates and other information is not applicable because no bonds are being issued at this time.

26. The following exhibits are provided pursuant to 807 KAR 5:001 (11)(2):

a. There are no trust deeds. All notes, indebtedness and mortgages are included in Exhibit F.

b. Property is to be constructed is described in Exhibit A.

27. The following information is provided pursuant to 807 KAR 5:001(6):

a. No stock is authorized.

b. No stock is issued.

c. There are no stock preferences.

d. Mortgages are listed in Exhibit F.

e. Bonds are listed in Exhibit F.

f. Notes are listed in Exhibit F.

g. Other indebtedness is listed in Exhibit F.

h. No dividends have been paid.

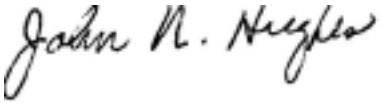
i. Current balance sheet, income statement and debt schedule are attached as Exhibits F and G.

28. USoA plant accounts are included in Exhibit D.

29. Depreciation cost, cost of operation after installation and debt service are in Exhibit D.

For these reasons, the District requests issuance of an order granting authority to construct and finance the facilities and for any other authorization that may be necessary.

SUBMITTED BY:



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Frankfort, KY 40601

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Kentucky Water District
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502 227 7270 Ph.

LIST OF EXHIBITS

Section 8(1)	Full name and post office address of applicant and a reference to the particular provision of law requiring Commission approval.	Application
Section 8(2)	The original and 10 copies of the application with an additional copy for any party named therein as an interested party.	yes
Section 8(3)	If applicant is a corporation, a certified copy of the Articles of Incorporation and all amendments thereto or if the articles were filed with the PSC in a prior proceeding, a reference to the style and case number of the prior proceeding.	n/a
Section 9(2)	1. The facts relied upon to show that the proposed new construction is or will be required by public convenience or necessity.	Exhibit A
	2. Copies of franchises or permits, if any, from the proper public authority for the proposed new construction or extension, if not previously filed with the commission.	Exhibit B
	3. A full description of the proposed location, route, or routes of the new construction or extension, including a description of the manner in which same will be constructed, and also the names of all public utilities, corporations, or persons with whom the	Exhibit A

	proposed new construction or extension is likely to compete.	
	4. Three (3) maps to suitable scale (preferably not more than two (2) miles per inch) showing the location or route of the proposed new construction or extension, as well as the location to scale of any like facilities owned by others located anywhere within the map area with adequate identification as to the ownership of such other facilities.	Exhibit A
	5. The manner, in detail, in which it is proposed to finance the new construction or extension.	Exhibits A, D
	6. An estimated cost of operation after the proposed facilities are completed.	Exhibit D
KRS 322.340	Engineering plans, specifications, plats and report for the proposed construction. The engineering documents prepared by a registered engineer, requires that they be signed, sealed, and dated by an engineer registered in Kentucky.	Exhibit A
Section 8(1)	Full name and post office address of applicant and a reference to the particular provision of law requiring Commission approval.	Application
Section 8(2)	The original and 10 copies of the application with an additional copy for any party named therein as an interested party.	yes
Section 8(3)	If applicant is a corporation, a certified copy of the Articles of Incorporation and all amendments thereto or if the articles were filed with the PSC in a prior proceeding, a reference to the style and case number of the prior proceeding.	n/a
KRS 278.300(2)	Every financing application shall be made under oath, and shall be signed and filed on behalf of the utility by its president, or by a vice president, auditor, comptroller or other executive officer having knowledge of the matters set forth and duly designated by the utility.	Application

807 KAR 5:001:		
Section 11(1)(a)	Description of applicant's property.	
	Statement of original cost of applicant's property and the cost to the applicant, if different.	Annual Rpt
Section 11(1)(b)	If stock is to be issued: and kinds to be issued.	none
	--Description of amount and kinds to be issued.	
	--If preferred stock, a description of the preferences.	none
	If Bonds or Notes or Other Indebtedness is proposed:	Exhibit F
	--Description of the amount(s)	
	--Full description of all terms	
	--Interest rates(s)	
	--Whether the debt is to be secured and if so a description of how it's secured.	
Section 11(1)(c)	Statement of how proceeds are to be used. Should show amounts for each type of use (i.e., property, debt refunding, etc.)	Exhibit A
807 KAR 5:001:		
Section 11(1)(d)	If proceeds are for property acquisition, give a full description thereof. Supply any contracts.	n/a
Section 11(1)(e)	If proceeds are to refund outstanding obligations, give:	n/a
	--Par value	
	--Amount for which actually sold	
	--Expenses and application of proceeds	
	--Date of obligations	
	--Total amount	
	--Time held	
	--Interest rate	

	--Payee	
Section 11(2)(a)	Financial Exhibit (see below)	
Section 11(2)(b)	Copies of all trust deeds or mortgages. If previously filed, state case number.	Annual Rpt
Section 11(2)(c)	If Property to be acquired:	Exhibit A
	--Maps and plans of property.	
Section 11(2)(c)	--Detailed estimates by USOA account number.	Exhibit D

ALL INFORMATION BELOW IN SECTIONS 6(1) THROUGH 6(9) SHOULD COVER THE PERIOD ENDING NOT MORE THAN 90 DAYS PRIOR TO DATE ON WHICH APPLICATION WAS FILED:

807 KAR 5:001		
Section 6(1)	Amount and types of stock authorized.	None
Section 6(2)	Amount and types of stock issued and outstanding.	None
Section 6(3)	Detail of preference terms of preferred stock.	None
Section 6(4)	Mortgages:	Exhibit F
	--Date of Execution	
	--Name of Mortgagor	
	--Name of Mortgagee or Trustee	
	--Amount of Indebtedness Secured	
	--Sinking Fund Provisions	
Section 6(5)	Bonds	Exhibit F
	--Amount Authorized	
	--Amount Issued	
	--Name of Utility Who Issued	
	--Description of Each Class Issued	
	--Date of Issue	
	--Date of Maturity	

	--How Secured	
	--Interest Paid in Last Fiscal Year	
Section 6(6)	Notes Outstanding:	Exhibit F
	--Date of Issue	
	--Amount	
	--Maturity Date	
	--Rate of Interest	
	--In Whose Favor	
	--Interest Paid in Last Fiscal Year	
Section 6(7)	Other Indebtedness:	
	--Description of Each Class	
	--How Secured	
	--Description of Any Assumption of Indebtedness by Outside Party (i.e., any transfer)	
	--Interest Paid in Last Fiscal Yr.	none
Section 6(8)	Rate and amount of dividends paid during the five (5) previous fiscal years and the amount of capital stock on which dividends were paid each year.	None
Section 6(9)	Detailed income statement and balance sheet.	Exhibits F G

NORTHERN KENTUCKY
WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

NORTHERN KENTUCKY WATER DISTRICT
Taylor Mill Treatment Plant Electrical and Basin Improvements
184-476

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EXHIBIT	TITLE
A	ENGINEERING REPORTS AND INFORMATION Project map, Basis of Design Report; Engineer's opinion of probable total construction cost; plans titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014, sealed by a P.E.; specifications titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014 and sealed by a P.E.
B	Certified statement from an authorized utility Official confirming:
	(1) Affidavit
	(2) Franchises
	(3) Plan review and permit status
	(4) Easements and Right-Of-Way status
	(5) Construction dates and proposed date in service
	(6) Plant retirements
C	BID INFORMATION AND BOARD RESOLUTION Bid tabulation, Engineer's recommendation of award, Board resolution.
D	PROJECT FINANCE INFORMATION Customers added and revenue effect, Debt issuance and source of debt, Additional costs and operating and maintenance, USoA plant account, Depreciation cost and debt service after construction.
E	SCHEDULE OF MORTGAGES, BONDS, NOTES, AND OTHER INDEBTEDNESS
F	CURRENT BALANCE SHEET AND INCOME STATEMENT

Taylor Mill Treatment Plant
Electrical and Basin Improvements

Project 184-476

ProjectDescription:

The project involves the structural rehabilitation of the basins and tunnel housing the preliminary treatment processes at the Taylor Mill Treatment Plant, as well as the replacement of the Filter Building roof and skylights. The improvements include removing soft concrete and replacing with new concrete in walls and elevated slabs; repair cracks in the floor and walls; installing seals at all twelve expansion joints; repairing lost metal and recoating rake arms that collect the settled solids in the bottom of the basins; and replacing tube settlers. The estimated cost for these repairs and equipment replacement is $600,000. These improvements are recommended in order to extend the life of the basins an estimated 10 years, which allows deferment of a new $6.4 million pretreatment basin.

The motor starters are original equipment and in need of replacement. Because of their age, parts are difficult to procure and typically require several days for delivery when located. Four of the six starters are located outside. These are the only units within the District that are not located indoors. These units start pumps that are critical for supplying water to about 60% of our customers. The electrical improvements will include modifications to the third floor of the Filter Building to house the motor starters; new motor starters for existing pumps; and modifications to increase air flow to the pump room. Because of the amount of heat generated, it is also recommended the room housing the motor starters be air conditioned for longevity of the equipment. The estimated cost for the electrical improvements is $900,000. This work was included in the Advanced Treatment project as part of the $5.9 million in electrical improvements.

During the detailed design process, staff determined it would be advantageous for optimized treatment and pumping operations to convert two of the existing pumps (Pump Nos. 5 and 6) from constant speed to variable frequency drives (VFDs). This will allow a pump to operate over a wide range of flows instead of one rate of flow, which increases flexibility for operating the treatment process and for pumping to fill the Dudley Tanks. The estimated power savings by installing VFDs on these pumps is over $20,000 a year. Installing VFDs in the future would make any new motor starter equipment obsolete. The additional cost above motor starters for adding the VFDs is $300,000. To facilitate the heavier loads from the VFDs, the Filter Building roof that was already scheduled for replacement will need to be replaced with a lighter roofing system. The 12 skylights installed in the 1950s are leaking and will also be replaced. The estimated cost of the roofing improvements is $200,000, as opposed to more costly structural modifications.

The District's Asset Management Program recommended replacement of four of the six Taylor Mill pumps because of age. This work was included in the District's 2013, 5-

Year Capital Budget for $932,750 in 2014 for one pump and $2,798,250 for three pumps in 2016. Staff identified Pump Nos. 1, 3, 5 and 6 as the best pumps/motors for replacement due to age, current condition, and present rate of efficiency. Staff determined through field testing that Pump Nos. 1 and 6 having 600 horsepower motors could be replaced with smaller 450 horsepower motors to better match the required pumping conditions. Similarly Pump No. 5 can be replaced with a 900 horsepower motor instead of a 1,250 horsepower motor. The combined pumping capacity will actually be 20% higher even though the motors can be 25% smaller. The estimated power savings by installing a smaller motor for these three pumps is at least $50,000 a year. Rather than coordinate two separate simultaneous construction projects (one for the pump/motor replacement and one for the motor starter replacement), staff recommended these projects be bid as one project. Staff incorrectly thought that these four pumps could be replaced for the original budget of $932,750 proposed for one pump and did not include the additional $2,798,250 component of the 2013 5-Year Capital Budget in the 2014 budget. The significant pipe and electrical work needed to install the new pumps was underestimated, which was confirmed by the design engineers pre-bid project budget. After receiving bids, the estimated cost for replacement of all four pumps is $1.8 million. This amount is still about one-half of the original 2013 5-Year Capital Budget cost of $3.7 million. In consideration of the budget, the District selected an alternate deduct bid item to remove replacement of Pump No. 3. This will reduce the project cost by $331,000. This pump replacement is now planned to be deferred until at least 2016. Therefore, the replacement of pumps and associated piping and control valves is approximately $1.5 million.

The recommended award amount for construction is $3,468,997.

The bids were opened February 25, 2014 and are subject to acceptance for 120 days. Therefore, the bids will expire June 25, 2014.

The estimated cost of the total project with engineering, construction, and contingencies is $4,000,000.

Case No. 2014-00151
Exhibit A

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

ENGINEERING REPORTS AND INFORMATION

Project Map

Basis of Design Report

Engineer's Opinion of Probable Total Construction Cost

Plans prepared by Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014

Specifications prepared by Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014

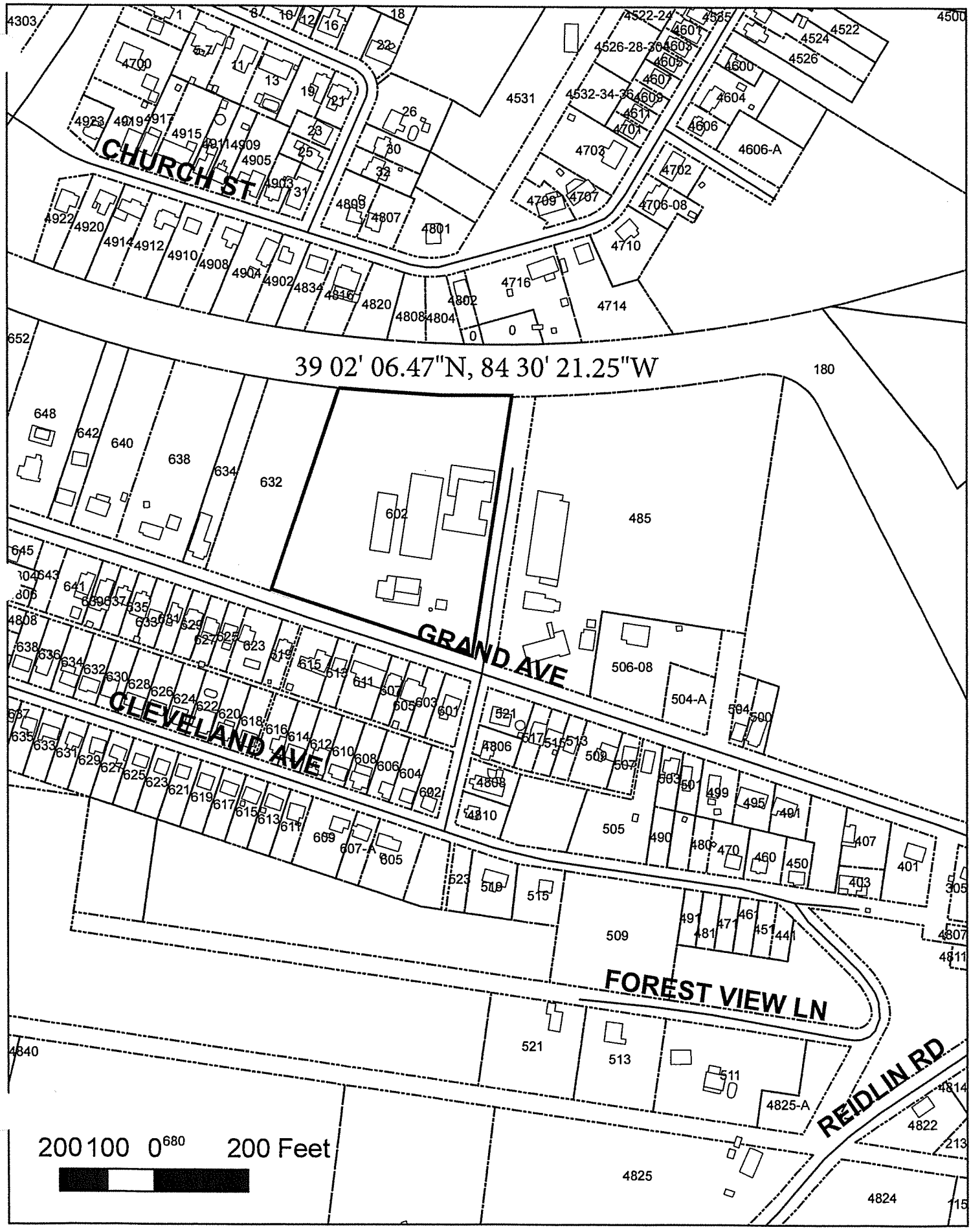
Case No. 2014-00151
Exhibit A

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Project Map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CHURCH ST
GRAND AVE
CLEVELAND AVE
FOREST VIEW LN
REIDLIN RD
200 100 0 680 200 Feet

Case No. 2014-00151
Exhibit A

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Basis of Design Report

MALCOM PIRNIE | ARCADIS

The Water Division of ARCADIS

Imagine the result

Magna ENGINEERS

Northern Kentucky Water District

Northern Kentucky Water District

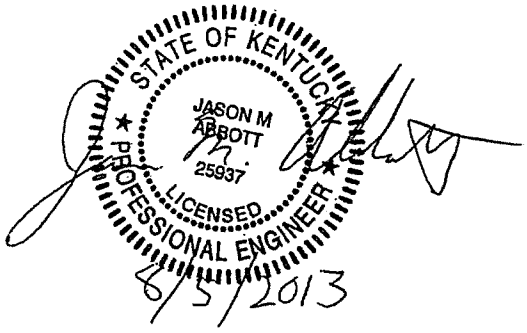
Taylor Mill Treatment Plant

Electrical and Basin Improvements

Preliminary Design Report

FINAL

August 5, 2013



3. Structural

3.1 Introduction

First constructed in the mid-1950s, the Taylor Mill Water Treatment Plant sedimentation basin has been in service for nearly 60 years. Shortly following the initial basin construction, the south sedimentation basin was added to the plant in the mid-1960s and has been in operation for the last 50 years. The basin structure is a partially buried cast-in-place concrete structure that includes an influent rapid mix area, north and south flocculation tanks, north and south sedimentation tanks, and an effluent channel which directs flow to the plant filter building for subsequent treatment. A single tunnel divides the north and south sides of the structure and connects the existing filter and chemical buildings. Demolition and repair work is to be designed and detailed to provide improved safety and increased service-life to the facility by addressing areas of leakage, cracking, and structure degradation throughout the basins, tanks, and channels.

3.2 Design Approach

The progressive deterioration of the sedimentation basins has been thoroughly documented since approximately 2001. Numerous condition reports record concrete cracking, railing anchorage deterioration and water leakage observed throughout the basin structures. A structural condition assessment of the facility was also previously performed to identify the existing conditions of the basins. For the scope of structural repairs included in this report, the results of the previous assessment were combined with the previous condition reports to derive the necessary improvements. Items outside the consideration of preceding reports and assessments were not considered in this PDR as current in depth studies or testing are not being performed. Where structural repairs are required, manufacturer representatives were consulted to aid in selecting the appropriate repair systems. Where the design of new structural elements is required, design shall be performed to provide watertight structures, which remain in the elastic stress range to limit the potential for cracking. Non-water retaining elements shall also be designed in keeping with the essential nature of the facility. Loading conditions shall be based on the worst operating scenario to design for static conditions in accordance with the building codes. Refer to the preliminary drawings depicting the proposed improvements and repairs which supplement this design report.

3.3 Design Approach

3.3.1 Rapid Mix & Effluent Channels

Rapid Mix: The existing top slab covering the rapid mix vault, chemical feed area, and effluent channels exhibits significant degradation. Thus, it is proposed that the entire slab be removed and replaced. Existing aluminum checker plate, grating, and railing will be removed, stored, and reinstalled following concrete placement. New frame embedments will be required for the checker plate and grating. Adhesive anchors will be provided to improve the integrity and longevity of the railing base anchorage.

Freeze-thaw degradation of the concrete walls supporting the rapid mix top slab is readily observable. Thus, it is proposed that the top two feet of concrete wall within the rapid mix area be removed, existing reinforcing within the walls preserved, and new concrete placed.

Effluent Channels: Located on the east side of the structure, the basin effluent channels direct flow to the Filter Building. These elevated channels exhibit extensive deterioration due to cycles of freeze-thaw exposure. It is proposed the channels for each basin be removed in their entirety and replaced with new concrete channels. To the extent possible, existing reinforcing will be preserved. Additionally, aluminum grating and railing installed on the channels will be removed, stored, and reinstalled.

3.3.2 Existing Basins

North Basin: Six vertical expansion joints are provided within the walls of the north sedimentation basin. In order to reduce water leakage and subsequent concrete deterioration at the joints an expansion joint repair with an interior adhered hypalon system is proposed. Cracking has occurred in the sedimentation basin effluent trough as a result of the trough bridging across the existing expansion joints. To ensure a watertight repair, cracking at the troughs in the vicinity of the expansion joints will also be repaired. In addition to repairing the basin expansion joints, a portion of the northwest basin wall exhibits active seepage in the vicinity of an expansion joint. This portion of the wall will be repaired to limit the extents of seepage via a cementitious waterproofing patch material.

South Basin: Six vertical expansion joints are provided within the walls of the north sedimentation basin.

In order to reduce water leakage and subsequent concrete deterioration at the joints an expansion joint repair with an interior adhered hypalon system is proposed. Cracking has occurred in the sedimentation basin effluent trough as a result of the trough bridging across the existing expansion joints. To ensure a watertight repair, cracking at the troughs in the vicinity of the expansion joints will also be repaired.

In addition to repairing the basin expansion joints, extensive cracks observed in the floor slab of the basin will be injected with a watertight sealant, capable of accommodating movement.

Feedwell: The center feedwells in both basins show signs of coating failure. In order to reduce the amount of corrosion both feedwells should be cleaned, prepped and painted with 2 coats of a high solids epoxy with a finish coat of Polyurethane.

Rake Arms: The rake arms in both basins show signs of localized, severe corrosion. This was likely caused by the wet environment and an ineffective coating system. In order to reduce further damage the structural rake arm members exhibiting severe corrosion should be removed and replaced in kind. Likewise, the entire steel framing of the rake arms should be cleaned, prepped and painted with 2 coats of a high solids epoxy with a finish coat of Polyurethane.

3.3.3 Existing Tunnel and Flocculation Tanks

Tunnel: Due to degradation of the eastern portion of the tunnel top slab, it is recommended the slab be removed and replaced with a new elevated concrete slab. This removal and replacement includes temporary removal of the easternmost flocculator equipment and subsequent re-installation of the equipment following concrete placement. It is proposed that a new cementitious coating system be applied to the entire tunnel top slab to provide improved resistance to freeze-thaw exposure. Prior to application, the existing top slab will be ground to remove any surface laitance and delaminations present from previous coating applications.

Due to leakage concerns of the existing skylights located along the length of the tunnel, it is recommended the skylights be removed and the openings filled in with concrete. Due to the elimination of natural light into the tunnel below, additional lighting may be required.

Finally, it appears railing base anchorage throughout the facility utilizes expansion anchors for securing railing to concrete construction.

Water penetrating, freezing and thawing within expansion anchor installations may weaken the base anchorage over time. In order to improve railing base anchorage and limit the deleterious effects of freeze-thaw all railing on the tunnel top slab will be removed, stored, and properly reinstalled utilizing adhesive anchors for the railing base anchorage.

Flocculator: The effects of freeze-thaw deterioration of the concrete tie-beams and walkways across the north and south flocculation tanks are extensive. To repair this degradation, it is proposed that the deteriorated concrete within the tie beams and walkways be removed, existing reinforcing within the elements be preserved, and new concrete be placed to the same size and shape. Similarly, the top two feet of wall between the flocculation tanks and sedimentation basins also exhibits freeze-thaw deterioration. Like the flocculation elements, the wall concrete will be removed until sound concrete is reached, the existing reinforcing will be preserved and new concrete placed.

A cementitious capillary waterproofing system is recommended for the shared wall between the flocculation tanks and the tunnel. This system will reduce the effects of moisture observed within the tunnel.

3.4 Materials

One of the preliminary sources of basin deterioration results from minimal air entrainment within the concrete. New concrete will meet current code standards for strength and durability including adequate air entrainment. All new concrete will be specified to have a compressive strength of 4500 psi and an air content ranging between 5% and 7%. Additionally, because the structure is part of a water treatment facility, constituent materials will meet the appropriate potable water standards.

The selection of repair materials will be determined based on a combination of previous project experience and discussions with manufacturer representatives. For expansion joint repair, materials will accommodate differential movement as well as chemical and UV exposure. A hypalon-type sheeting combined with a backer rod and sealant system will be employed at the sedimentation basin expansion joints.

For larger cracks observed in the south sedimentation basin floor slab and the sedimentation effluent troughs near expansion joints, an expanding polyurethane injection system will be provided. This type of system effectively seals larger cracks while accommodating differential movement. A cementitious waterproofing coating will be provided for the tunnel top slab.

This material will improve the freeze-thaw resistance of the remaining existing concrete. As previously noted, all repair materials will meet the appropriate potable water standards.

3.5 References

3.5.1 Building Code

The following codes apply to the scope of work covered under this project:

- Kentucky Building Code (KBC), 2007 Edition
- Code Requirements for Environmental Engineering Concrete Structures (ACI 350), 2006 Edition

3.5.2 Previous Reports

The following reports were utilized in evaluating the extents and methods of repair:

- Black & Veatch, "Northern Kentucky Water District Structural Evaluation of Taylor Mill Clarifiers", 2005
- Black & Veatch, "Northern Kentucky Water District Structural Testing and Recommendation of Taylor Mill Treatment Plant Clarifiers", 2006
- CH2MHILL, "Taylor Mill WTP Clarifier Joint and Crack Repairs, Summary of Observations and Recommendations", 2003
- CTL Group, "Evaluation of Clarifier Basins Northern Kentucky Water District Taylor Mill Water Treatment Plant", 2006
- GRW, "Structural Inspection of Flocculation and Sedimentation Basins", 2012

4. Process Mechanical

4.1 Introduction

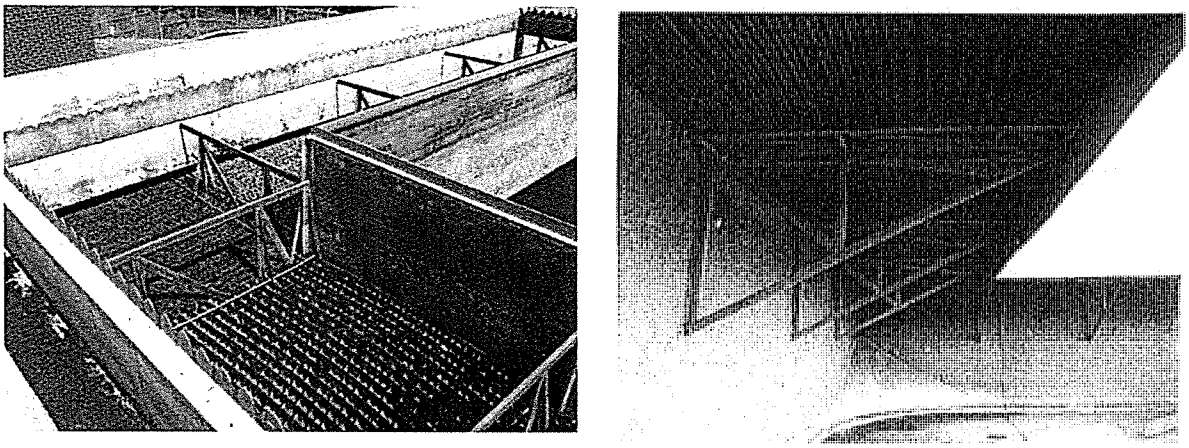
The process mechanical segment of the project involves the replacement of the existing tube settler modules located at the North and South Clarifiers of the Taylor Mill Treatment Plant (TMTP) and the removal of the Magna-Drive on High Service Pump #3. This section details the replacement option(s) available to NKWD for this work that were explored during the preliminary design phase.

4.1.1 Tube Settler Modules

The existing tube settler modules were installed in 1999 under the TMTP Chemical Building, Clarifier, and Clear Well Improvements Project (Contract No. 184-410). They are constructed of molded sheets of PVC and have become worn and deteriorated. Exposer from the sun and being subjected to foot traffic by operations and maintenance personnel over the years has resulted in the tube settlers reaching the end of their useful life. The existing tube settler modules will be replaced during this project. A photo that shows their current condition can be seen below.

4.1.2 Tube Settler and Baffle Support System

Figure 4-1 Existing Tube Settler Modules and Support System at North Clarifier



The existing tube settler and baffle support system was installed at the same time as the tube settler modules. The support structure appears to be constructed of aluminum. In May 2013, Arcadis performed a structural evaluation of the North and South Clarifiers and concluded that the overall condition of the tube settler and baffle support system, as well as the associated baffle, was satisfactory to be utilized by the new tube settler modules. A photo that shows the current condition of the support system can be seen below.

4.1.3 Magna Drive

An adjustable speed drive (Magna-Drive) was installed in High Service Pump #3 in March 2006. The original Goulds model 20ELC-3 (rated at 5,600 gpm at 375 feet of head). pump and motor was installed in 1996. The motor was modified during the 2006 project for the reduced thrust. The adjustable speed drive unit has experienced numerous issues, resulting in unreliable pump operation and the District has asked that the Magna-Drive be removed and the pump returned to it's original 1996 configuration.

4.2 Design Approach

4.2.1 General

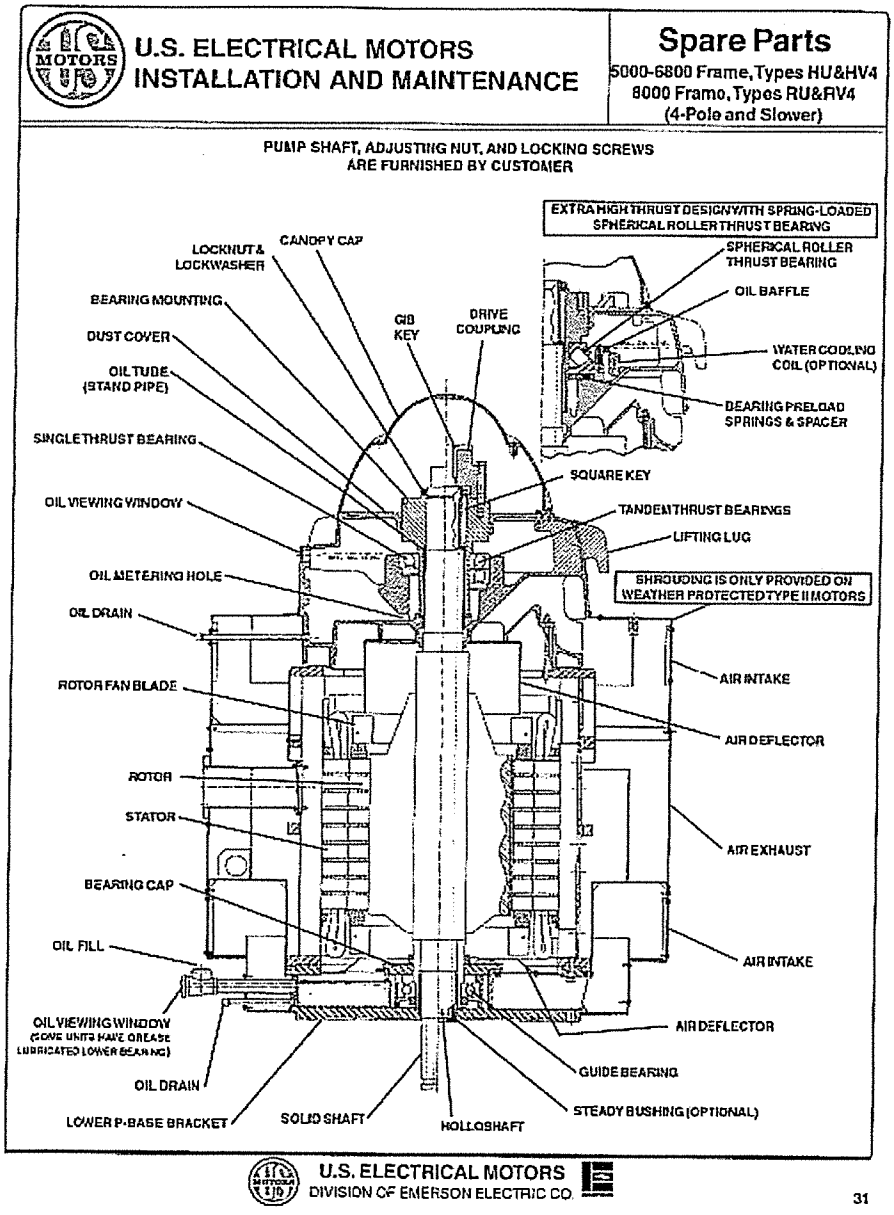
4.2.2 Tube Settler Modules - Design Approach

The scope of the process mechanical portion of the project includes the replacement of the existing tube settler modules at the North and South Clarifiers. During the preliminary design phase, Arcadis evaluated the possibility of utilizing the existing support system for the tube settlers and baffles, and associated baffle, at each clarifier versus requiring the tube settler manufacturer(s) to design and provide a new support system and baffle. While this project would provide an opportune time to replace the existing tube settler support systems and baffles at the clarifiers, due to the cost savings, it is recommended to utilize the existing support systems and baffles during this project. The existing support systems and baffles appear to be in good structural condition and there would be a substantial cost savings involved. The tube settler manufacturer(s) have confirmed they can design their respective tube settler modules to utilize the existing support systems and baffles during installation. A protective grating system is also offered as an option by the tube settler manufacturer(s) and will be provided under this project.

4.2.3 Magna-Drive Removal - Design Approach

It is generally know how High Service Pump #3 was configured prior to the 2006 project. In order to return it to this configuration the contractor will need to remove the motor and magna-drive from the pump; fabricate a new solid shaft coupling to fit the motor directly to the pump; the motor bearings will need to be replaced with high thrust bearings; the electrical feeder to the motor will need to be reinstalled to accommodate the lower motor height; the control panel, associated conduit and wiring will be removed and the existing SCADA wiring will be removed and restored to its original configuration.

Figure 4-2 High Service Pump #3 Pre 2006 Motor Configuration

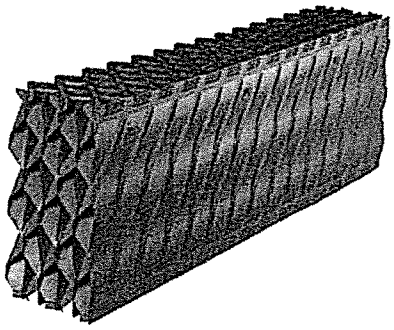


4.3 Materials, Equipment and Systems

4.3.1 Tube Settler Modules – Materials of Construction

The new tube settler modules will be constructed from smooth, primed and rigid PVC sheets and contain UV stabilizers. The PVC sheets will be evenly spaced so that they form tube-like channels running from the bottom of the module to the top, inclined at 60 degrees from the horizontal. The new tube settler modules will be designed to utilize the existing support system, and associated baffle, at the North and South Clarifiers. All fasteners and ties used in the installation will be Type 304 Stainless Steel. A typical tube settler module (Brentwood Industries) can be seen below.

Figure 4-3 Typical Tube Settler Module (Brentwood Industries)



4.4 Design Criteria

4.4.1 Tube Settler Modules - Basis of Design

The characteristics of the existing clarifiers and design basis for the new tube settler modules are provided in the table below:

Table 4-1 Characteristics of the Existing Clarifiers and Design Basis

Design Characteristic	North Clarifier	South Clarifier
Clarifier Width, ft	65	65
Clarifier Length, ft	65	65
Clarifier Side Water Depth, ft	15.5	15.5
Tube Settler Max. Hydraulic Flow Rate, mgd	6	6
Tube Settler Loading Rate at Max. Flow, gal/min/sqf.	2.0	2.0
Tube Settler Min. Surface Area, sqf	2,000	2,000

The specification for the tube settlers will be developed around Brentwood Industries as the basis of design manufacturer. Enviropax will also be considered as an approved manufacturer of tube settler modules. No other manufacturer's product will be considered as "Or Equal" during this project.

4.4.2 Magna-Drive - Basis of Design

The basis of design of the replacement of the Magna-Drive is to return the High Service Pump #3 to its pre 2006 configuration.

4.5 References

4.5.1 Standards

The following standards are applicable to the Tube Settler scope of work for this project:

- ASTM, American Society for Testing and Materials
- Standards of the Reinforced Plastic/Composites Institute
- NBS/PS 15-69, National Bureau of Standards
- ANSI/NSF-61, American National Standards Institute, Inc.

5. HVAC

5.1 Introduction

The HVAC portion of the project involves ventilation of the Filter Building Pump Room, the Filter Building electrical switchgear mezzanine and air conditioning of the proposed third floor electrical room in the Filter Building.

5.2 Design Approach

Warm weather ventilation in the pump room of the Filter Building will be provided by wall louvers with motorized dampers interfaced with a new propeller fan at the mezzanine level. The proposed third floor electrical room in the Filter Building will be conditioned by a split system air conditioner. Existing hot water unit heaters will heat the pump room in cold weather.

5.3 Materials, Equipment, and Systems

The split system for the Electrical room will have DX cooling with electrical strip heat in the air handler. The condensing unit will be mounted on the roof. The air handler will be hanged high in the electrical room. The air handler will have a supply fan, evaporator coil, air filters, electric heating coil, fresh air duct connection and built-in supply and return grilles.

5.4 Design Criteria

5.4.1 Controls

Ventilation of the pump room will be controlled by a remote manual switch mounted on a column in the room. The exhaust fan will be interfaced with motorized dampers on air intake wall louvers. Louvers will open when the fan operates. Operation of the HVAC unit for the third floor electrical room will be controlled by a remote 24 volt thermostat mounted on a column in the center of the room.

5.4.2 Louver Sizing

Intake Louvers: 500 feet per minute

Exhaust Louvers: 700 feet per minute

5.5 References

5.5.1 Codes

The design of this project will be governed by the following codes:

- The Kentucky Building Code, 9th Edition, 2007
- The International Mechanical Code 2006

5.5.2 Standards

The following standards and guides will be used for the mechanical design of this project:

- ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers)
- ACGIH (American Conference of Governmental Industrial Hygienists) Industrial Ventilation Manual of Recommended Practice
- NFPA (National Fire Protection Association)

6. Electrical

6.1 Introduction

Service to the plant is primary metered at 69 kV and enters the site from the east side to an outside substation. A 3,750 KVA transformer steps the voltage down to 2,400V, delta. The secondary of the transformer is connected to a 600A switch and four existing high service pump starters; all located outside near the substation. The 600A switch feeds a lineup located inside the filter building on a mezzanine level. The mezzanine lineup includes two additional high service pump starters, a switch which feeds a 300 KVA transformer located outside, a switch which feeds a 150 KVA transformer in the basement of the filter building, and a 150 KVA transformer within the lineup. A 208V low voltage section includes the backwash pump starter and other feeder breakers.

The 300 KVA transformer located outside is 2400V x 120/208V, and serves the residuals handling/backwash treatment building, and the chemical feed building. The 150 KVA transformer in the basement of the filter building is 2400V x 480/277V, and serves blowers and valves related to the filters. The 150 KVA transformer on the mezzanine level feeds the backwash pump, panelboards, and other miscellaneous loads within the filter building.

A second service from Duke was added during the UV system installation, presumably because the existing service was not adequate to carry the additional load. The second service is fed from a different Duke circuit; one which has a 12,470V primary. The UV system service is secondary metered at 480/277V, and includes an outside switchboard located near the Duke-owned pad mounted transformer.

Existing high service pump and backwash pump starters are full voltage, non-reversing. The high service pumps are 1-450 hp, 2-600 hp, 1-700 hp, and 2-1,250 hp. Even at 2,400V, the sizes of the motors are large for full voltage starting. The 1,200 hp high service pump utilizes a Magna-Drive, which provides variable speed capability using a clutch type device at the pump. All of the pumps include a solenoid operated pump control valve on the discharge, with solenoid valves, limit switches, and pressure switches integrated with the pump controls.

There is currently no standby power at the site.

6.2 Design Approach

6.2.1 General

The scope of this project includes primarily the replacement of the medium voltage switchgear and high service pump starters at the filter building.

The detailed design will include one line diagrams, control drawings, floor plans, details, and other information necessary for bidding purposes. Detailed Specifications will include technical requirements for the project, and will be coordinated with the overall Specifications for the project. Review of the detailed design will occur at 60% and 90% completion levels.

6.2.2 Proposed Facilities

The existing 69 KV service entrance and main substation transformer will remain. The transformer, which contains a flammable coolant, is very close to the building, which poses a potential fire hazard. In addition, we understand the existing transformer has been tested positive for PCB's. Given the location near the clearwell and the close proximity to the building structure, we recommend the Water District consider planning to replace the transformer in the relatively near future.

It is proposed that the outdoor switchgear and high service pump starters, as well as the two high service pump starters on the mezzanine, be replaced. A new 2,400V MCC would be installed on the third floor of the filter building, in the area currently used for storage. The MCC would include six new solid state, reduced voltage starters for the high service pumps.

A feeder breaker within the 2,400V MCC would be provided to backfeed the existing 150 KVA transformer located in the mezzanine. A feeder breaker will also be provided in the new MCC to backfeed the existing 150 KVA transformer in the basement, through the existing switch located in the mezzanine. Lastly, a feeder breaker will be provided in the new MCC to backfeed the existing 300 KVA transformer in front of the residuals handling building, with new feeder wiring to the existing point of origin of the conductors, and spliced at a junction box.

New high service pump starters will be replaced with solid state, reduced voltage type. Each high service pump can be operated locally in the hand mode, or in automatic mode with a start/stop signal from the plant SCADA system.

Control stations will be installed within sight of the pumps.

New control wiring will be provided for existing pump control valves, motor protective devices. The existing Magna drive, currently installed on high service pump no. 3, will be eliminated as part of this project. This would involve removal of the Magna drive itself, as well as the control panel and appurtenances. The existing motor will require replacement with a motor with high-thrust bearings, which will be required once the variable speed function is removed.

Power factor correction capacitors will be included in the new high service pump starters to prevent power factor penalties charged by the utility. As power factor correction capacitors can interfere with the operation of solid state equipment, a contactor interlocked with the shorting contactor will be wired ahead of the capacitors, to prevent energizing while the solid state starter is ramping.

The third floor will be renovated with new small power and lighting, designed to accommodate the new electrical room.

6.2.3 Constraints

We had hoped to specify optional arc-resistant construction for the medium voltage motor control center, however, existing building size limitations has proven prohibitive.

6.2.4 Energy Efficient Design

The replacement of the existing full voltage high service pump starters with solid state reduced voltage type will greatly reduce the inrush current of the motors during starting. This alone will save energy costs by reducing peak demands.

The addition of power factor correction capacitors will also save in utility costs by eliminating low power factor associating with the large induction motors on the high service pumps.

New lighting on the third floor will be designed with energy efficient lamping and ballasts to reduce energy consumption to a fraction of existing fixtures.

6.2.5 Area Classifications

The areas included in the facility which are part of the project scope of work are all non-hazardous areas.

6.3 Materials, Equipment, and Systems

6.3.1 Materials

New wiring for medium voltage power systems will be single conductor, 133% EPR insulated, and furnished in galvanized rigid steel conduit or cable tray. Conduit/conductors for low voltage power and control systems will be copper in aluminum conduit.

6.3.2 Equipment

Specific manufacturers have been selected as the basis of design, as described below. The Specifications, however, will be written to allow competitive bidding for equivalent equipment by other manufacturers.

Medium voltage motor control centers will be specified around Allen Bradley, with Benshaw, Eaton, and Square D as a listed equivalents, provided we are able to conclude that the alternate brands meet the requirements for the project. Draw-out feeder breakers specified to be Square D, Eaton, or equal.

Motor protective equipment will be specified to be Multilin model 469, which matches other medium voltage motor protective equipment at other NKWD facilities.

6.4 References

6.4.1 Codes

The following codes apply to the scope of work covered under this project:

- Kentucky Building Code (KBC), 2007 Edition
- National Electrical Code (NFPA 70), 2011 Edition
- Standards for Electrical Safety in the Workplace (NFPA 70E), 2009 Edition
- National Electrical Safety Code (NESC), C2-2012 Edition

Current codes require that an arc-flash hazard analysis study be performed, and it will be specified to be provided by the supplier of the power distribution/control equipment, as required per NFPA 70E.

6.4.2 Standards

The following standards are applicable to the electrical scope of work for this project:

- Factory Mutual System — FM
- National Electrical Manufacturers Association — NEMA
- Occupational Safety and Health Administration — OSHA
- Insulated Cable Engineers Association, Inc. — ICEA
- Illuminating Engineering Society of North America — IES
- Instrument Society of America — ISA
- Institute of Electrical and Electronic Engineers, Inc. — IEEE
- Certified Ballast Manufacturers Association — CMB
- American National Standards Institution, Inc. — ANSI
- Anti-Friction Bearing Manufacturers Association, Inc. — AFBMA
- American Society for Testing and Materials — ASTM
- American Wood Preservers Association — AWP

7. Permitting

Below is a list of permits that will likely be required for the project:

- KDOW Construction Permit "No Permit Required" letter, submitted upon completion of the design (Design Team). Based on the available project information the KDOW Construction Permit will not be required. NKWD has asked that a courtesy submittal be sent to KDOW;
- Kentucky Housing and Building Code Enforcement Review, submitted upon completion of design (Design Team);

- Commercial Building Permits, submitted upon completion of design (Design Team).

8. Suggested Sequencing of Construction

In order to construct these electrical and basin improvements we will have to utilize the 2013 and 2014 TMTP typical outage periods of October 16, 2013 to April 30, 2014 & October 16, 2014 to April 30, 2015. Even during these outage periods booster pumps number 1, 2, and 6, which move water from the FTTP shall not be out of service at the same time. The "2013" outage period (starting October 16, 2013) will be Phase I of the project, which will encompass the basin and tunnel structural rehabilitation. The MCCs can be installed while the plant is still operating, so they can be installed as soon as they can be delivered (lead time is anticipated to be 32 weeks). Due to the lead time required to obtain the tube settlers and the fact that the plant will need to be out of service while they are installed, this equipment will have to be ordered and scheduled to arrive just before the start of the "2014" plant outage (starting October 16, 2014). The 2014 outage period will be Phase II of the project. A preliminary schedule of construction is included in Appendix B.

8.1.1 Phase I: Basin and tunnel structural rehabilitation, and install MCCs

A. Drain and clean basins, and conduct structural rehabilitation on the basins and tunnel (Must be completed between October 16, 2013 and April 30, 2014).

B. Install new conduits and cable tray from new filter building MCC on third floor, as far as possible to existing high service pumps, and to transformer backfeed locations on mezzanine and in outside substation area.

C. Furnish and install new conduit from new MCC location on third floor, to the existing main transformer secondary bus.

D. Remove portions of the concrete panels roofing and install new conduit and control wiring from new filter building MCC to existing PLC cabinet, and new high service pump remote control station.

E. Furnish and install new motor control center.

F. Tap existing main transformer secondary bus, connect new MCC, and energize. Existing bus duct shall remain at this time. (This step requires an outage).

G. Replace concrete roof panels re-roof entire filter building and replace skylights above the filters.

H. Complete third floor architectural, electrical and HVAC work.

I. Steps J through O below may not be performed concurrently.

J. Remove existing feeder and controls from existing starter to high service pump no. 1 and install new feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 1 on new service.

K. Remove existing feeder and controls from existing starter to high service pump no. 2 and install new feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 2 on new service.

L. Disconnect and remove existing high service pump no. 3 motor, Magna Drive, and appurtenances. Remove existing feeder and controls from existing starter to high service pump no. 3. Furnish and install new motor for pump no. 3, feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 3 on new service.

M. Remove existing feeder and controls from existing starter to high service pump no. 4 and install new feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 4 on new service.

N. Remove existing feeder and controls from existing starter to high service pump no. 5 and install new feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 5 on new service.

O. Remove existing feeder and controls from existing starter to high service pump no. 6 and install new feeder from new MCC, and make all power and control connections. Perform startup of high service pump no. 6 on new service.

8.1.2 Phase II: Tube settler replacement and finish filter building electrical, HVAC and architectural work

A. Drain basins, remove existing tube settlers and install new tube settlers and protective surface grating.

B. Remove existing starter in mezzanine adjacent to 150 KVA transformer, and prepare bussing for new connection. Install feeder from new MCC and make connection to existing transformer. Energize transformer from new service.

C. Remove existing feeder to existing 2400V switch in mezzanine, serving 150 KVA basement transformer. Install new feeder from MCC and make connection. Energize transformer from new service. (Must be installed and connected between October 16th and April 30st, plant out of service)

D. Disconnect and remove existing switch feeding to existing 300 KVA transformer located outside. Install new feeder from MCC and make connection. Energize transformer from new service. (Must be installed and connected between October 16th and April 30st, plant out of service)

E. Disconnect and remove existing secondary bus duct from primary service transformer, existing 2400V switchgear, existing 2400V starters, and associated unused wiring and conduit.

F. Finish HVAC and electrical work in filter building

G. Bring plant back on line and test.

9. Opinion of Probable Construction Cost

An opinion of probable construction cost (OPCC) was developed based on the current preliminary design. The cost opinion was developed as a class 2 estimate in accordance with AACE guidelines and has a predicted accuracy of -15% to +20%. The summary of the opinion of probable construction cost is shown in Table 9-1 below.

Table 9-1 Opinion of Probable Construction Costs

Item	Costs
Opinion of Probable Construction Cost	$2,343,000
AACE Class 2 Estimate -15 % Range	$1,992,000
AACE Class 2 Estimate +20% Range	$2,812,000

Since the OPCC was developed utilizing the bid level drawings for HVAC, Electrical and Architecture, less items remain as unknowns. Markups and contingencies were utilized in an attempt to account for the remaining unknowns associated with this project.

The OPCC summary sheet and subsequent breakdowns of the cost can be found in Appendix A. The summary sheet includes a markup of 25% for contractor's indirect costs for bonds, mobilization, insurance overhead and profit, and contingency. An additional 2.25% (2.25% ENR annual increase in construction cost) is included to escalate the cost to the middle of 2014. In total the OPCC has been marked up 27.25% or approximately $639,000

As the project progresses and the design is finalized, the OPCC will be reevaluated to provide a more accurate and narrower range of cost opinion.

The OPCC of $2,343,000 is approximately $943,000 greater than the amount budgeted for this project. The following items have been added to this project since the project was budgeted:

Table 9-2 Items Added Since Project Was Budgeted

Item	Costs (including 40% markup)
General Requirements	$82,000
Additional Tunnel Work	$35,000
Additional Roofing & Sky Lights	$83,000
Optional Remove Magna- Drive	$26,000
TOTAL	$226,000

Case No. 2014-00151
Exhibit A

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Engineer's Opinion Of Probable Construction Cost

Northern Kentucky Water District
Taylor Mill Water Treatment Plant
Electrical and Basin Improvements

Bid Items	Unit	Estimated Quantity	Engineer's Estimate Unit Price	Engineer's Estimate Total
Items				
Base Bid Items:				
Item 1 - For General Construction	LS	1	$ 3,547,400.00	$ 3,547,400.00
Item 2 - For Wall Expansion Joint Repair	LF	600	$ 44.00	$ 26,400.00
Item 3 - For Trough Crack Repair	LF	200	$ 52.00	$ 10,400.00
Item 4 - Surface Spall Repair	SF	650	$ 68.00	$ 44,200.00
Item 5 - Contingency Allowance	LS	1	$ 40,000.00	$ 40,000.00
Item 6 - For Base Slab Crack Repair	LF	400	$ 44.00	$ 17,600.00
Total Base Bid Amount				$ 3,686,000.00
Alteranatives:				
Alternative No. 1 - New Medium Voltage Variable Frequency Drives for Pumps No. 5 and No. 6 and Provide Solid State Reduced Voltage Starters	LS	1	$ 268,000.00	$ 268,000.00
Alternative No. 2 - New Vertical Turbine Pump No. 3 Work	LS	1	$ 388,000.00	$ 388,000.00
Alternative No. 3 - New Modified Bituminous Protected Membrane Roof, Unit Skylights, and Lighting Work at Filter Building	LS	1	$ 162,000.00	$ 162,000.00
Alternative No. 4 - Cleaning, Preparation and Painting of Rake Arms, Center Cages, Center Columns and Feedwells	LS	1	$ 20,000.00	$ 20,000.00
TOTAL BASE BID AMOUNT			**$**	**3,686,000.00**

Case No. 2014-00151
Exhibit A

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Plans and Specifications prepared by Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements"

Northern Kentucky
Water District

The following items are enclosed separately from this volume in hard copy and enclosed in this submittal in electronic copy.

- Plans prepared by Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014

- Specifications prepared Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014

2835 Crescent Springs Rd Erlanger, KY 41018 (859) 578-9898 Fax (859) 578-5456

Case No. 2014-00151
Exhibit B

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

CERTIFIED STATEMENTS

Affidavit

Franchises

Plan Review and Permit Status

Easements and Right-of-Way Status

Construction Dates and Proposed Date In Service

Plant Retirements

AFFIDAVIT
Taylor Mill Treatment Plant Electrical and Basin Improvements

Affiant, Jack Bragg, Jr., being the first duly sworn, deposes and says that he is the Vice President of Finance and Support Services of the Northern Kentucky Water District, which he is the Applicant in the proceeding styled above; that he has read the foregoing "Taylor Mill Treatment Plant Electrical and Basin Improvements" Application and knows the contents thereof, and that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and that is to those matters he believes them to be true.

Jack Bragg, Jr.
Vice President, Finance & Support Services
Northern Kentucky Water District

Subscribed and sworn to before me in said County to be his act and deed by Jack Bragg, Jr., Vice President of Finance and Support Services of the Northern Kentucky Water District, this

23RD day of APRIL 2014.

NOTARY PUBLIC
Kenton County, Kentucky
My commission expires 5/6/17

COLLEEN KELLY MEDERT NOTARY PUBLIC STATE AT LARGE KY My Commission Expires 5/6/17

Franchises required – None

Plan Review and Permit Status - The District has reviewed and approved the plans and specifications prepared by Arcadis titled "Taylor Mill Treatment Plant Electrical and Basin Improvements" dated January 2014.

The District received technical approval from the Division of Water on January 2, 2014 and final approval February 24, 2014 (see attached letter).

Easements and Right-of-Way Status - Easement and Right-of-Way statements are not required.

Start date of construction – June 2014

Proposed date in service – June 2015

Plant retirements – There are no retirements as a result of this project.

Case No. 2014-00151
Exhibit B

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

PLAN REVIEW AND PERMIT STATUS

Approval Letter from Kentucky Division of Water

184-476
Permits

STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE, 4TH FLOOR
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

RECEIVED
MAR 10 2014
ON THIS DATE

February 24, 2014

Ms. Amy Kramer
Northern Kentucky Water District
2835 Crescent Springs Road
Erlanger, KY 41018

RE: DWL13060, F13-012
Northern KY Water Service--2485
Contract 3 – Taylor Mill WTP Electrical & Basin Improvements
Activity ID: FGL20140005

Dear Ms. Kramer:

The Kentucky Division of Water (DOW) has reviewed for completeness and adequacy the construction plans and specifications submitted for the above referenced contract(s). The DOW has granted technical approval on January 2, 2014. These plans consist of:

- structural rehabilitation on the Sedimentation Basins and Tunnel at Taylor Mill Treatment Plant
- installation of new conduits, cable trays, four new MCCs (Pumps no. 1 – 4), and 2 new VFDs (Pumps no. 5 – 6) at Filter Building
- re-roof entire Filter Building and replace skylights above the filters
- complete Architectural, Electrical, and HVAC work at Filter Building
- remove existing feeder, controls, and existing starters to pumps nos. 1–6 and install new feeders from new MCCs and new VFDs, and make all power and control connections
- disconnect and remove existing pumps nos. 1, 3, 4, and 5 and motors and appurtenances
- install new pumps nos. 1, 4, 5, and 6 and motors, install new shafts, and make all power and control connections
- install new control valves and required piping at pumps nos. 1, 2, and 3.
- drain Sedimentation Basins, remove existing tube settler modules and install new tube settler modules and protective surface grating
- general demolition and modifications
- all associated appurtenances with the above items

The approval conditions and a list of eligible/ineligible items are enclosed. Please note that ineligible items cannot be funded using State Revolving Fund (SRF) monies, and must be paid by other funding sources.

We have previously sent one (1) set of approved plans and specifications. An identical set should be made available at the project site at all times. If modifications are made to these plans and specifications before bidding, four (4) complete sets of as-bid plans and specifications must be submitted to the DOW for approval. A second DOW construction approval must be issued by separate correspondence before proceeding with advertising for bids. Any red line changes that were made by DOW personnel on the approved plans shall be incorporated into the bid set plans unless an alternative is approved.

You may now advertise for bids on the construction of this project. In addition to other notifications, this project must be advertised in the newspaper of the largest daily circulation in the project area.

You are cautioned not to advertise unless you have a proper wage decision. The Federal Davis-Bacon wage rates and Kentucky prevailing wage rates are applicable for this project. Please contact all other funding sources for their requirements pertaining to federal or state wage rates.

You are reminded that the construction contracts are subject to the equal employment opportunity requirements contained in Executive Order 11246. Equal employment opportunity affirmative action by the prime contractors and all subcontractors is mandated throughout the duration of the contract. Documentation of efforts to comply with Executive Order 11246, Equal Employment Opportunity is required to be kept by the borrower.

Review the attached Project Review and Cost Summary form for details of the information to be collected and retained in your files or to be submitted to DOW for review and approval. This form must be completed, signed by the recipient, and with the necessary information be then forwarded to the DOW. This signature will certify that all the information to be retained by the recipient has been secured and is available for review by the Division at the pre-construction conference. The required information must be approved by the DOW before executing any contracts.

Along with the Project Review and Cost Summary form, the following items must be submitted to the DOW for review and approval before executing any contracts:

- The bid advertisement
- Revised Project Budget
- Certified bid tabulation
- Documentation of compliance with DBE Good Faith Effort in accordance with 40 CFR 33.301

These items will be reviewed as a part of the Authority to Award process. The DOW will authorize you to award the contracts once these documents are approved

After the Notice to Proceed is signed, the DOW will need a copy of the executed contract documents, including plans and specifications.

Changes orders will require approval from the DOW before payment can be authorized from the State Revolving Fund. Submission of plans and specifications may be required for change order work.

Upon completion of the project, as-built drawings shall be provided to the DOW. As-builts shall be stamped, signed and dated by a professional engineer. A written certification stating that the project was constructed according to the approved plans shall be provided to the DOW by a professional engineer.

The previously issued construction permit has been issued under the provisions of KRS Chapter 224 and the regulations promulgated pursuant thereto. Issuance of this approval does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies.

You are cautioned that the advertisement and award of this contract will be subject to the laws and regulations that govern the State Revolving Fund (SRF) and to the conditions of your loan agreement. If we can be of further assistance, please call William Wright, Project Engineer, at (502) 564-3410, extension 4829.

Sincerely,

Mark Rasche

Mark Rasche, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

MR:WW

Enclosures

Eligible List, Ineligible List, Approval Conditions
Project Review and Cost Summary Form

C: ARCADIS US, Inc.
Kentucky Infrastructure Authority
Cabinet for Economic Development
Northern Kentucky District (Kenton County) Health Department
Division of Plumbing (by e-mail only)

DWL13060, F13-012
Contract 3 – Taylor Mill WTP Electrical & Basin Improvements

SRF ELIGIBLE ITEMS:

Contract No. 3: No ineligible items identified

SRF INELIGIBLE ITEMS:

Contract No. 3: No ineligible items identified

APPROVAL CONDITIONS:

Case No. 2014-00151
Exhibit C

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

BID INFORMATION AND BOARD RESOLUTION

Bid Tabulation

Engineer's Recommendation of Award

Board Resolution

Case No. 2014-00151
Exhibit C

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Bid Tabulation

Bid Tabulation

Northern Kentucky Water District
Taylor Mill Water Treatment Plant
Electrical and Basin Improvements

Bids Opened At 2:00 PM, February 25, 2014

			Engineer's Estimate		Building Crafts, Inc.			Dugan & Meyers Construction Co.			Smith Contractors, Inc.		
Bid Items	Unit	Estimated Quantity	Unit Price	Total	Unit Price	Total	Add or Deduct	Unit Price	Total	Add or Deduct	Unit Price	Total	Add or Deduct
Items													
Base Bid Items:													
Item 1 - For General Construction	LS	1	$ 3,547,400.00	$ 3,547,400.00	$ 3,655,947.00	$ 3,655,947.00		$ 3,684,695.00	$ 3,684,695.00		$ 4,048,000.00	$ 4,048,000.00	
Item 2 - For Wall Expansion Joint Repair	LF	600	$ 44.00	$ 26,400.00	$ 52.00	$ 31,200.00		$ 52.00	$ 31,200.00		$ 60.00	$ 36,000.00	
Item 3 - For Trough Crack Repair	LF	200	$ 52.00	$ 10,400.00	$ 50.00	$ 10,000.00		$ 50.00	$ 10,000.00		$ 60.00	$ 12,000.00	
Item 4 - Surface Spall Repair	SF	650	$ 68.00	$ 44,200.00	$ 69.00	$ 44,850.00		$ 70.00	$ 45,500.00		$ 80.00	$ 52,000.00	
Item 5 - Contingency Allowance	LS	1	$ 40,000.00	$ 40,000.00	$ 40,000.00	$ 40,000.00		$ 40,000.00	$ 40,000.00		$ 40,000.00	$ 40,000.00	
Item 6 - For Base Slab Crack Repair	LF	400	$ 44.00	$ 17,600.00	$ 45.00	$ 18,000.00		$ 50.00	$ 20,000.00		$ 58.00	$ 23,200.00	
Total Base Bid Amount				$ 3,686,000.00		$ 3,799,997.00			$ 3,831,395.00			$ 4,211,200.00	
Alteranatives:													
Alternative No. 1 - New Medium Voltage Variable Frequency Drives for Pumps No. 5 and No. 6 and Provide Solid State Reduced Voltage Starters	LS	1	$ 268,000.00	$ 268,000.00	$ 305,000.00	$ 305,000.00	Deduct	$ 290,000.00	$ 290,000.00	Deduct	$ 90,000.00	$ 90,000.00	Deduct
Alternative No. 2 - New Vertical Turbine Pump No. 3 Work	LS	1	$ 388,000.00	$ 388,000.00	$ 331,000.00	$ 331,000.00	Deduct	$ 235,000.00	$ 235,000.00	Deduct	$ 250,000.00	$ 250,000.00	Deduct
Alternative No. 3 - New Modified Bituminous Protected Membrane Roof, Unit Skylights, and Lighting Work at Filter Building	LS	1	$ 162,000.00	$ 162,000.00	$ 172,000.00	$ 172,000.00	Deduct	$ 160,000.00	$ 160,000.00	Deduct	$ 165,000.00	$ 165,000.00	Deduct
Alternative No. 4 - Cleaning, Preparation and Painting of Rake Arms, Center Cages, Center Columns and Feedwells	LS	1	$ 20,000.00	$ 20,000.00	$ 5,000.00	$ 5,000.00	Deduct	$ 34,000.00	$ 34,000.00	Deduct	$ 60,000.00	$ 60,000.00	Deduct
TOTAL BASE BID AMOUNT			$	3,686,000.00	$	3,799,997.00		$	3,831,395.00		$	4,211,200.00	

Bids Reviewed and Certified by:
ARCADIS U.S., INC.

Jason I. Lee, P.E.
Water Resources Engineer

Case No. 2014-00151
Exhibit C

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Engineer's Recommendation of Award

184-476
Corresp.

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
4665 Cornell Road
Suite 350
Cincinnati
Ohio 45241
Tel 513 860 8700
Fax 513 860 8701
www.arcadis-us.com

Water Resources

Ms. Amy Kramer, PE
Engineering Manager
Northern Kentucky Water District
2835 Crescent Springs Road
Erlanger, Kentucky 41018-0640

Subject:
Northern Kentucky Water District
Taylor Mill Treatment Plant
Electrical and Basin Improvements
Project No. 184-0476
Bid Evaluation and Recommendation of Award

Date:
March 6, 2014

Contact:
Jason Abbott

Phone:
(513) 985-8048

Email:
jason.abbott@arcadis-us.com

Our ref:
21420001.0000

Dear Ms. Kramer:

Bids were received for the above referenced project on February 25, 2014. The bids were based on a lump sum or unit price for each item of Work listed on the Bid Form. In addition to the Total Lump Sum Base Bid, the Bidders were required to provide Bids on four Project Alternatives, which could be Deducted from the Total Lump Sum Base Bid.

The bids have been reviewed and a Bid Tabulation Summary has been compiled showing the low bidder when comparing only the Total Lump Sum Base Bids. At the time of this letter, NKWD had not yet determined which alternatives would be incorporated into the above referenced project. A copy of the Bid Tabulation Summary and Bid Review Checklists for the three lowest bidders is enclosed for reference.

The total amounts for bids received are as follows:

	Total Lump Sum Base Bid Amount
Building Crafts, Inc.	$ 3,799,997.00
Dugan & Meyers Construction Co.	$ 3,831,395.00
Smith Contractors, Inc.	$ 4,211,200.00

Based on the above summary, the lowest Total Lump Sum Base Bid Amount was received from Building Crafts, Inc. in the amount of $3,799,997.00. Building Crafts, Inc. has submitted the required Drinking Water State Revolving Fund (DWSRF) Loan forms, which were submitted within 7 days of the Bid opening.

Therefore, based on the ARCADIS U.S., Inc. review of the bid submittal documents provided by each bidder and contingent on review by the District's legal counsel and approval by the District's Board, we recommend that the project be awarded to Building Crafts, Inc. in the amount of $3,799,997.00.

If you have any questions regarding this information, please let us know.

Sincerely,

ARCADIS U.S., Inc.

Jason M. Abbott, PE
Project Manager

Copies:
File

Case No. 2014-00151
Exhibit C

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

Board Resolution

DRAFT

Northern Kentucky Water District
Board of Commissioners Meeting
April 17, 2014

A regular meeting of the Board of Commissioners of the Northern Kentucky Water District was held on April 17, 2014 at the District's facility located at 2835 Crescent Springs Road in Erlanger, Kentucky. All Commissioners were present, except for Commissioner Collins. Also present were Ron Lovan, Jack Bragg, Richard Harrison, Dave Enzweiler, Rusty Collinsworth, Kyle Ryan, Steve Broering, Amy Kramer, John Scheben, Colleen Medert, Lindsey Rechtin, Jim Sparrow of Rankin, Rankin & Company, Greg Eubank, and Mendy Ruby.

Commissioner Sommerkamp called the meeting to order at 12:35 p.m., and Amy Kramer led the pledge of allegiance.

Mr. Greg Eubank and Ms. Mendy Ruby addressed the Board regarding the District's Sub-District I, Phase 2 project in Kenton County. They expressed their interest in having a water line extended along Northcutt Road as part of the project. At the completion of their comments and prior to their departure, Chair Sommerkamp thanked the individuals for attending the meeting and making their thoughts and concerns known to the Board and invited them to stay to hear the presentation of Item # 15, Consideration of Bids for Sub-District I Phase 2 Water Main Extension Project. Mr. Harrison departed the meeting at 12:40 p.m. to discuss the project with them briefly, and returned at 12:50 p.m.

Commissioner Sommerkamp proposed amending the agenda to: 1) drop Item #14, Consideration of CSX Facility Right-of-Entry Resolution for Camp Road, because CSX agreed that Item #13, Consideration of CSX Facility Encroachment Resolution for Rich Road, encompasses this same action; and 2) add Item #17, Consideration of Continuance of Legal Services with Brian Dunham During His Transition to Frost, Brown, Todd, LLC. On motion of Commissioner Spaulding, seconded by Commissioner Wagner, the Commissioners unanimously approved the amended agenda.

The Commissioners reviewed correspondence received and articles published since the special Board meeting on March 24, 2014.

On motion of Commissioner Cunningham, seconded by Commissioner Spaulding, the Commissioners unanimously approved the December 31, 2013 audit report as presented by Jim Sparrow of Rankin, Rankin & Company.

Jack Bragg provided a summary of the quarterly financial meeting attended by the Chair, the Treasurer, the President/CEO, the CFO, the Finance Manager, and the auditor on April 16, 2014, which included: 1) review of 2013 Audit Report; 2) an overview of quarterly operations; 3) credit card use procedures and updated SOG; 4) reconciliation procedures for gas receipts; 5) use of pool vehicles and proposed credit card tracking through use of individual PIN numbers; and 6) review of scrap and other controls by VonLehman & Associates.

On motion of Commissioner Macke, seconded by Commissioner Spaulding, the Commissioners unanimously approved the minutes for the special Board meeting held on March 24, 2014, which replaced the regular meeting of March 20, 2014.

The Board was provided a copy of the District's check registers, which included the check number, check date, payee, check amount and description of the reason for each payment, detailing the District's expenditures for the period March 1, 2014 through March 31, 2014. On motion of Commissioner Wagner, seconded by Commissioner Cunningham, and after discussion, the Commissioners unanimously approved the expenditures of the District for the month of March 2014.

On motion of Commissioner Wagner, seconded by Commissioner Spaulding, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Layne Christensen Company for Pump Maintenance Services, and authorized staff to execute the appropriate contract documents for a one (1) year agreement with the District's option to extend the contract for up to two additional one year terms.

On motion of Commissioner Wagner, seconded by Commissioner Cunningham, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Hall's Paving and Sealing, Inc. for the 2014 Asphalt Restoration, and authorized staff to execute the appropriate contract documents with an option to renew the contract for an additional one-year term.

On motion of Commissioner Cunningham, seconded by Commissioner Spaulding, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Bray Trucking, Inc. for 2014 Aggregate Materials, and authorized staff to execute the appropriate contract documents.

On motion of Commissioner Spaulding, seconded by Commissioner Wagner, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Ideal Supplies, Inc. for the purchase of flowable fill and concrete, and authorized staff to execute the appropriate contract documents with the option to renew the contract for one additional one-year term.

On motion of Commissioner Macke, seconded by Commissioner Cunningham, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Fred A. Nemann Company for the Beechwood Road and Page Road Water Main Replacement Project with a project budget of $385,000, and authorized staff to execute the appropriate documents.

On motion of Commissioner Wagner, seconded by Commissioner Spaulding, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Jack Gemmer and Sons, Inc. for the Dale Road Water Main Replacement Project with a project budget of $125,000, and authorized staff to execute the appropriate documents.

On motion of Commissioner Cunningham, seconded by Commissioner Spaulding, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to G.M. Pipeline, Inc. for the Kenridge Drive 8" Water Main Replacement Project with a project budget of $310,000, and authorized staff to execute the appropriate documents.

On motion of Commissioner Wagner, seconded by Commissioner Cunningham, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Building Crafts, Inc. for the Taylor Mill Water Treatment Plant Electrical and Basin Improvements Project and accept the second bid alternate deduction with a project budget of $4,000,000, and authorized staff to execute the appropriate documents.

On motion of Commissioner Spaulding, seconded by Commissioner Wagner, the Commissioners unanimously approved the District's adoption and authorization of the Resolution for CSX Facility Encroachment for Rich Road, and authorized the District's President/CEO or his designee to execute the agreement needed to install water mains crossing under CSX's train tracks at Rich Road.

On motion of Commissioner Cunningham, seconded by Commissioner Spaulding, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Smith & Brown Contracting for the NKWD-Kenton County Unserved Water Project 2012 (Sub-District M) Water Main Extension Project with a project budget of $3,400,000, and authorized staff to execute the appropriate documents.

On motion of Commissioner Wagner, seconded by Commissioner Cunningham, the Commissioners unanimously approved the District's acceptance of the bid by and awarding a contract to Michels Construction for the Sub-District I Phase 2 Water Main Extension Project with a project budget of $919,323, and authorized staff to execute the appropriate documents.

On motion of Commissioner Spaulding, seconded by Commissioner Wagner, the Commissioners unanimously approved the District's authorization to purchase the following vehicles and equipment:

Vehicle or Equipment	Vendor	Price
20-Ton Drag	Southeastern Equip.	$19,500
(2) Backhoes	Southeastern Equip.	$177,800
¾ ton 4x4 Pickup	Crossroads Ford/Linc	$24,157.60
1-Ton Flatbed	McCluskey Chev.	$55,865
Mid-Size 4-door Sedan	McCluskey Chev.	$17,602
Compact 4x4 Pickup	Crossroads Ford/Linc	$25,122.40

On motion of Commissioner Spaulding, seconded by Commissioner Cunningham, the Commissioners moved to authorize staff to finalize the negotiation of an agreement with Frost, Brown, Todd, LLC for general legal services and authorized the President/CEO to execute said agreement.

After discussion, on motion of Commissioner Wagner, seconded by Commissioner Cunningham, the Commissioners unanimously approved an amendment to the main motion to add the words "and further upon the execution of Frost, Brown, Todd, LLC agreement, notify Hemmer, DeFrank Attorneys at Law of termination of current agreement". The Commissioners unanimously approved the main motion as amended to read: that the Board authorize staff to finalize the negotiation of an agreement with Frost, Brown, Todd, LLC for general legal services, and authorize the President/CEO to execute said agreement and further upon the execution of Frost, Brown, Todd, LLC agreement, notify Hemmer, DeFrank Attorneys at Law of termination of current agreement.

Commissioner Spaulding departed the meeting at 2:17 p.m.

The Commissioners reviewed the District's financial reports and Department reports. As part of his report, Mr. Bragg updated the Commissioners on salaries and 2014 increases included in the budget approved on October 24, 2013, from a pool of $152,428. Increases were based on evaluations: 1) exemplary – 2.60%; 2) commendable – 2.25%; and 3) meets expectations – 2.00%. As part of his report, Mr. Harrison reviewed with the Commissioners the status of on-going projects within the 2014 5-Year Capital Budget, including highlighting change orders and expenses incurred to date.

On motion of Commissioner Wagner, seconded by Commissioner Cunningham, the Commissioners unanimously agreed to cancel the June 19, 2014 and July 17, 2014 regular meetings and schedule special meetings for June 26, 2014 and July 31, 2014 at 12:30 p.m. to replace them.

Other matters of a general nature were discussed.

On a motion by Commissioner Wagner, seconded by Commissioner Macke, the meeting was adjourned at 2:32 p.m.

CHAIRMAN

SECRETARY

Case No. 2014-00151
Exhibit D

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

PROJECT FINANCE INFORMATION

Customers Added and Revenue Effect

Debt Issuance and Source of Debt

Additional Costs for Operating and Maintenance

USoA Plant Account

Depreciation Cost and Debt Service After Construction

Customers Added and Revenue Effect: There will be zero new customers added and no revenue effect as a result of the Taylor Mill Treatment Plant Electrical and Basin Improvements project.

Debt Issuance and Source of Debt: This project will be paid from the District's Five-Year Capital Budget, PSC No. 212 "TMTP Electrical and Basin Improvements" with a budget of $4,000,000 which includes construction cost, engineering, and contingencies. A summary of the project costs is provided below:

o Design Engineering	$ 200,000
o Construction Engineering	$ 75,000
o Contractor's Bid	$ 3,468,997
o Misc. & Contingencies	$ 256,003
Total Project Cost	$ 4,000,000

The project will be funded through multiple sources. The District intends to apply $1,000,000 of SRF Loan F13-012 to this project. The project is partially funded through the District's Operational Capital Budget in the amount of $2,483,000. It is proposed that the remaining $517,000 be taken from contingencies leftover in Bond Anticipation Note 2011.

USoA Accounts: The anticipated amounts for the project cost of $4,000,000 will fall under the following Uniform System of Accounts Codes:

Code 304 "Structures and Improvements"	$ 576,535
Code 311 "Pumping Equipment"	$3,113,291
Code 320 "Water Treatment Equipment"	$ 310,174

Additional Costs and O&M: Additional operating and maintenance costs incurred for the project are as follows:

Power	($ 70,000)
Labor	$ 0
Maintenance	$ 70,000 (2% of construction)
	$ 0 Additional Annual O&M

Depreciation and Debt Service: Annual depreciation and debt service after construction are as follows:

Depreciation: $15,374/year over 37.5 years for Code 304 Structures & Improvements
$155,665/year over 20 years for Code 311 Pumping Equipment
$10,339/year over 30 years for Code 320 Water Treatment Equipment

Debt Service: $61,156 over 20 years (SRF loan)

Northern Kentucky
Water District

May 31, 2013

Ms. Tammy McCall
Financial Analyst
Kentucky Infrastructure Authority
1024 Capital Center Drive, Suite 340
Frankfort, KY 40601

Dear Ms. McCall,

Please find enclosed the executed Conditional Commitment Letter for the Drinking Water State Revolving Fund F13-012.

If you have any questions or need additional documentation, please do not hesitate to contact me at (859) 426-2734.

Sincerely,

Amy Kramer

Amy Kramer, P.E.
Engineering Manager

akk

KENTUCKY INFRASTRUCTURE AUTHORITY
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601
Phone (502) 573-0260
Fax (502) 573-0157
http://kia.ky.gov

Steven L. Beshear
Governor

John E. Covington III
Executive Director

May 6, 2013

Mr. C. Ronald Lovan, P.E., President/CEO
Northern Kentucky Water District
2835 Crescent Springs Road
Erlanger, KY 41018

KENTUCKY INFRASTRUCTURE AUTHORITY
FEDERALLY ASSISTED DRINKING WATER REVOLVING LOAN FUND
CONDITIONAL COMMITMENT LETTER (F13-012)

Dear Mr. Lovan:

The Kentucky Infrastructure Authority ("the Authority") commends your efforts to improve public service facilities in your community. On May 2, 2013, the Authority approved your loan for the Kenton and Campbell County Water Main Projects subject to the conditions stated below. The total cost of the project shall not exceed $5,930,000 of which the Authority loan shall provide $4,000,000 of the funding. Other anticipated funding for the project is reflected in Attachment A. The final loan amount will be equal to the Authority's portion of estimated project cost applied to the actual project cost. Attachment A incorporated herein by reference fully describes the project.

An Assistance Agreement will be executed between the Authority and the Northern Kentucky Water District upon satisfactory performance of the conditions set forth in this letter. A period of twelve months from the date of this letter (5/6/2014) will be allowed for you to meet the conditions set forth in this letter and enter into an Assistance Agreement. A one-time extension of up to six months may be granted for applicants that experience extenuating circumstances. Funds will be available for disbursement only after execution of the Assistance Agreement.

The Assistance Agreement and this commitment shall be subject, but not limited to, the following terms:

1. The Authority project loan shall not exceed $4,000,000.

2. The loan shall bear interest at the rate of 1.75% per annum commencing with the first draw of funds.

3. The loan shall be repaid over a period not to exceed 20 years from the date the loan is closed.

4. Interest shall be payable on the amount of actual funds received. The first payment shall be due on June 1 or December 1 immediately succeeding the date of the initial draw of funds, provided that if such June 1 or December 1 shall be less than three months since the date of the initial draw of funds, then the first interest payment date shall be the June 1 or December 1 which is at least six months from the date of the initial draw of funds. Interest payments will be due each six months thereafter until the loan is repaid.

5. Full principal payments will commence on the appropriate June 1 or December 1 within twelve months from initiation of operation. Full payments will be due each six months thereafter until the loan is repaid.

6. A loan servicing fee of 0.25% of the annual outstanding loan balance shall be payable to the Authority as a part of each interest payment.

7. Loan funds will be disbursed after execution of the Assistance Agreement as project costs are incurred.

8. The Authority loan funds must be expended within six months of the official date of initiation of operation.

9. Fund "F" loan funds are considered to be federal funds. OMB Circular A-133, "Audits of States, Local Governments and Non-Profit Organizations, requires that all recipients and subrecipients **expending $500,000 or more in a year in federal awards must have a single or program-specific audit conducted for that year** in accordance with the Circular. If the federal amount expended plus all other federal funds expended exceeds the threshold, you are required to arrange for an A-133 audit to be performed by an independent, licensed CPA, or in special cases, the Auditor of Public Accounts of the Commonwealth of Kentucky. The Authority requires an annual audit to be performed for the life of the loan.

The following is a list of the standard conditions to be satisfied prior to execution of the Assistance Agreement or incorporated in the Assistance Agreement. Any required documentation must be submitted to the party designated.

1. The Authority to Award (bid) package must be submitted to the Division of Water for approval within 14 days of bid opening.

2. The Assistance Agreement must be executed within six (6) months from bid opening.

3. The Borrower must agree to expend all Authority loan funds within six months of the date of initiation of operation.

4. Documentation of final funding commitments from all parties other than the Authority as reflected in the credit analysis shall be provided prior to preparation of the Assistance Agreement and disbursement of the loan monies. Rejections of any anticipated project funding shall be immediately reported and may cause this loan to be subject to further consideration.

5. The loan must undergo review by the Capital Projects and Bond Oversight Committee of the Kentucky Legislature prior to the state's execution of the Assistance Agreement. The committee meets monthly on the third Tuesday. At this time we know of no further submission required for their review; however, they may request information as needed.

6. Any required adjustment in utility service rates shall be adopted by ordinance, municipal order or resolution by the appropriate governing body of the Borrower. Public hearings as required by law shall be held prior to the adoption of the service rate ordinance, order, or resolution. Any required approvals by the Kentucky Public Service Commission shall be obtained.

7. All easements or purchases of land shall be completed prior to commencement of construction. Certification of all land or easement acquisitions shall be provided to the Division of Water.

8. The Borrower must complete and return to the Authority the attached "Authorization For Electronic Deposit of Vendor Payment" Form.

9. The Authority to Award Package documentation shall be submitted to and approved by DOW.

10. An environmental review shall be conducted by the Division of Water for all construction projects receiving DWSRF funds, within the term of this binding commitment and prior to project bid.

11. Technical plans and specifications and a complete DWSRF specifications checklist shall be approved by the Division of Water prior to project bid.

12. A clear site certificate shall be obtained and DOW representatives shall be notified for attendance of the pre-construction conference.

13. Project changes or additions shall require a complete environmental and change order review before they can be included in the DWSRF loan project.

The following is a list of additional conditions to be satisfied prior to execution of the Assistance Agreement or incorporated in the Assistance Agreement. Any required documentation must be submitted to the party designated.

1. The Borrower shall require all contractors to pay wages pursuant to applicable prevailing wage rates (federal or state) for all work relating to the subject Project. The Borrower shall, if applicable, comply with all Davis Bacon related monitoring and reporting.

2. The project shall comply with the reporting requirements of the Transparency Act, and shall complete the attached Transparency Act Reporting Information Form and provide to the Authority no later than 30 days after the KIA Board approval date of your loan.

3. If the project has a "Green Reserve" component, the Borrower must submit a Business Case, if required.

Any special conditions listed below and/or stated in Attachment A must be resolved.

Please inform the Authority of any changes in your financing plan as soon as possible. We wish you every success for this project which will benefit both your community and the Commonwealth as a whole.

Sincerely,

Sandy Williams

Sandy Williams
Financial Analyst

Attachments

cc: Richard Harrison, P.E., V.P. of Engineering, Northern Kentucky Water District
Jack Bragg, V.P. of Finance, Northern Kentucky Water District
Division of Water
Dirk Bedarff, Peck, Shaffer & Williams LLP
State Local Debt Office, DLG
Borrower File - Northern Kentucky Water District - F13-012

Please sign and return a copy of this letter indicating your acceptance of this commitment and its terms. Also attach the completed "Authorization For Electronic Deposit of Vendor Payment" Form.

	May 29, 2013
Accepted	Date

AUTHORIZATION FOR ELECTRONIC DEPOSIT
OF BORROWER PAYMENT
KENTUCKY INFRASTRUCTURE AUTHORITY
(FUND F13-012)

Borrower Information:

Name: Northern Kentucky Water District

Address: 2835 Crescent Springs Rd PO Box 18640

City: Erlanger State: KY Zip: 41018

Federal I.D. # [redacted]

Contact Name: Jack Bragg Telephone: (859) 426-2758

Email: jbragg@nkywater.org

Financial Institution Information:

Bank Name: ~~Bank of Kentucky~~, Park National Bank

Branch: Florence Phone No: 859-647-2722

City: Florence State: KY Zip: 41042

Transit / ABA No.: 042102115

Account Name: Grant/Loan Clearing

Account Number: [redacted]

I, the undersigned, authorize payments directly to the account indicated above and to correct any errors which may occur from the transactions. I also authorize the Financial Institution to post these transactions to that account.

Signature: _____ Date: 5/28/13

Name Printed: Jack Bragg, Jr. Job Title: CPO

Please return completed form to:

Kentucky Infrastructure Authority
1024 Capital Center Drive, Suite 340
Frankfort, KY 40601
phone: 502-573-0260
fax: 502-573-0157

TRANSPARENCY ACT REPORTING INFORMATION FORM

CLEAN WATER STATE REVOLVING FUND
AND
DRINKING WATER STATE REVOLVING FUND

This form is required for projects funded in whole or in part from the Clean Water State Revolving Fund or the Drinking Water State Revolving Fund. This form is to be completed and returned with the signed Conditional Commitment Letter from the Kentucky Infrastructure Authority.

Borrower Information:

Name:	Northern Kentucky Water District
Data Universal Numbering system (DUNS) No.*:	963951983
KIA Loan Number:	F13-012
Street Address	2835 Crescent Springs Road, PO Box 18640
City, State and Zip (Zip must include 4 digit extension)	Erlanger, KY 41018-0640
Federal Congressional District(s) of Borrower Utility Service Area:	Fourth

*If the DUNS No. provided above is registered under a different name than the recipient of funding, please provide the registration name below:

DUNS Name	

*If the recipient has not yet obtained a DUNS Number, please do so no later than 30 days after the KIA Board approval date of your loan request and provide notification to KIA of the number once issued. For instructions on DUNS registration, please contact sandy.williams@ky.gov.

Physical Location of Project (Primary Place of Performance)

Street Address	Contract 1 - 700 Alexandria Pike Contract 2 – Across Licking River, no street Contract 3 - 608 Grand Avenue
City, State and Zip (Zip must include 4 digit extension)	Contract 1 – Fort Thomas, KY 41075-2153 Contract 2 – near Wilder, KY Contract 3 – Taylor Mill, KY 41015-1924
Federal Congressional District(s) of Project Location	Fourth

Reliance upon Federal Assistance (please answer the below questions Yes or No):

Did recipient receive 80% or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards) during the last fiscal year?	No
Did recipient receive $25 million or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards) during the last fiscal year?	No
Does the public have access to compensation of senior executives of the recipient through periodic reports filed under Section 13A or 15D of the Securities Exchange Act of 1934 or Section 6104 of the Internal Revenue Code of 1986?	No

DUNS Registration Information: http://fedgov.dnb.com/webform OR 1-866-705-5711

Registration can be completed over the phone or via the web. Phone registration requests take approximately 10 minutes and are free. Internet requests are fulfilled within 24 hours.

ATTACHMENT A

Northern Kentucky Water District
F13-012

EXECUTIVE SUMMARY
KENTUCKY INFRASTRUCTURE AUTHORITY
FUND F, FEDERALLY ASSISTED DRINKING WATER REVOLVING LOAN FUND

Reviewer	Sandy Williams
Date	May 2, 2013
KIA Loan Number	F13-012
WRIS Number	WX21037003

BORROWER	NORTHERN KENTUCKY WATER DISTRICT KENTON COUNTY

BRIEF DESCRIPTION

This project includes the installation of new raw and finished water transmission mains along with equipment upgrades at the Taylor Mill treatment plant. The project will provide a more reliable water supply to wholesale customers and give the District flexibility in conveying raw water between reservoirs which will facilitate the temporary removal of the north reservoir from service for maintenance and a more even distribution of water storage between the north and south reservoirs.

PROJECT FINANCING		PROJECT BUDGET	RD Fee %	Actual %	
Fund F Loan	$4,000,000	Administrative Expenses			$6,000
Northern KY Water District	1,930,000	Legal Expenses			15,000
		Land, Easements			10,000
		Eng - Design	6.8%	5.2%	285,200
		Eng - Constr / Insp	3.5%	1.4%	80,000
		Construction			4,990,000
		Contingency			543,800
TOTAL	$5,930,000	TOTAL			$5,930,000

REPAYMENT	Rate	1.75%	Est. Annual Payment	$247,902
	Term	20 Years	1st Payment	6 Mo. after first draw
PROFESSIONAL SERVICES	Engineer	N/A		
	Bond Counsel	Peck, Shaffer, & Williams		
PROJECT SCHEDULE	Bid Opening	Aug-13		
	Construction Start	Dec-13		
	Construction Stop	Dec-14		
DEBT PER CUSTOMER	Existing	$3,205		
	Proposed	$2,901		
OTHER DEBT		See Attached		
OTHER STATE-FUNDED PROJECTS LAST 5 YRS		See Attached		

RESIDENTIAL RATES		Users	Avg. Bill	
	Current	80,481	$35.74	(for 4,000 gallons)
	Additional	0	$35.74	(for 4,000 gallons)

REGIONAL COORDINATION This project is consistent with regional planning recommendations.

CASHFLOW	Cash Flow Before Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2010	21,867,155	14,558,010	7,309,145	1.5
Audited 2011	24,901,248	14,986,158	9,915,090	1.7
Audited 2012	28,151,693	17,076,648	11,075,045	1.6
Projected 2013	29,353,951	18,113,241	11,240,710	1.6
Projected 2014	30,639,269	20,101,678	10,537,591	1.5
Projected 2015	31,983,535	21,001,368	10,982,167	1.5
Projected 2016	33,389,332	21,148,055	12,241,277	1.6
Projected 2017	34,859,357	21,156,567	13,702,790	1.6

Reviewer: Sandy Williams
Date: May 2, 2013
Loan Number: F13-012

KENTUCKY INFRASTRUCTURE AUTHORITY
DRINKING WATER STATE REVOLVING FUND (FUND "F")
NORTHERN KENTUCKY WATER DISTRICT, KENTON COUNTY
PROJECT REVIEW
WX21037003

I. PROJECT DESCRIPTION

The Northern Kentucky Water District is requesting a $4,000,000 Drinking Water SRF loan for the Kenton and Campbell County Water Main Projects. The project includes the installation of new finished and raw water transmission mains and improvements to the Taylor Mill treatment plant. A thirty six inch water transmission main will provide a redundant transmission main across the Licking River to provide a more reliable supply of water from Campbell to Kenton County. The raw water transmission main at the Fort Thomas Treatment plant in Campbell County will allow a higher percentage of raw water to be conveyed to the south raw water reservoir, facilitating the District's plan to temporarily remove the north reservoir from service for maintenance and for providing a more even distribution of water storage between the two reservoirs. The motor control centers for six pumps that convey water to the distribution system located at the Taylor Mill treatment plant in Kenton County will be moved to an indoor location which will improve reliability (three cabinets are currently outdoors). Improvements to the flocculation and sedimentation basis including replacement of tube settlers, replacement of concrete water stops and miscellaneous repairs will also be made.

The District provides service to Campbell and Kenton counties and portions of Boone, Grant and Pendleton counties and is regulated by the Public Service Commission. Wholesale service is provided to the City of Walton and the Bullock Pen and Pendleton County Water Districts.

II. PROJECT BUDGET

	Total
Administrative Expenses	$ 6,000
Legal Expenses	15,000
Land, Easements	10,000
Engineering Fees - Design	285,200
Engineering Fees - Const / Inspection	80,000
Construction	4,990,000
Contingency	543,800
Total	**$ 5,930,000**

III. PROJECT FUNDING

	Amount	%
Fund F Loan	$ 4,000,000	67%
Northern KY Water District	1,930,000	33%
Total	**$ 5,930,000**	**100%**

IV. KIA DEBT SERVICE

Construction Loan	$ 4,000,000
Interest Rate	1.75%
Loan Term (Years)	20
Estimated Annual Debt Service	$ 237,902
Administrative Fee (0.25%)	10,000
Total Estimated Annual Debt Service	**$ 247,902**

V. PROJECT SCHEDULE

Bid Opening	August 2013
Construction Start	December 2013
Construction Stop	December 2014

VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

A) Customers

Customers	Current
Residential	75,648
Commercial	4,723
Industrial	110
Total	80,481

B) Rates

	Prior	Prior	Current
Date of Last Rate Increase	01/07/11	01/01/12	01/01/13
Fixed Service Charge (Monthly Billing)	$12.77	$13.00	$13.60
Fixed Service Charge (Quarterly Billing)	22.49	26.00	27.20
First 1,500 Cubic Feet (per hundred CF)	3.67	4.02	4.14
Next 163,500 Cubic Feet (per hundred CF)	3.08	3.27	3.40
Over 165,000 Cubic Feet (per hundred CF)	2.57	2.58	2.65
Cost for 4,000 gallons - Monthly Billing	$32.39	$34.50	$35.74
Percent Increase		6.5%	3.6%
Affordability Index (Rate/MHI)		0.7%	0.8%

	Prior	Prior	Current
Cost for 4,000 gallons - Quarterly Billing	$27.12	$30.16	$31.20
Percent Increase		11.2%	3.4%
Affordability Index (Rate/MHI)		0.7%	0.7%
Wholesale Rate	$3.05	$3.13	$3.20
Percent Increase		2.6%	2.1%

The district also has a Subdistrict Monthly Surcharge that ranges from $8.55 to $36.22 depending on location.

VII. DEMOGRAPHICS

Census data was taken from the American Community Survey 5-Year Estimate 2006-2010. The District provides service to Campbell and Kenton counties and portions of Boone, Grant and Pendleton counties.

County	Population	MHI
Kenton	158,034	$53,213
Campbell	89,016	51,482
Boone	114,723	66,549
Grant	24,604	42,475
Pendleton	14,894	44,670
Total / Weighted MHI	401,271	$55,666

The median household income for the Commonwealth is $41,576. The District is a regional provider and the project will qualify for a 1.75% interest rate.

VIII. 2012 CAPITALIZATION GRANT EQUIVALENCIES

1) Green Project Reserve - The 2012 Drinking Water capitalization grant does not contain a "green" requirement.

2) Additional Subsidization – This project does not qualify for additional subsidization.

IX. FINANCIAL ANALYSIS (See Exhibit 1)

Financial information was obtained from the audited financial statements for the years ended December 31, 2010 through 2012. Interim financing balances were reclassified to long term debt for presentation since the amounts will ultimately be replaced by the issuance of bonds.

HISTORY

Revenues increased 12% from $43.8 million in 2010 to $49.0 million in 2012 with the bulk of the increase being due to rate increases. Operating expenses increased 2.6% from $23.8 to $24.4 during the same period. Non-operating income, comprised primarily of investment income and capital contributions, increased from $1.9 million in 2010 to $3.5 million in 2012 due to an increase in capital contributions. The debt coverage ratio was fairly consistent at 1.5, 1.7, and 1.6 for 2010, 2011 and 2012, respectively.

The balance sheet reflects a current ratio of 2.7 and a debt to equity ratio of 1.6. Months of operating expenses in unrestricted cash is 9.3. The District maintains various restricted accounts, primarily related to its bond covenants, and an Improvement, Repair and Replacement Reserve account. This account had a balance of $11.6 million, or 3% of in service fixed assets, at the end of 2012. Capital spending from 2010 through 2012 was $76 million.

PROJECTIONS

Projections are based on the following assumptions:

1) Revenues will increase 4% for inflation (rates) and volume each year
2) Expenses will increase 3% for inflation and volume.
3) Debt service on the proposed loan is estimated at $247,902 annually
4) Debt service coverage is 1.5 in 2015 when principal and interest repayments begin.

Based on the proforma assumptions, the utility shows adequate cash flow to repay the KIA Fund F loan.

REPLACEMENT RESERVE

The District maintains an "Improvement, Repair and Replacement account to make major repairs and replacements and to pay the cost of construction of additions, extensions and improvements to the water system. During the past five years the balance has increased from $2.6 million to $11.6 million. As a percentage of in service fixed assets the balance has increased from .9% in 2008 to 3.0% in 2012. Based on the District's current reserve funding practice a reserve will not be required for this proposed loan.

X. DEBT OBLIGATIONS

	Outstanding	Maturity
Series 2002B Revenue Bonds	4,200,000	2017
Series 2003A Revenue Bonds	1,280,000	2032
Series 2003B Revenue Bonds	22,150,000	2028
Series 2003C Revenue Bonds	12,250,000	2020
Series 2004 Revenue Bonds	8,095,000	2029

Series 2006 Revenue Bonds	24,815,000	2031
Series 2009 Revenue Bonds	26,280,000	2033
Series 2011 Revenue Bonds	30,005,000	2035
Rural Development Loan	1,987,000	2039
Taylor Mill Purchase Financing	925,000	2018
KIA Fund F Loan (F06-03)	3,304,508	2028
KIA Fund C Loan (C08-01)	4,939,349	2020
2011 Bond Anticipation Notes	25,615,000	TBD
KIA Fund F Loan (F08-07)	4,000,000	2032
KIA Fund F Loan (F09-02, i/a/o $24M)	23,500,000	TBD
Deferred Note Payable	100,000	TBD
Series 2012 Revenue Bonds	54,840,000	2027
Total	**$ 248,285,857**	

XI. OTHER STATE OR FEDERAL FUNDING IN PAST FIVE YEARS

Project Title	Funding Source	Amount
Unserved and Underserved Projects	HB 608	$500,000
Pike Street – Bromley	HB 608	300,000
Robbins Street Water Project	HB 608	300,000
Campbell Co. Unserved/Underserved Improvements	HB 608	1,000,000
Campbell Co. System Improvements	HB 608	1,200,000
Campbell Co. Unserved/Underserved Improvements	HB 608	750,000

XII. CONTACTS

Legal Applicant	
Name	Northern Kentucky Water District
Address	2835 Crescent Springs Road
	Erlanger, KY 41018
County	Kenton
Authorized Official	Jack Bragg (V.P. of Finance)
Phone	(859) 426-2758
Email	jbragg@nkwater.org

Project Administrator	
Name	Northern Kentucky Water District
Address	2835 Crescent Springs Road
	Erlanger, KY 41018
Contact	Richard Harrison, (V.P. of Engineering)
Phone	(859) 578-5458
Email	rharr@nkwater.org

XIII. RECOMMENDATIONS

KIA staff recommends approval of the loan with the standard conditions.

NORTHERN KENTUCKY WATER DISTRICT
BALANCE SHEETS (DECEMBER YEAR END)

ASSETS	Audited 2010	Audited 2011	Audited 2012	Projected 2013	Upon Completion 2014
Current Assets					
Cash and Cash Equivalents	11,835,530	14,822,171	18,846,682	20,837,392	21,194,983
Accounts Receivable	10,545,667	10,370,535	10,854,735	11,288,900	11,740,500
Assessments Receivable	92,634	98,760	104,778	105,000	105,000
Inventory	1,343,411	1,198,490	1,241,516	1,250,000	1,250,000
Prepaid Items	442,448	280,028	231,973	250,000	250,000
Total Current Assets	24,259,690	26,769,984	31,279,684	33,731,292	34,540,483
Restricted Assets					
Boone Florence Settlement	1,601,840	1,613,621	743,592	743,592	743,592
Bond Proceeds Fund	21,540,563	26,460,229	14,761,474	14,761,474	14,761,474
Debt Service Reserve Account	15,577,413	17,557,818	16,727,770	16,727,770	16,727,770
Debt Service Account	10,871,257	12,768,211	13,258,210	13,258,210	13,258,210
Improvement, Repair & Replacement	6,874,835	10,278,024	11,618,535	12,118,535	12,118,535
Total Restricted Assets	56,465,908	68,677,903	57,109,581	57,609,581	57,609,581
Utility Plant					
Property, Plant and Equipment	337,020,659	354,073,466	388,571,927	397,821,927	412,001,927
Unclassified Plant - Construction in Progress	37,881,689	58,207,358	43,776,830	43,776,830	43,776,830
Property, Plant and Equipment	374,902,348	412,280,824	432,348,757	441,598,757	455,778,757
Less Accumulated Depreciation ( )	(84,366,604)	(92,727,220)	(101,451,833)	(111,962,034)	(122,972,235)
Net Fixed Assets	290,535,744	319,553,604	330,896,924	329,636,723	332,806,522
Other Assets					
Deferred Charges	7,590,929	6,684,376	0	0	0
Total Other Assets	7,590,929	6,684,376	0	0	0
Total Assets	378,852,271	421,685,867	419,286,189	420,977,596	424,956,586
LIABILITIES					
Current Liabilities					
Bonded Indebtedness	6,883,000	7,974,000	7,926,000	8,218,000	9,335,000
Notes Payable	857,824	878,563	1,081,548	2,092,164	2,136,521
Accounts Payable	1,988,566	1,959,482	1,813,604	1,900,000	2,000,000
Accrued Payroll and Taxes	329,191	347,903	366,801	375,000	400,000
Other Accrued Liabilities	218,987	212,381	225,469	225,000	225,000
Total Current Liabilities	10,277,568	11,372,329	11,413,422	12,810,164	14,096,521
Liabilities Payable - Restricted Assets					
Accounts Payable	3,188,628	5,846,148	1,084,940	1,000,000	1,000,000
Accrued Interest Payable	3,492,903	3,994,015	3,703,241	3,700,000	3,700,000
Total Liabilities Payable - Restricted Assets	6,681,531	9,840,163	4,788,181	4,700,000	4,700,000
Long Term Liabilities					
Bonded Indebtedness	171,556,000	194,412,000	177,976,000	195,373,000	186,038,000
Notes Payable	16,693,975	54,659,908	35,687,309	34,095,145	31,958,624
Notes Payable (Interim Financing)	29,160,000	0	25,615,000	0	0
Proposed KIA Loan	0	0	0	0	4,000,000
Miscellaneous Deferred Charges	0	0	2,371,462	2,221,462	2,071,462
Total Long Term Liabilities	217,409,975	249,071,908	241,649,771	231,689,607	224,068,086
Total Liabilities	234,369,074	270,284,400	257,851,374	249,199,771	242,864,607
Retained Earnings:					
Invested in Capital Assets Net of Related Debt	65,384,945	61,629,133	82,611,067	89,858,414	99,338,377
Restricted	49,784,377	58,837,740	52,321,400	52,609,581	52,609,581
Unrestricted	29,313,875	30,934,594	26,502,348	29,309,830	30,144,021
Total Retained Earnings	144,483,197	151,401,467	161,434,815	171,777,825	182,091,979
Total Liabilities and Equities	378,852,271	421,685,867	419,286,189	420,977,596	424,956,586
Balance Sheet Analysis					
Current Ratio	2.4	2.4	2.7	2.6	2.5
Debt to Equity	1.6	1.8	1.6	1.5	1.3
Days Sales in Accounts Receivable	88.0	85.1	80.8	80.8	80.8
Months Operating Expenses in Unrestricted Cash	6.0	7.7	9.3	10.0	9.8

EXHIBIT 1
NORTHERN KENTUCKY WATER DISTRICT
CASH FLOW ANALYSIS (DECEMBER YEAR END)

	Audited 2010	% Change	Audited 2011	% Change	Audited 2012	Projected 2013	Projected 2014	Projected 2015	Projected 2016	Projected 2017
Operating Revenues										
Water Sales	42,118,806	2%	42,826,733	10%	47,243,674	49,133,421	51,098,758	53,142,708	55,268,416	57,479,153
Forfeited Discounts	765,655	-3%	740,506	13%	837,746	871,256	906,106	942,350	980,044	1,019,246
Rents From Property	525,784	1%	533,666	5%	562,966	585,485	608,904	633,260	658,590	684,934
Other Water Revenue	328,515	13%	370,150	-1%	365,295	379,907	395,103	410,907	427,343	444,437
Total Revenues	43,738,760	2%	44,471,055	10%	49,009,681	50,970,069	53,008,871	55,129,225	57,334,393	59,627,770
Operating Expenses										
Operating Expenses	23,751,578	-3%	23,003,045	6%	24,384,581	25,116,118	25,869,602	26,645,690	27,445,061	28,268,413
Depreciation	8,688,797	9%	9,498,005	5%	10,010,201	10,510,201	11,010,201	11,510,201	12,010,201	12,510,201
Replacement Reserve										
Total Expenses	32,440,375	0%	32,501,050	6%	34,394,782	35,626,319	36,879,803	38,155,891	39,455,262	40,778,614
Net Operating Income	11,298,385	6%	11,970,005	22%	14,614,899	15,343,750	16,129,068	16,973,334	17,879,131	18,849,156
Non-Operating Income and Expenses										
Investment Income	955,195	-15%	811,145	3%	831,929	800,000	800,000	800,000	800,000	800,000
Miscellaneous Non-Operating Income	(144,026)		(239,673)		(384,846)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)
Capital Contributions	1,068,804		2,861,766		3,079,510	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Non-Operating Income & Expenses	1,879,973	83%	3,433,238	3%	3,526,593	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Add Non-Cash Expenses										
Depreciation	8,688,797	9%	9,498,005	5%	10,010,201	10,510,201	11,010,201	11,510,201	12,010,201	12,510,201
Cash Available for Debt Service	**21,867,155**	**14%**	**24,901,248**	**13%**	**28,151,693**	**29,353,951**	**30,639,269**	**31,983,535**	**33,389,332**	**34,859,357**
Debt Service										
Existing Principal	6,956,737		7,740,824		8,852,563	9,007,548	10,310,164	11,471,521	11,898,987	12,347,587
Existing Interest	7,601,273		7,245,334		8,224,085	9,105,693	9,791,514	9,405,896	9,001,166	8,561,078
Proposed KIA Loan	0		0		0	0	0	123,951	247,902	247,902
Total Debt Service	14,558,010		14,986,158		17,076,648	18,113,241	20,101,678	21,001,368	21,148,055	21,156,567
Income After Debt Service	7,309,145		9,915,090		11,075,045	11,240,710	10,537,591	10,982,167	12,241,277	13,702,790
Debt Coverage Ratio	1.5		1.7		1.6	1.6	1.5	1.5	1.6	1.6

Case No. 2014-00151
Exhibit E

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

SCHEDULE OF MORTGAGES, BONDS, NOTES, AND OTHER INDEBTEDNESS

Northern Kentucky Water District
Schedule of Outstanding Debt
As of March 31, 2014

Description		Amount
Bonds		
2003 C		9,300,000
2004		7,415,000
2006		23,045,000
2009		24,810,000
2011		28,280,000
2012		51,315,000
2013A		25,785,000
2013B		22,120,000
Total Bonds	**$**	**192,070,000**
Notes		
KIA Loans		34,846,375
Taylor Mill purchase note	$	750,000
Deferred note payable		100,000
BAN 2009		29,160,000
Total Notes	**$**	**64,856,375**
Total Debt	**$**	**256,926,375**

Long Term Debt (Acct. 224)

Description of Obligation And Amount of Original Issue 2013 (a)	Date of Issue (b)	Date of Maturity (c)	Interest Expense For Year Rate (d)	Amount (e)	Principal per balance Sheet Date (f)
				$	$
Notes Payable City of Taylor Mill	Mar-2004	7/1/2018	0	0	$ 750,000
Kentucky Infrastructure Authority Loans					
-KIA F06-03 MPTP Project	June 2008	2028	3.0%	105,563	$ 3,134,220
- KIA F08-07 Various Capital Projects	June 2009	2029	1.0%	49,132	$ 3,818,383
- KIA C08-01 AMR Project	June 2009	2019	3.0%	148,531	$ 4,384,707
- KIA F09-02 GAC MPTP	June 2010	2030	2.0%	507,257	$ 23,509,065
Total				$ 810,483	$ 35,596,375

Account 221, BONDS

Line No.	Par Value of Actual Issue 1	Cash Realized on Actual Issue 2	Par Value of Amount Held by or for Respondent 3	Actually Outstanding at Close of year 4	Interest During Year	
					Accrued 5	Actually Paid 6
1	11,225,000	11,131,694		-	-	-
2	11,355,000	11,141,619		-	-	-
3	2,287,000	2,287,000		1,951,000	98,150	98,450
4	16,325,000	15,835,250		-	-	-
5	45,485,000	44,121,624		-	-	-
6	10,575,000	10,525,204		-	104,708	175,768
7	1,615,000	1,583,553		-	41,689	65,491
8	30,270,000	30,068,115		-	632,181	995,314
9	23,790,000	23,532,357		10,805,000	441,397	462,469
10	10,455,000	10,195,116		7,760,000	336,918	341,628
11	29,000,000	28,736,444		23,945,000	1,000,588	1,015,088
12	29,290,000	27,430,236		25,560,000	1,443,912	1,455,163
13	30,830,000	28,862,016		29,155,000	1,215,837	1,226,463
14	54,840,000	-		53,115,000	2,605,150	2,633,900
15	28,165,000	25,807,113		26,400,000	571,231	105,553
16	26,570,000	-		24,120,000	337,444	-
Total	362,077,000	271,257,341	-	202,811,000	8,829,205	8,575,287

Schedule of Bond Maturities

Line No.	Bond Numbers 7	Maturity Date 8	Interest Rate 9	Principal Amount 10	Amount Paid 11	Remaining Bonds Outstanding 12
1						
2		**See Attachments 23.1 Through 23.10**				
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Notes Payable (Acct. 232 & 234)

2013 a	Nominal Date of Issue b	Date of Maturity c	INTEREST Rate d	INTEREST Amount of payment e	Principal Amount per Balance Sheet f
Account 232 - Note Payable					
Campbell Co. Fiscal Court			0.00%	$	$ 100,000
			0.00%		
Total Account 232				$	$ 100,000
Account 234 - Notes Payable To Associated Companies		N/A		$	$
Total Account 234				$	$

Accounts Payable to Associated Companies (Acct. 233)

Show Payable to Each Associated Company Separately	Amount
	$
N/A	
Total	$

Case No. 2014-00151
Exhibit F

NORTHERN KENTUCKY WATER DISTRICT

Project
Taylor Mill Treatment Plant
Electrical and Basin Improvements

Kenton County
184-0476

CURRENT BALANCE SHEET AND INCOME STATEMENT

Northern Kentucky Water District

Balance Sheet
As of March 31, 2014

Assets	2014	2013
Current Assets		
Cash and Cash Equivalents	$21,790,412	$19,690,704
Accrued Interest Receivable	$4,848	$6,348
Accounts Receivable Customers	$5,268,793	$4,750,931
Accounts Receivable Unbilled Customers	$5,700,000	$5,500,000
Accounts Receivable Other	$58,288	$83,628
Assessments Receivable	$110,953	$100,584
Inventory Supplies for New Installation and Maintenance, at Cost	$1,399,343	$1,410,093
Prepaid Expenses	$1,044,507	$306,772
Total Current Assets	**$35,377,144**	**$31,849,060**
Restricted Assets		
Bond Proceeds Fund	$7,927,698	$12,602,981
Debt Service Reserve Account	$18,255,577	$16,536,244
Debt Service Account	$6,876,927	$6,176,972
Improvement, Repair, & Replacement	$10,951,091	$11,257,669
Boone/Florence Settlement Account	$307,911	$744,535
Total Restricted Assets	**$44,319,204**	**$47,318,401**
Non Current Assets		
Miscellaneous Deferred Charges	($5,207,990)	($2,374,463)
Capital Assets:		
Land, System, Buildings, and Equipment	$429,412,859	$388,794,350
Construction in Progress	$16,697,315	$45,220,986
Total Capital Assets before Accumulated Depreciation	$446,110,174	$434,015,336
Less: Accumulated Depreciation	($114,150,895)	($104,202,113)
Capital Assets Net of Accumulated Depreciation	$331,959,279	$329,813,223
Total Noncurrent Assets	**$326,751,289**	**$327,438,760**
Total Assets	**$406,447,637**	**$406,606,221**

Northern Kentucky Water District

Balance Sheet
As of March 31, 2014

Liabilities and Retained Earnings	2014	2013
Current Liabilities		
Current Portion of Long Term Debt	$10,968,754	$9,160,441
Accounts Payable	$1,726,824	$1,236,336
Accrued Payroll & Liabilities	$372,914	$456,508
Other Accrued Liabilities	$213,371	$198,192
Total Current Liabilities	**$13,281,863**	**$11,051,477**
Current Liabilities From Restricted Assets		
Accounts Payable	$1,317,429	$295,498
Accrued Interest Payable	$1,799,253	$1,701,524
Total Current Liabilities From Restricted Assets	**$3,116,682**	**$1,997,022**
Long Term Debt		
Long Term Portion of Bonded Indebtedness	$217,932,344	$204,633,309
Bond Anticipation Notes Payable	$0	$25,615,000
Note Payable-Taylor Mill Purchase	$575,000	$750,000
Deferred Note Payable	$100,000	$100,000
Total Long Term Debt	**$218,607,344**	**$231,098,309**
Total Liabilities	**$235,005,889**	**$244,146,808**
Retained Earnings	**$171,441,748**	**$162,459,413**
Total Liabilites and Retained Earnings	**$406,447,637**	**$406,606,221**

Northern Kentucky Water District

Income and Expenses Report-Detail
For the Three Months ending March 31, 2014

	March 2014	March 2013	March Budget	Variance Over (Under)	YTD 2014	YTD 2013	YTD Budget	Variance Over (Under)
Operating Income								
Water Sales	$5,028,824	$4,669,654	$5,059,314	-0.6%	$11,513,993	$10,784,034	$11,777,104	-2.2%
Forfeited Discounts	$61,761	$59,688	$61,180	0.9%	$226,846	$204,828	$209,948	8.0%
Rents from Water Property	$42,789	$40,843	$40,000	7.0%	$154,421	$154,097	$150,000	2.9%
Other Water Revenues	$27,830	$23,190	$20,000	39.2%	$50,840	$85,100	$81,260	-37.4%
Total Operating Income	**$5,161,204**	**$4,793,375**	**$5,180,494**	**-0.4%**	**$11,946,100**	**$11,228,059**	**$12,218,312**	**-2.2%**
Non Operating Income								
Interest Income	$57,610	$57,648	$65,000	-11.4%	$199,067	$190,636	$192,000	3.7%
Miscellaneous	$18,395	$14,416	$13,734	33.9%	$38,181	$140,683	$50,110	-23.8%
Total Non Operating Income	**$76,005**	**$72,064**	**$78,734**	**-3.5%**	**$237,248**	**$331,319**	**$242,110**	**-2.0%**
Boone Florence Settlement Transfer	$25,610	$36,549	$25,610	0.0%	$76,830	$109,647	$76,830	0.0%
Total Income	**$5,262,819**	**$4,901,988**	**$5,284,838**	**-0.4%**	**$12,260,178**	**$11,669,025**	**$12,537,252**	**-2.2%**
O&M Expenses								
Source of Supply, Water Treatment, Pumping, & Storage	$905,774	$803,033	$1,005,313	-9.9%	$2,809,510	$2,370,541	$3,012,618	-6.7%
Engineering & Distribution	$563,742	$539,048	$586,414	-3.9%	$1,819,850	$1,694,405	$1,846,843	-1.5%
Customer Service	$230,904	$268,539	$291,791	-20.9%	$784,369	$926,606	$986,953	-20.5%
Administration	$298,388	$261,544	$303,527	-1.7%	$858,798	$833,688	$888,700	-3.4%
Total O&M Expenses	**$1,998,808**	**$1,872,164**	**$2,187,045**	**-8.6%**	**$6,272,527**	**$5,825,240**	**$6,735,114**	**-6.9%**
Transfer to Debt Service	**$1,590,000**	**$1,600,000**	**$1,590,000**	**0.0%**	**$4,770,000**	**$4,800,000**	**$4,770,000**	**0.0%**
Total Expenses	**$3,588,808**	**$3,472,164**	**$3,777,045**	**-5.0%**	**$11,042,527**	**$10,625,240**	**$11,505,114**	**-4.0%**
Avail. to Transfer to Oper. Capital	**$1,674,011**	**$1,429,824**	**$1,507,793**	**11.0%**	**$1,217,651**	**$1,043,785**	**$1,032,138**	**18.0%**