

AMENDMENT NO. 3 to the Agreement to Perform Professional Engineering Services for Water Treatment Regulatory Compliance with LT2ESWTR and DBP Stage II between the City of Durham and Black and Veatch International Company

THIS AMENDMENT (“Third Amendment” or “Amendment No. 3”) is dated, made and entered into as of the _____ day of _____, 20__ between the City of Durham (“Owner”) and Black & Veatch International Company (“Engineer”), hereinafter collectively referred to as the “parties.”

The City and the Engineer entered into a contract titled “Agreement to Perform Professional Engineering Services for Water Treatment Regulatory Compliance with LT2ESWTR and DBP Stage II between the City of Durham and Black and Veatch International Company” dated February 28, 2008. That contract is referred to as the “Original Contract.”

The parties entered into a first amendment to the Original Contract, which amendment is dated July 14, 2009 (“First Amendment”). The purpose of the First Amendment was to authorize expenditure, and performance by Engineer, of the Bidding Phase Services, Construction Phase Services and Resident Field Representation in the additional compensation amount of \$975,379.00, with additional contingency moneys equal to \$97,538.00, for a total amended contract amount, including all contingency moneys, of \$3,165,480.

The parties entered into a second amendment to the Original Contract, which amendment is dated July 15, 2009 (“Second Amendment”). The Second Amendment deleted the design from the Original Contract and added new design services at both Brown and Williams which included a plant expansion at Brown and process, chemical feed, SCADA, and administration facilities improvements at Brown and Williams. Upgrades to Brown filters 1 - 4 were scoped to be designed and constructed separate from the main project. Second Amendment had an additional compensation amount of \$3,990,881.00, with additional contingency moneys equal to \$399,088.00, for a total amended contract amount, including all contingency moneys, of \$7,555,449.00.

The Original Contract is hereby amended as follows:

1. Exhibit A1 Engineer’s Responsibilities, PHASE 1400. ENVIRONMENTAL ASSESSMENT shall include the addition of the following:

Engineer completed the initial draft of the Environmental Assessment (EA) required of the contract scope in June 2010. This document was submitted to the Owner for review. At the time of the review of this initial EA document, the Owner directed to analyze and document the influence of additional reservoir withdrawals on the flows of Little River, Flat River, Eno River, and Falls Lake. Engineer worked with Owner and their modeling firm to scope,

conduct, and evaluate the hydrologic modeling, conducted ecological analyses, and rewrote and advanced the EA document for submission. This new EA document was completed and submitted to the Owner and, following review and editing, submitted to NCDENR Public Water Supply Section (PWSS) in March 2011. Following their review, PWSS advised a minimum release would be required from Lake Michie. The Owner requested a more comprehensive hydrological evaluation be conducted with Teer Quarry included as part of the analysis. Engineer worked with Owner and modeling firm to scope, conduct, and evaluate the modeling results of the expanded scope of the hydrologic modeling. Engineer incorporated the inclusion of a minimum release from Lake Michie and the operating protocols and associated impacts of Teer Quarry during normal and drought conditions into the EA document. The revised EA document was submitted again to PWSS in July 2013. Engineer has completed these additional services described herein and will perform the following services in support of the EA.

1. After receipt of comments from PWSS, Engineer will revise and resubmit the EA to NCDENR for interagency review.
2. After receipt of comments from NCDENR interagency review, Engineer will revise and resubmit the EA to the State Clearinghouse for review.
3. This scope assumes Engineer will receive and respond to one set of comments each from the PWSS review and from the NCDENR interagency review. This scope further assumes the level of effort to modify the EA will not require new analyses or additional field work and will be limited to 40 hours for each of the two revisions. Efforts to address comments and revisions to the EA beyond this will be considered additional services.
4. Two meetings with Owner and/or agencies are included to discuss comments received by PWSS and NCDENR interagency and our responses.

2. Exhibit A1 Engineer's Responsibilities, PHASE 2200. DESIGN shall include the additional of the following:

Value Engineering Assistance – Owner has secured the services of another engineering company to conduct value engineering (VE) study of the completed design documents. Engineer will provide assistance to Owner during this study. Value engineering assistance services shall include the following:

1. Reproduction of two sets of completed documents for use by the VE team.
2. Prepare and conduct workshop with Owner and VE team to introduce team to the project and to explain purpose and concepts of various aspects of the design.
3. Following the completion of VE study, assist Owner with the understanding and evaluation of study comments relative to the completed design and to develop a list of Owner desired changes to the design.

Conform Documents to Regulatory Changes – The executed date of the Original Contract was February 28, 2008. Since that time, new codes and regulations have been adopted by the North Carolina Department of Insurance and the City of Durham. Engineer shall modify the completed design documents to conform to the following new codes and ordinances:

1. 2012 North Carolina Building Code (2009 IBC with NC Amendments)
2. 2012 North Carolina Energy Code
3. 2011 National Electric Code with North Carolina Amendments
4. Durham City Code, Chapter 70, Article X entitled “Stormwater Performance Standards for Development”, adopted March 2009
5. Durham City Code, Chapter 70, Article X, Sections 70-736 through 70-741, adopted June 2010

Implementation of Facility Changes and Additions – The design documents were completed in 2010. A number of facility changes and additions have been identified since that time. The value engineering study was conducted in 2011 and recommended several changes. Operations and maintenance staff have implemented some of the design elements and have identified new elements for change or addition. Engineer will modify or change the current design documents to incorporate the following:

1. Owner has standardized on HDPE tanks for chemical storage. Change tanks, layouts, overflows, traps, and connections to accommodate HDPE tanks.
2. Owner has standardized on Hach analyzers, Cummings generators, and Beck electric modulating actuators. Address sole sourcing of this equipment.
3. Modify documents to reflect Owner installed flowmeters, entrance gate, chemical tanks, water quality analyzers, and changes to the residual collectors. Coordinate changes with the SCADA design.
4. Add butterfly valve near the finished water clearwells at Brown.
5. Show existing ductbank near Electrical Building and Finished Water Pump Stations. Relocate ductbank near new basin complex.
6. Modify the existing residuals collection system in the sedimentation basins at Brown.
7. Add minimum release structure at Lake Michie Reservoir.
8. Incorporate coordinating elements extending from Contract No. 1 construction.
9. Modify the telescoping valves of Brown sedimentation basins.
10. Develop detailed construction phasing drawings to allow partial utilization of the existing basins and filters during their improvements.
11. Develop detailed construction sequencing specifications for Brown and for Williams. Define required shutdowns and allowable durations.

Project Coordination and Finalization – To implement the regulatory changes and the facility changes and additions added by this amendment and to assist Owner in obtaining regulatory acceptance of the revised design documents, Engineer will provide the following services:

1. Prepare and conduct two workshops with Owner, at commencement and completion,

- to confirm and finalize the regulatory changes and the facility changes and additions.
- 2. Prepare and conduct two sequencing/scheduling workshops with Owner, at commencement and completion, to confirm construction schedule and durations, to identify required shutdowns and allowable shutdown durations, and to review and finalize the detailed construction phasing drawings and specifications.
- 3. Print, seal, approve, and reproduce documents for regulatory review. Documents will be submitted for review and acceptance by NCDENR for Authorization to Construct, NCDENR for Sediment and Erosion Control Review, and NC Building Code Review.
- 4. Receive, coordinate, and respond to comments received from these three reviewing agencies. Modify documents to incorporate changes as required.
- 5. Print, seal, approve, and reproduce documents for advertisement.

3. Exhibit A1 Engineer’s Responsibilities, PHASE 4100. CONSTRUCTION PHASE SERVICES shall include the additional of the following:

Extended Construction Services for Contract No. 1 – The duration for Contract No. 1 construction was extended from 6 months to over 24 months. Engineer performed construction phase services for this extended duration and assisted Owner in the development, emergency repairs, and contract negotiations with Contractor for the additional work.

The scope and fee for Contract No. 2 Construction Phase Services and Resident Field Representation will be modified in a future amendment.

4. Exhibit A1 Engineer’s Responsibilities, Part 3 – Schedule shall be deleted and replaced with the following:

PART 3 - SCHEDULE

The ENGINEER shall perform the tasks on the following schedule:

PHASE SERIES 1000	Evaluations	February 1, 2008 – July 1, 2009
PHASE SERIES 2000	Design/ Permitting	March 17, 2009 – March 15, 2014
PHASE SERIES 3000	Bid Phase Services	March 16, 2014 – July 15, 2014
PHASE SERIES 4000	Construction Phase	April 1, 2010 – Jan 15, 2017
PHASE SERIES 5000	Resident Services	July 16, 2014 – Jan 15, 2017
PHASE SERIES 6000	Post Construction Services	Nov 16, 2016 – April 15, 2017
PHASE SERIES 7000	Other Services	January 1, 2009 – April 15, 2017

The Contract shall be extended until April 30, 2018.

5. Exhibit C1 Payments to Engineer for Services and Reimbursable Expenses, C4.01 for Basic Services Having a Determine Scope – Lump Sum Method of Payment to be replaced with the following

EXHIBIT C1 Payments to ENGINEER for Services and Reimbursable Expenses

1. An amount of up to **\$941,921** for this amendment based on the following assumed distribution of Lump Sum compensation:

Task		Original Contract and Amendment Nos. 1 and 2 Value	Additional Lump Sum	Total Contract Value after Amendment No. 3
Phase Series 1000. Evaluations				
1100	Water Treatment Plant Evaluations	\$ 450,290	-	\$ 450,290
1200	Water Age Analysis	\$ 11,200	-	\$ 11,200
1300	Corrosion Study	\$ 62,200	-	\$ 62,200
1400	Environmental Assessment	\$ 156,200	\$ 139,400	\$ 295,600
Subtotal –Evaluations		\$ 679,890	\$ 139,400	\$ 819,290
Phase Series 2000. Design and Permitting				
2100	Field Surveys	\$ 126,000	-	\$ 126,000
2200	Design Services	\$ 3,518,480	\$ 709,021	\$ 4,227,501
2300	Permitting Services	\$ 74,000	-	\$ 74,000
Subtotal –Design and Permitting		\$ 3,718,480	\$ 709,021	\$ 4,427,501
Phase Series 3000. Bidding Phase Services				
3100	Bidding Phase Services	\$ 113,800	-	\$113,800
Subtotal – Bidding Phase		\$ 113,800	-	\$ 113,800
Phase Series 4000. Construction Phase Services				
4100	Construction Phase Services	\$ 1,691,200	\$ 93,500	\$ 1,784,700
4200	Construction Materials Testing	\$ 40,000	-	\$ 40,000
Subtotal – Construction Phase		\$ 1,731,200	\$ 93,500	\$1,824,700
Phase Series 5000. Resident Field Representation				
5100	Resident Field Representation	\$ 744,000	-	\$ 744,000
Subtotal – Resident Field		\$ 744,000	-	\$ 744,000

Representation				
Phase Series 6000. Post-Construction Services				
6100	Post-Construction Services	\$ 94,000	-	\$ 94,000
Subtotal – Post-Construction Services		\$ 94,000	-	\$ 94,000
Phase Series 7000. Other Services				
7100	Current Consolidated As-Built Drawings	\$ 151,800	-	\$151,800
7200	Subsurface Utility Engineering	\$ 71,000	-	\$71,000
7300	Master Site Plans	\$ 49,500	-	\$49,500
7400	LEED Services	\$ 168,696		\$ 168,696
7500	Lead-based Paint and Asbestos Tile Abatement	\$ 21,840		\$ 21,840
Subtotal – Other Services		\$ 462,836	-	\$ 462,836
Subtotal – All Tasks		\$ 7,544,206	\$ 941,921	\$ 8,486,127

The preceding table presents a breakdown of fees for evaluations, final design, and construction administration based on an assumed Scope of Work. If the parties fail to agree on the items of work or the fees, this agreement may be terminated according to paragraph 6.06.A.2 of Article 6.

6. Exhibit J, ARTICLE 18 Special Provisions, shall include the additional of the following:

18.3 E-Verify Compliance. The Contractor represents and covenants that the Contractor and its subcontractors comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (NCGS). The City is relying on this E-Verify Compliance section in entering into this Contract. The parties agree to this section only to the extent authorized by law. If this section is held to be unenforceable or invalid in whole or in part, it shall be deemed amended to the extent necessary to make this Contract comply with NCGS 160A-20.1(b).

7. All other provisions of the Agreement, to the extent not inconsistent with this Amendment, remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment, the Effective Date of which is indicated on page 1.

OWNER - CITY OF DURHAM

ATTEST:

By: _____

ENGINEER:

Black and Veatch International Company

Corporate Seal - Engineer

By: _____

Date Signed: _____

State of _____

ACKNOWLEDGMENT BY CORPORATION

County of _____

I, a notary public in and for the aforesaid county and state, certify that _____ personally appeared before me this day and stated that he or she is _____ Secretary of _____, a corporation, and that by authority duly given and as the act of the corporation, the foregoing contract or agreement with the City of Durham was signed in its name by its Vice-President, whose name is _____, sealed with its corporate seal, and attested by him/herself as its said Secretary or Assistant Secretary. This the _____ day of _____, 20_____.

My commission expires: _____

Notary Public