

Public Input
1-19-15

15-104

CONSENT



AECOM
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Milwaukee, Wisconsin

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Note:
TASK #10

**Supplemental Task Order –
2014 Quarterly Potable Well Sampling and
Annual Site Groundwater/Surface Water Monitoring
Scope and Authorization to Proceed
Former Town of Newton Gravel Pit
AECOM Project No. 60135471 (82518)**

A. Purpose of Task Order

AECOM Technical Services, Inc. (AECOM) is to provide consulting and subcontractor services for quarterly potable well sampling and annual site groundwater/surface water monitoring associated with the Former Town of Newton Gravel Pit. AECOM proposes to perform these services as a supplemental task order under the terms of our Consulting Agreement authorized by the City of Manitowoc Common Council November 23, 2009. These costs will be tracked and invoiced as a separate invoice task number under AECOM's current Project No. 60135471.

B. Scope of services

The following task descriptions present the proposed scope of services in a chronological order to facilitate City of Manitowoc budgeting needs. The potable well sampling scope of services is in general accordance with the *Potable Well Monitoring Work Plan* approved by the Wisconsin Department of Natural Resources (WDNR) on April 11, 2014. The site groundwater/surface water monitoring scope of services takes into account the current groundwater and surface water monitoring network and the proposed monitoring network to be installed during 2014.

Task 1 (2014): First Quarterly Potable Well Sampling Event

The first quarterly sampling event will occur during May/June 2014. The scope of services is expected to include:

- Notification to the potable well owners to schedule the sampling (to be conducted by the City) and coordination between AECOM, the City, and owners to determine specific sampling times for an AECOM field technician to sample the private wells.
- AECOM will sample an estimated total of 62 potable wells, including:
 - 21 Target Zone wells.
 - 17 Sentinel Zone wells.
 - 15 Data Gap wells.
 - 9 Historically Sampled wells.
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit an estimated 75 water samples (includes quality control samples) to a Wisconsin Administrative Code (WAC) Chapter NR 149 certified laboratory for analyses of volatile organic compounds (VOCs) (EPA Method SW 8260B).
- AECOM will assist the City with reporting the sampling results to both the WDNR and individual potable well owners. A quarterly potable well sampling letter report will be submitted

to the WDNR by AECOM. The letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, a figure showing the results, and copies of laboratory reports. Well owner notification of analytical results will be performed by the City and is expected to include a cover letter explaining the results with an attached copy of the well-specific laboratory report. The WDNR will be copied on the well owner reporting.

Task 2 (2014): Second Quarterly Potable Well Sampling Event

The second quarterly sampling event will occur during August 2014. The scope of services is expected to include:

- Notification to the potable well owners to schedule the sampling (to be conducted by the City) and coordination between AECOM, the City, and owners to determine specific sampling times for an AECOM field technician to sample the private wells.
- AECOM will sample an estimated total of 21 Target Zone wells (same Target Zone wells previously sampled as part of Task 1).
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit an estimated 30 water samples (includes quality control samples) to a WAC Chapter NR 149 certified laboratory for analyses of VOCs (EPA Method SW 8260B).
- AECOM will assist the City with reporting the sampling results to both the WDNR and individual potable well owners. A quarterly potable well sampling letter report will be submitted to the WDNR by AECOM. The letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, a figure showing the results, and copies of laboratory reports. Well owner notification of analytical results will be performed by the City and is expected to include a cover letter explaining the results with an attached copy of the well-specific laboratory report. The WDNR will be copied on the well owner reporting.

Task 3 (2014): Third Quarterly Potable Well Sampling Event and Annual Site Groundwater/Surface Water Sampling Event

The third quarterly sampling event will occur during November 2014. The scope of services will include both a quarterly round of potable well sampling and the annual site groundwater/surface water monitoring.

The scope of services for the quarterly potable well sampling is expected to include:

- Notification to the potable well owners to schedule the sampling (to be conducted by the City) and coordination between AECOM, the City, and owners to determine specific sampling times for an AECOM field technician to sample the private wells.
- AECOM will sample an estimated total of 21 Target Zone wells (same Target Zone wells as previously sampled as part of Tasks 1 and 2).
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the

sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.

- AECOM will submit an estimated 30 water samples (includes quality control samples) to a WAC Chapter NR 149 certified laboratory for analyses of VOCs (EPA Method SW 8260B).
- AECOM will assist the City with reporting the sampling results to both the WDNR and individual potable well owners. A quarterly potable well sampling letter report will be submitted to the WDNR by AECOM. The letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, a figure showing the results, and copies of laboratory reports. Well owner notification of analytical results will be performed by the City and is expected to include a cover letter explaining the results with an attached copy of the well-specific laboratory report. The WDNR will be copied on the well owner reporting.

The scope of services for the annual site groundwater/surface water monitoring takes into account the existing monitoring network and the proposed monitoring network to be installed during 2014. The work is expected to include:

- AECOM will obtain groundwater and free product elevation measurements from an estimated 41 monitoring wells (30 existing & 11 proposed) for use in interpreting the groundwater flow direction.
- AECOM will purge and sample groundwater from an estimated 41 monitoring wells (30 existing & 11 proposed) for field parameter analysis (pH, dissolved oxygen, conductivity, and redox potential) along with sampling for laboratory analysis of VOCs.
- AECOM will conduct water sampling from Silver Creek at the three (3) existing 'staff gage' locations for field parameters and VOCs consistent with groundwater sampling.
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit an estimated 70 water samples (includes quality control samples) to a WAC Chapter NR 149 certified laboratory for analyses of VOCs (EPA Method SW 8260B).
- AECOM will compile the data into a quarterly letter report for submittal to the City and the WDNR. The letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, figures showing the results, and copies of laboratory reports.

Task 4 (2015): Fourth Quarterly Potable Well Sampling Event and Preparation of 2015 Potable Well Monitoring Work Plan

The fourth quarterly sampling event will occur during February 2015. The scope of services is expected to include:

- Notification to the potable well owners to schedule the sampling (to be conducted by the City) and coordination between AECOM, the City, and owners to determine specific sampling times for an AECOM field technician to sample the private wells.

- AECOM will sample an estimated total of 21 Target Zone wells (same Target Zone wells as previously sampled as part of Tasks 1 through 3).
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit an estimated 30 water samples (includes quality control samples) to a WAC Chapter NR 149 certified laboratory for analyses of VOCs (EPA Method SW 8260B).
- AECOM will assist the City with reporting the sampling results to both the WDNR and individual potable well owners. A quarterly potable well sampling letter report will be submitted to the WDNR by AECOM. The letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, a figure showing the results, and copies of laboratory reports. Well owner notification of analytical results will be performed by the City and is expected to include a cover letter explaining the results with an attached copy of the well-specific laboratory report. The WDNR will be copied on the well owner reporting.
- At the completion of the 4th quarter potable well sampling, AECOM will prepare a *2015 Potable Well Monitoring Work Plan*. The work plan will define the scope of services for the next year of potable well sampling. It is anticipated that the work plan will be provided to the City and the WDNR.

C. Assumptions

Assumptions associated with this scope of services include:

- The proposed scope of services does not include confirmation potable well water sampling if a new/replacement potable well is installed at a residence with an impacted well. These services will be provided under a separate cover if potable well replacement activities take place.
- If quarterly sampling results indicate that updates should be made to the number of Target Zone or Sentinel Zone wells (as provided for in the WDNR approved *Potable Well Monitoring Work Plan*), those changes will be reflected in the number of potable wells sampled during subsequent quarterly sampling events.
- AECOM understands that the WDNR is trying to determine if one Target Zone address, 3320 Hecker Road, has more than one well. If more than one well exists at this address, it may be added to the quarterly sampling program.
- If the proposed additional site investigation scope of services changes, then those changes will be reflected in the number of monitoring wells sampled during the annual sampling event (Task 3).
- The City will dispose of groundwater sampling purge water.

D. Compensation

The total cost to complete the described activities is estimated to be **\$ 82,200.00**.

<u>Task</u>	<u>Scope</u>	<u>Proposed Costs</u>
Task 1(2014)	1 st Quarter Potable Well Sampling	\$ 20,120
Task 2 (2014)	2 nd Quarter Potable Well Sampling	\$ 12,050
Task 3 (2014)	3 rd Quarter Potable Well Sampling and Annual Site Monitoring	\$ 11,760 \$ 21,300
		2014 Sub-Total \$ 65,230
Task 4 (2015)	4 th Quarter Potable Well Sampling and 2015 Potable Well Monitoring Work Plan	\$ 16,970

Activities outside the scope of services described in this proposal will only be completed with prior approval.

E. Schedule

AECOM will commence the additional activities upon written authorization to proceed. By signing below and returning to David Henderson at AECOM's Milwaukee, Wisconsin office, this letter will serve as written authorization to proceed.

The above is understood and authorization to proceed is given as noted by the undersigned:

Approved by:

City of Manitowoc



 Signature

City Attorney

 Title
 Authorized via resolution



 Signature

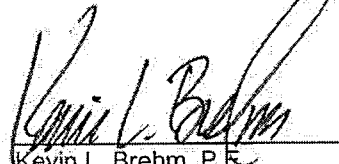
Finance Director

 Title
 Authorized via resolution
 6/11/2014

 Date

Accepted by:

AECOM Technical Services, Inc.



 Kevin L. Brehm, P.E.

Wisconsin Operations Manager

 Title

May 28, 2014

 Date

**Supplemental Task Order –
Western Source Area – Expanded Down-gradient Investigation
Scope and Authorization to Proceed
Former Town of Newton Gravel Pit
AECOM Project No. 60135471 (82518)**

NOTE:
TASK # 20

A. Purpose of Task Order

AECOM Technical Services, Inc. (AECOM) is to provide consulting and subcontractor services for additional groundwater monitoring well installation and sampling down-gradient (east and southeast) of the currently defined groundwater impacts associated with the Western Source Area at the Former Town of Newton Gravel Pit. AECOM proposes to perform these services as a supplemental task order under the terms of our Consulting Agreement authorized by the City of Manitowoc Common Council November 23, 2009. These costs will be tracked and invoiced as a separate invoice task number under AECOM's current Project No. 60135471.

B. Scope of Services

The following task descriptions present the proposed scope of services anticipated to be completed in 2014. The proposed additions to the monitoring network are designed to better quantify groundwater flow and potential groundwater impacts (both vertically and horizontally) between WT-16 and the Yindra Property. The proposed scope of services includes three tasks. The first task focuses on investigating the unconsolidated sediments between the water table and the top of bedrock (approximate 80-foot thickness). The second task extends the investigation focus into bedrock to monitor the upper portion of rock. Initiation of the second task is dependent on verification of groundwater impacts at the top of bedrock within the unconsolidated sediments. The third task provides additional support for the City and liaison with WDNR.

Task 1: Groundwater Monitoring Wells Installed in Unconsolidated Sediment

The scope of services is expected to include:

- Notification to land owners to obtain right-of-entry access to complete well installations on the Roberts and Mancheski properties.
- AECOM will install a total of 11 additional groundwater monitoring wells installed in four (4) nested locations (see attached Figure), including:
 - Two piezometers nested with existing wells WT-16 and PZ-16, located on the Roberts property, with target screen elevations at 640 ft MSL and (i.e. between PZ-16 and top of rock) and 600 ft MSL (immediately above top of rock)
 - A three-well nest located between WT-16/PZ-16 and Silver Creek, located on the Mancheski property. The well nest will include a water table well at approximate elevation of 680 ft MSL, a piezometer at approximate elevation of 640 ft MSL, and a piezometer at approximate elevation of 600 ft MSL.
 - A three-well nest located southeast of the newly installed nest described above, between Silver Creek and the Yindra property, on the Mancheski property. The well nest will include a water table well at approximate elevation of 680 ft MSL, a piezometer at approximate elevation of 640 ft MSL, and a piezometer at approximate elevation of 600 ft MSL.
 - A three-well nest located west of Hecker Road and south of Gravel Pit Road, on City property. The well nest will be completed consistent with the previously described wells including a water table well at approximate elevation of 680 ft MSL, a piezometer

at approximate elevation of 640 ft MSL, and a piezometer at approximate elevation of 600 ft MSL.

- Each of the newly installed wells will be developed and sampled prior to incorporating into the annual site-wide monitoring event (included under separate Task Order).
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit an estimated 15 water samples (includes quality control samples) to a Wisconsin Administrative Code (WAC) Chapter NR 149 certified laboratory for analyses of volatile organic compounds (VOCs) (EPA Method SW 8260B).
- The location of each newly-installed well will be surveyed (X and Y coordinates), as well as top of casing elevation.
- AECOM will complete boring logs and well construction and development documentation for each well (WDNR Forms 4400-122 and 4400-113A and 113B).
- AECOM will assist the City with reporting sampling results to the WDNR. A letter report will include a written summary of the sampling event, summarized laboratory results in tabular form, a figure showing the results, and copies of laboratory reports.

Task 2: Groundwater Monitoring Wells Installed in Bedrock

Initiation of this task is dependent on verification of groundwater impacts at the top of bedrock within the unconsolidated sediments based on the laboratory results from sampling the wells installed as part of Task 1. The scope of services is expected to include:

- Installation of up to four bedrock piezometers - one at each of the well nests described in Task 1 where groundwater samples from the deepest piezometer (immediately above the top of rock) indicate VOC impacts. Anticipated screen elevations will be approximately 580 ft MSL.
- Each of the newly installed bedrock piezometers will be developed and sampled prior to incorporating into the annual site-wide monitoring event (included under separate Task Order).
- AECOM will also collect quality control samples. The quality control samples will include field duplicate and matrix spike/matrix spike duplicate samples. The quality control samples will be determined by AECOM field personnel. Laboratory provided trip blanks will accompany the sample containers to evaluate the potential for analytical artifacts associated with container handling in the field and laboratory.
- AECOM will submit up to approximately 6 water samples (includes quality control samples) to a Wisconsin Administrative Code (WAC) Chapter NR 149 certified laboratory for analyses of volatile organic compounds (VOCs) (EPA Method SW 8260B).
- The location of each newly installed well will be surveyed (X and Y coordinates), as well as top of casing elevation.
- AECOM will complete boring logs and well construction and development documentation for each well (WDNR Forms 4400-122 and 4400-113A and 113B).

D. Compensation

The total cost to complete the described activities is estimated to be \$ 126,480 of which approximately \$65,580 is drilling and laboratory subcontractor fees.

Task	Scope	Proposed Costs
Task 1	Monitoring Wells in Unconsolidated Sediment	\$ 67,380
Task 2	Monitoring Wells in Bedrock	\$ 48,100
Task 3	City Support & WDNR Liaison	\$ 11,000
Total		\$126,480

Activities outside the scope of services described in this proposal will only be completed with prior approval.

E. Schedule

AECOM will commence the additional activities upon written authorization to proceed. By signing below and returning to David Henderson at AECOM's Milwaukee, Wisconsin office, this letter will serve as written authorization to proceed.

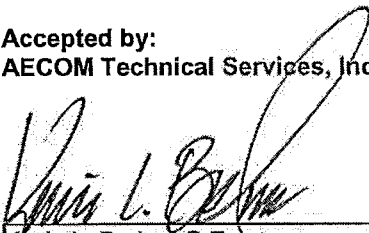
The above is understood and authorization to proceed is given as noted by the undersigned:

Approved by:
 City of Manitowoc

Accepted by:
 AECOM Technical Services, Inc.



 Signature



 Kevin L. Brehm, P.E.

City Attorney


 Title
 Authorized via resolution

Wisconsin Operations Manager

 Title

May 28, 2014

 Date



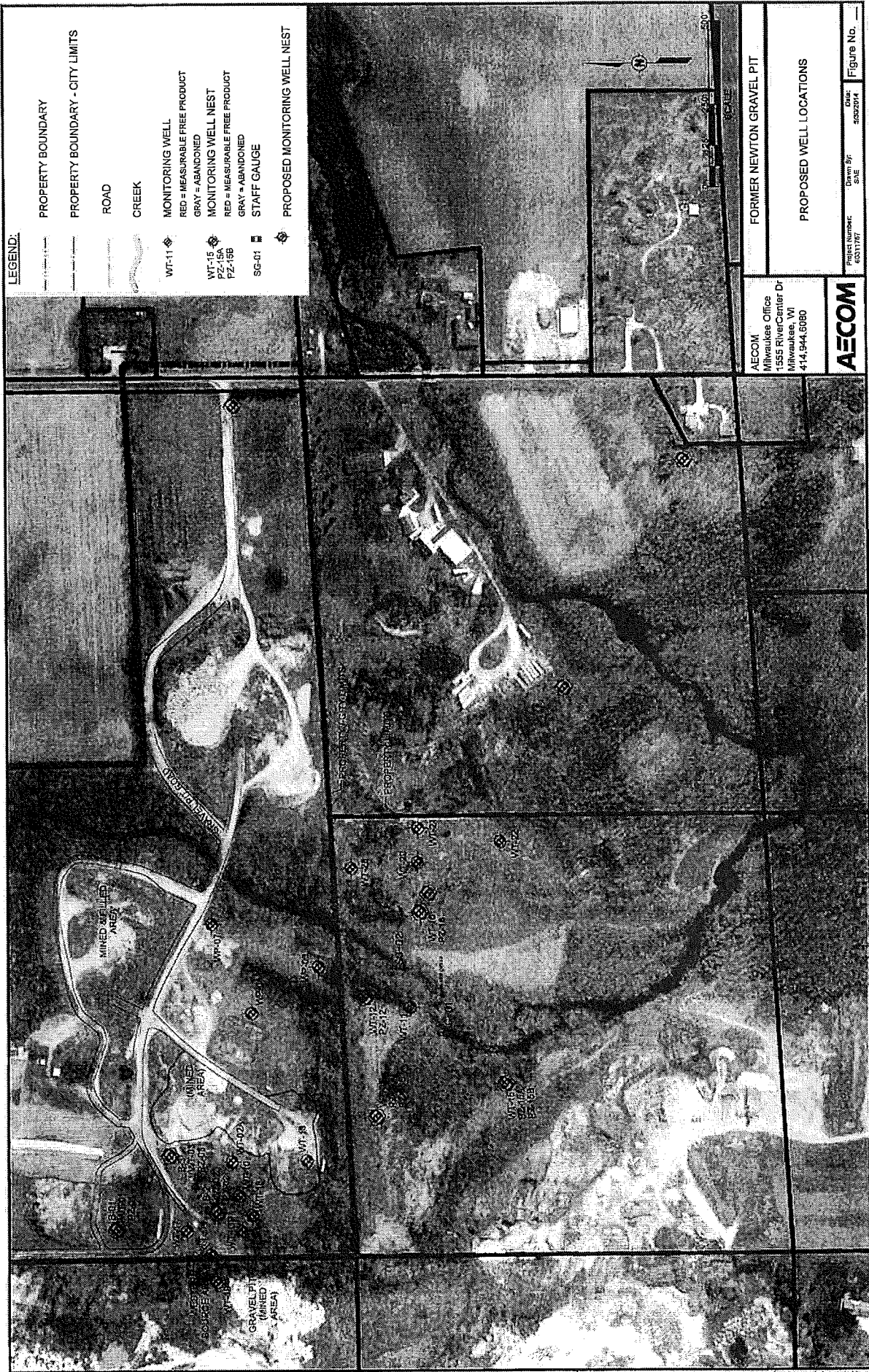
 Signature

Finance Director

 Title
 Authorized via resolution

6/11/2014

 Date



LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- ROAD
- CREEK
- MONITORING WELL
 - RED = MEASURABLE FREE PRODUCT
 - GRAY = ABANDONED
- MONITORING WELL NEST
 - RED = MEASURABLE FREE PRODUCT
 - GRAY = ABANDONED
- STAFF GAUGE
- PROPOSED MONITORING WELL NEST

AECOM
 Milwaukee Office
 1555 RiverCenter Dr
 Milwaukee, WI
 414.944.6080

AECOM

FORMER NEWTON GRAVEL PIT

PROPOSED WELL LOCATIONS

Project Number: 6031767
 Date: 05/20/14
 Figure No. _____

CHANGE ORDER

PROJECT: Gravel Pit Remediation

Date of Issuance: December 3, 2014

Change Order Number: 1

Agreement No: Project #60135471

Agreement Date: June 1, 2014

Agreement For: Western Source Area
Expanded Down-gradient Investigation

CONTRACTOR: AECOM

1555 N. River Center Drive
Suite 214
Milwaukee, WI 53212

The Consultant is directed to make the following changes to this agreement:

Change Order #1	Warden Site Visits on August 26th and September 3rd with WDNR interviewing former truck drivers to clarify historical documentation about where disposal activities took place.	\$1,900.00
	Meeting with Wisconsin Geological and Natural History Survey (WGNHS) Staff to discuss regional geologic and groundwater influences associated with Gravel Pit. Oct. 1, 2014	\$2,500.00
	Silver Creek surface water sampling event. Sept. 30, 2014	\$2,000.00
TOTAL		\$6,400.00

The original Contract Sum was	\$126,480.00
Net Change by previously authorized Change Orders.....	\$0.00
The Contract Sum prior to this Change Order was	\$126,480.00
The Contract Sum will be <i>changed</i> by this Change Order in the amount of	\$6,400.00
The new Contract Sum including this Change Order will be	\$132,880.00
The Contract Time will be <i>unchanged</i> by	Unchanged
The date of Substantial Completion as of the date of this Change Order therefore is	Unchanged

Dan Koski
Engineer
900 Quay Street
Address
Manitowoc, WI 54220
By *[Signature]* PE
Date 12-9-14

AECOM
Contractor
1555 N. River Center Drive, Suite 214
Address
Milwaukee, WI 53212
By *[Signature]*
Date 12/6/14

City of Manitowoc
Owner
900 Quay Street
Address
Manitowoc, WI 54220
By *[Signature]*
Date 12/11/14