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March 10, 2008

Jeff Reynolds
Ohio EPA, Division of Surface Water
Standards & Technical Support Section
P.O. Box 1049
122 S. Front Street
Columbus, Ohio 43216-1049

Dear Mr. Reynolds:

Please find enclosed for your review and the Director's approval a Level 3 Project Study Plan titled "2008 Flow Dependent Cuyahoga River Data Sonde Water Quality Monitoring." The objective of this study is to determine the impact that the Northeast Ohio Regional Sewer District's Southerly Wastewater Treatment Center has on dissolved oxygen concentrations in the Cuyahoga River during low flow conditions. If you have any questions regarding the content of this study plan, please do not hesitate to contact me. I can be reached by email at rhoadesj@neorsd.org or phone (216) 641-6000 ext. 2219.

Sincerely,



John W. Rhoades
Supervisor of Environmental Assessment
Northeast Ohio Regional Sewer District

Level 3 Project Study Plan

2008 Flow Dependent Cuyahoga River Data Sonde Water Quality Monitoring

(1) Objective

According to the Lower Cuyahoga River TMDL¹, reductions in phosphorus from point and nonpoint sources in the river are needed, at least in part, because current levels are causing diel swings in dissolved oxygen (DO) that may be impairing the fish communities living there. However, comprehensive site-specific data to support this hypothesis has not been collected. One of the sources of impairment given for the Cuyahoga River is the Northeast Ohio Regional Sewer District (NEORS) Southerly Wastewater Treatment Center (WWTC). The objective of this study is to determine the impact that Southerly WWTC's effluent has on DO concentrations in the Cuyahoga River during low flow conditions. Chemical and physical water quality monitoring in the Cuyahoga River between Lower Harvard Avenue and Riverview Road will be performed using long-term deployment water quality data sondes. The results of this study will help evaluate DO trends in the Cuyahoga River and the occurrence of diel swings. Temperature, pH, specific conductance, total phosphorus, dissolved reactive phosphorus, nitrate-nitrite, suspended solids and chlorophyll *a* will also be measured during the study. These measurements, along with DO concentrations, will be used to determine whether the stream is meeting applicable Ohio EPA water quality standards, make comparisons between areas of differing use attainment status, and evaluate the extent to which nutrient concentrations may be related to the magnitude of diel swings and the use attainment status.

(2) Nonpoint/Point Sources

The following are point sources in the study area: Big Creek (RM 7.20), Ohio Canal (RM 8.78), Southerly Wastewater Treatment Center (RM 10.57), West Creek (RM 11.05), Mill Creek (RM 11.49), Tinkers Creek (RM 16.36) and Combined Sewer Overflows. Upstream point sources include the Akron Wastewater Treatment Plant (RM 37.45) and numerous tributaries to the Cuyahoga River (see *Total Maximum Daily Loads for the Lower Cuyahoga River* for a complete list of tributaries and their locations).

Nonpoint sources of pollution in the study area include agriculture, urban runoff, storm sewers, and landfills.

¹ Ohio EPA. 2003. Total Maximum Daily Loads for the Lower Cuyahoga River. Ohio EPA, Division of Surface. Water Standards and Technical Support Section.

These sources may be contributing to increased concentrations of nutrients and sediment in the river. Changes in these concentrations may lead to changes in algal and macrophyte production and, therefore, changes in DO and pH.

(3) Parameters Covered

The chemical and physical water quality parameters to be measured during the study will include dissolved oxygen, pH, temperature, specific conductance, total phosphorus, dissolved reactive phosphorus, nitrate+nitrite, suspended solids and chlorophyll *a*.

(4) Field Collection and Data Assessment Techniques

YSI 6600 EDS data sondes will be deployed at four locations in the Cuyahoga River when flow in the river is below 250 cubic feet per second (cfs), as measured at the United States Geological Survey gage station in Independence. Each data sonde will record, at fifteen-minute intervals, dissolved oxygen concentration, pH, temperature, and specific conductance from the time the data sonde is deployed until the time it is retrieved. These data sondes will be placed in the stream by inserting each one into a 4.5-inch PVC pipe with holes drilled into the sides of the lower third of the pipe to allow water to pass through it (Figure 1). The PVC pipes, which will be four feet in length, are intended to protect the data sondes from hazards floating down the stream. These pipes will then be attached, with hose clamps, to angle iron driven into the substrate. To ensure that the PVC pipe will not break loose, the data sondes will be anchored to an eyebolt attached to a large rock on the shore with a ten-foot long braided steel cable. To provide additional security, the PVC pipe will be fitted with a cap that has a hole drilled in the top and two through the sides. A steel cable will be run through a hole in the top of the cap and attached to the data sonde. A lock will be used to secure the cap to the pipe.

The information from the data sondes will be uploaded every two weeks, or sooner if the river flows exceeds 250 cfs before the two week period is reached, unless conditions in the river prevent safe access. Following upload of the data, the data sondes will be calibrated according to the manufacturer's recommendations and placed back into the river when the river flow is below 250 cfs.

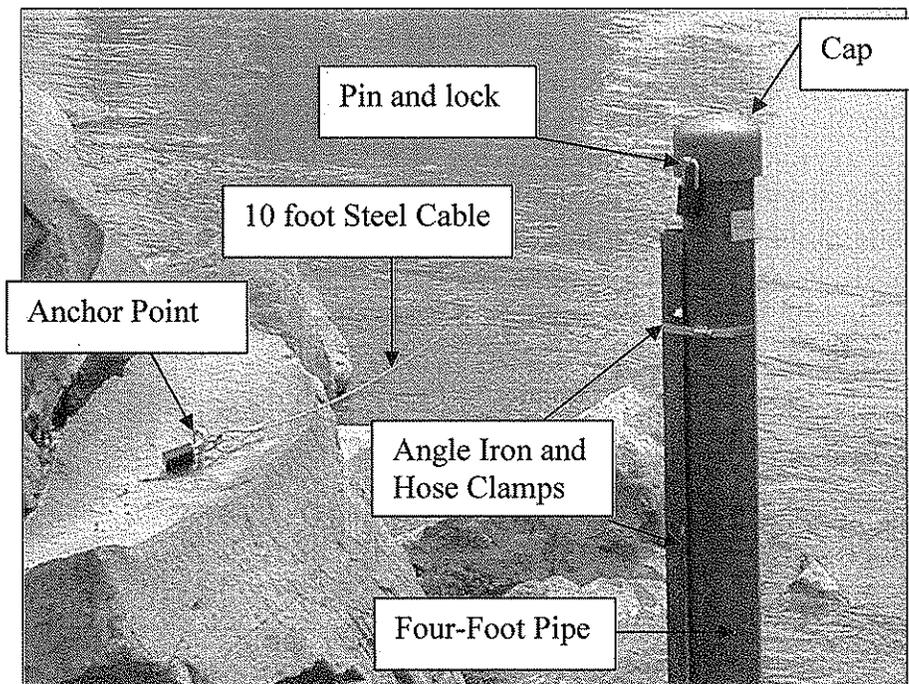


Figure 1. Data sonde installed in the Cuyahoga River

Water chemistry sampling will be completed at all locations at least twice per week when the data sondes are installed. Techniques used for water chemistry sampling and chemical analyses will follow the *Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices* (2006). Chemical water quality samples from each site will be collected with one 4-liter disposable polyethylene cubitainer with disposable polypropylene lid and two 473 mL plastic bottles. All water quality samples will be collected as grab samples. Acid preservation of the samples, as specified in the NEORSD laboratory's standard operating procedure for each parameter, will occur in the field. Appendix B lists the analytical method and detection limit for each parameter analyzed.

Water samples obtained for chemical analyses will be collected, labeled and then placed on ice inside the field truck. The field truck will remain locked at all times when not occupied/visible. The samples will then be delivered immediately to the NEORSD Analytical Services cooler, after which the door to the cooler will be locked and the samples will be transferred to the custody of Analytical Services. The NEORSD Analytical Services Quality Manual and associated Standard Operating Procedures is on file with Ohio EPA. The Quality Assurance Officer at Analytical Service will send updates, revisions and any information on document control to Ohio EPA as needed.

Data assessment will include an analysis of temporal and spatial trends in the collected data. Graphs will be prepared that show DO concentrations and pH over the course of the study. These graphs will be used to determine whether there are differences between areas with differing biocriteria attainment status as determined by Ohio EPA. The collected data will also be compared to applicable Ohio water quality standards to determine whether any excursions from water quality criteria have occurred. Finally, the data will also be used to determine relationships among DO, chlorophyll, nutrient, and suspended solids concentrations.

(5) Sampling Locations

The following locations will be sampled in the Cuyahoga River during the study. The furthest upstream site will be at the old Riverview Road bridge (“CRDS04 Riverview Road”), approximately 0.2 miles downstream of the confluence with Tinkers Creek. This site was chosen because it is upstream of Southerly WWTC and was in full attainment of biological criteria according to sampling completed by Ohio EPA in 2000² (Ohio EPA 2003). The next site downstream will be in an area of non-attainment approximately 0.5 miles upstream of Southerly WWTC (“CRDS03 Chlorine Access Bridge”). Permit-required water quality samples are also collected at this site, and chemical and physical data are readily available. The third site will be located on the river approximately 1.1 miles downstream of the Southerly WWTC discharge (“CRDS02 Interceptors”). This site is outside of the mixing zone and is an additional location where permit-required water quality samples are collected. The furthest downstream site will be at Harvard Avenue, which crosses the Cuyahoga River 0.1 miles downstream of the confluence with Big Creek (“CRDS01 Lower Harvard Avenue”).

Location	Latitude	Longitude	River Mile	Description	Quadrangle	Purpose
CRDS04 Riverview Road	41° 21.943' N	81° 36.769' W	16.80	Approximately 0.2 miles downstream of the confluence of Tinkers Creek at the old Riverview Road Bridge	Northfield	In full attainment of biological criteria, reference site
CRDS03 Chlorine Access	41° 25.139' N	81° 38.895' W	10.95	Approximately 50 feet downstream of the chlorine	Cleveland South	Non-attainment of biological

² Ohio EPA. 2003. Total Maximum Daily Loads for the Lower Cuyahoga River. Ohio EPA, Division of Surface. Water Standards and Technical Support Section.

Location	Latitude	Longitude	River Mile	Description	Quadrangle	Purpose
Bridge				access bridge near the Southerly ash lagoons		criteria, upstream of Southerly WWTC
CRDS02 Interceptors	41° 25.631' N	81° 39.945' W	9.78	Between the Big Creek and Southwest Interceptors downstream of Southerly WWTC	Cleveland South	Partial attainment of biological criteria, downstream of Southerly WWTC
CRDS01 Harvard Avenue	41° 26.835' N	81° 41.053' W	7.10	Near the northeast side of the Harvard Avenue Bridge	Cleveland South	Partial attainment of biological criteria, downstream of Southerly WWTC

(6) Schedule

The study will take place from June 1 through October 15, 2008. The data sondes will be installed at all of the sampling locations whenever flow in the Cuyahoga River falls below 250 cfs, as measured at the United States Geological Survey gage station in Independence. The information from the data sondes will be uploaded and the sondes calibrated every two weeks, or sooner, if the river flows exceed 250 cfs before the two-week period is reached, unless conditions in the river prevent safe access. Maintenance on the data sondes and probes will be performed as needed.

(7) QA/QC

The data sondes will be brought back to NEORSD's Environmental & Maintenance Service Center for data upload and calibration. Prior to calibration, the accuracy of the data that has been collected will be checked by comparing readings taken by the sondes to known standards. If the measurements taken at this time meet quality control goals, all of the data collected since the last calibration will be considered accurate. The acceptable differences for pH and specific conductivity will be ± 0.3 with pH 7 buffer and $\pm 10\%$ of conductivity standard, respectively³. The acceptable difference for DO will be ± 0.2 mg/L. If

³ EPA New England- Region 1. 2005. *Standard Operating Procedure for Calibration and Field Measurement Procedures for the YSI Model 6-Series Sondes and Data Logger (Including: Temperature, pH, Specific Conductance, Turbidity, Dissolved Oxygen, Chlorophyll, Rhodamine WT, ORP, and*

the measurements do not meet quality control goals, best professional judgment will be used to decide if any of the data collected during that period may still be accurate. For example, the data collected from the four locations may be plotted on the same graph, and if it appears that the data points are following similar trends, they may be considered accurate. If any data that do not meet quality control goals are used, a rationale for their inclusion will be provided when the data are submitted.

Calibration of the sondes will be done according to the YSI Environmental Operations Manual. The specific conductance will be calibrated first using a 111.9 mS/cm standard. Second, the pH will be calibrated using two different buffers (7 and 10 s.u.). The DO membrane will be replaced every other time the sondes are calibrated. Once the membrane is replaced, the DO will be calibrated. The acceptable error in calibration will be 0.2 mg/L.

Each data sonde will have a separate calibration and maintenance logbook. As the appropriate calibration procedures are completed, the results will be recorded in the logbook along with the name of the person performing the calibration and the date. If difficulty is encountered in calibrating an instrument, or if the instrument will not hold calibration, this information will also be recorded.

Malfunctioning equipment will not be used to collect data. Proper steps will be taken to correct the problem as soon as possible, whether by repairing the sonde in the field or at the Environmental & Maintenance Services Center or by sending it to the supplier or an appropriate service company. All equipment maintenance will be recorded in the logbook.

(8) Work Products

Following the completion of the project, a spreadsheet that presents data collected during the study and highlights any excursions from water quality criteria will be prepared. Reports summarizing, interpreting, graphically presenting, and discussing the data will also be prepared.

(9) Qualified Data Collectors

The following Level 3 Qualified Data Collectors will be involved with this study:

2008 Flow Dependent Cuyahoga River Data Sonde Water Quality Monitoring Study Plan
 March 10, 2008

Name	Address	Email Address	Phone Number
*John W. Rhoades	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	rhoadesj@neorsd.org	216-641-6000
Cathy Zamborsky	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	zamborskyc@neorsd.org	216-641-6000
Seth Hothem	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	hothems@neorsd.org	216-641-6000
Kathryn Crestani	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	crestanik@neorsd.org	216-641-6000
Tiffany Moore	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	mooret@neorsd.org	216-641-6000
Tom Zablotny	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	zablotnyt@neorsd.org	216-641-6000
Ron Maichle	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	maichler@neorsd.org	216-641-6000

* Indicates lead project manager

Following is a list of persons not qualified as a QDC who may be involved in the project. Prior to the start of sampling, the project manager or another QDC will explain to each of these and any other individuals the proper methods for installing and retrieving the sondes, data uploading, calibration and collection of water chemistry samples. These activities will only be completed under the direct observation of a QDC. The lead project manager will also be responsible for reviewing all reports and data analysis prepared by these individuals prior to completion.

Name	Address	Email Address	Phone Number
Joseph Broz	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	brozj@neorsd.org	216-641-6000
Tim Dobriansky	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	dobrianskyt@neorsd.org	216-641-6000
Rae Grant	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	grantr@neorsd.org	216-641-6000
Lateefah Hafeez	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	hafeezl@neorsd.org	216-641-6000
Eric Hinton	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	hintone@neorsd.org	216-641-6000
Mike Pavlik	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	pavlikm@neorsd.org	216-641-6000
Francisco Rivera	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	riveraf@neorsd.org	216-641-6000
Kevin Roff	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	roffk@neorsd.org	216-641-6000
Frank Schuschu	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	schuschuf@neorsd.org	216-641-6000
Elizabeth Toot-Levy	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	toot-levye@neorsd.org	216-641-6000

2008 Flow Dependent Cuyahoga River Data Sonde Water Quality Monitoring Study Plan
March 10, 2008

Name	Address	Email Address	Phone Number
Wolfram vonKiparski	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	vonkiparskiw@neorsd.org	216-641-6000
Timothy Whipple	4747 East 49 th Street Cuyahoga Hts., Ohio 44125	whipplet@neorsd.org	216-641-6000

(10) Documentation of approval of project manager as level 3 qualified data collector

See attached (Appendix A).

(11) Contract laboratory contact information

Not applicable.

(12) Copy of ODNR collector's permit

Not applicable.

(13) Catalog Statement

A digital photo catalog of all sampling locations will be maintained for 10 years and will include photos of the specific sampling location(s), the riparian zone adjacent to the sampling location(s) and the general land use in the immediate vicinity of the sampling location(s).

Print/Signature: John W. Rhoades /



Date: 03/10/08

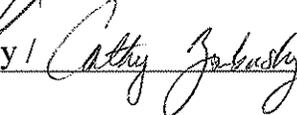
(14) Voucher Specimen Statement

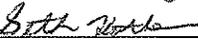
Not applicable.

(15) Trespassing Statement

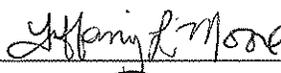
I have not been convicted or pleaded guilty to a Violation of section 2911.21 of the Revised Code (criminal trespass) or a substantially similar municipal ordinance within the previous five years.

Print/Signature: John W. Rhoades /  Date: 03/10/08

Print/Signature: Cathy Zamborsky /  Date: 3/10/08

Print/Signature: Seth Hothem /  Date: 3/10/08

Print/Signature: Kathryn Crestani /  Date: 3/10/08

Print/Signature: Tiffany Moore /  Date: 3/10/08

Print/Signature: Tom Zablony /  Date: 3-10-08

Print/Signature: Ron Maichle /  Date: 3-10-08



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

Effective Date: June 30, 2006
Expiration Date: June 29, 2008

CERTIFIED MAIL

OHIO E.P.A.
JUN 30 2006
ENTERED DIRECTOR'S JOURNAL

John W. Rhodes
Northeast Ohio Regional Sewer District
22370 Blossom Drive
Rocky River, Ohio 44116

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Mr. Rhodes:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 008

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.
Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncelik, Director

[Handwritten Signature] 6/30/06

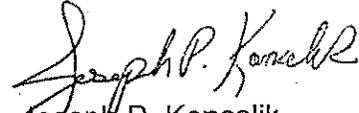
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Qualified Data Collector Approval
Page Two

Additionally, collection (and retention) of aquatic biological samples (this includes fish, macroinvertebrates, mollusks, and shells) requires a collector's permit from the Ohio Department of Natural Resources/Division of Wildlife. Obtain this permit prior to collection of any biological samples.

The approval of this certification is a final action of the director of Ohio EPA and may be appealed to the Environmental Review Appeals Commission pursuant to ORC 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Commission within thirty days after notice of the director's action. Notice of the filing of the appeal must be filed with the director within three days after the appeal is filed with the commission. An appeal may be filed with the Commission at the following address: 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

Sincerely,



Joseph P. Koncelik
Director



State of Ohio Environmental Protection Agency

STREET ADDRESS:

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122 S. Front Street
Columbus, Ohio 43215

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www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

Effective Date: June 30, 2006
Expiration Date: June 29, 2008

CERTIFIED MAIL

Catherine M. Zamborsky
Northeast Ohio Regional Sewer District
1749 Royalwood Road
Broadview Heights, Ohio 44147

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Ms. Zamborsky:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 009

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

OHIO E.P.A.
JUN 30 2006
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Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncinski, Director

Michael Ashmore 6/30/06

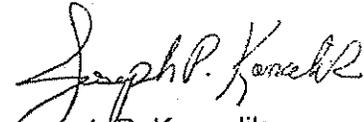
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Qualified Data Collector Approval
Page Two

Additionally, collection (and retention) of aquatic biological samples (this includes fish, macroinvertebrates, mollusks, and shells) requires a collector's permit from the Ohio Department of Natural Resources/Division of Wildlife. Obtain this permit prior to collection of any biological samples.

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Sincerely,


Joseph P. Koncelik
Director



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CERTIFIED MAIL

ENTERED DIRECTOR'S JOURNAL

JUN 30 2006

OHIO E.P.A.

Seth Hothem
Northeast Ohio Regional Sewer District
7815 Dartworth Drive
Parma, Ohio 44129

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Mr. Hothem:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 010

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

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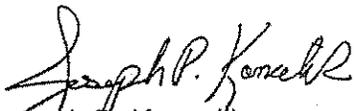
Joseph P. Koncellik 6/30/06

Qualified Data Collector Approval
Page Two

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JUN 30 2006

OHIO E.P.A.

Kathryn Crestani
Northeast Ohio Regional Sewer District
4075 West 215 Street
Fairview Park, Ohio 44126

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Ms. Crestani:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 011

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

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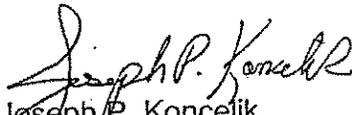
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Page Two

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Joseph P. Koncelik
Director



State of Ohio Environmental Protection Agency
OHIO E.P.A.

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

JUL 24 2006

ENTERED DIRECTOR'S JOURNAL

CERTIFIED MAIL

Effective Date: July 24, 2006
Expiration Date: July 23, 2008

Tiffany Lynn Moore
Northeast Ohio Regional Sewer District
8927 Weaver Road
Ravenna, Ohio 44266-8057

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Ms. Moore:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 017

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

Verify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency

Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncelik, Director

[Handwritten signature] 7-24-06

Qualified Data Collector Approval
Page Two

Additionally, collection (and retention) of aquatic biological samples (this includes fish, macroinvertebrates, mollusks, and shells) requires a collector's permit from the Ohio Department of Natural Resources/Division of Wildlife. Obtain this permit prior to collection of any biological samples.

The approval of this certification is a final action of the director of Ohio EPA and may be appealed to the Environmental Review Appeals Commission pursuant to ORC 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Commission within thirty days after notice of the director's action. Notice of the filing of the appeal must be filed with the director within three days after the appeal is filed with the commission. An appeal may be filed with the Commission at the following address: 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

Sincerely,



Joseph P. Koncelik
Director



State of Ohio Environmental Protection Agency

OHIO E.P.A.

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Columbus, Ohio 43215

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JUL 24 2006

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P.O. Box 1049
Columbus, OH 43216-1049

ENTERED DIRECTOR'S JOURNAL

Effective Date: July 24, 2006
Expiration Date: July 23, 2008

CERTIFIED MAIL

Tom Zabloutny
Northeast Ohio Regional Sewer District
1660 Melody Lane
Medina, Ohio 44356

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Mr. Zabloutny:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 018

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency

Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Kancelik, Director

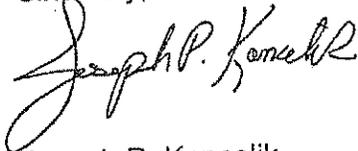
Joseph P. Kancelik 7-24-06

Qualified Data Collector Approval
Page Two

Additionally, collection (and retention) of aquatic biological samples (this includes fish, macroinvertebrates, mollusks, and shells) requires a collector's permit from the Ohio Department of Natural Resources/Division of Wildlife. Obtain this permit prior to collection of any biological samples.

The approval of this certification is a final action of the director of Ohio EPA and may be appealed to the Environmental Review Appeals Commission pursuant to ORC 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Commission within thirty days after notice of the director's action. Notice of the filing of the appeal must be filed with the director within three days after the appeal is filed with the commission. An appeal may be filed with the Commission at the following address: 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

Sincerely,

A handwritten signature in cursive script that reads "Joseph P. Koncelik".

Joseph P. Koncelik
Director



State of Ohio Environmental Protection Agency

OHIO E.P.A.

STREET ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

JAN - 7 2008 MAILING ADDRESS:

ENTERED DIRECTOR COPY ROOM
P.O. Box 1049
COLUMBUS OH 43216-1049

Effective Date: January 7, 2008
Expiration Date: January 6, 2010

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

CERTIFIED MAIL

Ronald Maichle
Northeast Ohio Regional Sewer District
7716 Oakhill Road #E
North Royalton, Ohio 44133

By: [Signature] Date: 1-7-08

Re: Qualified Data Collector Approval, Surface Water Volunteer Monitoring Program

Dear Ronald:

The Division of Surface Water Volunteer Monitoring (Credible Data) Program has reviewed your Qualified Data Collector (QDC) application. Pursuant to Ohio Revised Code (ORC) 6111.53 and Ohio Administrative Code (OAC) 3745-4-03, you are approved as a QDC for the following level and specialty:

QDC Level: 3
QDC Specialty: Chemical Water Quality Assessment
QDC number: 145

Please use this QDC number on all correspondence, study plans, etc. submitted to Ohio EPA.

As noted at the top of this letter, this status is effective as of the date of this letter and expires two years from that date. You may now submit study plans to the Volunteer Monitoring Program.

A renewal application must be submitted in accordance with OAC 3745-4-03(C). As provided in this rule, renewal of status is contingent upon active participation in the Volunteer Monitoring Program at the designated level and specialty. Lack of such participation will prevent you from renewing your status, but you may re-apply for initial QDC status.

As a reminder, your status is contingent upon the absence of any trespassing violation (within the previous five years) by you or any person sampling under your supervision. Always obtain land owner permission prior to sampling.

Additionally, collection (and retention) of aquatic biological samples (this includes fish, macroinvertebrates, mollusks, and shells) requires a collector's permit from the Ohio Department of Natural Resources/Division of Wildlife. Obtain this permit prior to collection of any biological samples.

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

Qualified Data Collector Approval
Page Two

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of seventy dollars (\$70.00) which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal must be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Commission at the following address: 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

Sincerely,



Chris Korleski
Director

Appendix B. Analytical methods and detection limits

Parameter	Test	Detection Limit
NO ₂	EPA 354.1	0.01 mg/L
NO ₃	EPA 353.2	0.01 mg/L
Soluble-P	SolPO ₄	0.01 mg/L
Total-P	EPA 365.2	0.01 mg/L
TSS	EPA 160.2	1 mg/L
Chlorophyll <i>a</i>	*	*

* Method is still being developed. Test and detection limit will be submitted once known.

