

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### Great Lakes Programs

270 Michigan Avenue, Buffalo, NY 14203-2915

P: (716) 851-7070 | F: (716) 851-7009

www.dec.ny.gov

June 15, 2018

Mr. Richard Balla  
Watershed Management Branch  
Region 2 Clean Water Division  
U.S. Environmental Protection Agency  
290 Broadway  
New York, NY 10007

Dear Mr. Balla:

I would like to request the U.S. Environmental Protection Agency's concurrence with the removal of the Rochester Embayment Area of Concern (AOC) Tainting of Fish and Wildlife Flavor Beneficial Use Impairment (BUI). The New York State Department of Environmental Conservation (NYSDEC) has determined that this impairment is no longer present in the Rochester Embayment AOC.

The enclosed BUI Removal Report describes NYSDEC's evaluation of the current status of the impairment, which is based largely upon a recent NYSDEC water quality monitoring study. NYSDEC developed the removal proposal in accordance with the process contained in New York State's *Guidance for Delisting (Redesignation) of AOCs and their BUI Indicators*, which is consistent the U.S. Policy Committee's *Delisting Principles and Guidelines* document.

The Rochester Embayment Remedial Advisory Committee fully supports the removal of this BUI. In addition, NYSDEC and the Monroe County Department of Public Health held a public meeting on removal of the BUI. The comments received were addressed as documented in the enclosed report.

If you need further information, please contact either Mr. Michael Kuzia-Carmel, NYSDEC State AOC Coordinator, at 518-402-7231 or Mr. Wade Silkworth, Monroe County Department of Public Health Rochester Embayment AOC Coordinator, at 585-753-5470. Thank you for your consideration of this request.

Sincerely,

A handwritten signature in black ink that reads "Don Zelazny". The signature is written in a cursive style with a long horizontal line extending to the right.

Donald Zelazny  
Great Lakes Programs Coordinator

Enclosure

cc: Mr. Frederick Luckey, USEPA Region 2  
Mr. John Perrecone, GLNPO  
Ms. Brenda Jones, GLNPO  
Mr. Michael Kuzia-Carmel, NYSDEC  
Mr. Wade Silkworth, Monroe County Dept. Of Public Health



Department of  
Environmental  
Conservation

# ROCHESTER EMBAYMENT AREA OF CONCERN

Tainting of Fish and Wildlife Flavor  
Beneficial Use Impairment Removal Report

APRIL 2018



Rochester Embayment Area of Concern  
Tainting of Fish and Wildlife Flavor  
Beneficial Use Impairment (BUI) Removal Report

April 2018

Prepared by:

New York State Department of Environmental Conservation

And

Monroe County Department of Public Health

This Beneficial Use Impairment (BUI) Removal Report was prepared by the New York State Department of Environmental Conservation (NYSDEC) using information provided by the Monroe County Department of Public Health (MCDPH) and was substantially funded by the United States Environmental Protection Agency (USEPA) through the Great Lakes Restoration Initiative (GLRI). The NYSDEC and MCDPH acknowledge the significant efforts of the Remedial Advisory Committee (RAC) in engaging stakeholders and the public throughout the BUI removal process. For more information, please contact the Remedial Action Plan Coordinator at MCDPH or the AOC Coordinator at NYSDEC Division of Water.

## **Table of Contents**

### **I. Introduction**

### **II. Background**

- A. BUI Removal Criteria
- B. Endpoint
- C. BUI Removal Comments and Report Preparation

### **III. BUI Indicator Status Resolution**

- A. Strategy and Rationale
- B. Supporting Data and Assessment
- C. Criteria, Principles, and Guidance Application
- D. Removal Statement

### **IV. BUI Removal Steps and Follow-up**

- A. BUI Removal Steps
- B. Post-Removal Responsibilities

### **Figures and Tables**

Figure 1 – NYSDEC 2013-2014 Sampling Locations

Figure 2 – NYSDEC 2013-2014 Analytical Results - Total Recoverable Phenolics by EPA Method 420.4

Table 1 – Analytical Procedures Used for NYSDEC 2013-2014 Water Quality Monitoring

Table 2 – NYSDEC 2013-2014 Analytical Results - Total Recoverable Phenolics by EPA Method 420.4

Table 3 – NYSDEC 2013-2014 Analytical Results - Individual Phenolics by EPA Method 625

### **Appendices**

- A. List of RAC Members
- B. Final Report Beneficial Use Impairment – Tainting of Fish and Wildlife Flavor Rochester Embayment AOC
- C. Documentation of Agency/Angler Surveys Supporting BUI Removal Criterion 3
- D. Public Meeting Notes and Responsiveness Summary

## I. Introduction

This BUI Removal Report identifies the background, criteria, supporting data, and rationale to remove the “Tainting of Fish and Wildlife Flavor” BUI from the Rochester Embayment Area of Concern (AOC). The status of this BUI is currently listed as “Impaired” for the Genesee River portion of the AOC due to historic angler reports of a chemical odor in salmonids caught in the lower Genesee River, as well as occasional exceedances of water quality standards for phenolic compounds typically associated with tainting of fish flesh.

Beginning in 1993, the Monroe County Department of Health (MCDOH) conducted water quality monitoring at the Charlotte Pump Station along the lower Genesee River. This effort confirmed the presence of phenolic compounds in the lower Genesee River that are often associated with the tainting of fish and wildlife flesh. NYSDEC conducted water quality sampling along the lower Genesee River at the Boxart Street Station from 2001 – 2013 through the Rotating Integrated Basin Studies (RIBS) program. This sampling also resulted in detections of phenolic compounds in the lower Genesee River.

To assess the condition of this BUI, NYSDEC conducted a water quality monitoring program from 2013 – 2014 that studied the presence of phenolic compounds both within the AOC portion of the Genesee River and also upstream of the AOC boundary. While phenols were detected above the applicable NYS water quality standards at both AOC and upstream sampling locations during select sampling events, the aggregate data suggest that impacts are due to sources upstream of the AOC. Additionally, the RAC has not received any reports of tainted fish and wildlife over a seven-year period.

Based on the results of the 2013 – 2014 water quality monitoring program and the absence of reports of tainted fish and wildlife from the public, the RAC and NYSDEC have determined that the Tainting of Fish and Wildlife Flavor BUI has met the conditions for removal from the AOC in accordance with the USEPA Delisting Guidance document, *Restoring United States Great Lakes Areas of Concern: Delisting Principles and Guidelines (USEPA, 2001)*. The RAC fully supports the recommendation that the Tainting of Fish and Wildlife Flavor BUI be removed from the list of impaired BUIs for the Rochester Embayment AOC.

## II. Background

In the Great Lakes Basin, the International Joint Commission (IJC) has identified 43 AOCs where pollution from past industrial production and waste disposal practices has created hazardous waste sites and contaminated sediments that have degraded the area’s aquatic environment. Up to 14 BUIs are used to evaluate the condition of an AOC. The demonstrated achievement of certain removal criteria for each BUI must be documented for an AOC to be delisted. Among the impairments identified in the Rochester Embayment AOC is the Tainting of Fish and Wildlife Flavor BUI.

The Rochester Embayment AOC includes the lower 6 miles of the Genesee River from the mouth up to the Lower Falls in the City of Rochester and the portion of Lake Ontario south of a straight line drawn from Bogus Point to Nine Mile Point. Remedial Action Plan (RAP) coordination is led by the Monroe County Department of Public Health (MCDPH), in collaboration with the local RAC (**Appendix A**).

In the Rochester Embayment AOC Stage I RAP (Monroe County Department of Planning & Development, 1993) and Stage II RAP (MCDPH, 1997), the status of the Tainting of Fish and Wildlife Flavor BUI was listed as “unknown” due to an absence of data sufficient to determine whether or not the BUI actually existed within the AOC. These documents indicated that there were a few complaints from anglers over a 5-year period (immediately prior to 1993) about a chemical odor in fish (salmonids) caught in the lower Genesee River, but actual survey results did not reveal instances of tainting.

In addition to the small number of reports from the public of tainted fish flesh, the Stage I RAP indicated that water quality data collected by EPA, NYSDEC and Monroe County between 1981 and 1991 confirmed that of phenolic compounds were detectable in the lower Genesee River at concentrations that could result in tainting (refer to Stage I RAP, Chapter 4, including Table 4-10).

No changes in the status of this BUI were indicated in two subsequent addenda to the RAP (MCDPH, 1999 and 2002). In 2008, Ecology and Environment, Inc. (E&E), under contract to USEPA, provided support to the Rochester Embayment AOC RAC including issues facilitation and technical assistance for developing removal criteria for those BUIs that required additional evaluation, including the Tainting of Fish and Wildlife Flavor BUI. In consultation with USEPA, NYSDEC and the RAC, E&E facilitated the development of the BUI removal criteria and published these in the *Rochester Embayment Area of Concern Beneficial Use Impairment Delisting Criteria Report* (E&E, 2009). The criteria are provided later in this section.

In the most recent Stage I/II RAP Addendum (NYSDEC, 2011), the status of the “Tainting of Fish and Wildlife Flavor” BUI was changed to “impaired” within the Genesee River portion of the AOC (**Figure 1**). This administrative change was based primarily on the prior angler reports cited above, and occasional exceedances of water quality standards for phenolic compounds that New York State has promulgated for the protection of aesthetic (food source) considerations. Due to the absence of any public reports of tainted wildlife flesh, it is the position of the RAC that any tainting that may have existed within the AOC only pertained to fish flesh; there is no evidence that it affected the flesh of other wildlife.

The 2011 Addendum states that NYSDEC has indicated that phenol is the usual cause of tainting complaints, and that its source in the Genesee River is likely coal tar (from former Manufactured Gas Plants or MGPs) seeping through fractured bedrock. NYSDEC identified multiple MGP sites along the Genesee River upstream of the AOC boundary at the Lower Falls. These MGP sites are in various phases of remediation from site investigation to site management.

## **A. BUI Removal Criteria**

As identified in the 2009 E&E report, the Tainting of Fish and Wildlife Flavor BUI may be removed when the following criteria have been met:

1. There are no more than three exceedances of NYSDEC water quality standards for chlorinated phenols (1 microgram per liter, or  $\mu\text{g/L}$ ) and unchlorinated phenols (5  $\mu\text{g/L}$ ) measured monthly at Charlotte Pump Station for a period of 1 year; **and**,
2. There is no indication of tainting of fish and wildlife flavor in a survey of anglers fishing in the lower river or embayment for a species considered resident in the river (channel catfish, freshwater drum and walleye); **or**,

3. There are no more than three reports of tainting from fish and wildlife officials per calendar year.

The RAC selected Criterion 3 instead of Criterion 2 for the public reporting component of the BUI removal process. As indicated in the Stage I/II RAP Addendum (NYSDEC, 2011), the RAC had indicated that an angler survey may not be the most reliable method for delisting due to the subjectivity of the respondents. This is supported by a study in conjunction with the Spanish River RAP, a Lake Huron AOC that found people could not consistently distinguish between tainted and untainted fish (Jardine and Bowman, 1990). The use of quantitative measurements of phenolic compounds in water coupled with reports of fish and wildlife officials provides a more reliable assessment of potential tainting problems.

## **B. Endpoint**

This report summarizes the available data addressing the status of the “Tainting of Fish and Wildlife Flavor” BUI within the Rochester Embayment AOC, and supports the RACs recommendation that this BUI be removed based on the attainment of the BUI removal criteria.

## **C. BUI Removal Comments and Report Preparation**

The following questions were considered when evaluating whether to proceed with the change in status for the tainting of fish and wildlife flavor BUI:

1. Are the methods and results cited in the report or presentation materials technically and scientifically sound?
2. Does the information cited in the report regarding restoration of the impaired beneficial use support the BUI removal criteria?
3. Do the RAC and general public concur that the BUI removal criteria have been met?

NYSDEC and MCDPH prepared this evaluation and included a thorough review of technical reports and supporting documents.

## **III. BUI Indicator Status Resolution**

### **A. Strategy and Rationale**

The USEPA Delisting Guidance document, *Restoring United States Great Lakes Areas of Concern: Delisting Principles and Guidelines (USEPA, 2001)*, adopted by the United States Policy Committee (USPC), states the following:

“Removal of a beneficial use impairment can occur under any of these scenarios:

- A delisting target has been met through remedial actions which confirms that the beneficial use has been restored;
- It can be demonstrated that the beneficial use impairment is due to natural rather than human causes;
- It can be demonstrated that the impairment is not limited to the local geographic extent, but rather is typical of lakewide, region-wide, or area-wide conditions (under this situation, the beneficial use may not have been originally needed to be recognized as impaired);



- The impairment is caused by sources outside the AOC. The impairment is not restored but the impairment classification can be removed or changed to “impaired-not due to local sources”. Responsibility for addressing “out of AOC” sources is given to another party (i.e., LAMPs).”

The IJC guidelines used to originally list the Tainting of Fish and Wildlife Flavor BUI are, “When ambient water quality standards, objectives or guidelines for the anthropogenic substance(s) known to cause tainting, are being exceeded or survey results have identified tainting of fish or wildlife flavor” (IJC, 1991). The IJC guidelines further state that this beneficial use may be deemed Not Impaired, “When survey results confirm no tainting of fish or wildlife flavor.” For the Rochester Embayment AOC, both water quality and public reporting components were considered when developing the strategy for BUI removal, and are discussed further in subsequent sections of this document.

## **B. Supporting Data and Assessment**

In this section, supporting data and assessment will be presented for each of the BUI removal criteria previously identified.

**BUI Removal Criterion 1:** *There are no more than three exceedances of NYSDEC water quality standards for chlorinated phenols (1 µg/L) and unchlorinated phenols (5 µg/L) measured monthly at Charlotte Pump Station for a period of 1 year.*

In addition to the NYSDEC water quality standards cited in Criterion 1, a standard of 1 µg/L also exists for total recoverable phenolics. This analyte is detected via a separate analytical method, and does not distinguish between chlorinated and unchlorinated components. All of the standards are for the protection of aesthetic (food source) considerations, and can be found in 6 NYCRR Part 703.5 (NYS, 2015). All of these standards are relevant to the discussion that follows regarding monitoring data that have been reviewed in support of this BUI removal report. As previously indicated, NYSDEC has reported that phenols are the usual cause of tainting complaints.

The Stage I/II RAP Addendum (NYSDEC, 2011) cited the need for additional phenol study, but noted concerns over the analytical method and detection limits that had historically been used, which may not be sufficient for determining whether or not phenols exist at concentrations above the water quality standard. As evidenced by the BUI Removal Criterion 1, there was a desire by the RAC to develop a monitoring program that would differentiate between chlorinated and unchlorinated phenolic compounds and achieve analytical detection limits that were below the applicable NYS water quality standards included in this criterion.

Using funding provided by EPA through the Great Lakes Restoration Initiative (GLRI Grant # GL97218901-3), NYSDEC, in consultation with the RAC, planned and implemented a monitoring program to more extensively assess the presence of phenolic compounds in the AOC section of the Genesee River, and provide the primary data set that would support BUI removal efforts. A critical component of this program was to assess whether concentrations within the AOC were any different than those upstream of the AOC. In the course of developing the work plan for the water quality monitoring, it was determined that the Charlotte Pump Station would not be an ideal location for representing AOC conditions. This determination was made due to the Charlotte Pump Station being subject to backwater effects from Lake Ontario, and also being difficult to secure access for sampling.

In 2013-2014, NYSDEC implemented and completed this monitoring program. As stated in the approved Quality Assurance Project Plan (QAPP) for this effort (NYSDEC, 2013), a total of four sampling locations were selected based on their ability to provide an accurate representation of the water quality conditions both inside and upstream of the AOC, and to allow for safe access and collection of field samples. Of the two sites located within the AOC boundaries, one location (GENRV-A) was selected to represent the AOC conditions as a whole, while the second location (GENRV-B) was selected due to concerns of site-specific phenol contamination sources (i.e., coal tar seeps originating from former MGP sites upstream of the AOC boundary). *(Note: GENRV-A was in the vicinity of the Boxart Street location from the NYSDEC RIBS monitoring program, and approximately 1.5 miles upstream of the Charlotte Pump Station).*

Two sampling locations (GENRV-C and GENRV-D) were selected to represent the water quality conditions and chemical concentrations upstream of the AOC. GENRV-C was selected for its close proximity to the coal tar seeps mentioned above, while GENRV-D serves as the representative sample for overall upstream conditions. Sampling locations are shown on **Figure 1**. *(Additional Note: It should be stated here that the discussion below, presenting the data from the 2013-2014 monitoring program, is somewhat different than how the data were presented in a technical report submitted to, and approved by, the RAC in 2014 and which is included in **Appendix B** of this BUI removal report. The actual data sets are entirely the same, but over time there was a reconsideration of how to present the data in the clearest manner within the context of the BUI removal process/criteria and the relevant water quality standards.)*

Figure 1: NYSDEC 2013-2014 Sampling Locations



Sampling was conducted on a monthly basis from April 2013 through March 2014 in accordance with the project QAPP (NYSDEC, 2013). All samples were analyzed for phenolic compounds using two different analytical methodologies. The first was an analysis for total recoverable phenolics by EPA Method 420.4, in order to provide results that were comparable to the historical data previously cited in this report. The second analytical procedure was EPA Method 625, which includes all of the Priority Pollutant phenolic compounds defined under the Clean Water Act (40 CFR Part 423, Appendix A). This is one of the most commonly used analytical procedures for identifying phenolic compounds in water samples, providing a higher level of specificity (differentiation between chlorinated and unchlorinated phenols) and generally lower detection limits than EPA Method 420.4. However, a limitation of this method is that it only includes 15 phenolic compounds, a relatively small subset of the phenolic compounds that potentially exist in the environment. The two analytical procedures are summarized in **Table 1**.

Table 1: Analytical Procedures Used for NYSDEC 2013-2014 Water Quality Monitoring		
Analytical Method	Chemical Parameters	Applicable NYS Water Quality Standard* (micrograms per liter, µg/L)
EPA 420.4	Total Recoverable Phenolics	1 µg/L (for total phenols)
EPA 625	<p>Chlorinated Phenols:            2-chlorophenol,            2,4-dichlorophenol            2,4,5-trichlorophenol            2,4,6-trichlorophenol            4-chloro-3-methylphenol            pentachlorophenol</p> <p>Unchlorinated Phenols:            2-methylphenol            2-nitrophenol            2,4-dimethylphenol            2,4-dinitrophenol            3&amp;4-methylphenol            4-nitrophenol            4,6-dinitro-2-methylphenol            phenol</p>	<p>1 µg/L (refers to sum of all chlorinated phenols)</p> <p>5 µg/L (refers to sum of all unchlorinated phenols)</p>

\* Type: E(FS) - Protection from aesthetic food source considerations (6 NYCRR Part 703.5)

The total recoverable phenolics data (EPA Method 420.4) from the 2013-2014 monitoring program are summarized on **Table 2** and **Figure 2** below. Similar concentrations (including ranges and averages) and concentration patterns over the 12-month monitoring period are exhibited throughout the monitored area, especially for locations GENRV-B, -C and -D. Locations GENRV-B and -C are located immediately downstream and upstream of the AOC boundary, respectively. The nearly identical concentrations at these two locations indicate that any total recoverable phenolics in the river downstream of the AOC boundary likely originated from upstream sources. The fact that concentrations at GENRV-A, the furthest downstream location, were generally the lowest of all four locations suggests that the primary source of phenolics is upstream of the AOC.

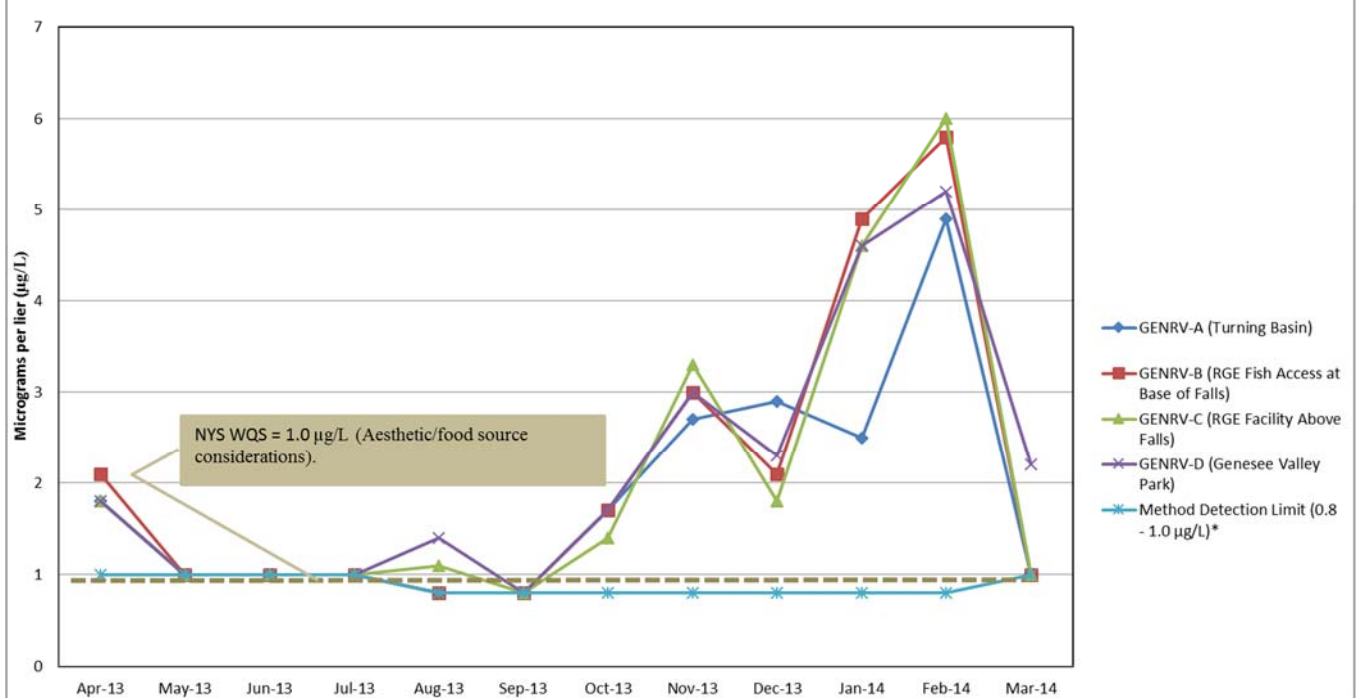
The *detected* concentrations of total recoverable phenolics exceeded the water quality standard of 1 µg/L in 9 of 24 samples collected over the 12-month period at the two locations within the AOC, and in 10 of 24 samples collected at the two locations upstream of the AOC. The similarity in these numbers provides further support that the concentrations of total recoverable phenolics within the AOC are not different than those upstream of the AOC boundary.

**Table 2: NYSDEC 2013-2014 Analytical Results - Total Recoverable Phenolics by EPA Method 420.4 (µg/L)**

Month	Locations Within AOC		Locations Upstream of AOC		Method Detection Limit (0.8 - 1.0 µg/L)*
	GENRV-A (Turning Basin)	GENRV-B (RGE Fish Access at Base of Falls)	GENRV-C (RGE Facility Above Falls)	GENRV-D (Genesee Valley Park)	
Apr-13	1.8	2.1	1.8	1.8	1
May-13	1	1	1	1	1
Jun-13	1	1	1	1	1
Jul-13	1	1	1	1	1
Aug-13	0.8	0.8	1.1	1.4	0.8
Sep-13	0.8	0.8	0.8	0.8	0.8
Oct-13	1.7	1.7	1.4	1.7	0.8
Nov-13	2.7	3	3.3	3	0.8
Dec-13	2.9	2.1	1.8	2.3	0.8
Jan-14	2.5	4.9	4.6	4.6	0.8
Feb-14	4.9	5.8	6	5.2	0.8
Mar-14	1	1	1	2.2	1
<b>12-Month Range:</b>	0.8 - 4.9	0.8 - 5.8	1.1 - 6	1.4 - 5.2	
<b>12-Month Average:</b>	2.3	3.3	3.4	3.2	

Shading indicates detected results. All remaining results are non-detects, the sample-specific detection limits are shown and are used for the graphical representation on Figure 3. (\*In some instances, the sample-specific detection limits are higher than the method detection limit reported by the laboratory.) Only detected results are included in the 12-Month Range and Average.

**Figure 2: NYSDEC 2013-2014 Analytical Results - Total Recoverable Phenolics by EPA Method 420.4**



Of the 15 individual phenolic compounds analyzed by EPA Method 625, only the unchlorinated 3&4-methylphenol (m&p-cresol) was detected. As shown below in **Table 3**, which summarizes the Method 625 results, 3&4-methylphenol was detected at three of the four sample locations, and only during one of the 12 monthly monitoring events. The range of detection limits for the six chlorinated and nine unchlorinated phenolic compounds analyzed by Method 625 are also presented in **Table 3** to illustrate the analytical sensitivity relative to the applicable water quality standards (1 µg/L for total chlorinated phenolics and 5 µg/L for total unchlorinated phenolics). As shown on the table, the method detection limits for all phenolic compounds were at or below the applicable water quality standards.

Month	Locations Within AOC		Locations Upstream of AOC		Range of Method Detection Limits For Chlorinated Phenolic Compounds	Range of Method Detection Limits For Unchlorinated Phenolic Compounds
	GENRV-A (Turning Basin)	GENRV-B (RGE Fish Access at Base of Falls)	GENRV-C (RGE Facility Above Falls)	GENRV-D (Genesee Valley Park)		
Apr-13	ND	ND	ND	ND	0.15 - 1.0 µg/L	0.11 - 1.4 µg/L
May-13	ND	ND	ND	ND		
Jun-13	ND	ND	ND	ND		
Jul-13	ND	ND	ND	ND		
Aug-13	ND	ND	ND	ND		
Sep-13	ND	ND	ND	ND		
Oct-13	ND	ND	ND	ND		
Nov-13	ND	ND	ND	ND		
Dec-13	ND	ND	ND	ND		
Jan-14	ND	1.3	1.1	0.66		
Feb-14	ND	ND	ND	ND		
Mar-14	ND	ND	ND	ND		
Shading indicates detected results for 3&4-methylphenol during the January 2014 monitoring event. ND (not detected) = no phenolic compounds were detected in the sample. The range of method detection limits for the six chlorinated phenolics and nine unchlorinated phenolics are provided for general comparison against the relevant water quality standards for chlorinated and unchlorinated phenolics.						

The limited number and frequency of detected results from the EPA Method 625 analyses precludes any meaningful graphical representation of the data (i.e., no trends/patterns are exhibited or could be inferred); as such, no figure is included in this report. The detected concentrations of 3&4-methylphenol at three locations during one sampling event are all below the water quality standard of 5 µg/L for total unchlorinated phenolics. As was the case for the total recoverable phenolics results (EPA Method 420.4), very similar concentrations for 3&4-methylphenol were detected at locations GENRV-B and -C, indicating that any phenolics in the river downstream of the AOC boundary likely originated from upstream sources. It is important to note that no chlorinated phenolic compounds were detected in this study via the Method 625 analyses, and no phenolic compounds were detected during any event at GENRV-A, the furthest downstream location. Refer to **Appendix B** for the full set of analytical results, including individual compound results and detection limits.

As a whole, the data set from the 2013-2014 monitoring program shows that the presence of phenolics in the Genesee River is virtually no different within the AOC compared to upstream of the AOC, and therefore is likely to be primarily or entirely due to sources upstream of the AOC.

As previously mentioned, the 2013-2014 monitoring program did not include the Charlotte Pump Station, rather an alternate location approximately 1.5 miles upstream was used. Based on this sampling program, for the 15 chlorinated/unchlorinated phenolic compounds that were analyzed by EPA Method 625, **the BUI removal criterion of no more than three exceedances of NYS**

***water quality standards for total chlorinated/unchlorinated phenols over a period of one year has been met.*** The total recoverable phenolics results from EPA Method 420.4 analyses do indicate that some phenolic compounds are present within the river, at times, at concentrations that exceed the NYS water quality standard of 1 µg/L. However, total recoverable phenolics are not specifically cited in the BUI removal criterion, and these results also suggest that any impairment due to phenolics that may exist within the AOC portion of the Genesee River would also exist to the same extent in the river upstream of the AOC. Attainment of the BUI removal criterion is supported since, in addition to meeting the specific requirements for chlorinated and unchlorinated phenols when using the EPA Method 625 results, the 2013-2014 monitoring data have shown AOC conditions that are consistent with the following two EPA BUI removal scenarios (USEPA, 2001):

- It can be demonstrated that the impairment is not limited to the local geographic extent, but rather is typical of lakewide, region-wide, or area-wide conditions (under this situation, the beneficial use may not have been originally needed to be recognized as impaired); **or**,
- The impairment is caused by sources outside the AOC. The impairment is not restored but the impairment classification can be removed or changed to “impaired-not due to local sources”. Responsibility for addressing “out of AOC” sources is given to another party (i.e., LAMPs).

In addition to the 2013-2014 water quality monitoring program, surface water phenolic concentrations within the lower Genesee River were measured as part of a Resource Conservation and Recovery Act (RCRA) facility investigation of Operable Unit 5 of the Eastman Business Park site. was conducted. As part of a Human Health Exposure Assessment, three rounds of surface water sampling were conducted at five discrete transects along the lower Genesee River. Chlorinated and unchlorinated phenols were included within the suite of analyses from this sampling. No chlorinated or unchlorinated phenolic compounds were detected as a result of this sampling effort (Parsons, 2017).

The ongoing remedial actions at MGP sites along the Genesee River upstream of the Lower Falls will mitigate both legacy sources of contamination and localized impacts. While NYSDEC’s Department of Environmental Remediation (DER) is continuing to monitor these projects, these efforts go beyond the scope of the RAP as they fall outside of the boundaries of the AOC.

**BUI Removal Criterion 2:** *There is no indication of tainting of fish and wildlife flavor in a survey of anglers fishing in the lower river or embayment for a species considered resident in the river (channel catfish, freshwater drum and walleye).*

As indicated in Section II.B of this report, only BUI removal criterion 2 or 3 was necessary to support BUI removal efforts. The RAC selected Criterion 3 (below) as the means to address the public reporting aspect of BUI removal.

**BUI Removal Criterion 3:** *There are no more than three reports of tainting from fish and wildlife officials per calendar year.*

A formal accounting effort to specifically determine whether or not there have been more than three reports of tainting per calendar year was not conducted. However, as part of their regular program efforts, NYSDEC and MCDPH both field reports (phone calls, email or other) from the public on a wide variety of topics, including any comments or complaints anglers may have

regarding their recreational fishing experiences and potential health impacts from consuming locally caught fish. To assess attainment of the BUI removal criterion, representatives from both agencies were contacted and asked if they had any documented reports of tainted fish. In response, both agencies stated that they had not received any such reports over the past (approximately) seven years (2010-2017). In addition, a representative of the Monroe County Fisheries Advisory Board has indicated that there have been no complaints of fish flesh tainting over the past year (as of April 2018) during meetings of this organization. Documentation (related correspondence) is provided in **Appendix C. *Based on the absence of any recent documented complaints from anglers, it is the position of the RAC that this BUI removal criterion has been met.***

### **C. Criteria, Principles, and Guidance Application**

The intent of the RAP process is to assess the status of each BUI; and, if existence of an impairment is indicated, to remedy the source of the impairment and subsequently demonstrate that the beneficial use has been restored. The delisting criteria for the Tainting of Fish and Wildlife Flavor BUI have been met in the following manner:

New York State and Monroe County have not received any documented instances of fish tainting since the late 1980s/early 1990s, based on correspondence with NYSDEC and MCDPH representatives, as well as the Monroe County Fisheries Advisories Board.

The data collected through the 2013-2014 water quality monitoring program did not indicate any exceedances of water quality standards for 15 chlorinated/unchlorinated phenolic compounds analyzed by EPA Method 625. While the total recoverable phenolics results from the EPA Method 420.4 analyses conducted as part of the water quality monitoring program did indicate that some phenolic compounds are present within the river, at times at concentrations that exceed the NYS water quality standard of 1 µg/L, total recoverable phenolics are not specifically cited in the BUI removal criteria. Furthermore, the total recoverable phenolic concentrations within the AOC are generally less than those upstream of the AOC. From this, the RAC concludes that the source of the impairment lies outside of the boundaries of the AOC. This condition is consistent with the BUI removal scenarios outlined in the *Restoring United States Great Lakes Areas of Concern: Delisting Principles and Guidelines* guidance document.

### **D. Removal Statement**

As a result of the general absence of any public reports of fish flesh tainting since the few reports dating back more than 20 years, documentation from NYSDEC and MCDPH indicating that no reports of tainting from these agencies have been received over the past (approximately) seven years, and the results of the most recent and comprehensive water quality data (DEC's 2013-2014 monitoring program), the RAC has determined that the "Tainting of Fish and Wildlife Flavor" BUI has met the conditions for removal to the maximum extent practicable, and in accordance with IJC guidelines. The RAC fully supports the recommendation that the "Tainting of Fish and Wildlife Flavor" BUI for the Rochester Embayment AOC be removed from the list of impaired BUIs.



#### IV. BUI Removal Steps and Follow-up

##### A. BUI Removal Steps (To Be completed as steps are taken)

	<i>Completed</i>	<i>Date</i>	<i>Step Taken</i>
1.	√	3/2009	BUI removal criteria completed and finalized with USEPA.
2.	√	12/2011	BUI first documented as “impaired” in the Stage I/II RAP Addendum.
3.	√	8/2014	NYSDEC implements and completes one-year monitoring program to determine presence of phenolic compounds in Genesee River within, and upstream of, the AOC.
4.	√	9/2014	RAP advisory committee compiles/assesses public reporting aspect of fish tainting.
5.	√	1/2015	RAP advisory committee agreed to proceed forward with BUI removal.
6.	√	3/2015	Review of technical information assembled.
7.	√	9/2014	Additional/ related monitoring, data review and assessment conducted.
8.	√	5/2015	Discussion of removal by RAP advisory / oversight committee.
9.	√	11/2015	Public meeting advertised and held, information, outreach, and comment on removal recommendation conducted (included a 30-day public comment period) – see <b>Appendix D</b> .
10.	√	07/2017	Comments assembled, Re-drafted BUI removal report prepared to include necessary changes.
11.	√	03/2018	NYSDEC (in consultation with USEPA R2) completes final modifications to the Tainting of Fish and Wildlife Flavor BUI removal document.
12.	√	04/2018	Coordinate the formal transmittal of the BUI removal with USEPA GLNPO and communicate result with IJC.
13.	√	04/2018	Communicate results to local RAP Coordination for appropriate recognition and follow-up.

##### B. Post-Removal Responsibilities

Following removal of the “Tainting of Fish and Wildlife Flavor” BUI, the organizations listed below will continue ongoing environmental programs to assure that the restored beneficial use is protected and continues to remain unimpaired. The environmental programs relating to this beneficial use are water quality monitoring, hazardous waste site remediation, and coordination of the Rochester Embayment RAC.

## **1. New York State Department of Environmental Conservation**

Through the statewide Rotating Integrated Basin Studies (RIBS) ambient water quality monitoring program, NYSDEC will continue to periodically monitor water quality in the AOC. The routine monitoring site on the lower Genesee River at Boxart Street is sampled 5-6 times in spring, summer, and fall, on a semiannual basis, and samples are analyzed for total phenolics.

Through the State Pollutant Discharge Elimination System (SPDES), NYSDEC will continue to regulate point source discharges of industrial and municipal wastewater and stormwater in accordance with the federal Clean Water Act. There are six permitted point-source discharges in the AOC: Monroe County Shoremont Water Treatment Plant in Rochester; Rochester Gas and Electric Russel Station in Greece; Frank E Van Lare Wastewater Treatment Facility in Rochester; Kodak Park Treatment Facility in Rochester; Webster Sewage Treatment Plant in Webster; and Northwest Quadrant Pure Waters Wastewater Treatment Plant in Hilton. There are also several SPDES discharges upstream and outside the AOC on both Lake Ontario and the Genesee River.

DEC Division of Remediation will continue the cleanups of several sources of phenolic compounds through its regulatory remedial programs including the Voluntary Cleanup Program and Superfund Program.

DEC fisheries staff, through their ongoing program efforts, will remain in communication (both formal and informal) with the public and therefore will be aware of any further instances of fish flesh tainting that are reported.

## **2. United States Environmental Protection Agency**

The USEPA will continue to provide funding for RAP/RAC Coordination and technical assistance to the extent that resources are available to support the removal of remaining BUIs and ultimately the Delisting of the AOC. NYSDEC Great Lakes Program staff are anticipated to assist with these efforts.

## **3. Monroe County Department of Public Health**

With EPA/GLRI funding, MCDPH currently provides a Coordinator for the AOC RAP, facilitation with RAC efforts, and technical assistance for AOC documentation and project design. With ongoing funding support, MCDPH will continue in these roles to assist the RAC and USEPA in achieving the long-term goal of delisting the Rochester Embayment AOC.

## **4. Remedial Action Committee**

The RAC will continue to forward the objectives of the RAP by evaluating, supporting, and documenting the restoration of the Rochester Embayment AOC, until all of the Beneficial Use Impairments are restored and the long-term goal of delisting the AOC can be achieved.

## References

Ecology & Environment, Inc. (E&E), *Rochester Embayment Area of Concern Beneficial Use Impairment Delisting Criteria Report*, March 2009.

International Joint Commission (IJC), *Guidelines for Listing and Delisting Areas of Concern in the Great Lakes Basin Ecosystem*, 1991.

Jardine, C.G. and A.B. Bowman. Spanish River Remedial Action Plan, Fish Tainting Evaluation, Spanish Harbour Remedial Action Plan, Ontario Ministry of the Environment, Northeastern Region, Technical Report, 1990.

Monroe County Department of Planning and Development (MCDPD), *Rochester Embayment Remedial Action Plan Stage I*, August 1993.

Monroe County (NY) Department of Health (MCDOH), *Rochester Embayment Remedial Action Plan Stage II*, September 1997.

MCDOH, *Rochester Embayment Remedial Action Plan 1999 Addendum*, 1999.

MCDOH, *Rochester Embayment Remedial Action Plan 2002 Addendum*, 2002.

Monroe County (NY) Department of Public Health (MCDPH), Charlie Knauf, Personal communication, 2010)

New York State (NYS), *Official Compilation of Codes, Rules, and Regulations, Title 6 (6 NYCRR), Parts 701-703*, 2015.

NYSDEC, *Addendum to Stage 1 and 2 Remedial Action Plans - Rochester Embayment Area of Concern*, December 2011.

NYSDEC, *Quality Assurance Project Plan for the Rochester Embayment - Area of Concern ("AOC") Water Quality Assessment, Designed to assess: Beneficial Use Impairment # 2: "Tainting of Fish and Wildlife Flavor*, April 2013.

Parsons, O'Brien & Gere, LimnoTech, *RCRA Facility Investigation for the Lower Genesee River (Operable Unit 5 of the Eastman Business Park)*, March 2017.

USEPA - adopted by the United States Policy Committee (USPC), *Restoring United States Great Lakes Areas of Concern: Delisting Principles and Guidelines*, December 2001.

USEPA, Water Quality Exchange (WQX): Publically-accessible online database, 2015.

**Appendix A**  
**List of Remedial Advisory Committee**  
**Members**

Wade Silkworth  
 Rochester Embayment Area of  
 Concern Remedial Action Plan  
 Coordinator  
 wadesilkworth@monroecounty.gov  
 585-753-5470

Monroe Co. Department of Public  
 Health  
 111 Westfall Road - Room 938  
 Rochester, NY 14620

<b>Name</b>	<b>Organization</b>	<b>E-mail</b>
Charlie Knauf	General Public (MCDPH retiree)	<a href="mailto:anniebl@frontiernet.net">anniebl@frontiernet.net</a>
Jayne Breschard	GFLRPC	<a href="mailto:jbreschard@gflrpc.org">jbreschard@gflrpc.org</a>
Louis J DiVincenti	URMC	<a href="mailto:Louis_Divincenti@URMC.Rochester.edu">Louis_Divincenti@URMC.Rochester.edu</a>
Dorraine C. Kirkmire	City of Rochester	<a href="mailto:Kirkmired@CityofRochester.Gov">Kirkmired@CityofRochester.Gov</a>
Michael G. Parker	Charlotte Comm. Assoc.	<a href="mailto:manyhats2u@gmail.com">manyhats2u@gmail.com</a>
Wayne D. Howard	Solara Concepts	<a href="mailto:whoward@solaraconcepts.com">whoward@solaraconcepts.com</a>
Jeff Wyatt	URMC	<a href="mailto:Jeff_Wyatt@URMC.Rochester.edu">Jeff_Wyatt@URMC.Rochester.edu</a>
Chris Fredette	Roch. Comm. for Scientific Info.	<a href="mailto:cfredette@rochester.rr.com">cfredette@rochester.rr.com</a>
Charles Valeska	General Public	<a href="mailto:CHAZVAL46@YAHOO.COM">CHAZVAL46@YAHOO.COM</a>
David Klein	The Nature Conservancy	<a href="mailto:dklein@tnc.org">dklein@tnc.org</a>
George Thomas	CEI	<a href="mailto:gthomas@ceinfo.org">gthomas@ceinfo.org</a>
John Waud	RIT	<a href="mailto:jmwsc1@rit.edu">jmwsc1@rit.edu</a>
Mark Gregor	City of Rochester	<a href="mailto:mgregor@cityofrochester.gov">mgregor@cityofrochester.gov</a>
Paul Flansburg	Great Lakes Comm., Sierra Club	<a href="mailto:pflansburg@hotmail.com">pflansburg@hotmail.com</a>
Paul Sawyko	Stormwater Coalition	<a href="mailto:psawyko@monroecounty.gov">psawyko@monroecounty.gov</a>
Stevie Adams	The Nature Conservancy	<a href="mailto:sadams@tnc.org">sadams@tnc.org</a>
June Summers	Gen. Valley Audubon Society	<a href="mailto:summers@frontiernet.net">summers@frontiernet.net</a>
<b>Staff</b>		
Wade Silkworth	MCDPH	<a href="mailto:WadeSilkworth@monroecounty.gov">WadeSilkworth@monroecounty.gov</a>
Peter Rightmyer	MCDPH	<a href="mailto:prightmyer@monroecounty.gov">prightmyer@monroecounty.gov</a>
Jennifer Dunn	NYSDEC	<a href="mailto:jennifer.dunn@dec.ny.gov">jennifer.dunn@dec.ny.gov</a>
Joan Kennedy	NYSDEC	<a href="mailto:joan.kennedy@dec.ny.gov">joan.kennedy@dec.ny.gov</a>
Michael Kuzia-Carmel	NYSDEC	<a href="mailto:michael.kuzia-carmel@dec.ny.gov">michael.kuzia-carmel@dec.ny.gov</a>

## Appendix B

# Final Report Beneficial Use Impairment – Tainting of Fish and Wildlife Flavor Rochester Embayment AOC Prepared by NYSDEC

### **Background and Project Description**

The International Joint Commission (IJC) has designated the Rochester Embayment as an Area of Concern (AOC) in the U.S. and Canada Great Lakes Water Quality Agreement (Annex 2 of the 1987 Protocol). This designation indicates that the area has been identified as exhibiting the degradation of environmental conditions, to the extent in which beneficial uses of the water and/or biota are considered “impaired.”

The Rochester Embayment AOC is located in the Western section of New York State, within the City of Rochester, New York. The AOC’s boundary extends from the mouth of the Genesee River (at Lake Ontario), to the first impassable barrier locally known as the “Lower Falls” approximately six miles upstream. The AOC’s drainage area is more than 3,000 square miles, consisting of the entire Genesee River Basin and parts of the easternmost area of the Lake Ontario West Basin and westernmost area of the Lake Ontario Central Basin.

The Rochester Embayment’s Beneficial Use Impairment (BUI) of the tainting of fish and wildlife flavoring was first reported in 1993, following reports to State and local officials that fish, harvested from the area, possessed unusual flavoring traits. In addition to the reports, water sampling at the Charlotte Pump Station, conducted by the Monroe County Department of Health (MCDOH), confirmed the presence of phenolic compounds which are often associated with the tainting of fish and wildlife flesh (flavor). Contaminant sources, identified at this location as potentially contributing to the AOC’s impairments, include coal tar seeps at the Lower Falls of the Genesee River and by-products from the manufactured gas plants upstream of the AOC.

A Remedial Action Plan (RAP) has been developed for the AOC in order to address site specific BUIs and outline BUI removal efforts. The Rochester Embayment RAP states that the “Tainting of Fish and Wildlife Flavor” BUI exists within the Rochester Embayment AOC, and must be properly addressed in order to delist the AOC. It is recognized that any tainting that may exist within the AOC only pertains to fish flavor; there is no evidence that it affects the flavor of other wildlife. It should also be noted that there have been no known, documented reports of tainted fish flavor in recent years.

Following the guidance of the BUI delisting criteria that has been developed, an assessment of the phenolic compounds within, and upstream of, the AOC was conducted by NYSDEC to determine if the water quality conditions were acceptable to remove the BUI designation. Specifically, whether concentrations of phenolic compounds were below

NYS water quality standards related to the tainting of fish flavor, and whether concentrations within the AOC were any different than those upstream of the AOC. This assessment was funded by the Great Lakes Restoration Initiative (GLRI).

A total of four sampling locations were selected based on their ability to provide an accurate representation of the water quality conditions both inside, and upstream of, the AOC, and to allow for safe access and collection of field samples. Of the two sites located within the AOC boundaries, one location (GENRV-A) was selected to represent the AOC conditions as a whole, while the second location (GENRV-B) was selected due to concerns of site-specific phenol contamination sources. Two sampling locations (GENRV-C and GENRV-D) were selected to represent the water quality conditions and chemical concentrations upstream of the AOC. GENRV-C was selected for track down purposes, as it is located in close proximity to a potential contaminant source, while GENRV-D serves as the representative sample for overall upstream conditions (Table 1 and Figure 1).

<b>Table 1: Sampling Locations</b>				
<b>Water Body</b>	<b>Station ID</b>	<b>Approx. Latitude</b>	<b>Approx. Longitude</b>	<b>Description</b>
<b>Sampling Locations Within AOC Boundaries</b>				
Genesee River	GENRV - A	43.2267	- 77.6164	Mooring Dolphin at Turning Basin
Genesee River	GENRV - B	43.1808	- 77.6279	RGE Fishing Access Point
<b>Sampling Locations Upstream of AOC Boundaries</b>				
Genesee River	GENRV - C	43.1763	- 77.6279	RGE Dam Crest Walkway
Genesee River	GENRV - D	43.1225	- 77.6354	Genesee Valley Park Canoe Launch

**Figure 1: Sampling locations both inside and upstream of the Rochester Embayment AOC**



Sampling was conducted on a monthly basis from April 2013 through March 2014 in accordance with the project Quality Assurance Project Plan (NYSDEC, 2013). All samples were analyzed for total recoverable phenolics (TRPH, ALS Environmental, Rochester, NY) and, to provide a higher level of specificity, 15 individual phenolic compounds (TestAmerica, Amherst, NY). The 15 individual phenolic compounds included 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4-dinitrophenol, 2-chlorophenol, 2-methylphenol, 2-nitrophenol, 3&4-methylphenol, 4,6-dinitro-2-methylphenol, 4-chloro-3-methylphenol, 4-nitrophenol, pentachlorophenol, and phenol.

To determine whether concentrations of phenolic compounds were sufficient for potentially causing the tainting of fish flavor, the sample results were compared to the

water quality criteria in Table 2. It should be noted that the TRPH analyses cannot distinguish between chlorinated and un-chlorinated phenolics. As a conservative measure, the TRPH results were compared to the most stringent water quality standard (for total chlorinated phenols).

<b>Table 2 - New York State Water Quality Standards for Contaminants (6 NYCRR Chapter X, Part 703) (Associated With Tainting of Fish and Wildlife Flavor)</b>		
<b>Chemical Parameters</b>	<b>Standard (µg/L) *</b>	<b>Specific Remarks</b>
<b>Phenols, Total Chlorinated</b>	1	Refers to sum of these substances.
<b>Phenols, Total Un-Chlorinated</b>	5	Refers to sum of these substances.

\* Type: E(FS) - Protection from aesthetic food source considerations

### **Analytical Results Discussion**

Results from the laboratory analyses are summarized on the tables and figures in Attachment A. A complete listing of the laboratory analytical results is provided in Attachment B.

TRPH was detected at all locations during at least five of the sampling events, and was also detected frequently in the field blank. Many of the concentrations exceeded the water quality standard of 1 microgram per liter (µg/L). The table and chart in Attachment A for TRPH show nearly identical concentration patterns over the 12 month monitoring period, especially for locations GENRV-B, -C and -D. Locations GENRV-B and -C are located immediately downstream and upstream of the AOC boundary, respectively. The nearly identical TRPH concentrations at these two locations indicate that any phenolics in the river downstream of the AOC boundary likely originated from upstream sources. The fact that concentrations at GENRV-A, the furthest downstream location, were generally the lowest of all four locations suggest that there are no, or negligible, additional inputs of TRPH downstream of the AOC boundary.

The table and chart in Attachment A for the individual phenolic compounds show that of the 15 phenolic compounds analyzed, only 3&4-methylphenol were detected (at three of four locations), and only during one of the 12 monitoring events. In addition, these are un-chlorinated phenolic compounds and are below the (most applicable) water quality standard of 5 µg/L. Therefore, it is unlikely these would result in the tainting of fish flavor. As with the TRPH results, nearly identical concentrations were detected at locations GENRV-B and -C, indicating that any phenolics in the river downstream of the AOC boundary likely originated from upstream sources. No individual phenolics were detected during any event at GENRV-A, the furthest downstream location.

Overall, the data suggest that if phenolic compounds are present in the river water within the AOC, they are likely due to sources upstream of the AOC. There do not appear to be sources within the AOC that are impacting the river. The frequent detections of TRPH in



samples where no individual phenolic compounds were detected is notable, and may be explained by the fact that the analytical method used for TRPH is much less sophisticated compared to that used for the individual phenolic compounds, and may be subject to interferences (from sample matrix, non-target contaminants, instrument noise) that would not factor as prominently into the analyses for the individual compounds. However, even when all results are assumed to be accurate as reported, the data indicate that, with regards to phenolics, water quality conditions within the AOC are comparable or better than those upstream of the AOC boundary. Therefore, any tainting of fish flavor that may potentially exist within the AOC would also likely exist, to the same extent or more, outside (upstream) of the AOC.

ATTACHMENT A

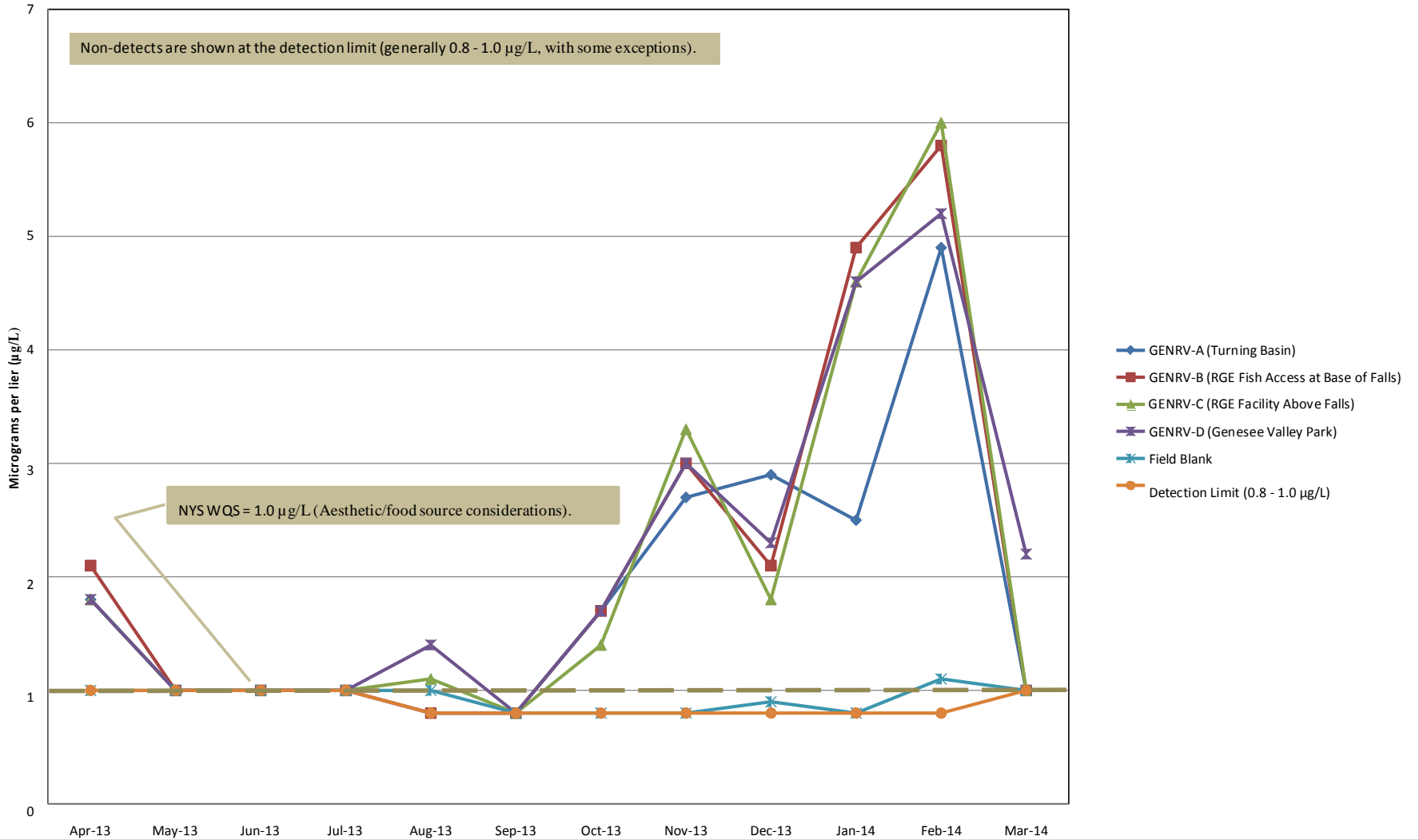
ANALYTICAL RESULTS: TABLES and FIGURES

## Analytical Results: Tables and Figures

### A. Total Recoverable Phenolics

Month	GENRV-A (Turning Basin)	GENRV-B (RGE Fish Access at Base of Falls)	GENRV-C (RGE Facility Above Falls)	GENRV-D (Genesee Valley Park)	Field Blank	Detection Limit (0.8 - 1.0 µg/L)	Quantitation Limit (2.0 µg/L)
Apr-13	1.8	2.1	1.8	1.8	1	1	2
May-13	1	1	1	1	1	1	2
Jun-13	1	1	1	1	1	1	2
Jul-13	1	1	1	1	1	1	2
Aug-13	0.8	0.8	1.1	1.4	1	0.8	2
Sep-13	0.8	0.8	0.8	0.8	0.8	0.8	2
Oct-13	1.7	1.7	1.4	1.7	0.8	0.8	2
Nov-13	2.7	3	3.3	3	0.8	0.8	2
Dec-13	2.9	2.1	1.8	2.3	0.9	0.8	2
Jan-14	2.5	4.9	4.6	4.6	0.8	0.8	2
Feb-14	4.9	5.8	6	5.2	1.1	0.8	2
Mar-14	1	1	1	2.2	1	1	2
Shading indicates detected result after data validation; all remaining results are non-detects (detection limit is shown)							

### Rochester Embayment AOC - Total Recoverable Phenolics

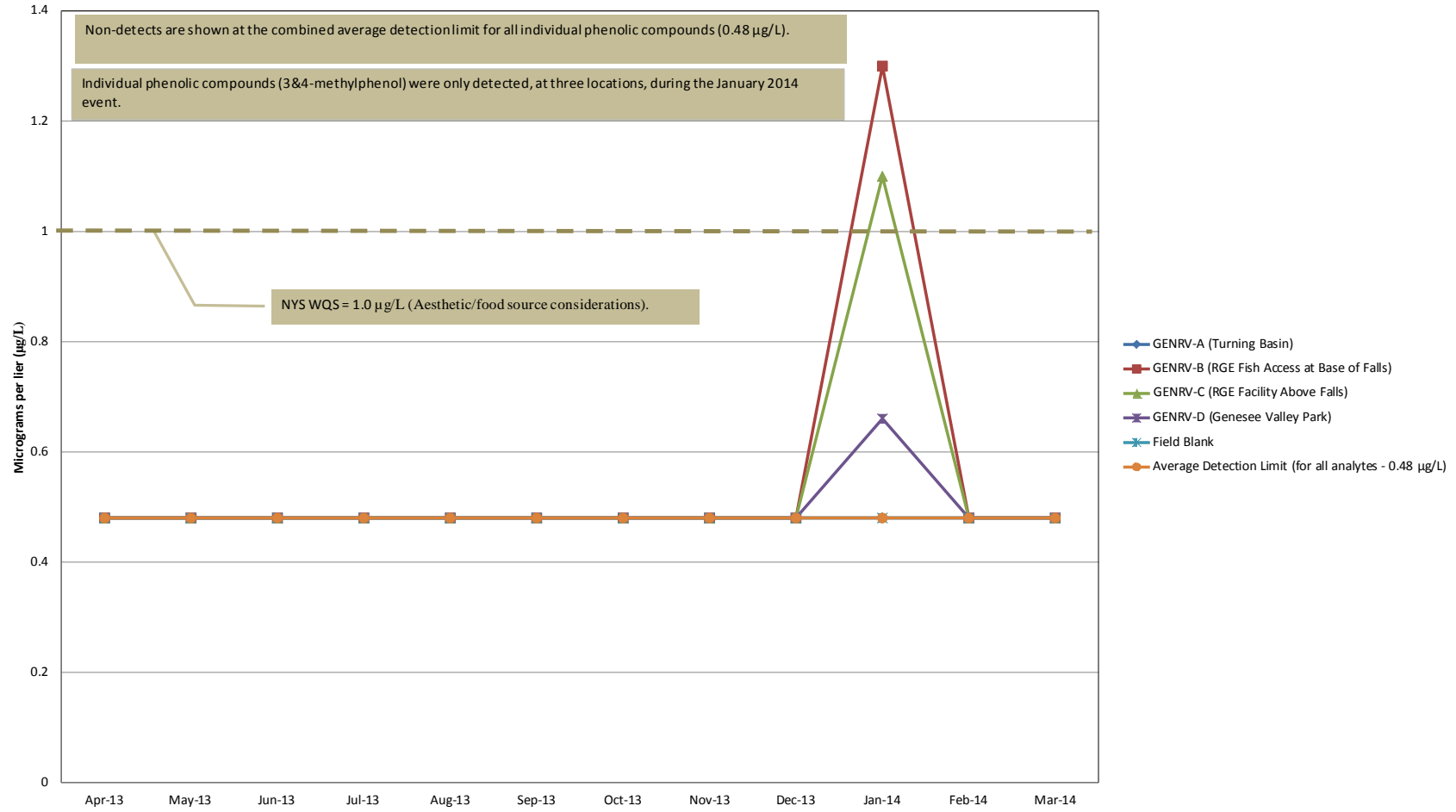


Analytical Results: Tables and Figures

**B. Individual Phenolics**

Month	GENRV-A (Turning Basin)	GENRV-B (RGE Fish Access at Base of Falls)	GENRV-C (RGE Facility Above Falls)	GENRV-D (Genesee Valley Park)	Field Blank	Average Detection Limit (for all analytes - 0.48 µg/L)	Quantitation Limit (for most analytes - 5.0 µg/L)
Apr-13	0.48	0.48	0.48	0.48	0.48	0.48	5
May-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Jun-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Jul-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Aug-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Sep-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Oct-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Nov-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Dec-13	0.48	0.48	0.48	0.48	0.48	0.48	5
Jan-14	0.48	1.3	1.1	0.66	0.48	0.48	5
Feb-14	0.48	0.48	0.48	0.48	0.48	0.48	5
Mar-14	0.48	0.48	0.48	0.48	0.48	0.48	5
Shading indicates detected result; all remaining results are non-detects (average detection limit is shown)							

### Rochester Embayment AOC - Sum of Individual Phenolic Compounds



## ATTACHMENT B

### COMPLETE ANALYTICAL DATA SUMMARY TABLES

**Summary of Analytical Results - Rochester Embayment AOC  
Beneficial Use Impairment – Tainting of Fish and Wildlife Flavor Sample Collection Date: April 18, 2013**

Sample Collection Date: April 18, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130418	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-A-20130418	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-A-20130418	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20130418	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20130418	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-A-20130418	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20130418	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-A-20130418	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20130418	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-A-20130418	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-A-20130418	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-A-20130418	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-A-20130418	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-A-20130418	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20130418	TOTAL RECOVERABLE PHENOLICS	1.8	J	1.0	2.0	µg/L
GENRV-B-20130418	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-B-20130418	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-B-20130418	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20130418	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-B-20130418	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
GENRV-B-20130418	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-B-20130418	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-B-20130418	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-B-20130418	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-B-20130418	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-B-20130418	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-B-20130418	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-B-20130418	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
GENRV-B-20130418	PHENOL		U	0.12	4.8	µg/L
GENRV-B-20130418	TOTAL RECOVERABLE PHENOLICS	2.1		1.0	2.0	µg/L
GENRV-C-20130418	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-C-20130418	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-C-20130418	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-C-20130418	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-C-20130418	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-C-20130418	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-C-20130418	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-C-20130418	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-C-20130418	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-C-20130418	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-C-20130418	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-C-20130418	CRESOLS, M & P		U	0.59	9.5	µg/L

GENRV-C-20130418	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-C-20130418	PHENOL		U	0.12	4.8	µg/L
GENRV-C-20130418	TOTAL RECOVERABLE PHENOLICS	1.8	J	1.0	2.0	µg/L
DUPLICATE-20130418 (GENRV-C)	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
DUPLICATE-20130418 (GENRV-C)	2-CHLOROPHENOL		U	0.15	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	2-NITROPHENOL		U	0.14	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
DUPLICATE-20130418 (GENRV-C)	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	4-NITROPHENOL		U	1.3	9.6	µg/L
DUPLICATE-20130418 (GENRV-C)	CRESOLS, M & P		U	0.60	9.6	µg/L
DUPLICATE-20130418 (GENRV-C)	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
DUPLICATE-20130418 (GENRV-C)	PHENOL		U	0.12	4.8	µg/L
DUPLICATE-20130418 (GENRV-C)	TOTAL RECOVERABLE PHENOLICS	2.1		1.0	2.0	µg/L
GENRV-D-20130418	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L
GENRV-D-20130418	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
GENRV-D-20130418	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
GENRV-D-20130418	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
GENRV-D-20130418	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-D-20130418	2-CHLOROPHENOL		U	0.15	4.7	µg/L
GENRV-D-20130418	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L
GENRV-D-20130418	2-NITROPHENOL		U	0.14	4.7	µg/L
GENRV-D-20130418	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-D-20130418	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
GENRV-D-20130418	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-D-20130418	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-D-20130418	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-D-20130418	PHENOL		U	0.11	4.7	µg/L
GENRV-D-20130418	TOTAL RECOVERABLE PHENOLICS	1.8	J	1.0	2.0	µg/L

Sample Collection Date: May 16, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130516	2,4,5-TRICHLOROPHENOL		U	0.99	4.9	µg/L
GENRV-A-20130516	2,4,6-TRICHLOROPHENOL		U	0.23	4.9	µg/L
GENRV-A-20130516	2,4-DICHLOROPHENOL		U	0.29	4.9	µg/L
GENRV-A-20130516	2,4-DIMETHYLPHENOL		U	0.13	4.9	µg/L
GENRV-A-20130516	2,4-DINITROPHENOL		U	0.82	9.8	µg/L
GENRV-A-20130516	2-CHLOROPHENOL		U	0.15	4.9	µg/L
GENRV-A-20130516	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.9	µg/L
GENRV-A-20130516	2-NITROPHENOL		U	0.14	4.9	µg/L
GENRV-A-20130516	4,6-DINITRO-2-METHYLPHENOL		U	0.75	9.8	µg/L
GENRV-A-20130516	4-CHLORO-3-METHYLPHENOL		U	0.54	4.9	µg/L
GENRV-A-20130516	4-NITROPHENOL		U	1.3	9.8	µg/L
GENRV-A-20130516	CRESOLS, M & P		U	0.61	9.8	µg/L
GENRV-A-20130516	PENTACHLOROPHENOL		U	0.40	9.8	µg/L
GENRV-A-20130516	PHENOL		U	0.12	4.9	µg/L
GENRV-A-20130516	TOTAL RECOVERABLE PHENOLICS		U	1.0	2.0	µg/L
GENRV-B-20130516	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-B-20130516	2,4,6-TRICHLOROPHENOL		U	0.23	4.8	µg/L
GENRV-B-20130516	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20130516	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-B-20130516	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-B-20130516	2-CHLOROPHENOL		U	0.15	4.8	µg/L



GENRV-B-20130516	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-B-20130516	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20130516	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-B-20130516	4-CHLORO-3-METHYLPHENOL	U	0.54	4.8	µg/L
GENRV-B-20130516	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-B-20130516	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-B-20130516	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-B-20130516	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20130516	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-C-20130516	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-C-20130516	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-C-20130516	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-C-20130516	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-C-20130516	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
GENRV-C-20130516	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-C-20130516	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-C-20130516	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-C-20130516	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-C-20130516	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-C-20130516	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-C-20130516	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-C-20130516	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-C-20130516	PHENOL	U	0.12	4.8	µg/L
GENRV-C-20130516	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2,4,5-TRICHLOROPHENOL	U	1.0	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2,4,6-TRICHLOROPHENOL	U	0.24	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2,4-DICHLOROPHENOL	U	0.30	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2,4-DIMETHYLPHENOL	U	0.14	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2,4-DINITROPHENOL	U	0.84	10	µg/L
DUPLICATE-20130516 (GENRV-C)	2-CHLOROPHENOL	U	0.16	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2-METHYLPHENOL (O-CRESOL)	U	0.22	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	2-NITROPHENOL	U	0.14	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	4,6-DINITRO-2-METHYLPHENOL	U	0.77	10	µg/L
DUPLICATE-20130516 (GENRV-C)	4-CHLORO-3-METHYLPHENOL	U	0.56	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	4-NITROPHENOL	U	1.4	10	µg/L
DUPLICATE-20130516 (GENRV-C)	CRESOLS, M & P	U	0.63	10	µg/L
DUPLICATE-20130516 (GENRV-C)	PENTACHLOROPHENOL	U	0.42	10	µg/L
DUPLICATE-20130516 (GENRV-C)	PHENOL	U	0.12	5.0	µg/L
DUPLICATE-20130516 (GENRV-C)	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-D-20130516	2,4,5-TRICHLOROPHENOL	U	0.98	4.8	µg/L
GENRV-D-20130516	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L
GENRV-D-20130516	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20130516	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20130516	2,4-DINITROPHENOL	U	0.81	9.7	µg/L
GENRV-D-20130516	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-D-20130516	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-D-20130516	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20130516	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.7	µg/L
GENRV-D-20130516	4-CHLORO-3-METHYLPHENOL	U	0.54	4.8	µg/L
GENRV-D-20130516	4-NITROPHENOL	U	1.3	9.7	µg/L

Sample Collection Date: June 12, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130612	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L	
GENRV-A-20130612	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L	
GENRV-A-20130612	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L	
GENRV-A-20130612	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L	

GENRV-A-20130612	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
GENRV-A-20130612	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-A-20130612	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-A-20130612	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-A-20130612	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-A-20130612	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-A-20130612	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-A-20130612	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-A-20130612	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-A-20130612	PHENOL	U	0.12	4.8	µg/L
GENRV-A-20130612	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
DUPLICATE-20130612 (GENRV-A)	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
DUPLICATE-20130612 (GENRV-A)	2-CHLOROPHENOL	U	0.15	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	2-NITROPHENOL	U	0.14	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
DUPLICATE-20130612 (GENRV-A)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	4-NITROPHENOL	U	1.3	9.6	µg/L
DUPLICATE-20130612 (GENRV-A)	CRESOLS, M & P	U	0.60	9.6	µg/L
DUPLICATE-20130612 (GENRV-A)	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
DUPLICATE-20130612 (GENRV-A)	PHENOL	U	0.12	4.8	µg/L
DUPLICATE-20130612 (GENRV-A)	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-B-20130612	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-B-20130612	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-B-20130612	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-B-20130612	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-B-20130612	2,4-DINITROPHENOL	U	0.79	9.5	µg/L
GENRV-B-20130612	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-B-20130612	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-B-20130612	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-B-20130612	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-B-20130612	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-B-20130612	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-B-20130612	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-B-20130612	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-B-20130612	PHENOL	U	0.11	4.7	µg/L
GENRV-B-20130612	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-C-20130612	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-C-20130612	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-C-20130612	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-C-20130612	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-C-20130612	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-C-20130612	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-C-20130612	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-C-20130612	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-C-20130612	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-C-20130612	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-C-20130612	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-C-20130612	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-C-20130612	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-C-20130612	PHENOL	U	0.11	4.7	µg/L

GENRV-C-20130612	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-D-20130612	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-D-20130612	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L
GENRV-D-20130612	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20130612	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20130612	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
GENRV-D-20130612	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-D-20130612	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-D-20130612	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20130612	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-D-20130612	4-CHLORO-3-METHYLPHENOL	U	0.54	4.8	µg/L
GENRV-D-20130612	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-D-20130612	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-D-20130612	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-D-20130612	PHENOL	U	0.12	4.8	µg/L
GENRV-D-20130612	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L

Sample Collection Date: July 11, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130711	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-A-20130711	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-A-20130711	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-A-20130711	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-A-20130711	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
GENRV-A-20130711	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-A-20130711	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-A-20130711	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-A-20130711	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-A-20130711	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-A-20130711	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-A-20130711	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-A-20130711	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-A-20130711	PHENOL	U	0.12	4.8	µg/L
GENRV-A-20130711	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-B-20130711	2,4,5-TRICHLOROPHENOL	U	0.96	4.8	µg/L
GENRV-B-20130711	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-B-20130711	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-B-20130711	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-B-20130711	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-B-20130711	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-B-20130711	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.8	µg/L
GENRV-B-20130711	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20130711	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-B-20130711	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-B-20130711	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-B-20130711	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-B-20130711	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-B-20130711	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20130711	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
DUPLICATE-20130711 (GENRV-B)	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
DUPLICATE-20130711 (GENRV-B)	2-CHLOROPHENOL	U	0.15	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L

DUPLICATE-20130711 (GENRV-B)	2-NITROPHENOL	U	0.14	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
DUPLICATE-20130711 (GENRV-B)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	4-NITROPHENOL	U	1.3	9.6	µg/L
DUPLICATE-20130711 (GENRV-B)	CRESOLS, M & P	U	0.60	9.6	µg/L
DUPLICATE-20130711 (GENRV-B)	PENTACHLOROPHENOL	U	0.39	9.6	µg/L
DUPLICATE-20130711 (GENRV-B)	PHENOL	U	0.12	4.8	µg/L
DUPLICATE-20130711 (GENRV-B)	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-C-20130711	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-C-20130711	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-C-20130711	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-C-20130711	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-C-20130711	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
GENRV-C-20130711	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-C-20130711	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-C-20130711	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-C-20130711	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-C-20130711	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-C-20130711	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-C-20130711	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-C-20130711	PENTACHLOROPHENOL	U	0.39	9.6	µg/L
GENRV-C-20130711	PHENOL	U	0.12	4.8	µg/L
GENRV-C-20130711	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-D-20130711	2,4,5-TRICHLOROPHENOL	U	0.96	4.8	µg/L
GENRV-D-20130711	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-D-20130711	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20130711	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20130711	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-D-20130711	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-D-20130711	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.8	µg/L
GENRV-D-20130711	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20130711	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-D-20130711	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-D-20130711	4-NITROPHENOL	U	1.3	9.5	µg/L

Sample Collection Date: August 13, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130813	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-A-20130813	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-A-20130813	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20130813	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20130813	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-A-20130813	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20130813	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-A-20130813	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20130813	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.5	µg/L
GENRV-A-20130813	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-A-20130813	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-A-20130813	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-A-20130813	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-A-20130813	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20130813	TOTAL RECOVERABLE PHENOLICS	0.8	J	0.8	2.0	µg/L
GENRV-B-20130813	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-B-20130813	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-B-20130813	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20130813	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L

GENRV-B-20130813	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-B-20130813	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-B-20130813	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-B-20130813	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-B-20130813	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-B-20130813	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-B-20130813	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-B-20130813	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-B-20130813	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-B-20130813	PHENOL		U	0.12	4.8	µg/L
GENRV-B-20130813	TOTAL RECOVERABLE PHENOLICS	0.8	J	0.8	2.0	µg/L
GENRV-C-20130813	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L
GENRV-C-20130813	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
GENRV-C-20130813	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
GENRV-C-20130813	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
GENRV-C-20130813	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-C-20130813	2-CHLOROPHENOL		U	0.15	4.7	µg/L
GENRV-C-20130813	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L
GENRV-C-20130813	2-NITROPHENOL		U	0.14	4.7	µg/L
GENRV-C-20130813	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-C-20130813	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
GENRV-C-20130813	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-C-20130813	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-C-20130813	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-C-20130813	PHENOL		U	0.11	4.7	µg/L
GENRV-C-20130813	TOTAL RECOVERABLE PHENOLICS	1.1	J	0.8	2.0	µg/L
GENRV-D-20130813	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L
GENRV-D-20130813	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
GENRV-D-20130813	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
GENRV-D-20130813	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
GENRV-D-20130813	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-D-20130813	2-CHLOROPHENOL		U	0.15	4.7	µg/L
GENRV-D-20130813	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L
GENRV-D-20130813	2-NITROPHENOL		U	0.14	4.7	µg/L
GENRV-D-20130813	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-D-20130813	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
GENRV-D-20130813	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-D-20130813	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-D-20130813	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-D-20130813	PHENOL		U	0.11	4.7	µg/L
GENRV-D-20130813	TOTAL RECOVERABLE PHENOLICS	0.8	J	0.8	2.0	µg/L
DUPLICATE-20130813 (GENRV-D)	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
DUPLICATE-20130813 (GENRV-D)	2-CHLOROPHENOL		U	0.15	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	2-NITROPHENOL		U	0.14	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
DUPLICATE-20130813 (GENRV-D)	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
DUPLICATE-20130813 (GENRV-D)	4-NITROPHENOL		U	1.3	9.6	µg/L
DUPLICATE-20130813 (GENRV-D)	CRESOLS, M & P		U	0.60	9.6	µg/L
DUPLICATE-20130813 (GENRV-D)	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
DUPLICATE-20130813 (GENRV-D)	PHENOL		U	0.12	4.8	µg/L

DUPLICATE-20130813 (GENRV-D)	TOTAL RECOVERABLE PHENOLICS	1.4	J	0.8	2.0	µg/L
FIELD BLANK-20130813	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
FIELD BLANK-20130813	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
FIELD BLANK-20130813	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
FIELD BLANK-20130813	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
FIELD BLANK-20130813	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
FIELD BLANK-20130813	2-CHLOROPHENOL		U	0.15	4.8	µg/L
FIELD BLANK-20130813	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
FIELD BLANK-20130813	2-NITROPHENOL		U	0.14	4.8	µg/L
FIELD BLANK-20130813	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
FIELD BLANK-20130813	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
FIELD BLANK-20130813	4-NITROPHENOL		U	1.3	9.6	µg/L
FIELD BLANK-20130813	CRESOLS, M & P		U	0.60	9.6	µg/L
FIELD BLANK-20130813	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
FIELD BLANK-20130813	PHENOL		U	0.12	4.8	µg/L
FIELD BLANK-20130813	TOTAL RECOVERABLE PHENOLICS		U	0.8	2.0	µg/L

Sample Collection Date: September 9, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20130909	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-A-20130909	2,4,6-TRICHLOROPHENOL		U	0.23	4.8	µg/L
GENRV-A-20130909	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20130909	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20130909	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-A-20130909	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20130909	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-A-20130909	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20130909	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-A-20130909	4-CHLORO-3-METHYLPHENOL		U	0.54	4.8	µg/L
GENRV-A-20130909	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-A-20130909	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-A-20130909	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
GENRV-A-20130909	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20130909	TOTAL RECOVERABLE PHENOLICS		U	0.8	2.0	µg/L
DUPLICATE-20130909 (GENRV-A)	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
DUPLICATE-20130909 (GENRV-A)	2-CHLOROPHENOL		U	0.15	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	2-NITROPHENOL		U	0.14	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.5	µg/L
DUPLICATE-20130909 (GENRV-A)	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	4-NITROPHENOL		U	1.3	9.5	µg/L
DUPLICATE-20130909 (GENRV-A)	CRESOLS, M & P		U	0.59	9.5	µg/L
DUPLICATE-20130909 (GENRV-A)	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
DUPLICATE-20130909 (GENRV-A)	PHENOL		U	0.12	4.8	µg/L
DUPLICATE-20130909 (GENRV-A)	TOTAL RECOVERABLE PHENOLICS	0.8	J	0.8	2.0	µg/L
GENRV-B-20130909	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-B-20130909	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-B-20130909	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20130909	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-B-20130909	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-B-20130909	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-B-20130909	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L

GENRV-B-20130909	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20130909	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-B-20130909	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-B-20130909	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-B-20130909	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-B-20130909	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-B-20130909	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20130909	TOTAL RECOVERABLE PHENOLICS	U	0.8	2.0	µg/L
GENRV-C-20130909	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-C-20130909	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-C-20130909	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-C-20130909	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-C-20130909	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-C-20130909	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-C-20130909	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-C-20130909	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-C-20130909	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-C-20130909	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-C-20130909	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-C-20130909	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-C-20130909	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-C-20130909	PHENOL	U	0.11	4.7	µg/L
GENRV-C-20130909	TOTAL RECOVERABLE PHENOLICS	U	0.8	2.0	µg/L
GENRV-D-20130909	2,4,5-TRICHLOROPHENOL	U	0.96	4.8	µg/L
GENRV-D-20130909	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-D-20130909	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20130909	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20130909	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-D-20130909	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-D-20130909	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.8	µg/L
GENRV-D-20130909	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20130909	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-D-20130909	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-D-20130909	4-NITROPHENOL	U	1.3	9.5	µg/L

**Sample Collection Date: October 8, 2013**

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20131008	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-A-20131008	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-A-20131008	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-A-20131008	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-A-20131008	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-A-20131008	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-A-20131008	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-A-20131008	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-A-20131008	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-A-20131008	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-A-20131008	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-A-20131008	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-A-20131008	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-A-20131008	PHENOL	U	0.11	4.7	µg/L
GENRV-A-20131008	TOTAL RECOVERABLE PHENOLICS	U	1.7	2.0	µg/L
GENRV-B-20131008	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-B-20131008	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-B-20131008	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-B-20131008	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-B-20131008	2,4-DINITROPHENOL	U	0.80	9.5	µg/L

GENRV-B-20131008	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-B-20131008	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-B-20131008	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-B-20131008	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-B-20131008	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-B-20131008	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-B-20131008	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-B-20131008	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-B-20131008	PHENOL	U	0.11	4.7	µg/L
GENRV-B-20131008	TOTAL RECOVERABLE PHENOLICS	U	1.7	2.0	µg/L
GENRV-C-20131008	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-C-20131008	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-C-20131008	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-C-20131008	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-C-20131008	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-C-20131008	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-C-20131008	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-C-20131008	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-C-20131008	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-C-20131008	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-C-20131008	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-C-20131008	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-C-20131008	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-C-20131008	PHENOL	U	0.11	4.7	µg/L
GENRV-C-20131008	TOTAL RECOVERABLE PHENOLICS	U	1.4	2.0	µg/L
DUPLICATE-20131008 (GENRV-C)	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
DUPLICATE-20131008 (GENRV-C)	2-CHLOROPHENOL	U	0.15	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	2-NITROPHENOL	U	0.14	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
DUPLICATE-20131008 (GENRV-C)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	4-NITROPHENOL	U	1.3	9.5	µg/L
DUPLICATE-20131008 (GENRV-C)	CRESOLS, M & P	U	0.59	9.5	µg/L
DUPLICATE-20131008 (GENRV-C)	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
DUPLICATE-20131008 (GENRV-C)	PHENOL	U	0.11	4.7	µg/L
DUPLICATE-20131008 (GENRV-C)	TOTAL RECOVERABLE PHENOLICS	U	1.7	2.0	µg/L
GENRV-D-20131008	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
GENRV-D-20131008	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
GENRV-D-20131008	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
GENRV-D-20131008	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
GENRV-D-20131008	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-D-20131008	2-CHLOROPHENOL	U	0.15	4.7	µg/L
GENRV-D-20131008	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
GENRV-D-20131008	2-NITROPHENOL	U	0.14	4.7	µg/L
GENRV-D-20131008	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-D-20131008	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
GENRV-D-20131008	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-D-20131008	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-D-20131008	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-D-20131008	PHENOL	U	0.11	4.7	µg/L
GENRV-D-20131008	TOTAL RECOVERABLE PHENOLICS	U	1.7	2.0	µg/L



Sample Collection Date: November 4, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20131104	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-A-20131104	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L
GENRV-A-20131104	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-A-20131104	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-A-20131104	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
GENRV-A-20131104	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-A-20131104	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-A-20131104	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-A-20131104	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-A-20131104	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-A-20131104	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-A-20131104	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-A-20131104	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-A-20131104	PHENOL	U	0.12	4.8	µg/L
GENRV-A-20131104	TOTAL RECOVERABLE PHENOLICS	2.7	0.8	2.0	µg/L
GENRV-B-20131104	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-B-20131104	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-B-20131104	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-B-20131104	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-B-20131104	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
GENRV-B-20131104	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-B-20131104	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-B-20131104	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20131104	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-B-20131104	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-B-20131104	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-B-20131104	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-B-20131104	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-B-20131104	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20131104	TOTAL RECOVERABLE PHENOLICS	3.0	0.8	2.0	µg/L
DUPLICATE-20131104 (GENRV-B)	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
DUPLICATE-20131104 (GENRV-B)	2-CHLOROPHENOL	U	0.15	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	2-NITROPHENOL	U	0.14	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
DUPLICATE-20131104 (GENRV-B)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	4-NITROPHENOL	U	1.3	9.6	µg/L
DUPLICATE-20131104 (GENRV-B)	CRESOLS, M & P	U	0.60	9.6	µg/L
DUPLICATE-20131104 (GENRV-B)	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
DUPLICATE-20131104 (GENRV-B)	PHENOL	U	0.12	4.8	µg/L
DUPLICATE-20131104 (GENRV-B)	TOTAL RECOVERABLE PHENOLICS	3.0	0.8	2.0	µg/L
GENRV-C-20131104	2,4,5-TRICHLOROPHENOL	U	0.98	4.8	µg/L
GENRV-C-20131104	2,4,6-TRICHLOROPHENOL	U	0.23	4.8	µg/L
GENRV-C-20131104	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-C-20131104	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-C-20131104	2,4-DINITROPHENOL	U	0.81	9.7	µg/L
GENRV-C-20131104	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-C-20131104	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-C-20131104	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-C-20131104	4,6-DINITRO-2-METHYLPHENOL	U	0.74	9.7	µg/L

GENRV-C-20131104	4-CHLORO-3-METHYLPHENOL		U	0.54	4.8	µg/L
GENRV-C-20131104	4-NITROPHENOL		U	1.3	9.7	µg/L
GENRV-C-20131104	CRESOLS, M & P		U	0.60	9.7	µg/L
GENRV-C-20131104	PENTACHLOROPHENOL		U	0.40	9.7	µg/L
GENRV-C-20131104	PHENOL		U	0.12	4.8	µg/L
GENRV-C-20131104	TOTAL RECOVERABLE PHENOLICS	3.3		0.8	2.0	µg/L
GENRV-D-20131104	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L
GENRV-D-20131104	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
GENRV-D-20131104	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
GENRV-D-20131104	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
GENRV-D-20131104	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-D-20131104	2-CHLOROPHENOL		U	0.15	4.7	µg/L
GENRV-D-20131104	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L
GENRV-D-20131104	2-NITROPHENOL		U	0.14	4.7	µg/L
GENRV-D-20131104	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-D-20131104	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
GENRV-D-20131104	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-D-20131104	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-D-20131104	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-D-20131104	PHENOL		U	0.11	4.7	µg/L
GENRV-D-20131104	TOTAL RECOVERABLE PHENOLICS	3.0		0.8	2.0	µg/L
FIELD BLANK-20131104	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
FIELD BLANK-20131104	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
FIELD BLANK-20131104	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
FIELD BLANK-20131104	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
FIELD BLANK-20131104	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
FIELD BLANK-20131104	2-CHLOROPHENOL		U	0.15	4.8	µg/L
FIELD BLANK-20131104	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
FIELD BLANK-20131104	2-NITROPHENOL		U	0.14	4.8	µg/L
FIELD BLANK-20131104	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
FIELD BLANK-20131104	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
FIELD BLANK-20131104	4-NITROPHENOL		U	1.3	9.6	µg/L
FIELD BLANK-20131104	CRESOLS, M & P		U	0.60	9.6	µg/L
FIELD BLANK-20131104	PENTACHLOROPHENOL		U	0.39	9.6	µg/L
FIELD BLANK-20131104	PHENOL		U	0.12	4.8	µg/L
FIELD BLANK-20131104	TOTAL RECOVERABLE PHENOLICS		U	0.8	2.0	µg/L

Sample Collection Date: December 9, 2013

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20131209	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-A-20131209	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-A-20131209	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20131209	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20131209	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
GENRV-A-20131209	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20131209	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-A-20131209	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20131209	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-A-20131209	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-A-20131209	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-A-20131209	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-A-20131209	PENTACHLOROPHENOL		U	0.39	9.6	µg/L
GENRV-A-20131209	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20131209	TOTAL RECOVERABLE PHENOLICS	2.9		0.8	2.0	µg/L
GENRV-B-20131209	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-B-20131209	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-B-20131209	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L

GENRV-B-20131209	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-B-20131209	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-B-20131209	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-B-20131209	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-B-20131209	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20131209	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.5	µg/L
GENRV-B-20131209	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-B-20131209	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-B-20131209	CRESOLS, M & P	U	0.60	9.5	µg/L
GENRV-B-20131209	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-B-20131209	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20131209	TOTAL RECOVERABLE PHENOLICS	U	2.1	2.1	µg/L
GENRV-C-20131209	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-C-20131209	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-C-20131209	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-C-20131209	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-C-20131209	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
GENRV-C-20131209	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-C-20131209	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-C-20131209	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-C-20131209	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-C-20131209	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-C-20131209	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-C-20131209	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-C-20131209	PENTACHLOROPHENOL	U	0.39	9.6	µg/L
GENRV-C-20131209	PHENOL	U	0.12	4.8	µg/L
GENRV-C-20131209	TOTAL RECOVERABLE PHENOLICS	U	1.8	2.0	µg/L
GENRV-D-20131209	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-D-20131209	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-D-20131209	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20131209	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20131209	2,4-DINITROPHENOL	U	0.81	9.6	µg/L
GENRV-D-20131209	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-D-20131209	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-D-20131209	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20131209	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-D-20131209	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-D-20131209	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-D-20131209	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-D-20131209	PENTACHLOROPHENOL	U	0.40	9.6	µg/L
GENRV-D-20131209	PHENOL	U	0.12	4.8	µg/L
GENRV-D-20131209	TOTAL RECOVERABLE PHENOLICS	U	2.3	2.3	µg/L
DUPLICATE-20131209 (GENRV-D)	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
DUPLICATE-20131209 (GENRV-D)	2-CHLOROPHENOL	U	0.15	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	2-NITROPHENOL	U	0.14	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
DUPLICATE-20131209 (GENRV-D)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
DUPLICATE-20131209 (GENRV-D)	4-NITROPHENOL	U	1.3	9.5	µg/L
DUPLICATE-20131209 (GENRV-D)	CRESOLS, M & P	U	0.59	9.5	µg/L
DUPLICATE-20131209 (GENRV-D)	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
DUPLICATE-20131209 (GENRV-D)	PHENOL	U	0.11	4.7	µg/L

DUPLICATE-20131209 (GENRV-D)

TOTAL RECOVERABLE  
PHENOLICS

U

2.1

2.1

µg/L

Sample Collection Date: January 13 & 16, 2014

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20140116	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-A-20140116	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-A-20140116	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20140116	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20140116	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-A-20140116	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20140116	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-A-20140116	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20140116	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-A-20140116	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-A-20140116	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-A-20140116	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-A-20140116	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
GENRV-A-20140116	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20140116	TOTAL RECOVERABLE PHENOLICS	2.5		0.8	2.0	µg/L
GENRV-B-20140113	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-B-20140113	2,4,6-TRICHLOROPHENOL		U	0.23	4.8	µg/L
GENRV-B-20140113	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20140113	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-B-20140113	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-B-20140113	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-B-20140113	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-B-20140113	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-B-20140113	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-B-20140113	4-CHLORO-3-METHYLPHENOL		U	0.54	4.8	µg/L
GENRV-B-20140113	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-B-20140113	CRESOLS, M & P	1.3	J	0.60	9.6	µg/L
GENRV-B-20140113	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
GENRV-B-20140113	PHENOL		U	0.12	4.8	µg/L
GENRV-B-20140113	TOTAL RECOVERABLE PHENOLICS	4.9		0.8	2.0	µg/L
GENRV-C-20140113	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-C-20140113	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-C-20140113	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-C-20140113	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-C-20140113	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-C-20140113	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-C-20140113	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-C-20140113	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-C-20140113	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.5	µg/L
GENRV-C-20140113	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-C-20140113	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-C-20140113	CRESOLS, M & P	1.1	J	0.59	9.5	µg/L
GENRV-C-20140113	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-C-20140113	PHENOL		U	0.12	4.8	µg/L
GENRV-C-20140113	TOTAL RECOVERABLE PHENOLICS	4.6		0.8	2.0	µg/L
DUPLICATE-20140113 (GENRV-C)	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
DUPLICATE-20140113 (GENRV-C)	2-CHLOROPHENOL		U	0.15	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L

DUPLICATE-20140113 (GENRV-C)	2-NITROPHENOL		U	0.14	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
DUPLICATE-20140113 (GENRV-C)	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	4-NITROPHENOL		U	1.3	9.5	µg/L
DUPLICATE-20140113 (GENRV-C)	CRESOLS, M & P	0.84	J	0.59	9.5	µg/L
DUPLICATE-20140113 (GENRV-C)	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
DUPLICATE-20140113 (GENRV-C)	PHENOL		U	0.11	4.7	µg/L
DUPLICATE-20140113 (GENRV-C)	TOTAL RECOVERABLE PHENOLICS	4.6		0.8	2.0	µg/L
GENRV-D-20140113	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-D-20140113	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-D-20140113	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-D-20140113	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-D-20140113	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-D-20140113	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-D-20140113	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-D-20140113	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-D-20140113	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-D-20140113	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-D-20140113	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-D-20140113	CRESOLS, M & P	0.66	J	0.59	9.5	µg/L
GENRV-D-20140113	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-D-20140113	PHENOL		U	0.12	4.8	µg/L
GENRV-D-20140113	TOTAL RECOVERABLE PHENOLICS	4.6		0.8	2.0	µg/L

Sample Collection Date: February 24, 2014

Sample Name	Analyte	Concentration	Qualifier	Detection Limit	Quantitation Limit	Units
GENRV-A-20140224	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-A-20140224	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-A-20140224	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-A-20140224	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-A-20140224	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-A-20140224	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-A-20140224	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-A-20140224	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-A-20140224	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-A-20140224	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-A-20140224	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-A-20140224	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-A-20140224	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-A-20140224	PHENOL		U	0.12	4.8	µg/L
GENRV-A-20140224	TOTAL RECOVERABLE PHENOLICS	4.9		0.8	2.0	µg/L
GENRV-B-20140224	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-B-20140224	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-B-20140224	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-B-20140224	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-B-20140224	2,4-DINITROPHENOL		U	0.80	9.6	µg/L
GENRV-B-20140224	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-B-20140224	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-B-20140224	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-B-20140224	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-B-20140224	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-B-20140224	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-B-20140224	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-B-20140224	PENTACHLOROPHENOL		U	0.39	9.6	µg/L
GENRV-B-20140224	PHENOL		U	0.12	4.8	µg/L
GENRV-B-20140224	TOTAL RECOVERABLE PHENOLICS	5.8		0.8	2.0	µg/L
DUPLICATE-20140224 (GENRV-B)	2,4,5-TRICHLOROPHENOL		U	0.96	4.7	µg/L

DUPLICATE-20140224 (GENRV-B)	2,4,6-TRICHLOROPHENOL		U	0.22	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	2,4-DICHLOROPHENOL		U	0.28	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	2,4-DIMETHYLPHENOL		U	0.13	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
DUPLICATE-20140224 (GENRV-B)	2-CHLOROPHENOL		U	0.15	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	2-NITROPHENOL		U	0.14	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
DUPLICATE-20140224 (GENRV-B)	4-CHLORO-3-METHYLPHENOL		U	0.53	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	4-NITROPHENOL		U	1.3	9.5	µg/L
DUPLICATE-20140224 (GENRV-B)	CRESOLS, M & P		U	0.59	9.5	µg/L
DUPLICATE-20140224 (GENRV-B)	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
DUPLICATE-20140224 (GENRV-B)	PHENOL		U	0.11	4.7	µg/L
DUPLICATE-20140224 (GENRV-B)	TOTAL RECOVERABLE PHENOLICS	5.5		0.8	2.0	µg/L
GENRV-C-20140224	2,4,5-TRICHLOROPHENOL		U	0.96	4.8	µg/L
GENRV-C-20140224	2,4,6-TRICHLOROPHENOL		U	0.22	4.8	µg/L
GENRV-C-20140224	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-C-20140224	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-C-20140224	2,4-DINITROPHENOL		U	0.80	9.5	µg/L
GENRV-C-20140224	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-C-20140224	2-METHYLPHENOL (O-CRESOL)		U	0.20	4.8	µg/L
GENRV-C-20140224	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-C-20140224	4,6-DINITRO-2-METHYLPHENOL		U	0.72	9.5	µg/L
GENRV-C-20140224	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-C-20140224	4-NITROPHENOL		U	1.3	9.5	µg/L
GENRV-C-20140224	CRESOLS, M & P		U	0.59	9.5	µg/L
GENRV-C-20140224	PENTACHLOROPHENOL		U	0.39	9.5	µg/L
GENRV-C-20140224	PHENOL		U	0.11	4.8	µg/L
GENRV-C-20140224	TOTAL RECOVERABLE PHENOLICS	6.0		0.8	2.0	µg/L
GENRV-D-20140224	2,4,5-TRICHLOROPHENOL		U	0.97	4.8	µg/L
GENRV-D-20140224	2,4,6-TRICHLOROPHENOL		U	0.23	4.8	µg/L
GENRV-D-20140224	2,4-DICHLOROPHENOL		U	0.29	4.8	µg/L
GENRV-D-20140224	2,4-DIMETHYLPHENOL		U	0.13	4.8	µg/L
GENRV-D-20140224	2,4-DINITROPHENOL		U	0.81	9.6	µg/L
GENRV-D-20140224	2-CHLOROPHENOL		U	0.15	4.8	µg/L
GENRV-D-20140224	2-METHYLPHENOL (O-CRESOL)		U	0.21	4.8	µg/L
GENRV-D-20140224	2-NITROPHENOL		U	0.14	4.8	µg/L
GENRV-D-20140224	4,6-DINITRO-2-METHYLPHENOL		U	0.73	9.6	µg/L
GENRV-D-20140224	4-CHLORO-3-METHYLPHENOL		U	0.53	4.8	µg/L
GENRV-D-20140224	4-NITROPHENOL		U	1.3	9.6	µg/L
GENRV-D-20140224	CRESOLS, M & P		U	0.60	9.6	µg/L
GENRV-D-20140224	PENTACHLOROPHENOL		U	0.40	9.6	µg/L
GENRV-D-20140224	PHENOL		U	0.12	4.8	µg/L
GENRV-D-20140224	TOTAL RECOVERABLE PHENOLICS	5.2		0.8	2.0	µg/L

Sample Collection Date: March 24, 2014

<u>Sample Name</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Qualifier</u>	<u>Detection Limit</u>	<u>Quantitation Limit</u>	<u>Units</u>
GENRV-A-20140324	2,4,5-TRICHLOROPHENOL		UJ	0.99	4.9	µg/L
GENRV-A-20140324	2,4,6-TRICHLOROPHENOL		UJ	0.23	4.9	µg/L
GENRV-A-20140324	2,4-DICHLOROPHENOL		UJ	0.30	4.9	µg/L
GENRV-A-20140324	2,4-DIMETHYLPHENOL		UJ	0.13	4.9	µg/L
GENRV-A-20140324	2,4-DINITROPHENOL		UJ	0.83	9.8	µg/L
GENRV-A-20140324	2-CHLOROPHENOL		UJ	0.15	4.9	µg/L
GENRV-A-20140324	2-METHYLPHENOL (O-CRESOL)		UJ	0.21	4.9	µg/L
GENRV-A-20140324	2-NITROPHENOL		UJ	0.14	4.9	µg/L
GENRV-A-20140324	4,6-DINITRO-2-METHYLPHENOL		UJ	0.75	9.8	µg/L
GENRV-A-20140324	4-CHLORO-3-METHYLPHENOL		UJ	0.55	4.9	µg/L

GENRV-A-20140324	4-NITROPHENOL	UJ	1.3	9.8	µg/L
GENRV-A-20140324	CRESOLS, M & P	UJ	0.61	9.8	µg/L
GENRV-A-20140324	PENTACHLOROPHENOL	UJ	0.41	9.8	µg/L
GENRV-A-20140324	PHENOL	UJ	0.12	4.9	µg/L
GENRV-A-20140324	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
DUPLICATE-20140324 (GENRV-A)	2,4,5-TRICHLOROPHENOL	U	0.96	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2,4,6-TRICHLOROPHENOL	U	0.22	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2,4-DICHLOROPHENOL	U	0.28	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2,4-DIMETHYLPHENOL	U	0.13	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
DUPLICATE-20140324 (GENRV-A)	2-CHLOROPHENOL	U	0.15	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	2-NITROPHENOL	U	0.14	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
DUPLICATE-20140324 (GENRV-A)	4-CHLORO-3-METHYLPHENOL	U	0.53	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	4-NITROPHENOL	U	1.3	9.5	µg/L
DUPLICATE-20140324 (GENRV-A)	CRESOLS, M & P	U	0.59	9.5	µg/L
DUPLICATE-20140324 (GENRV-A)	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
DUPLICATE-20140324 (GENRV-A)	PHENOL	U	0.11	4.7	µg/L
DUPLICATE-20140324 (GENRV-A)	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-B-20140324	2,4,5-TRICHLOROPHENOL	U	0.96	4.8	µg/L
GENRV-B-20140324	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-B-20140324	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-B-20140324	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-B-20140324	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-B-20140324	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-B-20140324	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.8	µg/L
GENRV-B-20140324	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-B-20140324	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-B-20140324	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-B-20140324	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-B-20140324	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-B-20140324	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-B-20140324	PHENOL	U	0.12	4.8	µg/L
GENRV-B-20140324	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-C-20140324	2,4,5-TRICHLOROPHENOL	U	0.96	4.8	µg/L
GENRV-C-20140324	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-C-20140324	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-C-20140324	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-C-20140324	2,4-DINITROPHENOL	U	0.80	9.5	µg/L
GENRV-C-20140324	2-CHLOROPHENOL	U	0.15	4.8	µg/L
GENRV-C-20140324	2-METHYLPHENOL (O-CRESOL)	U	0.20	4.8	µg/L
GENRV-C-20140324	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-C-20140324	4,6-DINITRO-2-METHYLPHENOL	U	0.72	9.5	µg/L
GENRV-C-20140324	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-C-20140324	4-NITROPHENOL	U	1.3	9.5	µg/L
GENRV-C-20140324	CRESOLS, M & P	U	0.59	9.5	µg/L
GENRV-C-20140324	PENTACHLOROPHENOL	U	0.39	9.5	µg/L
GENRV-C-20140324	PHENOL	U	0.12	4.8	µg/L
GENRV-C-20140324	TOTAL RECOVERABLE PHENOLICS	U	1.0	2.0	µg/L
GENRV-D-20140324	2,4,5-TRICHLOROPHENOL	U	0.97	4.8	µg/L
GENRV-D-20140324	2,4,6-TRICHLOROPHENOL	U	0.22	4.8	µg/L
GENRV-D-20140324	2,4-DICHLOROPHENOL	U	0.29	4.8	µg/L
GENRV-D-20140324	2,4-DIMETHYLPHENOL	U	0.13	4.8	µg/L
GENRV-D-20140324	2,4-DINITROPHENOL	U	0.80	9.6	µg/L
GENRV-D-20140324	2-CHLOROPHENOL	U	0.15	4.8	µg/L

GENRV-D-20140324	2-METHYLPHENOL (O-CRESOL)	U	0.21	4.8	µg/L
GENRV-D-20140324	2-NITROPHENOL	U	0.14	4.8	µg/L
GENRV-D-20140324	4,6-DINITRO-2-METHYLPHENOL	U	0.73	9.6	µg/L
GENRV-D-20140324	4-CHLORO-3-METHYLPHENOL	U	0.53	4.8	µg/L
GENRV-D-20140324	4-NITROPHENOL	U	1.3	9.6	µg/L
GENRV-D-20140324	CRESOLS, M & P	U	0.60	9.6	µg/L
GENRV-D-20140324	PENTACHLOROPHENOL	U	0.39	9.6	µg/L
GENRV-D-20140324	PHENOL	U	0.12	4.8	µg/L
GENRV-D-20140324	TOTAL RECOVERABLE PHENOLICS	U	2.2	2.2	µg/L

µg/L - Micrograms per liter.

J - The reported concentration is an estimated value.

U - Not detected above the reported detection limit.

UU - Not detected above the reported detection limit; detection and quantitation limits are estimated values.



**Appendix C**  
**Documentation of Agency/Angler Surveys Supporting BUI Removal Criterion 3**

**Kuzia-Carmel, Michael X (DEC)**

---

**From:** WadeSilkworth@monroecounty.gov  
**Sent:** Wednesday, April 11, 2018 12:08 PM  
**To:** Kuzia-Carmel, Michael X (DEC)  
**Subject:** Fw: MCFAB - Fish Tainting complaints

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

A little more detail on this one:

----- Forwarded by Wade Silkworth/HD/Monroe on 04/11/2018 12:07 PM -----

From: Steven Olufsen/PLN/Monroe  
To: Wade Silkworth/HD/Monroe@MONROE  
Date: 04/11/2018 11:56 AM  
Subject: Re: MCFAB - Fish Tainting complaints

---

Hi Wade,

We had our meeting on Monday and the MCFAB board confirmed that they have not received any reports of the tainting of fish flavor since December 2015.

Also Web Pearsall, Regional Fisheries Manager from NYS DEC was in attendance at the meeting and hasn't heard of any fish tainting either.

Please let me know if you need anything else!

Thanks,  
Steve

Steven M. Olufsen  
Monroe County Department of Planning & Development  
City Place, 50 West Main Street, Suite 8100  
Rochester, New York 14614  
ph: (585) 753-2027 fax: (585) 753-2028  
e-mail: solufsen@monroecounty.gov

~~~~~  
~~~~~  
CONFIDENTIALITY NOTICE: This e-mail message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution of any kind is strictly prohibited. If you are not the intended recipient, contact the sender via reply e-mail and destroy all copies of the original message.

From: Wade Silkworth/HD/Monroe  
To: Steven Olufsen/PLN/Monroe@Monroe  
Date: 04/02/2018 01:22 PM  
Subject: Re: MCFAB - Fish Tainting complaints

---

That's great. I'll wait to hear from you next week.  
Thank you very much,  
Wade

.....  
**Wade Silkworth, P.E.**  
Manager of Environmental Health  
**Monroe County Dept. of Public Health**  
111 Westfall Road, Rm 910, Rochester, NY 14620  
(585)753-5470 | wadesilkworth@monroecounty.gov

From: Steven Olufsen/PLN/Monroe  
To: Wade Silkworth/HD/Monroe@MONROE  
Date: 04/02/2018 12:48 PM  
Subject: Re: MCFAB - Fish Tainting complaints

---

Hi Wade,

Yes sure I can verify this with MCFAB at our next board meeting on Monday April 9th and get back to you then.

Thanks,  
Steve

Steven M. Olufsen  
Monroe County Department of Planning & Development  
City Place, 50 West Main Street, Suite 8100  
Rochester, New York 14614  
ph: (585) 753-2027 fax: (585) 753-2028  
e-mail: solufsen@monroecounty.gov

~~~~~  
~~~~~  
CONFIDENTIALITY NOTICE: This e-mail message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution of any kind is strictly prohibited. If you are not the intended recipient, contact the sender via reply e-mail and destroy all copies of the original message.

From: Wade Silkworth/HD/Monroe  
To: Steven Olufsen/PLN/Monroe@Monroe  
Date: 04/02/2018 12:29 PM  
Subject: MCFAB - Fish Tainting complaints

---

Hi Steve,

Are you still involved with the MCFAB? We are finalizing our BUI removal report for the Remedial Action Plan, and we would like to make sure our claims are up to date. You may remember, we reached out to you in late 2015 regarding this same topic. Can you verify that the MCFAB has not received any reports of the tainting of fish flavor since December 2015?

Thanks,  
Wade

.....  
**Wade Silkworth, P.E.**  
Manager of Environmental Health  
**Monroe County Dept. of Public Health**  
111 Westfall Road, Rm 910, Rochester, NY 14620  
(585)753-5470 | wadesilkworth@monroecounty.gov

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

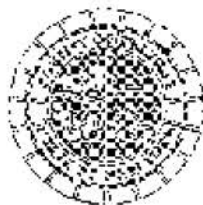
Division of Fish, Wildlife and Marine Resources, Bureau of Fisheries, Region 8  
6274 East Avon-Lima Road, Avon, NY 14414-9516  
P. (585) 226-2466 1F, (585) 226-6323  
[www.dec.ny.gov](http://www.dec.ny.gov)

**December 17, 2015**

**To: Gerald Pratt, State AOC Coordinator, Division of Water  
From: Webster Pearsall, Region 8 Fisheries Manager**

**Re: Reports of tainted fish from Rochester Embayment Area**

This memo is to serve as notification that to the best of our collective memories neither Senior Aquatic Biologist Matt Sanderson nor I have received any reports of tainted fish from the Rochester Embayment Area over the last five years.



*Department of Public Health*

Monroe County, New York

*Maggie Brooks*  
*County Executive*

*Jeremy T. Cushman, MD, MS, EMT-P, FACEP*  
*Interim Health Commissioner*

*Bureau of Public Health Engineering*

---

December 8, 2015

Gerald Pratt  
State AOC Coordinator, Division of Water  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-3508

RE: Rochester Embayment AOC  
Tainting of Fish and Wildlife Flavor BUI

Dear Mr. Pratt:

At your request, I have looked into the matter of tainting of fish and wildlife flavor. Upon review of records from our department and of correspondence between Charlie Knauf (Monroe County Department of Public Health), Steven Olufsen (Monroe County Department of Planning and Development), and Edmund Sander (Monroe County Fish Advisory Board), I can confirm that there have been no reports of tainting of fish and wildlife flavor that have been reported since October 2010, which is as far back as our correspondence records go tracking this issue.

If you have any questions regarding this matter, I can be reached at 585-753-5476.

Sincerely,

A handwritten signature in black ink, appearing to read "John J. Frazer", is written over a circular stamp.

John J. Frazer, P.E.  
Manager of Environmental Health

CC: Wade Silkworth P.E., MCDPH



{In Archive} Re: Fish Tainting  
Steven Lapan

to:

Web Pearsall, CKnauf

02/14/2014 09:06 AM

Cc:

"Gerald Pratt"

Hide Details

From: "Steven Lapan" <slapan@gw.dec.state.ny.us>

To: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>, <CKnauf@monroecounty.gov>

Cc: "Gerald Pratt" <ghpratt@gw.dec.state.ny.us>

History: This message has been replied to.

Archive: This message is being viewed in an archive.

Thank you, Charlie. I've heard nothing, but have cc:'d Jana to see if she's aware of anything. Thanks again,

Steve

>>> <CKnauf@monroecounty.gov> 02/13/14 4:32 PM >>>  
Web and Steve,

It has been a while since I've asked, but as part of the Rochester Embayment RAP, we're tracking complaints about fish flavor tainting. Have either of you received any complaints of this for areas associated with the lower Genesee River or areas of the Lake around Rochester (and we would even track anything reported for Irondequoit Bay, or the Greece Ponds) and Braddock Bay.

I don't know how much you folks value the anecdotal reports, but I have been watching the reports for Irondequoit Bay on lceshanty.com, and the guys using underwater cameras are reporting large numbers of big and small Gizzard shad, so it may be prudent to be ready for the spring post-ice out fish dieoff and subsequent media flurry again this year.

Also the reports all along the Lake indicate that perch are few and far between. If it were just me I would say it was lack of luck and skill, but this is being reported from Sandy Pond all the way to Wilson Harbor.

See you March 3rd.

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.



{In Archive} Re: Fw: Fish Tainting

Steven Lapan

to:

Web Pearsall, CKnauf

03/10/2014 12:28 PM

Cc:

"Gerald Pratt"

Hide Details

From: "Steven Lapan" <slapan@gw.dec.state.ny.us>

To: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>, <CKnauf@monroecounty.gov>

Cc: "Gerald Pratt" <ghpratt@gw.dec.state.ny.us>

History: This message has been replied to.

Archive: This message is being viewed in an archive.

My apologies, Charlie; Jana has received no reports from anglers participating in the creel survey.

Best,

Steve

>>> <CKnauf@monroecounty.gov> 03/10/14 11:05 AM >>>

Steve indicated he was forwarding to Jana Lantry, but I have received no response from her, and I've heard nothing from Web on this. I could take no news as good news but for the EPA purposes in the Rochester Embayment AOC, it is preferable to have an e-mail I can include in the removal document.

Thank you for your attention to this matter.

Charlie

Charles L. Knauf  
 Environmental Health Project Analyst  
 Monroe County Health Department  
 111 Westfall Road Room 976  
 Rochester, NY 14692  
 cknauf@monroecounty.gov  
 (585) 753-5440  
 fax (585) 753-5098

— Forwarded by Charlie Knauf/HD/Monroe on 03/10/2014 12:00 PM —

From: Charlie Knauf/HD/Monroe  
 To: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>, "Steven Lapan" <slapan@gw.dec.state.ny.us>,  
 Cc: "Gerald Pratt" <ghpratt@gw.dec.state.ny.us>  
 Date: 02/13/2014 04:31 PM  
 Subject: Fish Tainting

Web and Steve,

It has been a while since I've asked, but as part of the Rochester Embayment RAP, we're tracking complaints about fish flavor tainting. Have either of you received any complaints of this for areas associated with the lower Genesee River or areas of the Lake around Rochester (and we would even track anything reported for Irondequoit Bay, or the Greece Ponds) and Braddock Bay.

I don't know how much you folks value the anecdotal reports, but I have been watching the reports for Irondequoit Bay on Iceshanty.com, and the guys using underwater cameras are reporting large numbers of big and small Gizzard shad, so it may be prudent to be ready for the spring post-ice out fish dieoff and subsequent media flurry again this year.



Also the reports all along the Lake indicate that perch are few and far between. If it were just me I would say it was lack of luck and skill, but this is being reported from Sandy Pond all the way to Wilson Harbor.

See you March 3rd.

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.



{In Archive} Re: Fw: Fish Tainting  
Web Pearsall

to:

CKnauf

03/12/2014 11:47 AM

Cc:

"Leo Bracci", "Lisa Schwartz"

Hide Details

From: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>

To: <CKnauf@monroecounty.gov>

Cc: "Leo Bracci" <ljbracci@gw.dec.state.ny.us>, "Lisa Schwartz"  
<lpschwar@gw.dec.state.ny.us>

History: This message has been replied to.

Archive: This message is being viewed in an archive.

I have received no complaints. With this e-mail I will ask Matt Sanderson to respond to all.

Webster Pearsall  
Region 8 Fisheries Manager  
wepearsa@gw.dec.state.ny.us  
585-226-5339

>>> <CKnauf@monroecounty.gov> 3/10/2014 12:04 PM >>>  
Steve indicated he was forwarding to Jana Lantry, but I have received no response from her, and I've heard nothing from Web on this. I could take no news as good news but for the EPA purposes in the Rochester Embayment AOC, it is preferable to have an e-mail I can include in the removal document.

Thank you for your attention to this matter.

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

— Forwarded by Charlie Knauf/HD/Monroe on 03/10/2014 12:00 PM —

From: Charlie Knauf/HD/Monroe  
To: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>, "Steven Lapan" <slapan@gw.dec.state.ny.us>,  
Cc: "Gerald Pratt" <ghpratt@gw.dec.state.ny.us>  
Date: 02/13/2014 04:31 PM  
Subject: Fish Tainting

---

Web and Steve,

It has been a while since I've asked, but as part of the Rochester Embayment RAP, we're tracking complaints about fish flavor tainting. Have either of you received any complaints of this for areas associated with the lower Genesee River or areas of the Lake around Rochester (and we would even track anything reported for Irondequoit Bay, or the Greece Ponds) and Braddock Bay.

I don't know how much you folks value the anecdotal reports, but I have been watching the reports for Irondequoit Bay on lceshanty.com, and the guys using underwater cameras are reporting large numbers of big and small Gizzard shad, so it may be prudent to be ready for the spring post-ice out fish dieoff and subsequent media flurry again this year.

Also the reports all along the Lake indicate that perch are few and far between. If it were just me I would say it was lack of luck and skill, but this is being reported from Sandy Pond all the way to Wilson Harbor.

See you March 3rd.

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.



{In Archive} Re: Fwd: Fish Tainting  
Matt Sanderson to: CKnauf

03/17/2014 08:41 AM

History: This message has been replied to.  
Archive: This message is being viewed in an archive.

Hi Charlie:

Here is what I responded to Web about a month ago.

Matt

Matt Sanderson  
Sr. Aquatic Biologist  
NYSDEC  
Region 8 Bureau of Fisheries  
585-226-5341  
[mjsander@gw.dec.state.ny.us](mailto:mjsander@gw.dec.state.ny.us)

----- Message from "Matt Sanderson" <mjsander@gw.dec.state.ny.us> on Tue, 18 Feb 2014 13:20:15 -0500 -----

To: "Web Pearsall"  
<wepearsa@gw.dec.state.ny.us>

Subject: Re: Fwd: Fish Tainting

No complaints about fish flavor tainting. Agree with anticipating another spring gizzard shad die off, since there's plenty of snow cover on the ice. Also heard about spotty yellow perch ice fishing success. It will be interesting to hear what early spring perch fishing success in the Greece Ponds (Long and Cranberry) is this year.

>>> Web Pearsall 2/14/2014 11:02 AM >>>

Matt:

You hear of any complaints / concerns?



{In Archive} Re: Question re MCFAB meetings

Web Pearsall

to:

CKnauf

10/26/2010 10:46 AM

Cc:

"Phil Hulbert", "Steven Lapan"

Hide Details

From: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>

To: <CKnauf@monroecounty.gov>

Cc: "Phil Hulbert" <pxhulber@gw.dec.state.ny.us>, "Steven Lapan" <srlapan@gw.dec.state.ny.us>

History: This message has been replied to and forwarded.

Archive: This message is being viewed in an archive.

Charlie:

I checked with our Lake Ontario Unit that oversees the annual fishing boat census. Neither they or Region 8 Fisheries have recieved any complaints regarding tainting of the flavor of fish.

Web

>>> <CKnauf@monroecounty.gov> 10/20/2010 11:48 AM >>>

Web,

One of the Beneficial Use Impairments for the Rochester Embayment Remedial Action Plan deals with Fish and Wildlife flavor tainting. The Delisting Criteria, or part of it, deals with complaints received by Fish and Wildlife officials. Have you received any complaints in the past year from anyone concerning tainting of flavor of fish from either the Rochester Embayment (9 Mile Point to Bogus Point (west of Manitou and Braddock) to shore, or the Genesee River, especially in "resident" fish like Drum, Channel Catfish, or Walleye?. If you could also query other fisheries personnel, I would greatly appreciate this assistance. Finally, who would I contact at Region 8 to ask about Wildlife complaints from the described area?

Thanks for your attention to this matter,

Charlie

Charles L. Knauf  
 Environmental Health Project Analyst  
 Monroe County Health Department  
 111 Westfall Road Room 976  
 Rochester, NY 14692  
 cknauf@monroecounty.gov  
 (585) 753-5440  
 fax (585) 753-5098

-- Confidentiality Notice --

This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.



{In Archive} Re: Fw: RAP Tainting question

Matt Sanderson

to:

CKnauf

02/17/2012 09:00 AM

Hide Details

From: "Matt Sanderson" <mjsander@gw.dec.state.ny.us>

To: <CKnauf@monroecounty.gov>

History: This message has been replied to.

Archive: This message is being viewed in an archive.

Hi Charlie:

I don't know how I'd describe the odor. Maybe chemical like. It wasn't an organic decomposition (H<sub>2</sub>SO<sub>4</sub>) smell. Generally in mid-late April you can smell it on Edgemere drive. I think it was during a south wind. Might also have been from the lake.

Matt

Matt Sanderson

Sr. Aquatic Biologist

NYSDEC

Region 8 Bureau of Fisheries

585-226-5341

[mjsander@gw.dec.state.ny.us](mailto:mjsander@gw.dec.state.ny.us)

>>> <CKnauf@monroecounty.gov> 2/16/2012 2:52 PM >>>

Charles L. Knauf

Environmental Health Project Analyst

Monroe County Health Department

111 Westfall Road Room 976

Rochester, NY 14692

[cknauf@monroecounty.gov](mailto:cknauf@monroecounty.gov)

(585) 753-5440

fax (585) 753-5098

----- Forwarded by Charlie Knauf/HD/Monroe on 02/16/2012 02:51 PM -----

From: Charlie Knauf/HD/Monroe

To: "Matt Sanderson" <mjsander@gw.dec.state.ny.us> ,

Date: 02/06/2012 09:56 AM

Subject: Fw: RAP Tainting question

Matt,

Can you be more specific about the odor around the ponds? It was unique to the ponds? Were you in other urban to suburban areas during the same period and noticed no odors? Was it right after or during snow melt, when the concentrated materials locked up in the plow piles are being released? Can you characterize the odor, e.g. was it a petroleum like smell, sulfide, turpentine, etc? Living in the City, I'm kind of used to odors released during snow melt, and I'm at a loss as to what could cause a similar effect in the area of all 4 ponds when they are three different watersheds with three different sets of stressors, unless it is just a residual from the amount of traffic on Edgemere Drive. But I want to better define this in case I hear of it from other contacts in that area.

Thanks,

Charlie

Charles L. Knauf  
 Environmental Health Project Analyst  
 Monroe County Health Department  
 111 Westfall Road Room 976  
 Rochester, NY 14692  
 cknauf@monroecounty.gov  
 (585) 753-5440  
 fax (585) 753-5098

----- Forwarded by Charlie Knauf/HD/Monroe on 02/06/12 09:39 AM -----

"Web Pearsall" <wepearsa@gw.dec.state.ny.us>

To <CKnauf@monroecounty.gov>

cc "Matt Sanderson" <mjsander@gw.dec.state.ny.us>, "Mike Wasilco"

<mrwasilc@gw.dec.state.ny.us>

01/26/12 08:41 AM

Subject Re: RAP Tainting question

Charlie:

Wildlife contact is Mike Wasilco 585-226-5460 [mrwasilc@gw.dec.state.ny.us](mailto:mrwasilc@gw.dec.state.ny.us)

I have not heard any complaints regarding tainted fish. However Matt has heard reference to it. I have included his response below.

" Not specifically. I remember reading a Lake Ontario United post from someone mentioning a flavor concern with perch from Long Pond, but wasn't a complaint. I've received complaints about, and noticed myself, a chemical-like aroma on Edgemere Drive around Braddocks Bay, Long, Cranberry, Buck and Round Ponds in the spring."

Web

>>> <CKnauf@monroecounty.gov> 1/25/2012 12:54 PM >>>

Web,

One of the Beneficial Use Impairments for the Rochester Embayment Remedial Action Plan deals with Fish and Wildlife flavor tainting. The Delisting Criteria, or part of it, deals with complaints received by Fish and Wildlife officials. Have you received any complaints in the past year (or since our last communication on this matter in March of 2010) from anyone concerning tainting of flavor of fish from either the Rochester Embayment (9 Mile Point to Bogus Point (west of Manitou and Braddock) to shore, or the Genesee River, especially in "resident" fish like Drum, Channel Catfish, or Walleye?. If you could also query other fisheries personnel, I would greatly appreciate this assistance. Finally, who would I contact at Region 8 to ask about Wildlife complaints from the described

area?

Thanks for your attention to this matter,

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.





{In Archive} Re: RAP Tainting question

Web Pearsall

to:

CKnauf

01/26/2012 08:41 AM

Cc:

"Matt Sanderson", "Mike Wasilco"

Hide Details

From: "Web Pearsall" <wepearsa@gw.dec.state.ny.us>

To: <CKnauf@monroecounty.gov>

Cc: "Matt Sanderson" <mjsander@gw.dec.state.ny.us>, "Mike Wasilco" <mrwasilc@gw.dec.state.ny.us>

History: This message has been replied to and forwarded.

Archive: This message is being viewed in an archive.

Charlie:

Wildlife contact is Mike Wasilco 585-226-5460 [mrwasilc@gw.dec.state.ny.us](mailto:mrwasilc@gw.dec.state.ny.us)

I have not heard any complaints regarding tainted fish. However Matt has heard reference to it. I have included his response below.

" Not specifically. I remember reading a Lake Ontario United post from someone mentioning a flavor concern with perch from Long Pond, but wasn't a complaint. I've received complaints about, and noticed myself, a chemical-like aroma on Edgemere Drive around Braddocks Bay, Long, Cranberry, Buck and Round Ponds in the spring."

Web

>>> <CKnauf@monroecounty.gov> 1/25/2012 12:54 PM >>>

Web,

One of the Beneficial Use Impairments for the Rochester Embayment Remedial Action Plan deals with Fish and Wildlife flavor tainting. The Delisting Criteria, or part of it, deals with complaints received by Fish and Wildlife officials. Have you received any complaints in the past year (or since our last communication on this matter in March of 2010) from anyone concerning tainting of flavor of fish from either the Rochester Embayment (9 Mile Point to Bogus Point (west of Manitou and Braddock) to shore, or the Genesee River, especially in "resident" fish like Drum, Channel Catfish, or Walleye?. If you could also query other fisheries personnel, I would greatly appreciate this assistance. Finally, who would I contact at Region 8 to ask about Wildlife complaints from the described area?

Thanks for your attention to this matter,


Charlie

Charles L. Knauf

Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

-- Confidentiality Notice -- This email message, including all the attachments, is for the sole use of the intended recipient(s) and contains confidential information. Unauthorized use or disclosure is prohibited. If you are not the intended recipient, you may not use, disclose, copy or disseminate this information. If you are not the intended recipient, please contact the sender immediately by reply email and destroy all copies of the original message, including attachments.



{In Archive} Re: Question re MCFAB meetings   
Steven Olufsen to: Charlie Knauf

10/20/2010 11:40 AM

Archive: This message is being viewed in an archive.

Hi Charlie,

Thanks for the note. I have not heard any comments at the MCFAB meetings from the board members. I do have the e-mail address for Web Pearsall it is (wepearsa@gw.dec.state.ny.us). Please let me know if you have any other questions. I haven't been to Sandy this fall yet but I hear from Jason it has some steelhead in there. I might check it out on a weeknight sometime before the days get too short. Let me know how it goes!

Thanks,  
Steve

Steven M. Olufsen  
Monroe County Department of Planning & Development  
City Place, 50 West Main Street, Suite 8100  
Rochester, New York 14614  
ph: (585) 753-2027 fax: (585) 753-2028  
e-mail: solufsen@monroecounty.gov

---

CONFIDENTIALITY NOTICE: This e-mail message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution of any kind is strictly prohibited. If you are not the intended recipient, contact the sender via reply e-mail and destroy all copies of the original message.

Charlie Knauf/HD/Monroe



Charlie Knauf/HD/Monroe  
10/20/10 11:24 AM

To Steven Olufsen/PLN/Monroe@Monroe  
cc

Subject Question re MCFAB meetings

Steve,

One of the Beneficial Use Impairments for the Rochester Embayment deals with Fish and Wildlife flavor tainting. The Delisting Criteria, or part of it, deals with complaints from F+W officials. Have you heard any comments in the past year from MCFAB members concerning tainting of flavor of fish from either the Rochester Embayment (9 Mile Point to Bogus Point (west of Manitou and Braddock) to shore, or the Genesee River. I would rather you did not solicit comments as knowing some of those guys, the responses, might be aimed more at jocularly than accuracy, but I would still have to deal with them. Also, do you have an e-mail address for Web Pearsall?

Thanks, hope you are getting a chance to sample what is reported to be a great early run of steelhead,

even if the high water crunched the salmon more than some folks would have liked. I'm going over to see John Dady and try to get invited out to Sandy for the weekend tonight!

Charlie

Charles L. Knauf  
Environmental Health Project Analyst  
Monroe County Health Department  
111 Westfall Road Room 976  
Rochester, NY 14692  
cknauf@monroecounty.gov  
(585) 753-5440  
fax (585) 753-5098

## **Appendix D**

### **Public Meeting Notes and Responsiveness Summary**

Rochester Embayment Public Meeting, November 17<sup>th</sup>, 2015 – Tainting of Fish & Wildlife Flavor, Loss of Fish & Wildlife Habitat, Degradation of Benthos, Degradation of Plankton

The New York State Department of Environmental Conservation and the Monroe County Department of Public Health hosted a public meeting on the status of Rochester Embayment Beneficial Use Impairments at 7 p.m. on November 17, 2015 at the Roger Robach Community Center, 180 Beach Avenue. Notification of this meeting was distributed to local government officials, local media, and local environmental advocacy groups. Postcards were mailed to 600+ local resident addresses. Approximately 50 people attended. Pamphlets about the Area of Concern and its Beneficial Use Impairments were distributed and posters on each Beneficial Use Impairment were displayed and staffed by State and County experts. Comments were overall positive and the few questions formally posed were answered.

Commenter 1 – Was this meeting published in any of the local newspapers?

Response – Yes, several local papers including The New York Daily Record

Commenter 2 – There is white crust by furnaceville seen from middle falls dam.

Response – it is Hematite and limestone

Commenter 3 – The phytoplankton delisting report is done well

Commenter 4 – It is interesting to see what things are improving but there is still a lot more to be done

Response – There are other programs that will continue to address environmental concerns in the future

Commenter 4- 14468 – Great presentations. Really liked the small group presentations. Thank you!!

Commenter 5 – The information presented was very helpful. The representatives were very knowledgeable and enthusiastic about their presents. A brief group overview followed by the individual poster sessions.

## **MEMORANDUM**

**SUBJECT:** Great Lakes National Program Office Technical Review and Removal  
Recommendation for the Rochester Embayment Area of Concern (AOC) Tainting  
of Fish and Wildlife Flavor Beneficial Use Impairment (BUI)  
**INFORMATION MEMORANDUM**

**FROM:** Amy Pelka for Elizabeth Murphy  
Technical Review Lead

**THROUGH:** Brenda Jones and Fredrick Luckey  
Task Force Leads, Rochester Embayment AOC

**TO:** John Perrecone  
BUI Coordinator

This memorandum documents the technical approval of the New York State Department of Environmental Conservation (NYSDEC) and the Monroe County Department of Public Health (MCDPH) report entitled: *Rochester Embayment Area of Concern: Tainting of Fish and Wildlife Flavor Beneficial Use Impairment Removal Report*, and concurs with the Rochester Embayment Remedial Advisory Committee (RAC), NYSDEC, and the MCDPH's recommendation to remove this BUI from the Rochester Embayment AOC.

This memo responds to a request for review by the U.S. EPA Great Lakes National Program Office (GLNPO) Tainting of Fish and Wildlife Flavor Technical Review Lead (TRL). As TRL, Elizabeth Murphy had consulted with NYSDEC and MCDPH and provided extensive written comments to create this report. This final review has incorporated her comments.

BUI removal is achieved when the guidelines stated in the United States Policy Committee's (USPC) 2001 Delisting Principles and Guidelines document have been met. In accordance with these principals and guidelines, the NYSDEC and MCDPH's BUI removal report has shown that the restoration targets have been met and follow up monitoring or other evaluations confirm that the BUI designation can be removed.

After a thorough review for content, completeness, scientific support and an evaluation of the conclusions about the stated restoration targets, the GLNPO Tainting of Fish and Wildlife Flavor BUI TRL concurs with the findings of the of the BUI removal report. Therefore, EPA supports the request for BUI removal as stated by the State of New York, Monroe County, and the Rochester Embayment RAC in their letter to GLNPO dated June 15, 2018.

The concurrence is based on the following:

- Based on a 2013-2014 monitoring program conducted by the NYSDEC, there were no exceedances of New York State (NYS) water quality standards for chlorinated phenols (1

microgram per liter, or  $\mu\text{g/L}$ ) and unchlorinated phenols ( $5 \mu\text{g/L}$ ) measured in the AOC section of the lower Genesee River. This is the water quality standard utilized for the BUI removal criterion.

- Using EPA Method 420.4 (utilized to provide results comparable to historical data in the report) analysis of total recoverable phenolics, there were instances of phenolic compound concentrations exceeding the NYS water quality standard of  $1 \mu\text{g/L}$ . However, total recoverable phenolics are not specifically cited in the BUI removal criterion and the results suggest that impacts are due to sources upstream of the AOC boundary.
- There were no reports of tainting of fish flavor from the public to NYSDEC and MCDPH over the past seven years (2010-2017). In addition, a representative of the Monroe County Fisheries Advisory Board has indicated there have been no complaints of fish flesh tainting over the past year (as of April 2018).

As such, with the information presented to U.S. EPA, the tainting of fish and wildlife flavor BUI can be removed from the Rochester Embayment AOC.

CC: Marc Tuchman  
Great Lakes National Program Office  
Branch Chief, Great Lakes Remediation and Restoration Branch

Richard Balla  
Watershed Management Branch  
Clean Water Division, Region 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

JUL 30 2018

Mr. Donald Zelazny  
Great Lakes Program Coordinator  
New York State Department of Environmental Conservation  
270 Michigan Avenue  
Buffalo, New York 14203-2915

REPLY TO THE ATTENTION OF:

Dear Mr. Zelazny:

*Dom*

Thank you for your June 15, 2018, request to Mr. Richard Balla to remove the "*Tainting of Fish and Wildlife Flavor*" Beneficial Use Impairment (BUI) at the Rochester Embayment Area of Concern (AOC), Rochester, New York. As you know, we share your desire to restore all of the Great Lakes AOCs and to formally delist them.

Based upon a review of your submittal and the supporting data, the U.S. Environmental Protection Agency (EPA) hereby approves your BUI removal request at the Rochester Embayment AOC. In addition, EPA will notify the International Joint Commission (IJC) of this significant positive environmental change at this AOC.

We congratulate you and your staff, as well as the many federal, state, and local partners who have worked so hard and been instrumental in achieving this important environmental improvement. This progress will benefit not only the people who live and work in the Rochester Embayment AOC but all the residents of New York and the Great Lakes basin as well.

We look forward to the continuation of this important and productive relationship with your agency and the Rochester Embayment Remedial Advisory Committee (RAC) as we work together to delist this AOC in the years to come. If you have any further questions, please contact me, or your staff may contact John Perrecone, at (312) 353-1149.

Sincerely,

Chris Korleski, Director  
Great Lakes National Program Office

cc: Wade Silkworth, Monroe County Department of Public Health  
Michael Kuzia-Carmel, NYSDEC  
Raj Bejankiwar, IJC  
Richard Balla, US EPA, Region 2  
Frederick Luckey, US EPA, Region 2  
Brenda Jones, US EPA, GLNPO