State of Ohio
Environmental Protection Agency

Division of Drinking and Ground Waters

Drinking Water Quality Sampling to Support the Ohio Department of Health Childhood Cancer Investigation, City of Clyde and Surrounding Townships

April 9, 2009

Governor Ted Strickland
Director Chris Korleski

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Executive Summary

Drinking water sampling was performed to support an environmental exposure assessment for a childhood cancer investigation being conducted by the Ohio Department of Health for the City of Clyde and surrounding townships. Eleven drinking water samples were collected in January and February 2009 from two public water systems, city of Clyde and Northern Ohio Rural Water (NORW), and domestic water wells. Three samples were collected from the city of Clyde public water system, four samples were collected from NORW public water system and four domestic water wells were sampled.

The drinking water samples were analyzed for a broad scan of carcinogenic and non-carcinogenic chemical compounds. These included inorganic compounds, volatile organic compounds, semi-volatile organic compounds, pesticides/ herbicides, petroleum compounds and radiological parameters. In order to broaden the scope of analysis, a suite of less common organic compounds was requested for analysis. These organic compounds, collectively called tentatively identified compounds (TICs), appear in the results only when their presence is probable, but not absolutely confirmed.

The results of the sampling did not identify any components of drinking water that suggest significant carcinogenic health concerns. A few naturally occurring substances were identified at elevated concentrations in the water well samples. These substances occur naturally in carbonate bedrock aquifers, such as the bedrock aquifer underlying the local area. The naturally occurring substances that exceed a U.S. EPA secondary maximum contaminant level (MCL) or health advisory level do not have carcinogenic health implications.

Significant findings are as follows:

- No U.S. EPA primary health standard MCL was exceeded for any of the compounds detected. Most values were well below the standard.

- Strontium was identified at elevated levels (16,600 to 47,700 ppb) in samples collected from the domestic water wells. One ppb (part per billion) is equivalent to one drop of water in 50,000 one-liter bottles of water (13,000 gallons). U.S. EPA has not established an MCL for strontium. U.S. EPA's health advisory levels for this substance are 25,000 ppb for children and 4,000 ppb for a lifetime exposure level. Strontium is naturally occurring in the carbonate bedrock aquifer in northwest Ohio.

  There are no known harmful effects of stable strontium for humans at the levels typically found in the environment. Problems with bone growth may occur in children eating or drinking unusually high levels of strontium, especially if the diet is low in calcium and protein. Calcium levels in all of the domestic water wells were higher than the strontium levels detected in the water in these same wells likely negating the potential adverse health effects from chronic exposures to these elevated strontium levels.

- Secondary MCLs (established for cosmetic or aesthetic effects such as taste, odor or color) were exceeded for three substances (iron, sulfate and total dissolved solids) in the domestic water well samples. This is common for the bedrock carbonate aquifer.

- A recommended health-based value for sodium (sodium restricted diet) was exceeded in two domestic water well samples and one NORW sample.

- Only 11 of the 183 targeted organic compounds were detected (98 percent non-detect, 2013 analyses with 44 detections). This detection frequency is consistent with those found in other Ohio communities.

- Trihalomethanes (byproducts of the water disinfection process) were detected in all samples collected at both public water systems. All detections were below the MCL of 80 ppb which is based on the total trihalomethanes value. Trihalomethane chemicals were not detected in the domestic water well samples.

- As part of the screening for organic chemicals, 21 TICs were provisionally identified in one or more of all water samples. Three compounds were detected at very low concentrations in all sources of water, two are naturally occurring fatting acids and the other a surfactant. Only 13 values were estimated to be greater than 1 ppb for seven of the provisionally identified compounds. The sporadic distribution and occurrence of these compounds within each of the three sources of water suggest the actual presence in the water sample is suspect. These TICs were identified from a library of approximately 160,000 compounds. There is no U.S. EPA established primary health standard, secondary standard or health advisory level for any the tentatively identified compounds.

- Herbicides (atrazine, simazine and Dalapon) and an insecticide (BHC) were detected at low concentrations, all below MCLs, in the public water system samples which use surface water as their source of drinking water. These chemicals were not detected in the domestic water well samples. The presence of herbicides in surface water streams in northwest Ohio is principally associated with agricultural, residential and commercial weed control.

- To evaluate additional pesticides/herbicides of concern, Ohio EPA will collaborate with the Ohio Department of Agriculture (ODA) to perform additional drinking water sampling during May or June 2009.

- Gross alpha and gamma radiation were detected only at low activity levels in three of the eleven samples. None of the radiological substances were detected above U.S. EPA MCLs.

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Introduction

Ohio EPA collaborated with the Sandusky County Health Department (SCHD) and the Ohio Department of Health (ODH) to identify potential environmental exposures, in this case the source of drinking water, which may help explain the distribution of childhood cancer in the City of Clyde and surrounding townships. Children with cancer were using both public and domestic water sources. To support the investigation, drinking water samples were collected from two public water systems, city of Clyde and Northern Ohio Rural Water (NORW) and domestic water wells. ODH's initial analyses of the incidence of childhood cancer did not identify clear environmental commonalities among the cancers, so the drinking water sampling could not target specific subsets of parameters for analysis. Rather, the sampling plan identified a wide range of compounds for analysis to maximize the possibility of identifying potential sources of contamination.

This report discusses the results of drinking water sampling conducted in January and February 2009. The report summarizes the following: a description of the local sources of drinking water; an overview of the selection of contaminants included in the investigation; an overview of the typical sources of contaminants that commonly occur in water; an explanation of drinking water health standards and reporting units; and a detailed explanation of the various detected substances associated with the applicable health standards including a typical source of the contaminant.

Local Drinking Water Supplies

Three sources of drinking water are used in the vicinity of the city of Clyde. Two of these sources use surface water as the source water; the Clyde public water system uses water from Beaver Creek and NORW uses a water source obtained from the Sandusky Bay via the city of Sandusky water treatment facility and the Margaretta Water District. The third source of local drinking water is ground water, obtained from water wells drilled into the limestone bedrock aquifer with well depths ranging from 45 to 100 feet.

Drinking Water Sample Information

Eleven drinking water samples were collected in January and February 2009 from two public water systems and domestic water wells. Three samples were collected from the city of Clyde public water system, four samples were collected from the NORW public water system and four domestic water wells were sampled.

Ohio EPA staff collected the drinking water samples in cooperation with staff from SCHD, city of Clyde and NORW public water system as well as local residents. Ohio EPA's Division of Environmental Services performed all laboratory analyses, except for the radiological parameters, which was completed by the ODH laboratory.

City of Clyde Public Water System

Number of Samples:	3
Sample Locations:	Water treatment plant tap and distribution system (near middle school, south end of town)
Source of Water:	Beaver Creek to two upland reservoirs

Northern Ohio Rural Water-NW Public Water System

Number of Samples:	4
Sample Locations:	Entry point (master meter) to distribution system, three in the distribution system: east of Clyde; south of Clyde; and west of Clyde.
Source of Water:	Purchased water from Erie County Margaretta District public water system, which buys from city of Sandusky. Original source of water is Lake Erie/Sandusky Bay.

Domestic Water Wells

Number of Samples:	4
Sample Locations:	Homes of study participants.
Source of Water:	Bedrock carbonate aquifer, most wells are 45 to 100 feet deep.

Selection of Contaminants for Inclusion in the Investigation

Ohio EPA collaborated with ODH on the selection of a comprehensive set of chemicals that may be associated with cancers. The Agency also evaluated commercial and industrial usage of chemicals in the city of Clyde, as well as the type of chemicals that are included as part of the ground water monitoring program for the hazardous waste underground injection facility in Vickery, OH. A broad scan of inorganic compounds, pesticides/herbicides, organic compounds and radiological parameters was included in the investigation. Ohio EPA also selected additional naturally occurring substances to help define the geochemical compositions of the different water sources (surface water or ground water).

The drinking water samples were analyzed for 34 inorganic compounds; 183 target organic compounds (volatile organic chemicals, semi-volatile chemicals, pesticides/ herbicides, petroleum compounds); and seven radiological parameters. To ensure that the Agency screened for the broadest number of potential organic compounds, TICs were requested for screening. This screening allows the laboratory to analyze each water sample for a potential list of nearly 160,000 organic chemical compounds referenced in its instrumentation library. When the chemicals are “tentatively identified” during this analysis, their concentrations are estimated. A complete list of target compounds is presented in Appendix 3.

In evaluating the historic and recent use of pesticides with the Ohio Department of Agriculture (ODA) and Sandusky County Extension Service, it was determined by the Agency that one pesticide chemical group, known as organophosphates, may have been used in the vicinity of Clyde during the past 15 years, but could not be analyzed by Ohio EPA’s laboratory. The Agency plans to collaborate with ODA to complete additional sampling and analysis for these organophosphate chemicals during May or June 2009.

Contaminants in Sources of Drinking Water
There is no such thing as naturally pure water. In nature, all water contains some impurities. As water flows in streams, sits in lakes and filters through layers of soil and rock into the groundwater, it dissolves or absorbs many substances that it touches. In fact, many major and trace minerals and nutrients are naturally taken up in both ground water and surface water. These include calcium, sodium and fluoride, as well as trace metals such as zinc and magnesium. Some of these substances are harmless. Some people prefer mineral water precisely because minerals give it an appealing taste. However, at certain levels, minerals, just like man-made chemicals, are considered contaminants that can make water unpalatable or even unsafe.

Some contaminants come from dissolution or erosion of natural rock formations. Other contaminants are substances discharged from factories, applied to farmlands, or used by consumers in their homes and yards. Sources of contaminants might be in your neighborhood or might be many miles away. Contaminants that may be present in source water include:

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production and mining or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and wastewater management systems; and
- Radioactive contaminants, which can be naturally-occurring or be the result of human activities.

Drinking Water Health Standards
Drinking water standards are regulations that U.S. EPA sets to control the level of contaminants in the nation's drinking water. These standards are part of the Safe Drinking Water Act's "multiple barrier" approach to drinking water protection, which includes assessing and protecting drinking water sources; protecting wells and collection systems; making sure water is treated by qualified operators; ensuring the integrity of distribution systems; and making information available to the public on the quality of their drinking water.

There are two categories of drinking water standards:

- A National Primary Drinking Water Regulation (NPDWR), or primary standard, is a legally- enforceable standard that applies to public water systems. Primary standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. They take the form of MCLs.

- A National Secondary Drinking Water Regulation (NSDWR), or secondary standard, is a non-enforceable guideline regarding contaminants that may cause

cosmetic effects, such as skin or tooth discoloration, or aesthetic effects, such as taste, odor or color, in drinking water. EPA recommends secondary standards to water systems but does not require compliance. They take the form of secondary MCLs.

U.S. EPA has also set health advisory levels for some contaminants for which it has not set drinking water health standards. These health advisory levels help alert public health officials and consumers when there is a potential health risk (e.g., in the event of a chemical spill), but they do not have any legal significance. Health advisories are guidance values based on non-cancer health effects for different durations of exposure (e.g., one-day, 10-day and lifetime).

All of the chemical health standards and a description of each type of standard or advisory level are available in U.S. EPA's 2006 Edition of the Drinking Water Standards and Health Advisories. Definitions are presented in Appendix 2.

Drinking Water Sample Results

A summary of the drinking water quality sample results is presented in Appendix 1. Individual sample result values are included for the city of Clyde and NORW public water systems and the concentration range is presented for the domestic water well samples. Information on health standards or health advisory levels, including the recommended level, type of standard and typical source of the contaminant, also are included in the summary table.

The concentrations of the values in the drinking water quality summary table are reported with measurement units as follows: parts per million (ppm) which is equivalent to milligrams per liter (mg/L); parts per billion (ppb) which is equivalent to micrograms per liter (ug/L); and pico curies per liter (pCi/L) for the radioactive substances. To gain a better understanding of the unit of measure, see Appendix 2. For example, 1 ppb is equivalent to one drop of water in 50,000 one-liter bottles of water (13,000 gallons).

Actual laboratory reports for the samples collected from the public water systems are presented in Appendix 6. Due to privacy concerns, the laboratory reports for the domestic water well samples are not included in Appendix 5. However, these results have been summarized in Appendix 1.

Inorganic Compounds

All of the sample results for the inorganic compounds are presented in the drinking water quality summary table (Appendix 1) regardless of whether or not they were detected in any sample. Of the 34 chemicals listed under the inorganic category, no results exceeded an established U.S. EPA MCL. Only five substances exceeded a secondary MCL or health advisory level, all deemed non-carcinogenic.

Strontium was detected at concentrations above the recommended health advisory levels in samples collected from the domestic water wells, and ranged from 16,600 to 47,700 ppb. While U.S. EPA has not established an MCL for strontium, the recommended health advisory levels for this substance are 25,000 ppb for children

(one-day and 10-day exposure for a 10-kg child) and 4,000 ppb for a drinking water equivalent level based on a lifetime (70-year) exposure of two liters of water per day (U.S. EPA, 2006). No harmful effects in humans are known at levels typically found in the environment. Problems with bone growth may occur in children eating or drinking unusually high levels of strontium, especially if the diet is low in calcium and protein (ASTDR, 2004). This health condition is referred to as “strontium rickets”. Calcium levels in all of the domestic water well samples (ranged from 64,000 to 498,000 ppb) were higher than the strontium levels detected in the water in these same wells (15,500 to 47,200 ppb), likely negating the potential adverse health effects from chronic exposures to these elevated strontium levels .

Figure 1 shows the range of strontium found in Ohio’s major water supply aquifers (Ohio EPA, 2008). Concentrations above the 25,000 ppb health advisory level are found in 13 locations in Figure 1(Kenah, 2009) and are concentrated in a north-south band along western central Ohio. This area overlies carbonate bedrock containing significant amounts of the strontium-bearing mineral celestite ($SrSO_4$, strontium sulfate). As ground water moves slowly through the carbonate aquifer, this mineral dissolves, leading to the elevated levels found today in western Ohio ground water.

The average and maximum concentrations of strontium within all carbonate aquifers of northwest Ohio are about 18,000 ppb and 66,000 ppb, respectively, based on Ohio EPA’s Ambient Ground Water Quality Monitoring Program, which tracks water quality in ground water use by public water supplies. Comparison of these aquifer-wide strontium levels to the ground water concentrations found in and around Clyde (16,600 to 47,700 ppb) indicates that much of western Ohio ground water has similar, if not more elevated, total strontium levels.

The secondary MCL (established for cosmetic or aesthetic effects such as taste, odor or color) was exceeded for three substances (iron, sulfate and total dissolved solids) in the domestic water well samples. Elevated values of these substances are common to a large section of northwest Ohio served by the regional carbonate bedrock aquifer.

The concentration for iron ranged from 154 to 1,300 ppb with an average of 753 ppb in samples collected from the domestic water wells. Iron was not detected in the public water system samples. The secondary MCL for iron is 300 ppb. Iron is naturally occurring within the local aquifer.

The concentration for sulfate ranged from 26 to 1,400 ppm in samples collected from the water wells and public water system samples. The secondary MCL for sulfate, 250 ppm, was exceeded only in the domestic water well samples. Sulfate is naturally occurring and often elevated within the local bedrock carbonate aquifer.

The concentration of total dissolved solids ranged from 170 to 2,330 ppm in samples collected from the domestic water well and public water systems. Total dissolved solids (TDS) is a measure of the total dissolved matter, both inorganic and organic, found in a water sample. The most common components of TDS are common salts, very small particulates and ionic forms of common elements such as calcium, magnesium, sodium,

iron, sulfate and strontium. The secondary MCL for total dissolved solids, 500 ppm, was exceeded only in the domestic water well samples. Total dissolved solids are often elevated within the local bedrock aquifer through the dissolution of naturally occurring compounds.

The recommended health-based value for sodium (sodium restricted diet) is 20 ppm and was exceeded in two domestic water well samples and one NORW sample. Sources of sodium to ground water and surface water include dissolution of soil and aquifer materials, water softening brines and agricultural and lawn chemicals.

Some of the water well samples exhibited above detection levels of metals (copper, lead, zinc and chromium) which may come from the aquifer or plumbing fixtures, but none of the values reported approach recommended health standards or advisory levels.

All other inorganic compounds are within normally detected ranges and eight compounds (aluminum, arsenic, beryllium, cadmium, cobalt, mercury, selenium and thallium) were not detected in any water sample.

Organic Compounds

Organic compounds include volatile organic chemicals, semi-volatile organic chemicals, pesticides/herbicides and petroleum-related products. Only the organic compounds that were detected in one or more of the drinking water samples are presented in the drinking water quality summary table presented in Appendix 1. If the chemical was not detected in the sample, the code ND (non-detect) is used. The actual reporting limit (e.g., <0.5) is presented on each original laboratory results sheet in Appendix 5 and represents the concentration cutoff, below which the presence of that particular target parameter can no longer be analytically verified or confirmed.

Of the 183 target organic chemicals, no results exceeded an established U.S. EPA MCL. Only 11 of the 183 targeted organic chemicals were detected (98 percent non-detect, 2013 analyses with 44 detections). The most frequently detected organic chemicals were the trihalomethanes, discussed in the following section.

Disinfection Byproducts

Trihalomethanes (disinfection byproducts) were detected in all samples collected from both public water systems and were not detected in the domestic water well samples. The presence of trihalomethanes in the public water systems is expected because it can be formed during the water disinfection process when chlorine reacts with the dissolved organic carbon material in water. Trihalomethane concentrations tend to increase in warmer weather with the highest values usually occurring during the summer. The total trihalomethanes concentrations ranged from 20 to 37 ppb in the Clyde public water system, and 24 to 54 ppb in the NORW water system. The MCL for total trihalomethanes (bromodichloromethane, bromomethane, chloroform and dibromochloromethane) is 80 ppb. Some people who drink water

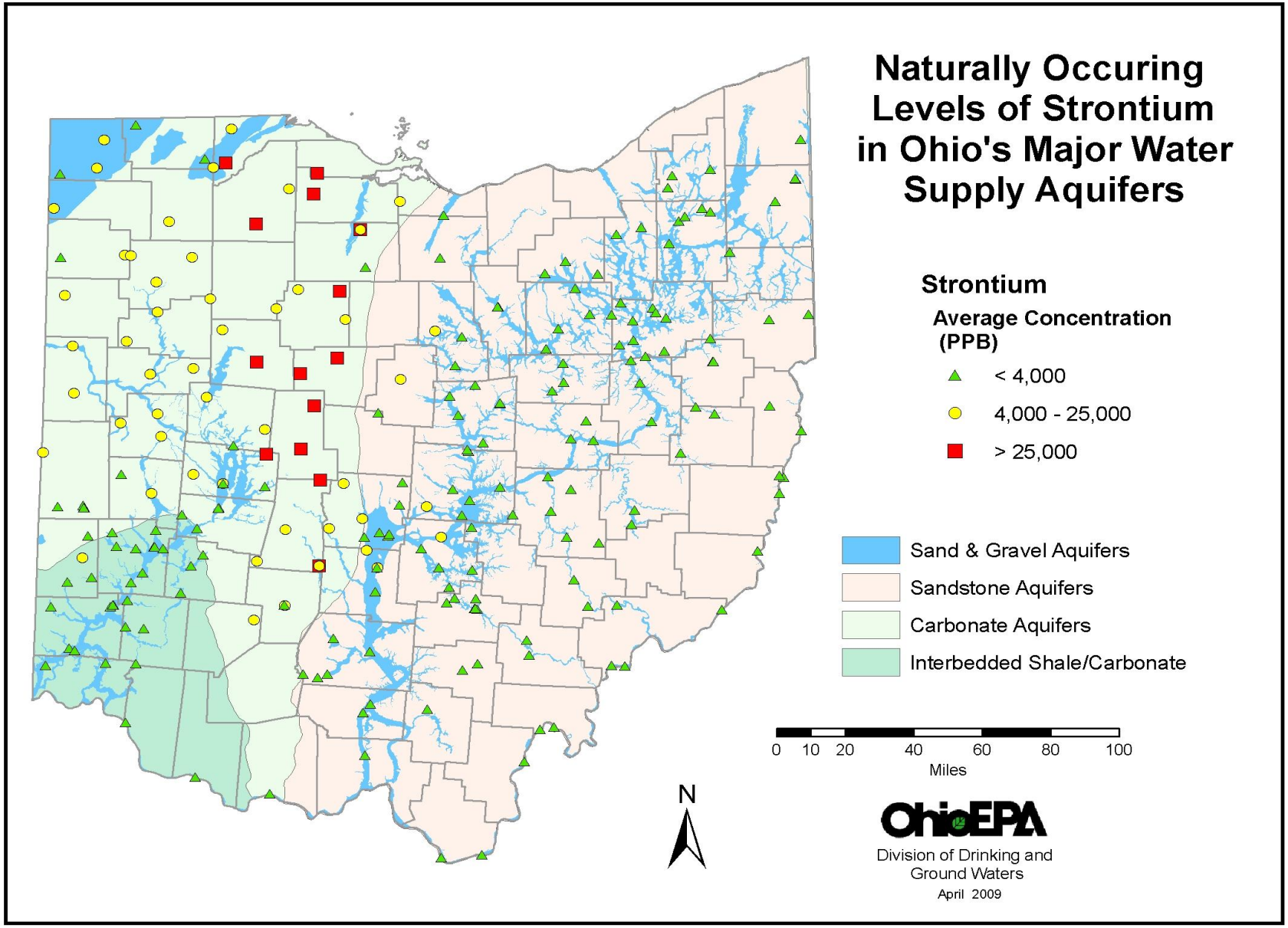

Figure 1 - Naturally Occurring Levels of Strontium in Ohio's Major Water Supply Aquifers

that contains trihalomethanes in excess of the MCL for many years may experience problems with their liver, kidneys or central nervous system and may have an increased risk of developing cancer. (U.S. EPA, 2003)

Pesticides/Herbicides

Three herbicides (atrazine, simazine and Dalapon) and an insecticide (a-BHC, a breakdown product of Lindane) were detected at low concentrations, all below MCL, in both of the public water system samples. These chemicals were not detected in the domestic water well samples.

Atrazine was detected at the highest concentration of all of pesticides or herbicides at 1.2 to 1.4 ppb in the city of Clyde public water supply and 0.25 to 0.35 ppb in the NORW public water supply. The MCL for atrazine is 3 ppb. Some people who drink water containing atrazine well in excess of the MCL for many years could experience problems with their cardiovascular system or have reproductive difficulties (U.S. EPA, 2003).

The presence of herbicides in surface water streams in northwest Ohio is principally associated with agricultural, residential and commercial weed control. The sample results are consistent with the level of detections identified in previous drinking water compliance monitoring results for city of Clyde and NORW public water systems. The results are consistent with other public water systems in Ohio situated in similar land-use settings.

The city of Clyde informed the Agency that they have been participating in a voluntary pesticide occurrence research program in collaboration with the U.S. Department of Agriculture's (U.S. DA) Monitoring Program Office. The research involves sampling the city's treated and untreated drinking water and analyzing the samples for 124 pesticides or pesticide breakdown compounds. The data indicates that low levels of pesticides (0.001 to 1.00 ppb) are present for the 22 chemicals detected. Only three chemicals, acetochlor ethanesulfonic acid (ESA), acetochlor oxanilic acid (OA), and atrazine, have been detected at an average concentration greater than 0.5 ppb. The average concentrations were 0.77, 1.05 and 0.87 ppb, respectively.

The occurrence of the 22 pesticide chemicals detected in Clyde's water supply at parts per trillion levels is consistent with U.S. DA results for four similar investigations in agricultural watersheds of northwest Ohio. (Councell, 2009)

Other Organic Compounds

Only three target organic chemicals (benzo[a]pyrene, bis(2-ethylhexyl)phthalate, diethylphthalate) were detected in any of the drinking water samples.

Benzo[a]pyrene was detected in one of the four samples collected from the NORW public water system. The concentration, 0.02 ppb, was just at the laboratory reporting limit. The MCL for benzo[a]pryene is 0.2 ppb, which is 10 times greater than the detected result. Some people who drink water containing benzo(a)pyrene in excess of the MCL for many years may experience reproductive difficulties and may have an

increased risk of developing cancer. Benzo[a]pyrene is typically found in coal tar, car and truck exhaust fumes, smoke from the combustion of organic material and in charbroiled food. This compound may also leach from water storage tank linings and distribution lines into the water supply.

Bis(2-ethylhexyl)phthalate (also known as di(2-ethylhexyl)phthalate) was detected in seven drinking water samples from all water sources. The results are estimated and concentrations ranged from 0.38 to 0.92 ppb. The MCL for bis(2-ethylhexyl)phthalate is 6 ppb. Some people who drink water containing bis(2-ethylhexyl) phthalate well in excess of the MCL for many years may develop liver problems, experience reproductive difficulties and may have an increased risk of developing cancer. Sources of bis(2-ethylhexyl)phthalate are typically from discharge from rubber and chemical factories. This compound is also a common laboratory contaminant.

Diethylphthalate was detected in two samples, one at city of Clyde and one in a domestic water well, at concentrations of 5.4 to 11.6 ppb, respectively. U.S. EPA has not established an MCL for this compound. The drinking water equivalent health advisory level for diethylphthalate is 30,000 ppb. This synthetic substance is commonly used to make plastics more flexible. Products in which it is found include toothbrushes, automobile parts, tools, toys, food packaging, cosmetics, insecticides and aspirin. Diethylphthalate can be easily released from these products.

As part of the screening for organic chemicals, 21 TICs were provisionally identified in one or more of all water samples. Three compounds (n-Hexadeconoic acid, Octadecanoic acid and Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]-) were detected at levels between 0.3 to 2 ppb in all three water sources. n-Hexadeconoic acid, Octadecanoic acid are naturally occurring fatting acids and Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)- phenoxy]ethoxy]-) is a surfactant used in the production of detergents and other household products. Seven provisionally identified compounds (7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione; n-Hexadecanoic acid; Phenol, 2,4-bis(1,1-dimethylethyl)- ; Benzene, 1,1'-sulfonylbis[4-chloro; Cyclohexanone; Phenol, 2,4-bis(1,1-dimethylethyl); and Triphenylphosphine oxide) were reported at a concentration greater than 1 ppb. However, the sporadic distribution and occurrence of these compounds within each of the three sources of water suggest the actual presence in the water sample is suspect. It is important to note that these are estimated results, and that these unconfirmed compounds derive from a compound library of approximately 160,000 substances. There are no U.S. EPA primary health standards, secondary standards or health advisory levels established for any these tentatively identified compounds.

The TICs are typically associated with the manufacture of plasticizers, antioxidants (stabilizers) and household products. These may include solvents and rubber-related compounds; surfactants used mainly in the production of detergents, but also pesticides, paints and varnishes and drugs (drug delivery systems); antioxidant stabilizer commonly used in polymer formulations (e.g., packaging materials; adhesives, sealants, paints and lubricants rubbers, plastics, foods, oils, pharmaceuticals and fragrances). These substances also include naturally occurring non-toxic fatty

acids from palm tree oil, butter, cheese and meat. They also are used in the production of milk, beverages, candles, rubbers, soaps, shampoos and cosmetics.

Additional information on the TICs is presented in Appendix 4.

Sulfur (C6 and C8) were identified in all water samples. The highest concentrations were identified in the domestic water wells samples. The presence of sulfur at these concentrations is consistent with the presence of naturally occurring sulfate in the drinking water, especially from the bedrock aquifer. Sulfate can transform to hydrogen sulfide or sulfur.

Radiological Parameters

Drinking water samples were screened for radiological substances. These included gross alpha, beta and photon emitters, gamma scan, radium 226, radium 228 and uranium. These substances were selected based on the availability of drinking water health standards and the ability to screen for a broad number of radioactive substances.

Only gross alpha and two radionuclides identified in the gamma scan were detected above minimum reporting levels. None of the values exceeded a U.S. EPA MCL health standard.

Gross alpha was detected only in two of the water well samples at concentrations from 4.8 to 5.3 pCi/L. The MCL for alpha is 15 pCi/l. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL for many years may have an increased risk of developing cancer. Typical sources of alpha are from the erosion of natural deposits of certain radioactive minerals such as uranium, radium and radon.

The gamma scan identified two radionuclides, bismuth-214 and lead-214, which were detected in three samples. Bismuth-214 levels ranged from10.6 to 80.5 pCi/L in one NORW sample and two water well samples. Lead-214 levels ranged from 20.8 to 68.5 pCi/L in two water well samples. All nuclides were below the detection level in the remaining samples. A gamma ray is a packet of electromagnetic energy which is typically emitted after a radionuclide undergoes alpha or beta decay. This occurs as the nucleus sheds excess energy to become stable once again. The primary source of gamma exposure for humans is from naturally occurring radionuclides, particularly potassium-40, which is found in soil and water, as well as meat and high-potassium foods such as bananas. Radium is also a source of gamma exposure. The 214 isotope of bismuth, a naturally occurring metal, emits gamma and beta rays. Bismuth compounds are used in cosmetics, medicines and in medical procedures. The 214 isotope of lead, a naturally occurring metal, can emit gamma and beta rays.

There is a very good probability that the decay of naturally occurring radon in ground water has generated the detectable levels of gross alpha, bismuth-214 and lead-214. .Additional information on radiological measurements is presented in Appendix 5.

Conclusion

Drinking water sampling was performed to support an environmental exposure assessment for a childhood cancer investigation being conducted by the Ohio Department of Health for the City of Clyde and surrounding townships. Eleven drinking water samples were collected in January and February 2009 from two public water systems, city of Clyde and NORW, and domestic water wells. Three samples were collected from the city of Clyde public water system, four samples were collected from the NORW public water system and four domestic water wells were sampled.

The drinking water samples were analyzed for a broad scan of carcinogenic and non-carcinogenic chemical compounds. These included inorganic compounds, volatile organic compounds, semi-volatile organic compounds, pesticides/ herbicides, petroleum compounds and radiological parameters. In order to broaden the scope of analysis, a suite of less common organic compounds was requested for analysis. These organic compounds, collectively called TICs, appear in the results only when their presence is probable, but not absolutely confirmed.

The results of the sampling did not identify any components of drinking water that suggest significant carcinogenic health concerns. A few naturally occurring substances were identified at elevated concentrations in the domestic water well samples. These substances occur naturally in carbonate bedrock aquifers, such as the bedrock aquifer underlying the local area. The naturally occurring substances that exceed an U.S. EPA secondary MCL or health advisory level do not have carcinogenic health implications.

Significant findings are as follows:

- No U.S. EPA primary health standard MCL was exceeded for any of the compounds detected. Most values were well below the standard.

- Strontium was identified at elevated levels (16,600 to 47,700 ppb) in samples collected from the domestic water wells. U.S. EPA has not established an MCL for strontium. U.S. EPA's health advisory levels for this substance are 25,000 ppb for children and 4,000 ppb for a lifetime exposure level. Strontium is naturally occurring in the carbonate bedrock aquifer in northwest Ohio.

  There are no harmful effects of stable strontium in humans at the levels typically found in the environment. Problems with bone growth may occur in children eating or drinking unusually high levels of strontium, especially if the diet is low in calcium and protein. Calcium levels in all of the domestic water wells were higher than the strontium levels detected in the water in these same wells likely negating the potential adverse health effects from chronic exposures to these elevated strontium levels.

- Secondary MCLs (established for cosmetic or aesthetic effects such as taste, odor or color) were exceeded for three substances (iron, sulfate and total dissolved solids) in the domestic water well samples. This is common for the bedrock

carbonate aquifer. Exceedance of a SMCL does not necessarily pose any kind of health concern.

- A recommended health-based value for sodium (sodium restricted diet) was exceeded in two domestic water well samples and one NORW sample.

- Some of the domestic water well samples exhibited above detection levels of metals (copper, lead, zinc and chromium) which may come from the aquifer or plumbing fixtures, but none of the values reported approach recommended health standards.

- The elevated concentrations of alkalinity and calcium in domestic well water samples are typical for water obtained from the local bedrock aquifer.

- Only 11 of the 183 targeted organic compounds were detected (98 percent non-detect, 2,013 analyses with 44 detections). This detection frequency is consistent with those found in other Ohio communities.

- Trihalomethanes were detected in all samples collected at both public water systems. All detections were below the MCL of 80 ppb, which is based on the total trihalomethanes value. Trihalomethane chemicals were not detected in the domestic water well samples.

- Bis (2-Ethylhexyl) phthalate was detected at a low concentration (less than 1 ppb) in all water sources. This is a plasticizer and a common lab contaminant.

- As part of the screening for organic chemicals, 21 TICs were provisionally identified in one or more of all water samples. Three compounds were detected at very low concentrations in all sources of water, two are naturally occurring fatting acids and the other a surfactant. Only 13 values were estimated to be greater than 1 ppb for seven of the provisionally identified compounds. The sporadic distribution and occurrence of these compounds within each of the three sources of water suggest the actual presence in the water sample is suspect. These TICs were identified from a library of approximately 160,000 compounds. There is no U.S. EPA established primary health standard, secondary standard or health advisory level for any the tentatively identified compounds.

- Herbicides (atrazine, simazine and Dalapon) and an insecticide (BHC) were detected at low concentrations, all below the MCLs, in the public water system samples. These chemicals were not detected the domestic water well samples. The presence of herbicides in surface water streams in northwest Ohio is principally associated with agricultural, residential and commercial weed control.

- To evaluate additional pesticides/herbicides of concern, Ohio EPA will collaborate with ODA to perform additional drinking water sampling during May or June 2009.

- Gross alpha and gamma radiation were detected only at low activity levels in three of the 11 samples. None of the radiological substances were detected above U.S. EPA MCLs.

References

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Appendix 1 – Drinking Water Quality Monitoring Results

Clyde Childhood Cancer Investigation - Drinking Water Quality Results

Parameter	Units [1]	Data Qualifer [2]	City of Clyde Public Water System			Northern Ohio Rural Water Public Water System				Water Wells (4 Samples)	Exceeds a Standard [3]	Drinking Water Health Information	Typical Source of Contaminant
			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Inorganic Compounds													
Alkalinity	ppm		55.1	53.8	63.7	90	98.7	87.2	91	183 - 337	*	No drinking water health standard established.	Erosion or dissolution of natural materials
Aluminum	ppb		<200	<200	<200	<200	<200	<200	<200	<200 - <200	No	The Secondary MCL for Aluminum is 50 to 200 ppm. This is a non-enforceable federal guideline for cosmetic effects or aesthetic effects (such as taste, odor or color).	Erosion or dissolution of natural materials
Ammonia	ppm		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.22 - 0.333	No	The non-regulatory drinking water advisory level for Ammonia is 30 ppm and is based on a taste threshold.	Discharge of wastewaters, runoff of fertizliers, Erosion or dissolution of natural depoists
Arsenic	ppb		<2	<2	<2	<2	<2	<2	<2	<2 - <2	No	The MCL for Arsenic is 10 ppb. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of developing cancer.	Erosion or dissolution of natural materials; runoff from orchards; discharge from glass and electronics production wastes
Barium	ppb		<15	<15	<15	18	22	17	17	<15 - 118	No	The MCL for Barium is 2000 ppb. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.	Discharge of drilling wastes; Discharge from metal refineries; Erosion or dissolution of natural materials
Beryllium	ppb		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2 - <0.2	No	The MCL for Beryllium is 4 ppb. Some people who drink water containing beryllium well in excess of the MCL over many years could experience intestinal lesions.	Discharge from metal refineries and coal coalburning factories; Discharge from electrical, aerospace, and defense industries
Bromide	ppb		<100	<100	<100	<100	<100	<100	<100	26 - 195	*	No drinking water health standard established.	Erosion or dissolution of natural materials;
Cadmium	ppb		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2 - <0.2	No	The MCL for Cadium is 5 ppb. Some people who drink water containing cadmium well in excess of the MCL over many years could experience kidney damage.	Corrosion of galvanized pipes; Erosion or dissolution of natural materials; discharge from metal refineries; runoff from waste batteries and paints
Calcium	ppm		32	32	38	36	45	34	34	64 - 198	*	No drinking water health standard established.	Erosion or dissolution of natural materials.
Chloride	ppm		44.9	45	49	24.2	36.5	21.1	21.1	<5 - 19.4	No	The Secondary MCL is 250 ppm. The standard is established for cosmetic effects or aesthetic effects (such as taste, odor or color) of drinking water.	Erosion or dissolution of natural materials; runoff from deicing operations; oil and gas drilling operation, brine management
Chromium	ppb		3.4	3.2	3.2	2.1	2.3	<2	3.3	5.8 - 16	No	The MCL for Chromium is 100 ppb. Some people who drink water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.	Discharge from steel and pulp mills; Erosion or dissolution of natural materials
Cobalt	ppb		<2	<2	<2	<2	<2	<2	<2	<2 - <2	*	No drinking water health standard established.	Erosion or dissolution of natural materials; manufacturing of steel alloys, color glass, ceramics and paints, and used as a drier for porcelain enamel and paints
Chemical Oxygen Demand	ppm		<20	<20	<20	<20	<20	<20	<20	<20 - <20	*	No drinking water health standard established.	Dissolved organic material.

Clyde Childhood Cancer Investigation - Drinking Water Quality Results

Parameter	Units [1]	Data Qualifer [2]	City of Clyde Public Water System			Northern Ohio Rural Water Public Water System				Water Wells (4 Samples)	Exceeds a Standard [3]	Drinking Water Health Information	Typical Source of Contaminant
			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Copper	ppb		7.2	2.1	30.8	2.1	11.2	<2	<2	<2 - 28.1	No	The action level for Copper of 1300 ppb is regulatory level that if exceeded may require treatment or other requirements (such as eduction programs). Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.	Corrosion of household plumbing systems; erosion or dissolution of natural materials.
Fluoride	ppm		0.77	1.2	1.1	1	1.2	1.1	1	0.61 - 1.5	No	The MCL for fluoride is 4 ppm. Some people who drink water containing fluoride well in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.	Erosion or dissolution of natural materials; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Hardness, Total	ppm		100	96	111	131	162	126	122	267 - 1700	*	No drinking water health standards established.	Caused by high mineralization in water. Water softening is a common treatment solution.
Iron	ppb		<50	<50	<50	<50	<50	<50	<50	154 - 1300	Yes	The Secondary MCL for Iron is 300 ppb. The standard is established for cosmetic effects or aesthetic effects (such as taste, odor or color) of drinking water.	Erosion or dissolution of natural materials.
Lead	ppb		<2	<2	2.6	<2	<2	<2	<2	<2 - 12.9	No	The action level for Lead of 15 ppb is regulatory level that if exceeded may require treatment or other requirements (such as eduction programs). Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.	Corrosion of household plumbing systems; Erosion or dissolution of natural materials.
Magnesium	ppm		5	4	4	10	12	10	9	26 - 135	*	No drinking water health standard established.	Erosion or dissolution of natural materials.
Manganese	ppb		<10	<10	<10	<10	<10	<10	<10	<10 - 26	No	The Secondard MCL for Managnese is 50 ppb. The standard is established for cosmetic or aesthetic effects (such as taste, odor or color) of drinking water.	Erosion or dissolution of natural materials.
Mercury	ppb		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2 - <0.2	No	The MCL for Mercury is 2 ppb. Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.	Erosion or dissolution of natural materials; discharge from refineries and factories; runoff from landfills; runoff from crop land
Nickel	ppb		<2	<2	<2	<2	<2	<2	<2	<2 - 26.4	No	No MCL is established. The drinking water lifetime health advisory level is 100 ppb.	Corrosion of household plumbing systems; Erosion or dissolution of natural materials.
Nitrate	ppm		0.82	0.7	1	1.4	1.3	1	0.9	<0.5 - <0.5	No	The MCL for Nitrate is 10 ppm. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion or dissolution of natural materials
Potassium	ppm		5	5	5	2	2	2	2	2 - 5	*	No drinking water health standards established.	Erosion or dissolution of natural materials; fertilizers

Clyde Childhood Cancer Investigation - Drinking Water Quality Results

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			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Selenium	ppb		<2	<2	<2	<2	<2	<2	<2	<2 -<2	No	The MCL for Selenium is 50 ppb. Selenium is an essential trace nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.	Discharge from petroleum and metal refineries; erosion or dissolution of natural materials; discharge from mines
Sodium	ppm		18	18	18	17	23	16	15	15 - 30	Yes	There is no MCL for Sodium. A non-enforceable health based value of 20 ppm is recommended for individuals on a sodium restricted diet and 30 to 60 ppm is recommended for a taste threshold.	Erosion or dissolution of natural materials; water softening; runoff from deicing operations
Strontium	ppb		70	71	82	277	394	259	254	15500 - 47200	Yes	U.S. EPA has not established a MCL for this substance. The health advisory levels for this substance are 25,000 ppb for children and 4,000 ppb for a drinking water equivalent level. There are no harmful effects of stable strontium in humans at the levels typically found in the environment. Problems with bone growth may occur in children eating or drinking unusally high levels of strontium, especially if the diet is low in calcium and protein.	Strontium is a naturally occurring element found in rocks, soil, dust, coal, and oil. Naturally occurring strontium is not radioactive and is either referred to as stable strontium or strontium. Strontium compounds are used in making ceramics and glass products, pyrotechnics, paint pigments, fluorescent lights, and medicines.
Sulfate	ppm		32	26.6	26.2	40.3	56.4	32.9	32.1	106 - 1420	Yes	The Secondary MCL for Sulfate is 250 ppm. The standard is established for cosmetic or aesthetic effects (such as taste, odor or color) of drinking water. Elevated sulfate has a laxative effect for transient users.	Erosion or dissolution of natural materials.
Thallium	ppb		<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5 - <1.5	No	The MCL for Thallium is 2 ppb. Some people who drink water containing thallium well in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines or liver.	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
TKN -Total Kjeldahl Nitrogen	ppm		0.25	<0.2	0.29	<0.2	0.33	<0.2	<0.2	0.28 - 0.39	*	No drinking water health standards established.	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion or dissolution of natural materials
Total Dissolved Solids	ppm		128	170	232	196	240	158	192	442-2330	Yes	The Secondary MCL for Total Dissolved Solids is 500 ppm. The standard is established for cosmetic or aesthetic effects (such as taste, odor or color) of drinking water.	Erosion or dissolution of natural materials.
Total Organic Carbon	ppm		2.3	2.5	2.4	<2	<2	<2	<2	<2 - <2	*	Total organic carbon has no health effects. However, total organic carbon is a precusor for the formation of disinfection by-products.	Erosion or dissolution of natural materials.
Total Phosphorus	ppm		0.12	0.093	0.085	<0.01	<0.01	0.013	<0.01	<0.01 - 0.029	*	No drinking water health standard established.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion or dissolution of natural materials
Zinc	ppb		<10	<10	<10	<10	<10	<10	<10	<10 - 335	No	The Secondary MCL for Zinc is 5000 ppb. The standard is established for cosmetic or aesthetic effects (such as taste, odor or color) of drinking water.	Zinc is found naturally in many rock-forming minerals. Industrial discharges.

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			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Field Measurement													
pH	S.U.		8.37	8.88	9.13	8.04	8.07	NA	7.85	7.11 - 7.38	No	Ohio's secondary MCL for pH is 7.0 to 10.5. The standard is established to help prevent corrosion, staining or scaling in water distribution and household pumping systems.	Erosion or dissolution of natural earth materials or due to the addition of substances during the water treatment process (e.g. softening, pH adjustment, coagulation).
Pesticides/Herbicdes													
Atrazine	ppb		1.37	1.32	1.16	0.31	0.35	0.25	0.21	ND	No	The MCL for Atrazine is 3 ppb. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.	Runoff from herbicide used on row crops
Dalapon	ppb	J	ND	0.28	ND	0.37	0.5	ND	0.28	ND	No	The MCL for Dalapon is 200 ppb. Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.	Herbicide runoff.
Simazine	ppb		0.51	0.52	0.42	ND	ND	ND	ND	ND	No	The MCL for Simazine is 7 ppb. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.	Runoff from herbicide used on rights of way
a-BHC (Lindane)	ppb		0.0028	ND	0.0022	ND	ND	ND	ND	ND	No	There is no MCL for a-BHC (a breakdown product of Lindane). The MCL for Lindane is 0.200 ppb. Some people who drink water containing Lindane in excess of the MCL over many years could experience problems with their kidneys or liver.	Runoff/leaching from insecticide used on cattle, lumber, gardens.
Radiological													
Alpha, Total	pCi/l		<3	<3	??	<3	<3	<3	<3	<3 - 5.3	No	The MCL for Alpha is 15 pCi/l. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of developing cancer.	Erosion of natural deposits of certain minerals that are radioactive and may emit alpha particles.
Beta and Photon Emitters	pCi/l		<4	<4	??	<4	<4	<4	<4	<4 - <4	No	The MCL for Beta and Photon Emitters is 4 mrem/year based on a action level of 50 pCi/L. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of developing cancer.	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit photons and beta particles.
Radium 226	pCi/l		<1	<1	??	<1	<1	<1	<1	<1 - <1	No	The MCL for combined Radium 226 and 228 is 5 pCi/L. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of developing cancer.	Erosion or dissolution of natural materials.
Radium 228	pCi/l		<1	<1	??	<1	<1	<1	<1	<1 - <1			

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			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Uranium, Total	pCi/l		<1	<1	??	<1	<1	<1	<1	<1 - <1	No	The MCL for Uranium is 30 pCi/l. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of developing cancer and kidney toxicity.	Erosion or dissolution of natural materials.
Gamma Scan, All Nuclides (except Bismuth-214 & Lead-214)	pCi/l		<ND	<ND	<ND	<ND	<ND	<ND	<ND	<ND	*	No drinking water health standards established.	A gamma ray is a packet of electromagnetic energy--a photon. Most people's primary source of gamma exposure is naturally occurring radionuclides, particularly potassium-40, which is found in soil and water, as well as meats and high-potassium foods such as bananas. Radium is also a source of gamma exposure.
Bismuth-214	pCi/l		<ND	<ND	<ND	<ND	<ND	10.6	<ND	<ND - 80.5	*	No drinking water health standards established.	The 214 isotope of bismuth is a naturally occuring metal and can emit beta particles and gamma rays. Bismuth compounds are used in cosmetics, medicines, and in medical procedures.
Lead-214	pCi/l		<ND	<ND	<ND	<ND	<ND	<ND	<ND	<ND - 68.5	*	No drinking water health standards established.	The 214 isotope of lead, a naturally occuring metal, emits beta and gamma rays.
Disinfection By-Products													
Bromodichloromethane	ppb		5.15	7.4	4.68	12.2	14.9	8.56	11.1	ND	No	The MCL for Total Trihalomethane (4 chemicals) is 80 ppb. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of developing cancer.	A byproduct of the disinfection process which use chlorine chemcials.
Bromomethane	ppb		0.93	0.76	ND	0.53	0.59	0.51	ND	ND			
Chloroform	ppb		14.1	28	14.2	24	33.2	11.6	17.6	ND			
Dibromochloromethane	ppb		1.26	1.81	1.26	4.75	5.69	3.71	4.43	ND			
Total Trihalomethanes	ppb		20.5	37.2	20.1	41	53.8	23.9	33.1	ND			
Other Organic Compounds													
Benzo[a]pyrene	ppb		ND	ND	ND	ND	ND	ND	0.02	ND	No	The MCL for Benzo[a]pryene is 0.2 ppb. Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of developing cancer.	Found in coal tar, car and truck exhaust fumes, smoke from the combustion of organic material, and in charbroiled food; Leaching from linings of water storage tanks and distribution lines.
bis(2-Ethylhexyl)phthalate	ppb	J	0.79	0.62	0.79	0.67	ND	0.92	ND	0.63 - 0.87	No	The MCL for bis(2-Ethylhexyl)phthalate (also known as di(2-Ethylhexyl)phthalate) is 6 ppb. Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of developing cancer.	Discharge from rubber and chemical factories and a common laboratory contaminant.

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			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Diethylphthalate	ppb		ND	5.4	ND	ND	ND	ND	ND	ND - 11.6	No	U.S. EPA has not established a MCL for this chemical. The drinking water equivalent health advisory level is 30,000 ppb.	This synthetic substance is commonly used to make plastics more flexible. Products in which it is found include toothbrushes, automobile parts, tools, toys, and food packaging. Diethylphthalate can be released fairly easily from these products. Diethylphthalate is also used in cosmetics, insecticides, and aspirin.
1,3-Dioxolane, 2-(4-methoxyphenyl)	ppb	NJ	ND	ND	ND	ND	ND	ND	0.3	ND	*	No drinking water health standards established. These chemicals have been "tentatively identified" and concentration estimated.	These substances are associated with the manufacture of plasticizers, antioxidants (stabalizers) and household products. Typically these include solvents and rubber-related compounds; surfactants used in the production of detergents mainly, but also pesticides, paints and varnishes, drugs (drug delivery systems); antioxidant stabilizer commonly used in polymer formulations (e.g. packaging materials); adhesives, sealants, paints and lubricants rubbers, plastics, foods, oils, pharmaceuticals and fragrances. These substances include naturally occurring non-toxic fatty acids from palm tree oil, butter, cheese, and meat and used in milk, beverages, candles, rubbers, soaps, shampoos, and cosmetics.
1-Ethyl-1,2,3,4-tetrahydro-6,7-methylenedioxy-4-oxoquinoline	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 0.3			
2,2'-Ethylidenebis(4,6-di-tert-butylphenol)	ppb	NJ	ND	ND	ND	ND	0.5	ND	ND	ND - 0.6			
3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 3			
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 3			
Benzenecarboxylic acid	ppb	NJ	0.3	0.3	ND	ND	ND	ND	ND	ND			
Benzyl butyl phthalate	ppb	NJ	0.3	ND	ND	ND	ND	0.2	ND	ND - 0.3			
Ethanol, 2-(2-butoxyethoxy)-	ppb	NJ	0.4	0.3	ND	ND	ND	ND	ND	ND			
Ethanol, 2-[2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy] ethoxy]-	ppb	NJ	ND	ND	ND	ND	0.7	ND	ND	ND			
Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]-	ppb	NJ	0.6	0.4	0.7	0.3	1	ND	1	ND - 0.5			
Hexadecane	ppb	NJ	1	ND	0.5	ND	ND	ND	ND	ND			
n-Hexadecanoic acid	ppb	NJ	2	2	0.7	1	1	0.6	1	ND - 0.4			
Octadecanoic acid	ppb	NJ	2	0.8	0.5	0.5	0.8	ND	0.8	ND - 0.3			
Phenol, 2,4-bis(1,1-dimethylethyl)-	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND -30			
Phenol, 2,6-dibromo-	ppb	NJ	0.3	ND	ND	ND	ND	ND	ND	ND			
Silane, trimethyl(1-methylbutoxy)-	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 0.3			
Tetradecanoic acid, trimethylsilyl	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 0.6			
Benzene, 1,1'-sulfonylbis[4-chloro	ppb	NJ	6	2	ND	ND	ND	ND	ND	ND			
Cyclohexanone	ppb	NJ	ND	ND	7	ND	ND	ND	ND	ND - 5			
Phenol, 2,4-bis(1,1-dimethylethyl)	ppb	NJ	ND	ND	ND	ND	ND	ND	ND	ND - 30			
Triphenylphosphine oxide	ppb	NJ	6	3	ND	ND	10	ND	ND	ND			

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			Sample 10	Sample 11	Sample 20	Sample 13	Sample 14	Sample 15	Sample 16	Range			
Sulfur (S6)	ppb	NJ	40	4	10	9	10	20	6	2 - 9	*	No drinking water health standards established. These chemicals have been "tentatively identified" and concentration estimated.	Erosion or dissolution of natural materials.
Sulfur (S8)	ppb	NJ	200	30	70	90	100	80	30	40 - 7000			

1 - Units: ppm - parts per million (mg/l on lab sheet); ppb - parts per billion (ug/l on lab sheet)
2 - < means less than the detection limit of the reported value; ND - Not Detected; NA - Not Analyzed; J- postively identified, value estimated; and NJ- Analysis indicated the presence of an analyte that has been "tentatively identified" and the result represents its approximate concentration.
3 - * - No Health Standard (2006 Edition of Drinking Water Standards and Health Advisories, U.S. EPA)

Appendix 2 - Health Standards Definitions

The following health standards and non-health standards terms are used in the Water Quality Summary Table. There definitions are taken from U.S. EPA's 2006 Edition of the Drinking Water Standards and Health Advisories.
http://www.epa.gov/waterscience/criteria/drinking/dwstandards.pdf

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. It is the level of lead or copper which, if exceeded in over 10% of the homes tested, triggers treatment for corrosion control.

DWEL: Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from drinking water
.
HA: Health Advisory. An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State, and local officials.

Lifetime HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for a lifetime of exposure. The Lifetime HA is based on exposure of a 70-kg adult consuming 2 liters of water per day. The Lifetime HA for Group C carcinogens includes an adjustment for possible carcinogenicity.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available analytical and treatment technologies and taking cost into consideration. MCLs are enforceable standards.

SMCL: Secondary Maximum Contaminant Level. A non-enforceable federal guideline regarding cosmetic effects (such as tooth or skin discoloration) or aesthetic effects (such as taste, odor, orcolor) of drinking water.

Drinking Water Advisory: A non-regulatory concentration of a contaminant in water that is likely to be without adverse effects on health and aesthetics.

Water Quality Reporting Units

The water quality results are presented in parts per million (ppm, mg/L on lab sheets) and parts per billion (ppb, µg/L on lab sheet) as listed in the units on the table and are consistent with the laboratory reporting forms. These units provide a way to represent parameter concentrations that are small. Pure water is one million parts per one million parts or 1,000,000 ppm. So sodium dissolved in water at a concentration of 1 ppm is 1 part sodium per 1,000,000 parts water by weight. Parts per billion are even smaller concentrations. One ppm is equal to 1,000 ppb. The following examples may help to put these small numbers in perspective:

- 1 ppm is equal to 1 dollar to 1 million dollars
- 1 ppm is equal to 1 inch in 16 miles
- 1 ppb is equal to 1 dollar of 1 billion dollars
- 1 ppb is equal to one drop of water in 50,000 1 liter bottles of water.

Appendix 3 - List of Compounds

INORGANIC COMPOUNDS (Various Methods)

Major Constituents

Alkalinity, Total as $CaCO_3$
Calcium (Ca)
Chloride (Cl)
Hardness as $CaCO_3$
Magnesium (Mg)
Potassium (K)
Sodium (Na)
Sulfate (SO4)
Total Dissolved Solids (TDS)

Trace Constituents

Aluminum (Al)
Arsenic (As)
Barium (Ba)
Bromide (Br)
Beryllium (Be)
Cadmium (Cd)
Chromium (Cr)
Cobalt (Co)
Copper (Cu)
Fluoride (F)
Iron (Fe)
Lead (Pb)
Manganese (Mn)
Mercury (Hg)
Nickel (Ni)
Selenium (Se)
Strontium (Sr)
Thallium (Tl)
Zinc (Zn)

Nutrients

Ammonia (NH_3)
Chemical Oxygen Demand (COD)
Nitrate/Nitrite (as N)
Phosphorus (P)
Total Kjeldahl Nitrogen (as N)
Total Organic Carbon (TOC)

Field Parameters

pH
Specific Conductance (µmhos/cm)
Temperature
Oxidation Reduction Potential (ORP)
Total Dissolved Solids (TDS)

VOLATILE ORGANIC COMPOUNDS (METHOD 524.2)

Benzene	4-Chlorotoluene	1,3-Dichloropropane	1,1,2,2-Tetrachloroethane
Bromobenzene	Dibromochloromethane	2,2-Dichloropropane	Tetrachloroethene
Bromochloromethane	1,2-Dibromo-3-Chloropropane	1,1-Dichloropropene	Toluene
Bromodichloromethane	1,2-Dibromoethane	cis-1,3-Dichloropropene	1,2,3-Trichlorobenzene
Bromoform	Dibromomethane	trans-1,3-Dichloropropene	1,2,4-Trichlorobenzene
Bromomethane	1,2-Dichlorobenzene	Ethylbenzene	1,1,1-Trichloroethane
n-Butylbenzene	1,3-Dichlorobenzene	Hexachlorobutadiene	1,1,2-Trichloroethane
sec-Butylbenzene	1,4-Dichlorobenzene	Isopropylbenzene	Trichloroethene
tert-Butylbenzene	Dichlorodifluoromethane	4-Isopropyltoluene	Trichlorofluoromethane
Carbon tetrachloride	1,1-Dichloroethane	Methylene chloride	1,2,3-Trichloropropane
Chlorobenzene	1,2-Dichloroethane	Methyl-tert-butyl ether	1,2,4-Trimethylbenzene
Chloroethane	1,1-Dichloroethene	Naphthalene	1,3,5-Trimethylbenzene
Chloroform	cis-1,2-Dichloroethene	n-Propylbenzene	Vinyl Chloride
Chloromethane	trans-1,2-Dichloroethene	Styrene (Ethenylbenzene)	o-Xylene
2-Chlorotoluene	1,2-Dichloropropane	1,1,1,2-Tetrachloroethane	m-Xylene &/or p-Xylene

SEMIVOLATILES/BNA (Base Neutral and Acid extractable) (METHOD 625)

Acenaphthalene	4-Bromophenylphenylether	2,4-Dinitrophenol	Naphthalene
Acenaphthene	4-Chloro-3-methylphenol	2,4-Dinitrotoluene	Nitrobenzene
Anthracene	2-Chloronaphthalene	2,6-Dinitrotoluene	2-Nitrophenol
Benzo[a]anthracene	2-Chlorophenol	Fluoranthene	4-Nitrophenol
Benzo[a]pyrene	4-Chlorophenylphenylether	Fluorene	n-Nitrosodiphenylamine
Benzo[b]fluoranthene	Chrysene	Hexachlorobenzene	n-Nitroso-di-n-propylamine
Benzo[g,h,i]perylene	Di-n-butylphthalate	Hexachlorobutadiene	Pentachlorophenol
Benzo[k]fluoranthene	Di-n-octylphthalate	Hexachlorocyclopentadiene	Phenanthrene
Benzylbutylphthalate	Dibenzo[a,h]anthracene	Hexachloroethane	Phenol
Bis(2-chloroethoxy)methane	2,4-Dichlorophenol	Indeno[1,2,3-cd]pyrene	Pyrene
Bis(2-chloroethyl)ether	Diethylphthalate	Isophorone	1,2,4-Trichlorobenzene
Bis(2-chloroisopropyl)ether	Dimethylphthalate	2-Methyl-4,6-dinitrophenol	2,4,6-Trichlorophenol

HERBICIDES (METHOD 525.2)

Acetochlor	Benzo[a]pyrene	Butachlor	Metribuzin
Alachlor	bis(2-Ethylhexyl)adipate	Cyanazine	Propachlor
Atrazine	bis(2-Ethylhexyl)phthalate	Metolachlor	Simazine

ORGANOCHLORINE PESTICIDES (METHOD 505)

Aldrin	Dieldrin	Heptachlor epoxide	Methoxychlor
y-BHC	Endrin	Hexachlorobenzene	Toxaphene
Total Chlordane	Heptachlor	Hexachlorocyclopentadiene	

CHLORINATED ACIDS (METHOD 515)

Acifluorfen	Dalapon	Dinoseb	Picloram
2,4-D (Silvex)	Dicamba	Pentachlorophenol	2,4,5-TP

CHLORINATED ACIDS (METHOD 608)

Aldrin	4,4'-DDD	Endosulfan II	Heptachlor epoxide
a-BHC	4,4'-DDE	Endosulfan sulfate	Hexachlorobenzene
b-BHC	4,4'-DDT	Endrin	Methoxychlor
y-BHC	Dieldrin	Heptachlor	Mirex
d-BHC	Endosulfan I		

CARBAMATES (METHOD 531.1)

Aldicarb (Temik)	Propoxur (Baygon)	3-Hydroxy Carbofuran	Methomyl (Lannate)
Aldicarb Sulfone (Temik Sulfone)	Carbaryl (Sevin)	Methiocarb (Mesurol)	Oxamyl (Vydate)
Aldicarb Sulfoxide (Standak)	Carbofuran (Furadan)		

GLYPHOSATE (METHOD 547)

Glyphosate (Roundup, Rattler)

EDB/DBCP (METHOD 504.1)

1,2-Dibromoethane (EDB)	1,2-Dibromo-3-chloropropane (DBCP)

TOTAL PCB (POLYCHLORINATED BIPHENYL) (METHOD 508A)

Total PCB

Radiologicals (Various Methods)

Gross Alpha	Gross Beta	Radium 226
Radium 228	GammaSpec	Uranium

Appendix 4 - Additional Information on the

Organic 'Tentatively Identified Compounds'

Plasticizers, solvents and Rubber-related compounds

Cyclohexanone

Billions of pounds of this are used every year as the chemical precursor to manufacture of Nylon. Non-carcinogenic, but mildly toxic.

Silane, trimethyl(1-methylbutoxy)-

Silanes are most commonly used in formulations for water repellents, masonry protection, and graffiti control.

Triphenylphosphine oxide

Used in epoxy manufacture, and as a crystallizing agent for many compounds. Possibly occurs along with the silane as they can be reactant-product in some applications.

Benzyl butyl phthalate (BBP)

Vinyl foam plasticizer (bags, traffic cones, artificial leather, food conveyor belts)

1,3-Dioxolane, 2-(4-methoxyphenyl)

Uses reported in literature for 1,3-dioxolane:

- Reaction solvent for pharmaceutical manufacturing
- Peroxide component
- Replacement for many chlorinated solvents
- Lithium battery electrolyte solvent component
- Copolymerization agent with trioxane and formaldehyde for manufacturing polyacetal resins
- Copolymerization agent with styrene
- Paint stripper
- Glue stabilizer
- Water solubilizing agent for pesticides, herbicides and wood preservatives
- Manufacture of polycarbonate/polyester membrane filters

7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione

This compound is a known breakdown product of one of the phenolic anti-oxidants, used in plastics and engine oils. Commonly found in extremely low concentrations as a leachate from plastic water piping (ABS, PVC, etc).

Benzyl butyl phthalate

Phthalates are general plasticizers

bis(2-Ethylhexyl)phthalate
Phthalates are general plasticizers

Phthalates, or phthalate esters, are mainly used as plasticizers (substances added to plastics to increase their flexibility).

Environmental Anti-Oxidants
2,2'-Ethylidenebis(4,6-di-tert-butylphenol) CAS 35958-30-6
Environmental antioxidant

3,5-di-tert-Butyl-4-hydroxyphenylpropionic acid CAS 20170-32-5
Antioxidant stabilizer commonly used in polymer formulations. (e.g. packaging materials). Minor uses are preparations such as adhesives, sealants, paints and lubricants. Very low solubility in water (2.85 ug/L). USEPA / Ciba compound summary: http://www.epa.gov/hpv/pubs/summaries/cibaspec/12667b2tl.pdf

Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]-
CAS 9036-19-5 a.k.a. ethoxylated octylphenol (OPE), Triton X-114
This is a surfactant used in the production of detergents mainly, but also pesticides, paints and varnishes, drugs (drug delivery systems), spermicides and contraceptive foams. Most releases to environment occur from industrial waste waters directly to surface water. Releases include vehicle washing stations, agricultural operations, and sewage treatment plants.

Phenol, 2,4-bis(1,1-dimethylethyl)-
CAS 96-76-4, a.k.a. 2,4,DTBP or 2.4-Di-tert-Butylphenol
A phenol is any compound that contains a six-member aromatic ring bonded to a hydroxyl group (OH-). This particular phenol is completely insoluble, and so needs a solvent to carry it. The solvent in this case may be the ethanol listed above. It is an anti-oxidant, used to slow the oxidation of a variety of materials, e.g. rubbers, plastics, foods, oils, pharmaceuticals and fragrances.

Fatty Acids, naturally occurring
n-Hexadecanoic acid CAS 57-10-3 a.k.a palmitic acid
This is a C16 saturated fatty acid; source is palm tree oil, but also butter cheese, and meat. It is water-insoluble in water, and is an anti-oxidant and used to stabilize vitamin A in low-fat milk.

Octadecanoic acid CAS 57-11-4 a.k.a stearic acid
This is a C18 saturated fatty acid, occurring in many animal and vegetable oils. It is a waxy solid, insoluble in water, and is used to modify plastics, candles, rubbers, soaps, shampoos, and cosmetics. Considered nontoxic.

Tetradecanoic acid, trimethylsilyl
This is another fatty acid

Benzenecarboxylic acid
Used as a food preservative since the 17th century! Acidic food and beverage like fruit juice (citric acid), sparkling drinks (carbon dioxide), soft drinks (phosphoric acid), pickles (vinegar) or other acidified food are preserved with benzoic acid and benzoates.

1-Ethyl-1,2,3,4-tetrahydro-6,7-methylenedioxy-4-oxoquinoline
CAS ??
Analogs for quinoline (two benzene rings fused together, with a nitrogen attached) are pyrondine and naphthalene.

Misc Compounds
Molecular sulfur S6 S8
Reduced forms of sulfur

Appendix 5 – Information on Radioactivity Measurements

Radioactivity measurements (Gross alpha, beta and photon emitters, and the Gamma radiation scan) are used as methods to screen samples for relative levels of the three types of radioactivity decay: alpha particles, beta particles, and gamma radiation. These three forms of energy have unique characteristics. Each is discharged from a variety of radionuclides. Thus, the total measurements alpha, beta, and gamma sum up the radioactivity energy detected from all sources, regardless of the specific radionuclide. The following table summarizes the three gross radionuclide measurements. Typically, if an elevated total activity is found, further tests on specific emitters will be made.

Emission Type	Basic properties of emitted radiation	Significant emitters	Health effects/exposure pathways
Alpha particle **(from alpha decay)**	An alpha particle is identical to a helium atom (2 protons and 2 neutrons). Emitted from radionuclides of high mass. Has a positive charge (+2).	Uranium-238 Plutonium-236 Thorium-232 Radium-226 Radon-222 Polonium-210	Alpha particles lack the energy to pierce a piece of paper or even human skin. However, ingestion, inhalation, or adsorption into the blood stream can increase the risk of cancer.
Beta particle **(from beta decay)**	A beta particle is equivalent to an electron. Beta particles themselves are not radioactive. Their energy (speed) is what damages tissue, etc. Negatively charged (-1).	Tritium (hydrogen-3) Potassium-40 Cobalt-60 Strontium-90 Cesium-137 Bismuth-214 Lead-214	Direct exposure is dangerous but rare. As with alpha particles, the greatest concern is from internal exposure, such as inhalation or ingested particles. Beta particles are much smaller than alpha particles, and so mover farther through tissue, thus cellular damage may be greater. Chronic health effects (mainly cancers) can occur from fairly low exposure over long periods.
Gamma radiation **(from gamma decay)**	Gamma rays are a form of high energy electromagnetic radiation released by decaying atoms with “excess energy”. This type of emission frequently follows after alpha or beta decay. It has no mass and no charge.	There is no “pure” gamma emitter. Many alpha and beta emitters also emit gamma radiation. Important gamma emitters include technicium-99, cobalt-60, and cesium-137.	By far the most energetic radiation of the three, with a very short wavelength. Gamma rays interact with material by colliding with the electrons in the shells of atoms, and can travel significant distances. Gamma rays will easily travel right through people. This radiation produces the greatest hazard during most radiological emergencies, and produces the most effects of “radiation sickness” on living things.

Appendix 6 – Laboratory Results

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109805				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	128	10	mg/L	01/08/2009	
TOC	TOC	P680	2.3	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Chromium	P1034	3.4	2	ug/L	01/08/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Copper	P1042	7.2	2	ug/L	01/08/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/08/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/07/2009	
ICP_DW	Barium	P1007	<15	15	ug/L	01/07/2009	
ICP_DW	Calcium	P916	32	2	mg/L	01/07/2009	
ICP_DW	Hardness, Total	P900	100	10	mg/L	01/07/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/07/2009	
ICP_DW	Magnesium	P927	5	1	mg/L	01/07/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/07/2009	
ICP_DW	Potassium	P937	5	2	mg/L	01/07/2009	
ICP_DW	Sodium	P929	18	5	mg/L	01/07/2009	
ICP_DW	Strontium	P1082	70	30	ug/L	01/07/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/07/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/08/2009	
Alkalinity	Alkalinity	P410	55.1	5	mg/L	01/07/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/08/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/12/2009	
COD	COD	P340	<20	20	mg/L	01/12/2009	
Chloride	Chloride	P940	44.9	5	mg/L	01/12/2009	
Fluoride	Fluoride	P951	0.77	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	0.82	0.5	mg/L	01/07/2009	
Sulfate	Sulfate	P945	32.0	10	mg/L	01/13/2009	
TKN	TKN	P625	0.25	0.2	mg/L	01/09/2009	
TP	Total Phosphorus	P665	0.120	0.01	mg/L	01/09/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109808				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.019	0.019	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.019	0.019	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<0.9	0.9	01/12/2009	
Dieldrin		000060-57-1	<0.9	0.9	01/12/2009	
Endrin		000072-20-8	<0.038	0.038	01/12/2009	
Heptachlor		000076-44-8	<0.038	0.038	01/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/12/2009	
Hexachlorobenzene		000118-74-1	<0.038	0.038	01/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/12/2009	
Methoxychlor		000072-43-5	<0.9	0.9	01/12/2009	
y-BHC		000058-89-9	<0.019	0.019	01/12/2009	
Chlordane		000057-74-9	<0.19	0.19	01/12/2009	
Toxaphene		008001-35-2	<0.9	0.9	01/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/15/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/15/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/15/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/15/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/15/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/15/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/15/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	<0.20	0.2	01/26/2009	
Dicamba		001918-00-9	<0.20	0.2	01/26/2009	
Dinoseb		000088-85-7	<0.20	0.2	01/26/2009	
Acifluorfen		050594-66-6	<0.20	0.2	01/26/2009	
2,4-D		000094-75-7	<0.20	0.2	01/26/2009	
2,4,5-TP		000093-72-1	<0.20	0.2	01/26/2009	
Pentachlorophenol		000087-86-5	<0.10	0.1	01/26/2009	
Picloram		001918-02-1	<0.20	0.2	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/07/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/07/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/07/2009	
Bromodichloromethane		000075-27-4	5.15	0.5	01/07/2009	
Bromoform		000075-25-2	<0.50	0.5	01/07/2009	
Bromomethane		000074-83-9	0.93	0.5	01/07/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/07/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/07/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/07/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/07/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/07/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/07/2009	
Chloroform		000067-66-3	14.1	0.5	01/07/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/07/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/07/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109808				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/07/2009	
Dibromochloromethane		000124-48-1	1.26	0.5	01/07/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/07/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/07/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/07/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/07/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/07/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/07/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/07/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/07/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/07/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/07/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/07/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/07/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/07/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/07/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/07/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/07/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/07/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/07/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/07/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/07/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/07/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/07/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/07/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/07/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/07/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/07/2009	
Styrene		000100-42-5	<0.50	0.5	01/07/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/07/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/07/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/07/2009	
Toluene		000108-88-3	<0.50	0.5	01/07/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/07/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/07/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/07/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/07/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/07/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/07/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/07/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/07/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/07/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/07/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/07/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/07/2009	
Trihalomethanes (THMs)		Unknown	20.5	0.5	01/07/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.20	0.2	01/16/2009	
Alachlor		015972-60-8	<0.20	0.2	01/16/2009	
Atrazine		001912-24-9	1.37	0.2	01/16/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109808				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	01/16/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.61	0.61	01/16/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	0.79	0.61	01/16/2009	J
Butachlor		023184-66-9	<0.20	0.2	01/16/2009	
Metolachlor		051218-45-2	<0.20	0.2	01/16/2009	
Metribuzin		021087-64-9	<0.20	0.2	01/16/2009	
Propachlor		001918-16-7	<0.20	0.2	01/16/2009	
Simazine		000122-34-9	0.51	0.2	01/16/2009	
Benzenecarboxylic acid		000065-85-0	0.3		01/16/2009	NJ
Ethanol, 2-(2-butoxyethoxy)-		000112-34-5	0.4		01/16/2009	NJ
Phenol, 2,6-dibromo-		000608-33-3	0.3		01/16/2009	NJ
Hexadecane		000544-76-3	1		01/16/2009	NJ
n-Hexadecanoic acid		000057-10-3	2		01/16/2009	NJ
Octadecanoic acid		000057-11-4	2		01/16/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramet		002315-61-9	0.6		01/16/2009	NJ
Benzyl butyl phthalate		000085-68-7	0.3		01/16/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/12/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/12/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/12/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/12/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/12/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/12/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/12/2009	
Methomyl		016752-65-7	<0.50	0.5	01/12/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/12/2009	
Propoxur		000114-26-1	<0.50	0.5	01/12/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/14/2009	
a-BHC		000319-84-6	0.0028	0.0021	01/14/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/14/2009	
d-BHC		000319-86-8	<0.0021	0.0021	01/14/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/14/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/14/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/14/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/14/2009	
Dieldrin		000060-57-1	<0.0021	0.0021	01/14/2009	
Endosulfan I		000959-98-8	<0.0021	0.0021	01/14/2009	
Endosulfan II		033213-65-9	<0.0021	0.0021	01/14/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/14/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/14/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/14/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/14/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/14/2009	
Methoxychlor		000072-43-5	<0.010	0.01	01/14/2009	
Mirex		002385-85-5	<0.010	0.01	01/14/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109808				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 608	**ug/L**					
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/14/2009	
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	01/12/2009	
Acenaphthylene		000208-96-8	<5.3	5.3	01/12/2009	
Anthracene		000120-12-7	<5.3	5.3	01/12/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/12/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/12/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/12/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/12/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/12/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	01/12/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/12/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/12/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.5	10.5	01/12/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	01/12/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/12/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.5	10.5	01/12/2009	
2-Chloronaphthalene		000091-58-7	<5.3	5.3	01/12/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/12/2009	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/12/2009	
Chrysene		000218-01-9	<2.1	2.1	01/12/2009	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	01/12/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/12/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/12/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/12/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/12/2009	UJ
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/12/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/12/2009	
Diethylphthalate		000084-66-2	<5.3	5.3	01/12/2009	
2,4-Dimethylphenol		000105-67-9	<10.5	10.5	01/12/2009	
Dimethylphthalate		000131-11-3	<5.3	5.3	01/12/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	01/12/2009	
2,4-Dinitrophenol		000051-28-5	<21.1	21.1	01/12/2009	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/12/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/12/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/12/2009	
Fluorene		000086-73-7	<2.1	2.1	01/12/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/12/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/12/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/12/2009	
Hexachloroethane		000067-72-1	<5.3	5.3	01/12/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/12/2009	
Isophorone		000078-59-1	<2.1	2.1	01/12/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/12/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	01/12/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/12/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/12/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/12/2009	
4-Nitrophenol		000100-02-7	<21.1	21.1	01/12/2009	
Pentachlorophenol		000087-86-5	<10.5	10.5	01/12/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109808				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 10:45 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 10				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Phenanthrene		000085-01-8	<2.1	2.1	01/12/2009	
Phenol		000108-95-2	<2.1	2.1	01/12/2009	
Pyrene		000129-00-0	<2.1	2.1	01/12/2009	
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/12/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	01/12/2009	
Sulfur (S6)		013798-23-7	40		01/12/2009	NJ
Sulfur (S8)		010544-50-0	200		01/12/2009	NJ
Benzene, 1,1'-sulfonylbis[4-chloro		000080-07-9	6		01/12/2009	NJ
Triphenylphosphine oxide		000791-28-6	6		01/12/2009	NJ

Field Comments

Lab Comments

QC / Sample Comments

625: 1,4-dichlorobenzene and hexachlorobutadiene estimated due to poor matrix spike recovery.
525.2: bis(2-ethylhexyl)phthalate estimated due to high matrix spike and QC recovery.
608: Endosulfan II estimated due to poor matrix spike and QC recovery.

Approved By SROBERTS **On** 02/04/2009

Ohio EPA
Division of Drinking and Ground Waters

NO BILLING

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name: _____
STU Name: _____
PWSID #: _____ STU #: _____
Address: CLYDE 10
County: _____
Contact Person: CHRIS KENAH
Contact Phone: 614/644-2903

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☒ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain) _____

LABORATORY INFORMATION:
Reporting Lab: N/A ID: _____
Analytical Lab: ODH LAB ID: 12345
Reporting Lab Sample #: R5549-01
Sample Received Date: 1/7/09 QC Completed Date: 3/16/09
QC Completed by: S. Chang

SAMPLE INFORMATION:
Sample Monitoring Point: EP X RS ____ Other ____
Sample Collection Date: 1/06/09 Time: 10:45
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☐ Other (explain): _____
Sample Collected by: M. SLATTERY
Repeat for Sample #: _____

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
~~Gamma Scan: All nuclides < MDA~~ SC
Gamma Scan: All nuclides < MDA 1/9/09 SC
Ga

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS):

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
* Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
* Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
* Beta, total	4100	<	4	pCi/L	1/30/09	165	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
* Radium-226	4020	<	1	pCi/L	3/16/09	169	293X
* Radium-228	4030	<	1	pCi/L	3/6/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
* Uranium, total	4006	<	1	pCi/L	2/6/09	184	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109806				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		01/06/2009 11:55 AM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	170	10	mg/L	01/08/2009	
TOC	TOC	P680	2.5	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Chromium	P1034	3.2	2	ug/L	01/08/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Copper	P1042	2.1	2	ug/L	01/08/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/08/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/07/2009	
ICP_DW	Barium	P1007	<15	15	ug/L	01/07/2009	
ICP_DW	Calcium	P916	32	2	mg/L	01/07/2009	
ICP_DW	Hardness, Total	P900	96	10	mg/L	01/07/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/07/2009	
ICP_DW	Magnesium	P927	4	1	mg/L	01/07/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/07/2009	
ICP_DW	Potassium	P937	5	2	mg/L	01/07/2009	
ICP_DW	Sodium	P929	18	5	mg/L	01/07/2009	
ICP_DW	Strontium	P1082	71	30	ug/L	01/07/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/07/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/08/2009	
Alkalinity	Alkalinity	P410	53.8	5	mg/L	01/07/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/08/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/13/2009	
COD	COD	P340	<20	20	mg/L	01/12/2009	
Chloride	Chloride	P940	45.0	5	mg/L	01/12/2009	
Fluoride	Fluoride	P951	1.20	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	0.70	0.5	mg/L	01/07/2009	
Sulfate	Sulfate	P945	26.6	10	mg/L	01/13/2009	
TKN	TKN	P625	<0.20	0.2	mg/L	01/09/2009	
TP	Total Phosphorus	P665	0.093	0.01	mg/L	01/09/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109809				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
Begin		**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:55 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.018	0.018	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.018	0.018	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<1.0	1	01/12/2009	
Dieldrin		000060-57-1	<1.0	1	01/12/2009	
Endrin		000072-20-8	<0.039	0.039	01/12/2009	
Heptachlor		000076-44-8	<0.039	0.039	01/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/12/2009	
Hexachlorobenzene		000118-74-1	<0.039	0.039	01/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/12/2009	
Methoxychlor		000072-43-5	<1.0	1	01/12/2009	
y-BHC		000058-89-9	<0.019	0.019	01/12/2009	
Chlordane		000057-74-9	<0.19	0.19	01/12/2009	
Toxaphene		008001-35-2	<1.0	1	01/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/15/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/15/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/15/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/15/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/15/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/15/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/15/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	0.28	0.2	01/26/2009	J
Dicamba		001918-00-9	<0.20	0.2	01/26/2009	
Dinoseb		000088-85-7	<0.20	0.2	01/26/2009	
Acifluorfen		050594-66-6	<0.20	0.2	01/26/2009	
2,4-D		000094-75-7	<0.20	0.2	01/26/2009	
2,4,5-TP		000093-72-1	<0.20	0.2	01/26/2009	
Pentachlorophenol		000087-86-5	<0.10	0.1	01/26/2009	
Picloram		001918-02-1	<0.20	0.2	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/07/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/07/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/07/2009	
Bromodichloromethane		000075-27-4	7.40	0.5	01/07/2009	
Bromoform		000075-25-2	<0.50	0.5	01/07/2009	
Bromomethane		000074-83-9	0.76	0.5	01/07/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/07/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/07/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/07/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/07/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/07/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/07/2009	
Chloroform		000067-66-3	28.0	1	01/07/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/07/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/07/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109809				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:55 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/07/2009	
Dibromochloromethane		000124-48-1	1.81	0.5	01/07/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/07/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/07/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/07/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/07/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/07/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/07/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/07/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/07/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/07/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/07/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/07/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/07/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/07/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/07/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/07/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/07/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/07/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/07/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/07/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/07/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/07/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/07/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/07/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/07/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/07/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/07/2009	
Styrene		000100-42-5	<0.50	0.5	01/07/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/07/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/07/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/07/2009	
Toluene		000108-88-3	<0.50	0.5	01/07/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/07/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/07/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/07/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/07/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/07/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/07/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/07/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/07/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/07/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/07/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/07/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/07/2009	
Trihalomethanes (THMs)		Unknown	37.2	0.5	01/07/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.21	0.21	01/16/2009	
Alachlor		015972-60-8	<0.21	0.21	01/16/2009	
Atrazine		001912-24-9	1.32	0.21	01/16/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109809				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:55 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	01/16/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.62	0.62	01/16/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	0.62	0.62	01/16/2009	J
Butachlor		023184-66-9	<0.21	0.21	01/16/2009	
Metolachlor		051218-45-2	<0.21	0.21	01/16/2009	
Metribuzin		021087-64-9	<0.21	0.21	01/16/2009	
Propachlor		001918-16-7	<0.21	0.21	01/16/2009	
Simazine		000122-34-9	0.52	0.21	01/16/2009	
Benzenecarboxylic acid		000065-85-0	0.3		01/16/2009	NJ
Ethanol, 2-(2-butoxyethoxy)-		000112-34-5	0.3		01/16/2009	NJ
n-Hexadecanoic acid		000057-10-3	2		01/16/2009	NJ
Octadecanoic acid		000057-11-4	0.8		01/16/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramet		002315-61-9	0.4		01/16/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/12/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/12/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/12/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/12/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/12/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/12/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/12/2009	
Methomyl		016752-65-7	<0.50	0.5	01/12/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/12/2009	
Propoxur		000114-26-1	<0.50	0.5	01/12/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/14/2009	
a-BHC		000319-84-6	<0.0021	0.0021	01/14/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/14/2009	
d-BHC		000319-86-8	<0.0021	0.0021	01/14/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/14/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/14/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/14/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/14/2009	
Dieldrin		000060-57-1	<0.0021	0.0021	01/14/2009	
Endosulfan I		000959-98-8	<0.0021	0.0021	01/14/2009	
Endosulfan II		033213-65-9	<0.0021	0.0021	01/14/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/14/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/14/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/14/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/14/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/14/2009	
Methoxychlor		000072-43-5	<0.011	0.011	01/14/2009	
Mirex		002385-85-5	<0.011	0.011	01/14/2009	
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/14/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109809				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:55 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.2	5.2	01/12/2009	
Acenaphthylene		000208-96-8	<5.2	5.2	01/12/2009	
Anthracene		000120-12-7	<5.2	5.2	01/12/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/12/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/12/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/12/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/12/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/12/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.2	5.2	01/12/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/12/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/12/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.3	10.3	01/12/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.2	5.2	01/12/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/12/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.3	10.3	01/12/2009	
2-Chloronaphthalene		000091-58-7	<5.2	5.2	01/12/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/12/2009	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/12/2009	
Chrysene		000218-01-9	<2.1	2.1	01/12/2009	
Di-n-butylphthalate		000084-74-2	<5.2	5.2	01/12/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/12/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/12/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/12/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/12/2009	UJ
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/12/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/12/2009	
Diethylphthalate		000084-66-2	5.4	5.2	01/12/2009	
2,4-Dimethylphenol		000105-67-9	<10.3	10.3	01/12/2009	
Dimethylphthalate		000131-11-3	<5.2	5.2	01/12/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.2	5.2	01/12/2009	
2,4-Dinitrophenol		000051-28-5	<20.6	20.6	01/12/2009	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/12/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/12/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/12/2009	
Fluorene		000086-73-7	<2.1	2.1	01/12/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/12/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/12/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/12/2009	
Hexachloroethane		000067-72-1	<5.2	5.2	01/12/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/12/2009	
Isophorone		000078-59-1	<2.1	2.1	01/12/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/12/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.2	5.2	01/12/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/12/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/12/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/12/2009	
4-Nitrophenol		000100-02-7	<20.6	20.6	01/12/2009	
Pentachlorophenol		000087-86-5	<10.3	10.3	01/12/2009	
Phenanthrene		000085-01-8	<2.1	2.1	01/12/2009	
Phenol		000108-95-2	<2.1	2.1	01/12/2009	
Pyrene		000129-00-0	<2.1	2.1	01/12/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109809				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected		01/06/2009 11:55 AM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 11				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/12/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.2	5.2	01/12/2009	
Sulfur (S6)		013798-23-7	4		01/12/2009	NJ
Sulfur (S8)		010544-50-0	30		01/12/2009	NJ
Benzene, 1,1'-sulfonylbis[4-chloro		000080-07-9	2		01/12/2009	NJ
Triphenylphosphine oxide		000791-28-6	3		01/12/2009	NJ

Field Comments

Lab Comments

QC / Sample Comments

625: 1,4-dichlorobenzene and hexachlorobutadiene estimated due to poor matrix spike recovery.
525.2: bis(2-ethylhexyl)phthalate estimated due to high matrix spike and QC recovery.
515.1: Dalapon estimated due to masked peak in confirmation GC channel, unable to confirm presence in sample.
608: Endosulfan II estimated due to poor matrix spike and QC recovery.

Approved By SROBERTS **On** 02/04/2009

Ohio EPA

Division of Drinking and Ground Waters

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name:
STU Name:
PWSID #: STU #:
Address: CLYDE 11
County:
Contact Person: CHRIS KENAN
Contact Phone: 614/644-2983

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☐ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain)

LABORATORY INFORMATION:
Reporting Lab: N/A ID:
Analytical Lab: ODH LAB ID: 12345
Reporting Lab Sample #: R5549-02
Sample Received Date: 1/7/09 QC Completed Date: 3/16/09
QC Completed by: S. Clay

SAMPLE INFORMATION:
Sample Monitoring Point: EP RS Other X
Sample Collection Date: 1/6/09 Time: 11:55
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☐ Other (explain):
Sample Collected by: M. SLATTERY
Repeat for Sample #:

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
Gamma Scan: All nuclides < MDA 1/13/09 SC

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS) :

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
Beta, total	4100	<	4	pCi/L	1/30/09	165	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
Radium-226	4020	<	1	pCi/L	3/16/09	169	293X
Radium-228	4030	<	1	pCi/L	3/6/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
Uranium, total	4006	<	1	pCi/L	2/6/09	184	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109813				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected		01/06/2009 11:00 AM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	196	10	mg/L	01/08/2009	
TOC	TOC	P680	<2.0	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Chromium	P1034	2.1	2	ug/L	01/08/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Copper	P1042	2.1	2	ug/L	01/08/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/08/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/07/2009	
ICP_DW	Barium	P1007	18	15	ug/L	01/07/2009	
ICP_DW	Calcium	P916	36	2	mg/L	01/07/2009	
ICP_DW	Hardness, Total	P900	131	10	mg/L	01/07/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/07/2009	
ICP_DW	Magnesium	P927	10	1	mg/L	01/07/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/07/2009	
ICP_DW	Potassium	P937	2	2	mg/L	01/07/2009	
ICP_DW	Sodium	P929	17	5	mg/L	01/07/2009	
ICP_DW	Strontium	P1082	277	30	ug/L	01/07/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/07/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/08/2009	
Alkalinity	Alkalinity	P410	90.0	5	mg/L	01/07/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/08/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/13/2009	
COD	COD	P340	<20	20	mg/L	01/12/2009	
Chloride	Chloride	P940	24.2	5	mg/L	01/12/2009	
Fluoride	Fluoride	P951	1.00	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	1.40	0.5	mg/L	01/07/2009	
Sulfate	Sulfate	P945	40.3	10	mg/L	01/13/2009	
TKN	TKN	P625	<0.20	0.2	mg/L	01/09/2009	
TP	Total Phosphorus	P665	<0.010	0.01	mg/L	01/09/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109817				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:00 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.019	0.019	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.019	0.019	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<0.9	0.9	01/12/2009	
Dieldrin		000060-57-1	<0.9	0.9	01/12/2009	
Endrin		000072-20-8	<0.037	0.037	01/12/2009	
Heptachlor		000076-44-8	<0.037	0.037	01/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/12/2009	
Hexachlorobenzene		000118-74-1	<0.037	0.037	01/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/12/2009	
Methoxychlor		000072-43-5	<0.9	0.9	01/12/2009	
y-BHC		000058-89-9	<0.019	0.019	01/12/2009	
Chlordane		000057-74-9	<0.19	0.19	01/12/2009	
Toxaphene		008001-35-2	<0.9	0.9	01/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/15/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/15/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/15/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/15/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/15/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/15/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/15/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	0.37	0.22	01/26/2009	J
Dicamba		001918-00-9	<0.22	0.22	01/26/2009	
Dinoseb		000088-85-7	<0.22	0.22	01/26/2009	
Acifluorfen		050594-66-6	<0.22	0.22	01/26/2009	
2,4-D		000094-75-7	<0.22	0.22	01/26/2009	
2,4,5-TP		000093-72-1	<0.22	0.22	01/26/2009	
Pentachlorophenol		000087-86-5	<0.11	0.11	01/26/2009	
Picloram		001918-02-1	<0.22	0.22	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/07/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/07/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/07/2009	
Bromodichloromethane		000075-27-4	12.2	0.5	01/07/2009	
Bromoform		000075-25-2	<0.50	0.5	01/07/2009	
Bromomethane		000074-83-9	0.53	0.5	01/07/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/07/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/07/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/07/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/07/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/07/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/07/2009	
Chloroform		000067-66-3	24.0	0.5	01/07/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/07/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/07/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109817				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:00 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/07/2009	
Dibromochloromethane		000124-48-1	4.75	0.5	01/07/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/07/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/07/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/07/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/07/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/07/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/07/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/07/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/07/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/07/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/07/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/07/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/07/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/07/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/07/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/07/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/07/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/07/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/07/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/07/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/07/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/07/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/07/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/07/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/07/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/07/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/07/2009	
Styrene		000100-42-5	<0.50	0.5	01/07/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/07/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/07/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/07/2009	
Toluene		000108-88-3	<0.50	0.5	01/07/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/07/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/07/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/07/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/07/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/07/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/07/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/07/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/07/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/07/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/07/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/07/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/07/2009	
Trihalomethanes (THMs)		Unknown	41.0	0.5	01/07/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.21	0.21	01/16/2009	
Alachlor		015972-60-8	<0.21	0.21	01/16/2009	
Atrazine		001912-24-9	0.31	0.21	01/16/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109817				
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Begin		**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:00 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	01/16/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.63	0.63	01/16/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	0.67	0.63	01/16/2009	J
Butachlor		023184-66-9	<0.21	0.21	01/16/2009	
Metolachlor		051218-45-2	<0.21	0.21	01/16/2009	
Metribuzin		021087-64-9	<0.21	0.21	01/16/2009	
Propachlor		001918-16-7	<0.21	0.21	01/16/2009	
Simazine		000122-34-9	<0.21	0.21	01/16/2009	
n-Hexadecanoic acid		000057-10-3	1		01/16/2009	NJ
Octadecanoic acid		000057-11-4	0.5		01/16/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbut		002315-61-9	0.3		01/16/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/12/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/12/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/12/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/12/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/12/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/12/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/12/2009	
Methomyl		016752-65-7	<0.50	0.5	01/12/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/12/2009	
Propoxur		000114-26-1	<0.50	0.5	01/12/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/14/2009	
a-BHC		000319-84-6	<0.0021	0.0021	01/14/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/14/2009	
d-BHC		000319-86-8	<0.0021	0.0021	01/14/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/14/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/14/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/14/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/14/2009	
Dieldrin		000060-57-1	<0.0021	0.0021	01/14/2009	
Endosulfan I		000959-98-8	<0.0021	0.0021	01/14/2009	
Endosulfan II		033213-65-9	<0.0021	0.0021	01/14/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/14/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/14/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/14/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/14/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/14/2009	
Methoxychlor		000072-43-5	<0.011	0.011	01/14/2009	
Mirex		002385-85-5	<0.011	0.011	01/14/2009	
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/14/2009	
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.4	5.4	01/12/2009	
Acenaphthylene		000208-96-8	<5.4	5.4	01/12/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109817				
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	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 11:00 AM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Anthracene		000120-12-7	<5.4	5.4	01/12/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/12/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/12/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/12/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/12/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/12/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.4	5.4	01/12/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/12/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/12/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.7	10.7	01/12/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.4	5.4	01/12/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/12/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.7	10.7	01/12/2009	UJ
2-Chloronaphthalene		000091-58-7	<5.4	5.4	01/12/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/12/2009	UJ
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/12/2009	
Chrysene		000218-01-9	<2.1	2.1	01/12/2009	
Di-n-butylphthalate		000084-74-2	<5.4	5.4	01/12/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/12/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/12/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/12/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/12/2009	UJ
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/12/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/12/2009	UJ
Diethylphthalate		000084-66-2	<5.4	5.4	01/12/2009	
2,4-Dimethylphenol		000105-67-9	<10.7	10.7	01/12/2009	UJ
Dimethylphthalate		000131-11-3	<5.4	5.4	01/12/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.4	5.4	01/12/2009	UJ
2,4-Dinitrophenol		000051-28-5	<21.4	21.4	01/12/2009	UJ
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/12/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/12/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/12/2009	
Fluorene		000086-73-7	<2.1	2.1	01/12/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/12/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/12/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/12/2009	
Hexachloroethane		000067-72-1	<5.4	5.4	01/12/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/12/2009	
Isophorone		000078-59-1	<2.1	2.1	01/12/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/12/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.4	5.4	01/12/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/12/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/12/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/12/2009	UJ
4-Nitrophenol		000100-02-7	<21.4	21.4	01/12/2009	UJ
Pentachlorophenol		000087-86-5	<10.7	10.7	01/12/2009	UJ
Phenanthrene		000085-01-8	<2.1	2.1	01/12/2009	
Phenol		000108-95-2	<2.1	2.1	01/12/2009	UJ
Pyrene		000129-00-0	<2.1	2.1	01/12/2009	
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/12/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.4	5.4	01/12/2009	UJ

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

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Date Collected		01/06/2009 11:00 AM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 13				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Sulfur (S6)		013798-23-7	9		01/12/2009	NJ
Sulfur (S8)		010544-50-0	90		01/12/2009	NJ

Field Comments

Lab Comments

QC / Sample Comments

625: 1,4-dichlorobenzene and hexachlorobutadiene estimated due to poor matrix spike recovery. All acid extractable compounds estimated due to poor surrogate recovery.
515.1: Dalapon estimated due to masked peak in confirmation GC channel, unable to confirm presence in sample.
608: Endosulfan II estimated due to poor matrix spike and QC recovery.
525.2: bis(2-ethylhexyl)phthalate estimated due to high matrix spike and QC recovery.

Approved By SROBERTS **On** 02/04/2009

Ohio EPA

Division of Drinking and Ground Waters

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name: _____
STU Name: _____
PWSID #: _____ STU #: _____
Address: CLYDE 13
County: _____
Contact Person: CHRIS KEMAH
Contact Phone: 614/644-2903

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☐ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain) _____

LABORATORY INFORMATION:
Reporting Lab: N/A ID: _____
Analytical Lab: ODH LAB ID: 12345
Reporting Lab Sample #: R5549-04
Sample Received Date: 1/7/09 QC Completed Date: 3/16/09
QC Completed by: S. Chung

SAMPLE INFORMATION:
Sample Monitoring Point: EP _____ RS _____ Other _____
Sample Collection Date: 1/6/09 Time: 11:45
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☒ Other (explain): SURVEY
Sample Collected by: C. STUCKEY
Repeat for Sample #: _____

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
Gamma Scan: All nuclides < MDA 1/14/09. SC

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS):

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
Beta, total	4100	<	4	pCi/L	1/30/09	165	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
Radium-226	4020	<	1	pCi/L	3/16/09	169	293X
Radium-228	4030	<	1	pCi/L	3/6/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
Uranium, total	4006	<	1	pCi/L	2/6/09	18X	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109807				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		01/06/2009 4:00 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	240	10	mg/L	01/08/2009	
TOC	TOC	P680	<2.0	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Chromium	P1034	2.3	2	ug/L	01/08/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Copper	P1042	11.2	2	ug/L	01/08/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/08/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/07/2009	
ICP_DW	Barium	P1007	22	15	ug/L	01/07/2009	
ICP_DW	Calcium	P916	45	2	mg/L	01/07/2009	
ICP_DW	Hardness, Total	P900	162	10	mg/L	01/07/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/07/2009	
ICP_DW	Magnesium	P927	12	1	mg/L	01/07/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/07/2009	
ICP_DW	Potassium	P937	2	2	mg/L	01/07/2009	
ICP_DW	Sodium	P929	23	5	mg/L	01/07/2009	
ICP_DW	Strontium	P1082	394	30	ug/L	01/07/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/07/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/08/2009	
Alkalinity	Alkalinity	P410	98.7	5	mg/L	01/07/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/08/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/13/2009	
COD	COD	P340	<20	20	mg/L	01/12/2009	
Chloride	Chloride	P940	36.5	5	mg/L	01/12/2009	
Fluoride	Fluoride	P951	1.20	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	1.30	0.5	mg/L	01/07/2009	
Sulfate	Sulfate	P945	56.4	10	mg/L	01/13/2009	
TKN	TKN	P625	0.33	0.2	mg/L	01/09/2009	
TP	Total Phosphorus	P665	<0.010	0.01	mg/L	01/09/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109810				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 4:00 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.022	0.022	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.022	0.022	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<1.0	1	01/12/2009	
Dieldrin		000060-57-1	<1.0	1	01/12/2009	
Endrin		000072-20-8	<0.039	0.039	01/12/2009	
Heptachlor		000076-44-8	<0.039	0.039	01/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/12/2009	
Hexachlorobenzene		000118-74-1	<0.039	0.039	01/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/12/2009	
Methoxychlor		000072-43-5	<1.0	1	01/12/2009	
y-BHC		000058-89-9	<0.019	0.019	01/12/2009	
Chlordane		000057-74-9	<0.19	0.19	01/12/2009	
Toxaphene		008001-35-2	<1.0	1	01/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/15/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/15/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/15/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/15/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/15/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/15/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/15/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	0.50	0.22	01/26/2009	J
Dicamba		001918-00-9	<0.22	0.22	01/26/2009	
Dinoseb		000088-85-7	<0.22	0.22	01/26/2009	
Acifluorfen		050594-66-6	<0.22	0.22	01/26/2009	
2,4-D		000094-75-7	<0.22	0.22	01/26/2009	
2,4,5-TP		000093-72-1	<0.22	0.22	01/26/2009	
Pentachlorophenol		000087-86-5	<0.11	0.11	01/26/2009	
Picloram		001918-02-1	<0.22	0.22	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/07/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/07/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/07/2009	
Bromodichloromethane		000075-27-4	14.9	0.5	01/07/2009	
Bromoform		000075-25-2	<0.50	0.5	01/07/2009	
Bromomethane		000074-83-9	0.59	0.5	01/07/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/07/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/07/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/07/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/07/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/07/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/07/2009	
Chloroform		000067-66-3	33.2	1	01/07/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/07/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/07/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109810				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 4:00 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/07/2009	
Dibromochloromethane		000124-48-1	5.69	0.5	01/07/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/07/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/07/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/07/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/07/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/07/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/07/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/07/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/07/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/07/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/07/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/07/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/07/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/07/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/07/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/07/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/07/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/07/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/07/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/07/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/07/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/07/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/07/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/07/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/07/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/07/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/07/2009	
Styrene		000100-42-5	<0.50	0.5	01/07/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/07/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/07/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/07/2009	
Toluene		000108-88-3	<0.50	0.5	01/07/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/07/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/07/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/07/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/07/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/07/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/07/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/07/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/07/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/07/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/07/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/07/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/07/2009	
Trihalomethanes (THMs)		Unknown	53.8	0.5	01/07/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.22	0.22	01/16/2009	
Alachlor		015972-60-8	<0.22	0.22	01/16/2009	
Atrazine		001912-24-9	0.35	0.22	01/16/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109810				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 4:00 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	01/16/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.66	0.66	01/16/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<0.66	0.66	01/16/2009	
Butachlor		023184-66-9	<0.22	0.22	01/16/2009	
Metolachlor		051218-45-2	<0.22	0.22	01/16/2009	
Metribuzin		021087-64-9	<0.22	0.22	01/16/2009	
Propachlor		001918-16-7	<0.22	0.22	01/16/2009	
Simazine		000122-34-9	<0.22	0.22	01/16/2009	
n-Hexadecanoic acid		000057-10-3	1		01/16/2009	NJ
Octadecanoic acid		000057-11-4	0.8		01/16/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramet		002315-61-9	1		01/16/2009	NJ
Ethanol, 2-[2-[2-[4-(1,1,3,3-tetra		002315-62-0	0.7		01/16/2009	NJ
2,2'-Ethylidenebis(4,6-di-tert-but		035958-30-6	0.5		01/16/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/12/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/12/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/12/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/12/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/12/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/12/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/12/2009	
Methomyl		016752-65-7	<0.50	0.5	01/12/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/12/2009	
Propoxur		000114-26-1	<0.50	0.5	01/12/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/14/2009	
a-BHC		000319-84-6	<0.0021	0.0021	01/14/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/14/2009	
d-BHC		000319-86-8	<0.0021	0.0021	01/14/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/14/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/14/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/14/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/14/2009	
Dieldrin		000060-57-1	<0.0021	0.0021	01/14/2009	
Endosulfan I		000959-98-8	<0.0021	0.0021	01/14/2009	
Endosulfan II		033213-65-9	<0.0021	0.0021	01/14/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/14/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/14/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/14/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/14/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/14/2009	
Methoxychlor		000072-43-5	<0.011	0.011	01/14/2009	
Mirex		002385-85-5	<0.011	0.011	01/14/2009	
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/14/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109810				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 4:00 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	01/12/2009	
Acenaphthylene		000208-96-8	<5.3	5.3	01/12/2009	
Anthracene		000120-12-7	<5.3	5.3	01/12/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/12/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/12/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/12/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/12/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/12/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	01/12/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/12/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/12/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.6	10.6	01/12/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	01/12/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/12/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.6	10.6	01/12/2009	UJ
2-Chloronaphthalene		000091-58-7	<5.3	5.3	01/12/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/12/2009	UJ
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/12/2009	
Chrysene		000218-01-9	<2.1	2.1	01/12/2009	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	01/12/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/12/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/12/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/12/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/12/2009	UJ
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/12/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/12/2009	UJ
Diethylphthalate		000084-66-2	<5.3	5.3	01/12/2009	
2,4-Dimethylphenol		000105-67-9	<10.6	10.6	01/12/2009	UJ
Dimethylphthalate		000131-11-3	<5.3	5.3	01/12/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	01/12/2009	UJ
2,4-Dinitrophenol		000051-28-5	<21.2	21.2	01/12/2009	UJ
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/12/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/12/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/12/2009	
Fluorene		000086-73-7	<2.1	2.1	01/12/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/12/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/12/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/12/2009	
Hexachloroethane		000067-72-1	<5.3	5.3	01/12/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/12/2009	
Isophorone		000078-59-1	<2.1	2.1	01/12/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/12/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	01/12/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/12/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/12/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/12/2009	UJ
4-Nitrophenol		000100-02-7	<21.2	21.2	01/12/2009	UJ
Pentachlorophenol		000087-86-5	<10.6	10.6	01/12/2009	UJ
Phenanthrene		000085-01-8	<2.1	2.1	01/12/2009	
Phenol		000108-95-2	<2.1	2.1	01/12/2009	UJ
Pyrene		000129-00-0	<2.1	2.1	01/12/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109810				
Date Received	01/07/2009 10:22 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 4:00 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 14				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/12/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	01/12/2009	UJ
Sulfur (S6)		013798-23-7	10		01/12/2009	NJ
Sulfur (S8)		010544-50-0	100		01/12/2009	NJ
Triphenylphosphine oxide		000791-28-6	10		01/12/2009	NJ

Field Comments

Lab Comments

QC / Sample Comments

625: 1,4-dichlorobenzene and hexachlorobutadiene estimated due to poor matrix spike recovery. All acid extractable compounds estimated due to poor surrogate recovery.
515.1: Dalapon estimated due to masked peak in confirmation GC channel, unable to confirm presence in sample.
608: Endosulfan II estimated due to poor matrix spike and QC recovery.

Approved By SROBERTS **On** 02/04/2009

Ohio EPA

Division of Drinking and Ground Waters

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name: _____
STU Name: _____
PWSID #: _____ STU #: _____
Address: CLYDE 14
County: _____
Contact Person: CHRIS KEMAN
Contact Phone: 614/644-2903

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☒ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain) _____

LABORATORY INFORMATION:
Reporting Lab: N/A ID: _____
Analytical Lab: RS ODH LAB ID: 12345
Reporting Lab Sample #: R5549-05
Sample Received Date: 1/9/09 QC Completed Date: 3/18/09
QC Completed by: S. Chung

SAMPLE INFORMATION:
Sample Monitoring Point: EP ____ RS ____ Other X
Sample Collection Date: 01-06-09 Time: 16:00
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☐ Other (explain): _____
Sample Collected by: M. SLATTERY
Repeat for Sample #: _____

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
Gamma Scan: All nuclides < MDA @ 1/15/09 SC

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS):

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
Beta, total	4100	<	4	pCi/L	1/30/09	165	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
Radium-226	4020	<	1	pCi/L	3/16/09	169	293X
Radium-228	4030	<	1	pCi/L	3/6/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
Uranium, total	4006	<	1	pCi/L	2/6/09	184	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109814				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 12:30 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	158	10	mg/L	01/08/2009	
TOC	TOC	P680	<2.0	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/08/2009	
ICPMS_DW	Chromium	P1034	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Copper	P1042	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/08/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/08/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/07/2009	
ICP_DW	Barium	P1007	17	15	ug/L	01/07/2009	
ICP_DW	Calcium	P916	34	2	mg/L	01/07/2009	
ICP_DW	Hardness, Total	P900	126	10	mg/L	01/07/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/07/2009	
ICP_DW	Magnesium	P927	10	1	mg/L	01/07/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/07/2009	
ICP_DW	Potassium	P937	2	2	mg/L	01/07/2009	
ICP_DW	Sodium	P929	16	5	mg/L	01/07/2009	
ICP_DW	Strontium	P1082	259	30	ug/L	01/07/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/07/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/08/2009	
Alkalinity	Alkalinity	P410	87.2	5	mg/L	01/07/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/08/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/13/2009	
COD	COD	P340	<20	20	mg/L	01/12/2009	
Chloride	Chloride	P940	21.1	5	mg/L	01/12/2009	
Fluoride	Fluoride	P951	1.10	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	1.00	0.5	mg/L	01/07/2009	
Sulfate	Sulfate	P945	32.9	10	mg/L	01/13/2009	
TKN	TKN	P625	<0.20	0.2	mg/L	01/09/2009	
TP	Total Phosphorus	P665	0.013	0.01	mg/L	01/09/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109818				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 12:30 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.019	0.019	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.019	0.019	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<1.0	1	01/12/2009	
Dieldrin		000060-57-1	<1.0	1	01/12/2009	
Endrin		000072-20-8	<0.039	0.039	01/12/2009	
Heptachlor		000076-44-8	<0.039	0.039	01/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/12/2009	
Hexachlorobenzene		000118-74-1	<0.039	0.039	01/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/12/2009	
Methoxychlor		000072-43-5	<1.0	1	01/12/2009	
y-BHC		000058-89-9	<0.019	0.019	01/12/2009	
Chlordane		000057-74-9	<0.19	0.19	01/12/2009	
Toxaphene		008001-35-2	<1.0	1	01/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/15/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/15/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/15/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/15/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/15/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/15/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/15/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	<0.21	0.21	01/26/2009	
Dicamba		001918-00-9	<0.21	0.21	01/26/2009	
Dinoseb		000088-85-7	<0.21	0.21	01/26/2009	
Acifluorfen		050594-66-6	<0.21	0.21	01/26/2009	
2,4-D		000094-75-7	<0.21	0.21	01/26/2009	
2,4,5-TP		000093-72-1	<0.21	0.21	01/26/2009	
Pentachlorophenol		000087-86-5	<0.10	0.1	01/26/2009	
Picloram		001918-02-1	<0.21	0.21	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/07/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/07/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/07/2009	
Bromodichloromethane		000075-27-4	8.56	0.5	01/07/2009	
Bromoform		000075-25-2	<0.50	0.5	01/07/2009	
Bromomethane		000074-83-9	0.51	0.5	01/07/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/07/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/07/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/07/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/07/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/07/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/07/2009	
Chloroform		000067-66-3	11.6	0.5	01/07/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/07/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/07/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109818				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 12:30 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/07/2009	
Dibromochloromethane		000124-48-1	3.71	0.5	01/07/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/07/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/07/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/07/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/07/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/07/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/07/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/07/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/07/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/07/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/07/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/07/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/07/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/07/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/07/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/07/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/07/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/07/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/07/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/07/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/07/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/07/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/07/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/07/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/07/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/07/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/07/2009	
Styrene		000100-42-5	<0.50	0.5	01/07/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/07/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/07/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/07/2009	
Toluene		000108-88-3	<0.50	0.5	01/07/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/07/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/07/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/07/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/07/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/07/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/07/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/07/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/07/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/07/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/07/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/07/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/07/2009	
Trihalomethanes (THMs)		Unknown	23.9	0.5	01/07/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.21	0.21	01/16/2009	
Alachlor		015972-60-8	<0.21	0.21	01/16/2009	
Atrazine		001912-24-9	0.25	0.21	01/16/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109818				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 12:30 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	01/16/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.62	0.62	01/16/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	0.92	0.62	01/16/2009	J
Butachlor		023184-66-9	<0.21	0.21	01/16/2009	
Metolachlor		051218-45-2	<0.21	0.21	01/16/2009	
Metribuzin		021087-64-9	<0.21	0.21	01/16/2009	
Propachlor		001918-16-7	<0.21	0.21	01/16/2009	
Simazine		000122-34-9	<0.21	0.21	01/16/2009	
n-Hexadecanoic acid		000057-10-3	0.6		01/16/2009	NJ
Benzyl butyl phthalate		000085-68-7	0.2		01/16/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/12/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/12/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/12/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/12/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/12/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/12/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/12/2009	
Methomyl		016752-65-7	<0.50	0.5	01/12/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/12/2009	
Propoxur		000114-26-1	<0.50	0.5	01/12/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/14/2009	
a-BHC		000319-84-6	<0.0021	0.0021	01/14/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/14/2009	
d-BHC		000319-86-8	<0.0021	0.0021	01/14/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/14/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/14/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/14/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/14/2009	
Dieldrin		000060-57-1	<0.0021	0.0021	01/14/2009	
Endosulfan I		000959-98-8	<0.0021	0.0021	01/14/2009	
Endosulfan II		033213-65-9	<0.0021	0.0021	01/14/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/14/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/14/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/14/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/14/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/14/2009	
Methoxychlor		000072-43-5	<0.011	0.011	01/14/2009	
Mirex		002385-85-5	<0.011	0.011	01/14/2009	
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/14/2009	
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.2	5.2	01/12/2009	
Acenaphthylene		000208-96-8	<5.2	5.2	01/12/2009	
Anthracene		000120-12-7	<5.2	5.2	01/12/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109818				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/06/2009 12:30 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/12/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/12/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/12/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/12/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/12/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.2	5.2	01/12/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/12/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/12/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.4	10.4	01/12/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.2	5.2	01/12/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/12/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.4	10.4	01/12/2009	
2-Chloronaphthalene		000091-58-7	<5.2	5.2	01/12/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/12/2009	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/12/2009	
Chrysene		000218-01-9	<2.1	2.1	01/12/2009	
Di-n-butylphthalate		000084-74-2	<5.2	5.2	01/12/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/12/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/12/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/12/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/12/2009	UJ
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/12/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/12/2009	
Diethylphthalate		000084-66-2	<5.2	5.2	01/12/2009	
2,4-Dimethylphenol		000105-67-9	<10.4	10.4	01/12/2009	
Dimethylphthalate		000131-11-3	<5.2	5.2	01/12/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.2	5.2	01/12/2009	
2,4-Dinitrophenol		000051-28-5	<20.8	20.8	01/12/2009	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/12/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/12/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/12/2009	
Fluorene		000086-73-7	<2.1	2.1	01/12/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/12/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/12/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/12/2009	
Hexachloroethane		000067-72-1	<5.2	5.2	01/12/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/12/2009	
Isophorone		000078-59-1	<2.1	2.1	01/12/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/12/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.2	5.2	01/12/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/12/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/12/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/12/2009	
4-Nitrophenol		000100-02-7	<20.8	20.8	01/12/2009	
Pentachlorophenol		000087-86-5	<10.4	10.4	01/12/2009	
Phenanthrene		000085-01-8	<2.1	2.1	01/12/2009	
Phenol		000108-95-2	<2.1	2.1	01/12/2009	
Pyrene		000129-00-0	<2.1	2.1	01/12/2009	
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/12/2009	
2,4,6-Trichlorophenol		000088-06-2	<5.2	5.2	01/12/2009	
Sulfur (S6)		013798-23-7	20		01/12/2009	NJ

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109818				
Date Received	01/07/2009 10:35 AM	**Matrix**	DW	**Collected by**	STUCKEY, GEORGE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected		01/06/2009 12:30 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 15				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Sulfur (S8)		010544-50-0	800		01/12/2009	NJ

Field Comments Entry Point / Master Meter

Lab Comments

QC / Sample Comments
625: 1,4-dichlorobenzene and hexachlorobutadiene estimated due to poor matrix spike recovery.
525.2: bis(2-ethylhexyl)phthalate estimated due to high matrix spike and QC recovery.
608: Endosulfan II estimated due to poor matrix spike and QC recovery.

Approved By SROBERTS **On** 02/04/2009

Ohio EPA
Division of Drinking and Ground Waters

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name:
STU Name:
PWSID #: STU #:
Address: CLYDE 15
County:
Contact Person: CHRIS KENNAY
Contact Phone: 614/644-2903

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☐ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain)

LABORATORY INFORMATION:
Reporting Lab: N/A ID:
Analytical Lab: ODH LAB ID: 12345
Reporting Lab Sample #: R5549-06
Sample Received Date: 1/7/09 QC Completed Date: 3/16/09
QC Completed by: S. Chung

SAMPLE INFORMATION:
Sample Monitoring Point: EP X RS Other
Sample Collection Date: 1/6/09 Time: 12:30
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☒ Other (explain): SURVEY
Sample Collected by: G STUCKEM
Repeat for Sample #:

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
Gamma Scan: All other nuclides < MDA 1/15/09 SC
Bi-214*: 1.06 E+01 +/- 2.06 E+00 pCi/L. 1/15/09 SC
→ * natural nuclide

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS):

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
Beta, total	4100	<	4	pCi/L	1/30/09	169	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
Radium-226	4020	<	1	pCi/L	3/16/09	169	293X
Radium-228	4030	<	1	pCi/L	3/6/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
Uranium, total	4006	<	1	pCi/L	2/6/09	184	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	109843				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 16				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	192	10	mg/L	01/14/2009	
TOC	TOC	P680	<2.0	2	mg/L	01/19/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	01/15/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	01/15/2009	
ICPMS_DW	Chromium	P1034	3.3	2	ug/L	01/15/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Copper	P1042	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Lead	P1051	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	01/15/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	01/15/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	01/15/2009	
ICP_DW	Barium	P1007	17	15	ug/L	01/15/2009	
ICP_DW	Calcium	P916	34	2	mg/L	01/15/2009	
ICP_DW	Hardness, Total	P900	122	10	mg/L	01/15/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	01/15/2009	
ICP_DW	Magnesium	P927	9	1	mg/L	01/15/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	01/15/2009	
ICP_DW	Potassium	P937	2	2	mg/L	01/15/2009	
ICP_DW	Sodium	P929	15	5	mg/L	01/15/2009	
ICP_DW	Strontium	P1082	254	30	ug/L	01/15/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	01/15/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	01/21/2009	
Alkalinity	Alkalinity	P410	91.0	5	mg/L	01/22/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	01/16/2009	
Bromide	Bromide	P71870	<100	100	ug/L	01/13/2009	
COD	COD	P340	<20	20	mg/L	01/16/2009	
Chloride	Chloride	P940	21.1	5	mg/L	01/23/2009	
Fluoride	Fluoride	P951	1.00	0.2	mg/L	01/27/2009	
Nitrate_DW	Nitrate	P620	0.90	0.5	mg/L	01/14/2009	
Sulfate	Sulfate	P945	32.1	10	mg/L	01/13/2009	
TKN	TKN	P625	<0.20	0.2	mg/L	01/16/2009	
TP	Total Phosphorus	P665	<0.010	0.01	mg/L	01/16/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 01/28/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109847				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 16				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.019	0.019	01/15/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.019	0.019	01/15/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<1.0	1	01/18/2009	UJ
Dieldrin		000060-57-1	<1.0	1	01/18/2009	
Endrin		000072-20-8	<0.038	0.038	01/18/2009	
Heptachlor		000076-44-8	<0.038	0.038	01/18/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	01/18/2009	
Hexachlorobenzene		000118-74-1	<0.038	0.038	01/18/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	01/18/2009	
Methoxychlor		000072-43-5	<1.0	1	01/18/2009	UJ
y-BHC		000058-89-9	<0.019	0.019	01/18/2009	
Chlordane		000057-74-9	<0.19	0.19	01/18/2009	
Toxaphene		008001-35-2	<1.0	1	01/18/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	01/22/2009	
PCB-1221		011104-28-2	<0.10	0.1	01/22/2009	
PCB-1232		011141-16-5	<0.10	0.1	01/22/2009	
PCB-1242		053469-21-9	<0.10	0.1	01/22/2009	
PCB-1248		012672-29-6	<0.10	0.1	01/22/2009	
PCB-1254		011097-69-1	<0.10	0.1	01/22/2009	
PCB-1260		011096-82-5	<0.10	0.1	01/22/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	0.28	0.21	01/26/2009	J
Dicamba		001918-00-9	<0.21	0.21	01/26/2009	
Dinoseb		000088-85-7	<0.21	0.21	01/26/2009	
Acifluorfen		050594-66-6	<0.21	0.21	01/26/2009	
2,4-D		000094-75-7	<0.21	0.21	01/26/2009	
2,4,5-TP		000093-72-1	<0.21	0.21	01/26/2009	
Pentachlorophenol		000087-86-5	<0.10	0.1	01/26/2009	
Picloram		001918-02-1	<0.21	0.21	01/26/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	01/14/2009	
Bromobenzene		000108-86-1	<0.50	0.5	01/14/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	01/14/2009	
Bromodichloromethane		000075-27-4	11.1	0.5	01/14/2009	
Bromoform		000075-25-2	<0.50	0.5	01/14/2009	
Bromomethane		000074-83-9	<0.50	0.5	01/14/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	01/14/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	01/14/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	01/14/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	01/14/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	01/14/2009	
Chloroethane		000075-00-3	<0.50	0.5	01/14/2009	
Chloroform		000067-66-3	17.6	0.5	01/14/2009	
Chloromethane		000074-87-3	<0.50	0.5	01/14/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	01/14/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109847				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 16				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	01/14/2009	
Dibromochloromethane		000124-48-1	4.43	0.5	01/14/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	01/14/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	01/14/2009	
Dibromomethane		000074-95-3	<0.50	0.5	01/14/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	01/14/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	01/14/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	01/14/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	01/14/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	01/14/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	01/14/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	01/14/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	01/14/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	01/14/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	01/14/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	01/14/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	01/14/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	01/14/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	01/14/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	01/14/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	01/14/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	01/14/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	01/14/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	01/14/2009	
Methylene chloride		000075-09-2	<0.50	0.5	01/14/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	01/14/2009	
Naphthalene		000091-20-3	<0.50	0.5	01/14/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	01/14/2009	
Styrene		000100-42-5	<0.50	0.5	01/14/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	01/14/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	01/14/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	01/14/2009	
Toluene		000108-88-3	<0.50	0.5	01/14/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	01/14/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	01/14/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	01/14/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	01/14/2009	
Trichloroethene		000079-01-6	<0.50	0.5	01/14/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	01/14/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	01/14/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	01/14/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	01/14/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	01/14/2009	
o-Xylene		000095-47-6	<0.50	0.5	01/14/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	01/14/2009	
Trihalomethanes (THMs)		Unknown	33.1	0.5	01/14/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.21	0.21	01/22/2009	
Alachlor		015972-60-8	<0.21	0.21	01/22/2009	
Atrazine		001912-24-9	0.21	0.21	01/22/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109847				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 16				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	0.02	0.02	01/22/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.63	0.63	01/22/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<0.63	0.63	01/22/2009	
Butachlor		023184-66-9	<0.21	0.21	01/22/2009	
Metolachlor		051218-45-2	<0.21	0.21	01/22/2009	
Metribuzin		021087-64-9	<0.21	0.21	01/22/2009	
Propachlor		001918-16-7	<0.21	0.21	01/22/2009	
Simazine		000122-34-9	<0.21	0.21	01/22/2009	
1,3-Dioxolane, 2-(4-methoxyphenyl)		036881-00-2	0.3		01/22/2009	NJ
n-Hexadecanoic acid		000057-10-3	1		01/22/2009	NJ
Octadecanoic acid		000057-11-4	0.8		01/22/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramet		002315-61-9	1		01/22/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	01/22/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	01/22/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	01/22/2009	
Carbaryl		000063-25-2	<0.50	0.5	01/22/2009	
Carbofuran		001563-66-2	<0.50	0.5	01/22/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	01/22/2009	
Methiocarb		002032-65-7	<0.50	0.5	01/22/2009	
Methomyl		016752-65-7	<0.50	0.5	01/22/2009	
Oxamyl		023135-22-0	<0.50	0.5	01/22/2009	
Propoxur		000114-26-1	<0.50	0.5	01/22/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	01/15/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0021	0.0021	01/21/2009	
a-BHC		000319-84-6	<0.0021	0.0021	01/21/2009	
b-BHC		000319-85-7	<0.0021	0.0021	01/21/2009	UJ
d-BHC		000319-86-8	<0.0021	0.0021	01/21/2009	
y-BHC		000058-89-9	<0.0021	0.0021	01/21/2009	
4,4'-DDD		000072-54-8	<0.0063	0.0063	01/21/2009	
4,4'-DDE		000072-55-9	<0.0021	0.0021	01/21/2009	
4,4'-DDT		000050-29-3	<0.0063	0.0063	01/21/2009	UJ
Dieldrin		000060-57-1	<0.0021	0.0021	01/21/2009	UJ
Endosulfan I		000959-98-8	<0.0021	0.0021	01/21/2009	UJ
Endosulfan II		033213-65-9	<0.0021	0.0021	01/21/2009	UJ
Endosulfan sulfate		001031-07-8	<0.021	0.021	01/21/2009	
Endrin		000072-20-8	<0.0021	0.0021	01/21/2009	
Endrin aldehyde		007421-93-4	<0.0063	0.0063	01/21/2009	
Heptachlor		000076-44-8	<0.0021	0.0021	01/21/2009	
Heptachlor epoxide		001024-57-3	<0.0021	0.0021	01/21/2009	UJ
Methoxychlor		000072-43-5	<0.011	0.011	01/21/2009	UJ
Mirex		002385-85-5	<0.011	0.011	01/21/2009	
Hexachlorobenzene		000118-74-1	<0.0021	0.0021	01/21/2009	
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	01/30/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109847				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 16				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthylene		000208-96-8	<5.3	5.3	01/30/2009	
Anthracene		000120-12-7	<5.3	5.3	01/30/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	01/30/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	01/30/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	01/30/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	01/30/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	01/30/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	01/30/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	01/30/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	01/30/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.5	10.5	01/30/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	01/30/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	01/30/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.5	10.5	01/30/2009	
2-Chloronaphthalene		000091-58-7	<5.3	5.3	01/30/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	01/30/2009	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	01/30/2009	
Chrysene		000218-01-9	<2.1	2.1	01/30/2009	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	01/30/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	01/30/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	01/30/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	01/30/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	01/30/2009	
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	01/30/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	01/30/2009	
Diethylphthalate		000084-66-2	<5.3	5.3	01/30/2009	
2,4-Dimethylphenol		000105-67-9	<10.5	10.5	01/30/2009	
Dimethylphthalate		000131-11-3	<5.3	5.3	01/30/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	01/30/2009	
2,4-Dinitrophenol		000051-28-5	<21.1	21.1	01/30/2009	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	01/30/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	01/30/2009	
Fluoranthene		000206-44-0	<2.1	2.1	01/30/2009	
Fluorene		000086-73-7	<2.1	2.1	01/30/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	01/30/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	01/30/2009	UJ
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	01/30/2009	
Hexachloroethane		000067-72-1	<5.3	5.3	01/30/2009	UJ
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	01/30/2009	
Isophorone		000078-59-1	<2.1	2.1	01/30/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	01/30/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	01/30/2009	
Naphthalene		000091-20-3	<2.1	2.1	01/30/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	01/30/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	01/30/2009	
4-Nitrophenol		000100-02-7	<21.1	21.1	01/30/2009	
Pentachlorophenol		000087-86-5	<10.5	10.5	01/30/2009	
Phenanthrene		000085-01-8	<2.1	2.1	01/30/2009	
Phenol		000108-95-2	<2.1	2.1	01/30/2009	
Pyrene		000129-00-0	<2.1	2.1	01/30/2009	
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	01/30/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	109847				
Date Received	01/13/2009 10:17 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	DISTRIBUTION
Date Collected			01/12/2009 1:15 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde. 16				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	01/30/2009	
Sulfur, mol. (S6)		013798-23-7	6		01/30/2009	NJ
Sulfur, mol. (S8)		010544-50-0	30		01/30/2009	NJ

Field Comments

Lab Comments

QC / Sample Comments

505: Aldrin and methoxychlor estimated due to poor matrix spike recovery.
608: b-BHC, 4,4'-DDT, dieldrin, endosulfan I, endosulfan II, heptachlor epoxide, and methoxychlor estimated due to poor matrix spike and QC recovery.
515.1: Dalapon estimated due to masked peak in confirmation GC channel, unable to confirm presence in sample.
625: Hexachlorobutadiene and hexachloroethane estimated due to poor matrix spike recovery.

Approved By SROBERTS **On** 02/04/2009

NO BILLING

OhioEPA
Division of Drinking and Ground Waters

RADIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)

MAIL COMPLETED REPORT TO:
Ohio EPA, Division of Drinking and Ground Waters
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

PUBLIC WATER SYSTEM INFORMATION:
PWS Name:
STU Name:
PWSID #: STU #:
Address: CLYDE 16
County:
Contact Person: CHRIS KERNAN
Contact Phone: 614/644-2903

ANALYTICAL INFORMATION:
Preservation Location: ☐ Field ☐ Laboratory ☐ None
Preservation Type:
☐ ASCORBIC ACID ☐ HCL ☐ NAOH
☐ CLCH2COOH ☐ HNO3 ☐ NAS
☐ FILTERED ☐ ICED ☐ NH4CL
☐ H2SO4 ☐ NA2O3S2 ☐ UNPRESERVED
☐ OTHER (Explain)

LABORATORY INFORMATION:
Reporting Lab: N/A ID:
Analytical Lab: ODH LAB ID: 12345
Reporting Lab Sample #: R5560 -01
Sample Received Date: 1/13/09 QC Completed Date: 3/25/09
QC Completed by: S Clay

SAMPLE INFORMATION:
Sample Monitoring Point: EP RS Other
Sample Collection Date: 1/13/09 Time: 13:15
Sample Purpose: ☐ Compliance ☐ Resample ☐ New Well
☒ Other (explain): SURVEY
Sample Collected by: M. SLATTERY
Repeat for Sample #:

SAMPLE LOCATION DESCRIPTION/LAB REMARKS:
Gamma Scan: All nuclides < MDA 1/16/09 SC

ANALYTICAL RESULTS - RADIO ISOTOPES (RADS) :

Parameters	Cont. ID	Sign	Result	Unit	Analysis Date	Method	Analyst Number
* Alpha, total	4000	<	3	pCi/L	2/2/09	222	293X
Alpha, dissolved	4040			pCi/L			
Alpha, suspended	4041			pCi/L			
* Beta, total	4100	<	4	pCi/L	2/17/09	165	293X
Beta, dissolved	4042			pCi/L			
Beta, suspended	4043			pCi/L			
Barium-140	4278			pCi/L			
Cesium-134	4270			pCi/L			
Cesium-137	4276			pCi/L			
Iodine-131	4264			pCi/L			
Potassium-40	4044			pCi/L			
* Radium-226	4020	<	1	pCi/L	3/25/09	169	293X
* Radium-228	4030	<	1	pCi/L	3/17/09	183	293X
Radium, total	4010			pCi/L			
Radon-222	4004			pCi/L			
Strontium-90	4174			pCi/L			
Strontium-89	4172			pCi/L			
Tritium	4102			pCi/L			
* Uranium, total	4006	<	1	pCi/L	3/25/09	18X	293X
Uranium-234	4007			pCi/L			
Uranium-235	4008			pCi/L			
Uranium-238	4009			pCi/L			

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	110018				
Date Received	02/06/2009 10:19 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	SURVEY
Date Collected		02/05/2009 2:05 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	232	10	mg/L	02/12/2009	
TOC	TOC	P680	2.4	2	mg/L	02/23/2009	
ICPMS_DW	Arsenic	P1002	<2.0	2	ug/L	02/09/2009	
ICPMS_DW	Beryllium	P1012	<0.20	0.2	ug/L	02/09/2009	
ICPMS_DW	Cadmium	P1027	<0.20	0.2	ug/L	02/09/2009	
ICPMS_DW	Chromium	P1034	3.2	2	ug/L	02/09/2009	
ICPMS_DW	Cobalt	P1037	<2.0	2	ug/L	02/09/2009	
ICPMS_DW	Copper	P1042	30.8	2	ug/L	02/09/2009	
ICPMS_DW	Lead	P1051	2.6	2	ug/L	02/09/2009	
ICPMS_DW	Nickel	P1067	<2.0	2	ug/L	02/09/2009	
ICPMS_DW	Selenium	P1147	<2.0	2	ug/L	02/09/2009	
ICPMS_DW	Thallium	P1059	<1.5	1.5	ug/L	02/09/2009	
ICP_DW	Aluminum	P1105	<200	200	ug/L	02/09/2009	
ICP_DW	Barium	P1007	<15	15	ug/L	02/09/2009	
ICP_DW	Calcium	P916	38	2	mg/L	02/09/2009	
ICP_DW	Hardness, Total	P900	111	10	mg/L	02/09/2009	
ICP_DW	Iron	P1045	<50	50	ug/L	02/09/2009	
ICP_DW	Magnesium	P927	4	1	mg/L	02/09/2009	
ICP_DW	Manganese	P1055	<10	10	ug/L	02/09/2009	
ICP_DW	Potassium	P937	5	2	mg/L	02/09/2009	
ICP_DW	Sodium	P929	18	5	mg/L	02/09/2009	
ICP_DW	Strontium	P1082	82	30	ug/L	02/09/2009	
ICP_DW	Zinc	P1092	<10	10	ug/L	02/09/2009	
Mercury_DW	Mercury	P71900	<0.20	0.2	ug/L	02/17/2009	
Alkalinity	Alkalinity	P410	63.7	5	mg/L	02/13/2009	
Ammonia	Ammonia	P610	<0.050	0.05	mg/L	02/06/2009	
Bromide	Bromide	P71870	<20.0	20	ug/L	02/17/2009	
COD	COD	P340	<20	20	mg/L	02/10/2009	
Chloride	Chloride	P940	49.0	5	mg/L	02/18/2009	
Fluoride	Fluoride	P951	1.10	0.2	mg/L	02/25/2009	
Nitrate_DW	Nitrate	P620	1.00	0.5	mg/L	02/06/2009	
Sulfate	Sulfate	P945	26.2	10	mg/L	02/17/2009	
TKN	TKN	P625	0.29	0.2	mg/L	02/12/2009	
TP	Total Phosphorus	P665	0.085	0.01	mg/L	02/12/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 02/26/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	110019				
Date Received	02/06/2009 10:19 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	SURVEY
Date Collected			02/05/2009 2:05 PM	**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 504.1	**ug/L**					
1,2-Dibromoethane		000106-93-4	<0.019	0.019	02/17/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.019	0.019	02/17/2009	
USEPA 505	**ug/L**					
Aldrin		000309-00-2	<1.0	1	02/12/2009	
Dieldrin		000060-57-1	<1.0	1	02/12/2009	
Endrin		000072-20-8	<0.038	0.038	02/12/2009	
Heptachlor		000076-44-8	<0.038	0.038	02/12/2009	
Heptachlor epoxide		001024-57-3	<0.019	0.019	02/12/2009	
Hexachlorobenzene		000118-74-1	<0.038	0.038	02/12/2009	
Hexachlorocyclopentadiene		000077-47-4	<0.19	0.19	02/12/2009	
Methoxychlor		000072-43-5	<1.0	1	02/12/2009	
y-BHC		000058-89-9	<0.019	0.019	02/12/2009	
Chlordane		000057-74-9	<0.19	0.19	02/12/2009	
Toxaphene		008001-35-2	<1.0	1	02/12/2009	
USEPA 508A	**ug/L**					
PCB-1016		012674-11-2	<0.10	0.1	02/19/2009	
PCB-1221		011104-28-2	<0.10	0.1	02/19/2009	
PCB-1232		011141-16-5	<0.10	0.1	02/19/2009	
PCB-1242		053469-21-9	<0.10	0.1	02/19/2009	
PCB-1248		012672-29-6	<0.10	0.1	02/19/2009	
PCB-1254		011097-69-1	<0.10	0.1	02/19/2009	
PCB-1260		011096-82-5	<0.10	0.1	02/19/2009	
USEPA 515.1	**ug/L**					
Dalapon		000075-99-0	<0.22	0.22	02/18/2009	
Dicamba		001918-00-9	<0.22	0.22	02/18/2009	
Dinoseb		000088-85-7	<0.22	0.22	02/18/2009	
Acifluorfen		050594-66-6	<0.22	0.22	02/18/2009	
2,4-D		000094-75-7	<0.22	0.22	02/18/2009	
2,4,5-TP		000093-72-1	<0.22	0.22	02/18/2009	
Pentachlorophenol		000087-86-5	<0.11	0.11	02/18/2009	
Picloram		001918-02-1	<0.22	0.22	02/18/2009	
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	02/10/2009	
Bromobenzene		000108-86-1	<0.50	0.5	02/10/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	02/10/2009	
Bromodichloromethane		000075-27-4	4.68	0.5	02/10/2009	
Bromoform		000075-25-2	<0.50	0.5	02/10/2009	
Bromomethane		000074-83-9	<0.50	0.5	02/10/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	02/10/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	02/10/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	02/10/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	02/10/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	02/10/2009	
Chloroethane		000075-00-3	<0.50	0.5	02/10/2009	
Chloroform		000067-66-3	14.2	0.5	02/10/2009	
Chloromethane		000074-87-3	<0.50	0.5	02/10/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	02/10/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	110019				
Date Received	02/06/2009 10:19 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	SURVEY
Date Collected		02/05/2009 2:05 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
4-Chlorotoluene		000106-43-4	<0.50	0.5	02/10/2009	
Dibromochloromethane		000124-48-1	1.26	0.5	02/10/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	02/10/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	02/10/2009	
Dibromomethane		000074-95-3	<0.50	0.5	02/10/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	02/10/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	02/10/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	02/10/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	02/10/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	02/10/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	02/10/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	02/10/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	02/10/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	02/10/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	02/10/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	02/10/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	02/10/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	02/10/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	02/10/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	02/10/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	02/10/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	02/10/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	02/10/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	02/10/2009	
Methylene chloride		000075-09-2	<0.50	0.5	02/10/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	02/10/2009	
Naphthalene		000091-20-3	<0.50	0.5	02/10/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	02/10/2009	
Styrene		000100-42-5	<0.50	0.5	02/10/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	02/10/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	02/10/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	02/10/2009	
Toluene		000108-88-3	<0.50	0.5	02/10/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	02/10/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	02/10/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	02/10/2009	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	02/10/2009	
Trichloroethene		000079-01-6	<0.50	0.5	02/10/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	02/10/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	02/10/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	02/10/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	02/10/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	02/10/2009	
o-Xylene		000095-47-6	<0.50	0.5	02/10/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	02/10/2009	
Trihalomethanes (THMs)		Unknown	20.1	0.5	02/10/2009	
USEPA 525.2	**ug/L**					
Acetochlor		034256-82-1	<0.21	0.21	03/02/2009	
Alachlor		015972-60-8	<0.21	0.21	03/02/2009	
Atrazine		001912-24-9	1.16	0.21	03/02/2009	

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Laboratory Organic Analysis Data Report

Sample	110019				
Date Received	02/06/2009 10:19 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	SURVEY
Date Collected		02/05/2009 2:05 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 525.2	**ug/L**					
Benzo[a]pyrene		000050-32-8	<0.02	0.02	03/02/2009	
bis(2-Ethylhexyl)adipate		000103-23-1	<0.63	0.63	03/02/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	0.79	0.63	03/02/2009	J
Butachlor		023184-66-9	<0.21	0.21	03/02/2009	
Metolachlor		051218-45-2	<0.21	0.21	03/02/2009	
Metribuzin		021087-64-9	<0.21	0.21	03/02/2009	
Propachlor		001918-16-7	<0.21	0.21	03/02/2009	
Simazine		000122-34-9	0.42	0.21	03/02/2009	
Hexadecane		000544-76-3	0.5		03/02/2009	NJ
n-Hexadecanoic acid		000057-10-3	0.7		03/02/2009	NJ
Octadecanoic acid		000057-11-4	0.5		03/02/2009	NJ
Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbuty		002315-61-9	0.7		03/02/2009	NJ
USEPA 531.1	**ug/L**					
Aldicarb		000116-06-3	<0.50	0.5	02/11/2009	
Aldicarb sulfone		001646-88-4	<0.50	0.5	02/11/2009	
Aldicarb sulfoxide		001646-87-3	<0.50	0.5	02/11/2009	
Carbaryl		000063-25-2	<0.50	0.5	02/11/2009	
Carbofuran		001563-66-2	<0.50	0.5	02/11/2009	
3-Hydroxycarbofuran		016655-82-6	<0.50	0.5	02/11/2009	
Methiocarb		002032-65-7	<0.50	0.5	02/11/2009	
Methomyl		016752-65-7	<0.50	0.5	02/11/2009	
Oxamyl		023135-22-0	<0.50	0.5	02/11/2009	
Propoxur		000114-26-1	<0.50	0.5	02/11/2009	
USEPA 547	**ug/L**					
Glyphosate		001071-83-6	<5.0	5	02/18/2009	
USEPA 608	**ug/L**					
Aldrin		000309-00-2	<0.0022	0.0022	02/18/2009	
a-BHC		000319-84-6	0.0022	0.0022	02/18/2009	
b-BHC		000319-85-7	<0.0022	0.0022	02/18/2009	
d-BHC		000319-86-8	<0.0022	0.0022	02/18/2009	
y-BHC		000058-89-9	<0.0022	0.0022	02/18/2009	
4,4'-DDD		000072-54-8	<0.0067	0.0067	02/18/2009	
4,4'-DDE		000072-55-9	<0.0022	0.0022	02/18/2009	
4,4'-DDT		000050-29-3	<0.0067	0.0067	02/18/2009	
Dieldrin		000060-57-1	<0.0022	0.0022	02/18/2009	
Endosulfan I		000959-98-8	<0.0022	0.0022	02/18/2009	
Endosulfan II		033213-65-9	<0.0022	0.0022	02/18/2009	UJ
Endosulfan sulfate		001031-07-8	<0.022	0.022	02/18/2009	
Endrin		000072-20-8	<0.0022	0.0022	02/18/2009	
Endrin aldehyde		007421-93-4	<0.0067	0.0067	02/18/2009	
Heptachlor		000076-44-8	<0.0022	0.0022	02/18/2009	
Heptachlor epoxide		001024-57-3	<0.0022	0.0022	02/18/2009	
Methoxychlor		000072-43-5	<0.011	0.011	02/18/2009	
Mirex		002385-85-5	<0.011	0.011	02/18/2009	
Hexachlorobenzene		000118-74-1	<0.0022	0.0022	02/18/2009	
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	02/25/2009	

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Laboratory Organic Analysis Data Report

Sample	110019				
Date Received	02/06/2009 10:19 AM	**Matrix**	DW	**Collected by**	SLATTERY, MIKE
	Begin	**End**		**Sample Type**	SURVEY
Date Collected		02/05/2009 2:05 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthylene		000208-96-8	<5.3	5.3	02/25/2009	
Anthracene		000120-12-7	<5.3	5.3	02/25/2009	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	02/25/2009	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	02/25/2009	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	02/25/2009	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	02/25/2009	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	02/25/2009	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	02/25/2009	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	02/25/2009	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	02/25/2009	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.6	10.6	02/25/2009	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	02/25/2009	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	02/25/2009	
4-Chloro-3-methylphenol		000059-50-7	<10.6	10.6	02/25/2009	
2-Chloronaphthalene		000091-58-7	<5.3	5.3	02/25/2009	
2-Chlorophenol		000095-57-8	<2.1	2.1	02/25/2009	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	02/25/2009	
Chrysene		000218-01-9	<2.1	2.1	02/25/2009	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	02/25/2009	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	02/25/2009	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	02/25/2009	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	02/25/2009	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	02/25/2009	
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	02/25/2009	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	02/25/2009	
Diethylphthalate		000084-66-2	<5.3	5.3	02/25/2009	
2,4-Dimethylphenol		000105-67-9	<10.6	10.6	02/25/2009	
Dimethylphthalate		000131-11-3	<5.3	5.3	02/25/2009	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	02/25/2009	
2,4-Dinitrophenol		000051-28-5	<21.3	21.3	02/25/2009	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	02/25/2009	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	02/25/2009	
Fluoranthene		000206-44-0	<2.1	2.1	02/25/2009	
Fluorene		000086-73-7	<2.1	2.1	02/25/2009	
Hexachlorobenzene		000118-74-1	<2.1	2.1	02/25/2009	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	02/25/2009	
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	02/25/2009	
Hexachloroethane		000067-72-1	<5.3	5.3	02/25/2009	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	02/25/2009	
Isophorone		000078-59-1	<2.1	2.1	02/25/2009	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	02/25/2009	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	02/25/2009	
Naphthalene		000091-20-3	<2.1	2.1	02/25/2009	
Nitrobenzene		000098-95-3	<2.1	2.1	02/25/2009	
2-Nitrophenol		000088-75-5	<2.1	2.1	02/25/2009	
4-Nitrophenol		000100-02-7	<21.3	21.3	02/25/2009	
Pentachlorophenol		000087-86-5	<10.6	10.6	02/25/2009	
Phenanthrene		000085-01-8	<2.1	2.1	02/25/2009	
Phenol		000108-95-2	<2.1	2.1	02/25/2009	
Pyrene		000129-00-0	<2.1	2.1	02/25/2009	
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	02/25/2009	

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Laboratory Organic Analysis Data Report

Sample	110019				
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	Begin	**End**		**Sample Type**	SURVEY
Date Collected		02/05/2009 2:05 PM		**Station ID**	
Program	NWDO-DDAGW			**Customer ID**	
Client	DDAGW_CLYDE			**External ID**	
OEPA Division	DDAGW				
Location	Clyde 20				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	02/25/2009	
Cyclohexanone		000108-94-1	7		02/25/2009	NJ
Sulfur, mol. (S6)		013798-23-7	10		02/25/2009	NJ
Sulfur, mol. (S8)		010544-50-0	70		02/25/2009	NJ

Field Comments

Lab Comments 5 vials for VOC, 1 Vial for 547 submitted KLH

QC / Sample Comments 608: Endosulfan II estimated due to poor QC recovery.
525.2: Bis92-ethylhexyl)phthalate estimated due to elevated QC recovery.

Approved By SROBERTS **On** 03/04/2009