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Reichlin Consulting, LLC

TECHNICAL MEMORANDUM

To: Cheryl Carlson
Ann McIver

From: Douglas B. Reichlin, PE- Reichlin Consulting, LLC
Christopher B. Cain, PE- MWH Americas

Subject: Program Management Project No. 9099- Industrial Pretreatment Program Local Limits Evaluation

Task 6 & 8: Final Local Limits Evaluation Report

Date: July 16, 2012

We are pleased to present the final report on the evaluation of the Local Limits for the CWA Authority's Industrial Pretreatment Program (IPP) for the Indianapolis service area. This report has been prepared in accordance with the appropriate 2004 EPA Guidance, and with available Region V EPA guidance, and using the Region V EPA Local Limits spreadsheet template, as modified to conform to the 2004 EPA Guidance.

The analysis shows that the current Local Limits may be retained as-is with no changes, and that no additional new Local Limits are necessary at this time. Alternately, many of the current Local Limits could be significantly increased based on this analysis, or even eliminated altogether. Relaxation or elimination of the current Local Limits would be considered a Major Modification of the Local Limits, and subject to EPA review and approval. CWA Authority's final decision as to how to retain or modify the Local Limits should be reflected in the Indianapolis Sewer User Ordinance. Once implemented, this report, along with the revisions to the SUO, if any, will be provided to EPA Region V for review and approval of any changes.

The analysis also utilized a modified uniform allocation method, as described more fully in the report, and as discussed and agreed to with the Authority's IPP management staff. Specifically, maximum allowable industrial loadings (MAILs) were first allocated to Federal Categorical industries at the Categorical limit concentrations. Remaining MAIL allocations were then uniformly allocated to the remaining Significant Industrial Users (SIUs) that required an allocation of each pollutant based on historical data and as included in current IPP Permit limits. This approach will allow the Authority to permit Categorical SIUs using the Federal Categorical Limit, whether higher or lower than the Local Limit. This approach could affect IPP Permit Limits for approximately 25 Categorical SIUs for copper

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CWA Authority, Inc.

Indianapolis Industrial Pretreatment Program

Local Limits Evaluation

July 2012

citizens energy group™

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Thank you for the opportunity to assist the Authority with this important task. We look forward to providing any additional technical assistance that may be needed to finalize the Local Limits, and to support final approval from Region V EPA, and IDEM.

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INTRODUCTION AND BACKGROUND

Permit Requirements and Regulatory Authority

The CWA Authority, Inc. (the Authority) owns and operates two advanced wastewater treatment facilities (AWTs), the Belmont AWT and the Southport AWT, that are currently permitted under the Federal Pollution Discharge Elimination System (NPDES) Permit number IN0023183, issued by the Indiana Department of Environmental Management (IDEM). The current NPDES permit was issued to the City of Indianapolis (City) on December 27, 2007, with an effective date of February 1, 2008, and expires on January 31, 2013. On August 26, 2011, the NPDES permit was modified and became effective to reflect the transfer of ownership from the City to the Authority. The current NPDES Permit is included in Appendix A-1.

The NPDES Permit requires the permittee to maintain an Industrial Pretreatment Program (IPP) to monitor and regulate industrial contributions of pollutants to the AWTs in accordance with Federal and State regulations, through, among other things, application of the Federal Categorical Limits as well as locally promulgated Local Limits for the discharge of certain pollutants. Part III, section A, item 1 of the NPDES Permit stipulates requirements for the permittee to conduct a "technical re-evaluation" of the Local Limits at least once during the term of the Permit, using the most recent EPA Guidance documents for Local Limits development. Local Limits are required in the IPP of the NPDES permittee to ensure that contributory Significant Industrial Users (SIUs) do not cause:

a) pass-through of pollutants that would adversely affect receiving stream water quality, or violate NPDES Permit discharge limits;

b) inhibition of AWT biological treatment processes by toxicity effects or;

c) contamination of sewage sludge residuals that would interfere with the regulated disposal of sludge by the disposal method utilized by the AWTs.

While the NPDES Permit has been transferred to the Authority, the IPP legal authority is still maintained by the City, pending EPA approval of the application of transfer of legal authority to the Authority. The City currently retains the legal and enforcement powers required for the IPP through the Sewer User Ordinance (SUO), and associated legal instruments. The Authority performs all of the day-to-day operations, management and administration of the IPP through an Agreement with the City. Any changes to these ordinances and legal instruments, including any proposed revisions to the Local Limits, will need to be adopted by the City to become effective for enforcement by the Authority. The current Indianapolis SUO is included in Appendix A-2.

Local Limits Background

The current Local Limits included in the SUO were originally developed by the City in 1983, and, after review and minor modification, were incorporated in the IPP Program approved by IDEM and USEPA in January 1985. At that time a comprehensive review of pollutants and the various treatment pass-through, inhibition and sludge disposal requirements was conducted in accordance with then applicable EPA Guidance Documents, including significant analytical and pilot testing of site-specific treatment inhibition and removal effects. The Maximum Allowable Headworks Loading (MAHL), Maximum Allowable Industrial Loadings (MAIL), and Local Limits were developed based on allocation to those industries in operation at that time that were reasonably expected to discharge each Pollutant of Concern (POC) at levels significantly above background domestic/ commercial concentrations.

EPA Guidance documents available at that time required that a minimum of ten (10)- heavy metal POCs be evaluated for the Local Limits development. This review culminated in the original Local Limits as listed in Table 1, below, along with the original criteria governing each Local Limit. The minimum 10-POCs are underlined and highlighted in Table 1. The City also screened for other POCs and added several to the initial Local Limits based on their potential to cause issues with pass-through and/or inhibition. Over the years, two of the original Local Limits were modified or eliminated as noted in Table 1, as conditions changed and the City's IPP regulatory approach evolved. These changes were done with review and approval of IDEM and the USEPA, and are explained below.

While the EPA Guidance does not distinguish between total cyanide (CN(T)) and amenable cyanide (CN(A)), the City initially adopted Local Limits for both forms of these POCs. At the time, there was concern that a known routine discharge of iron cyanide (measurable as CN(T) but not as CN(A)) from a specific large industrial discharger might cause release of CN(A) due to photo-degradation in the receiving water. This discharger (Citizens Gas and Coke Utility) is no longer in operation, and no evidence has been found indicating that a CN(A) limit would not fully protect against cyanide discharge. In addition, CN(T) discharges for the remaining SIUs are limited by Federal Categorical standards, which provides protection from cyanide discharges from the most common industrial sources of this contaminant. Therefore, the Local Limit for CN(T) was eliminated from the SUO in 1996, because the significant source was eliminated, and the CN(T) Local Limit was considered to be redundant for the remaining Categorical SIUs. The documentation supporting this change is included in Appendix A-3.

Current IDEM aquatic toxicity Water Quality standards are for free cyanide (CN(free)), and the NPDES Permit was revised to switch from a CN(A) limit to a CN(free) limit. The test method used for the determination of CN(A) is the same as used for CN(free), so that these cyanide forms are considered as being interchangeable for the purpose of this report. Therefore, CN(A) will be used throughout the remainder of this Local Limits report.

The Local Limit for oil and grease (O&G) was eliminated and replaced with a Local Limit for total petroleum hydrocarbons (TPH) in 1994, as shown in Table 1. This change essentially substituted a more appropriate analytical procedure for monitoring and regulating the petroleum oil and grease discharges that need to be excluded from the sewers, without including other non-target materials. While the Oil and Grease test measures relatively biodegradable vegetable oils along with poorly degraded petroleum (mineral) oils, the TPH analysis focuses on measurement of the target petroleum oils. The documentation supporting this change is included in Appendix A-4.

TABLE 1 Original and Current Local Limits

Pollutant	Original Local Limit (mg/L)	Criterion Basis of Original Local Limit	Current Local Limit (mg/L)	Reason for Change from Original to Current Limit
Arsenic As	4.0	Pass-through (Chronic Toxicity)	4.0	No Change
Cadmium Cd	1.2	Inhibition (Trickling Filter)	1.2	No Change
Chromium- total Cr(T)	24.0	Pass-through (Chronic Toxicity)	24.0	No Change
Chromium- hexavalent Cr(VI)	3.4	Pass-through (Acute Toxicity)	3.4	No Change
Copper Cu	2.2	Pass-through (Acute Toxicity)	2.2	No Change
Cyanide-total CN(t)	8.0	Pass-through (Acute Toxicity)	--	Eliminated (1996) due to loss of discharger, and redundancy with Categorical Limits.
Cyanide-amenable/free CN(A)	0.4	Pass-through (Acute Toxicity)	0.4	No Change
Lead Pb	4.7	Inhibition (Trickling Filter)	4.7	No Change
Mercury Hg	0.025	Pass-through (Chronic Toxicity)	0.025	No Change
Nickel Ni	7.3	Inhibition (Trickling Filter)	7.3	No Change
Phenol	46.0	Inhibition (Nitrification)	46.0	No Change
Pentachlorophenol PCP	0.012	Inhibition (Nitrification)	0.012	No Change
Silver Ag	4.2	Pass-through (Chronic Toxicity)	4.2	No Change
Zinc Zn	38.0	Inhibition (Trickling Filter)	38.0	No Change
Oil & Grease O&G	200	Inhibition (Activated Sludge)	---	Eliminated (1994) and replaced with limit for TPH, below.
Total Petroleum Hydrocarbons TPH	---	Not included in Original Local Limits.	200	Replaced O&G (1994) Local Limit with more practical analysis method.

Designates EPA's original 10- heavy metal POCs

The majority of the Local Limits have remained unchanged since the initial program adoption and approval in 1985. Since that time, substantial changes have occurred in the system that may require that these Local Limits be modified to meet the intent of the program; namely, to prevent pass-through, inhibition or sludge contamination.

Since the time that these Local Limits were initially adopted, the EPA issued new Guidance Documents entitled "Local Limits Development Guidance (EPA 833-R-04-002A), July 2004" (2004 EPA Guidance) that have provided modifications and refinements to the Local Limits development methodology. The 2004 EPA Guidance also added five (5)- additional Federal POCs for inclusion in Local Limits reviews. These include two (2)- heavy metals now regulated under 40 CFR Part 503 Land Application requirements, Molybdenum (Mo) and Selenium (Se), and three (3)- conventional wastewater pollutants, biochemical oxygen demand (BOD), total suspended solids (TSS) and ammonia (NH_3).

In addition, the 2004 Guidance provides the specific methodology for three (3)- different types of Local Limits reviews as follows:

1. Initial Evaluation- for potential new Local Limits for a POC;
2. Interim Review- for existing Local Limits for a POC on an annual and ongoing basis;
3. Detailed Re-evaluation- for existing Local Limits for a POC on a longer term basis when conditions have changed significantly from the time when the original Local Limits were developed.

The major difference between an Initial Evaluation and a Detailed Re-evaluation is that only those issues that have significantly changed since the initial evaluation need to be re-evaluated, and data needs may be somewhat less exhaustive than in an initial evaluation. Figure 1 (Figure 2-1 from 2004 EPA Guidance) at the end of this section, provides a flow chart decision tree to determine which methodology to apply for each POC. The significant issues that could determine if an existing Local Limit requires a "detailed re-evaluation" are discussed below, along with a summary of the changes since the original Local Limits evaluation in 1983.

- Changes to discharge limits in the NPDES Permit- The most recent Permit eliminated previous numerical limits for various heavy metals. These, and other heavy metals, are now only required to be monitored and reported in the current Permit. The current Permit also added numerical limits for CN(free/A), and dropped previous numerical limits for CN(T).

- Changes to assumed toxicity limits and/or State Water Quality Standards- Current Water Quality Standards are, in most cases, significantly lower than those that were applied in 1983 when the original Local Limits evaluation was conducted, so the Local Limits may need to be decreased. A number of the original Local Limits were derived based on chronic or acute fathead minnow toxicity values rather than the EPA water quality criteria that were available, but not strictly applicable at the time. Since that time, the EPA Water Quality Criteria have been revised and enacted in the Indiana State Water Quality Standards, which has changed these criteria from guidance into applicable standards. This regulatory change provides justification for requiring review and revision of certain Local Limits.

- Domestic/commercial background concentrations- In most cases the concentrations of pollutants from the non-industrial domestic/commercial sources are lower than those used in the original 1983 Local Limits determination, so higher Local Limits may be allowable. While some of this could be attributable to general reductions in pollutant use and discharge, some of this reduction is also likely to be attributable to improvements in detection levels used in current testing compared to those used in 1983.

- White River background concentrations- In most cases, background concentrations of pollutants found in the White River are also lower than those in 1983. Again, this is likely to be partially attributable to improvements in Water Quality from reduced usage and discharge of pollutants, but is also likely to be somewhat attributable to the use of lower levels of detection in more recent data. These lower concentrations may theoretically allow the local limits to be increased.

- AWT process changes- The AWT treatment process has remained virtually unchanged since the 1983 study, with the exception that additional primary clarifiers have been added to the Belmont AWT to improve primary treatment during wet weather. The additional wet weather expansion projects currently underway at the Belmont AWT and in design for the Southport AWT are not expected to result in changed performance, POC removal or inhibition considerations.

- Changes to sludge disposal regulations- Significant changes to the regulations for Land Application as well as for Landfill Disposal have been promulgated since 1983. The Authority does not currently utilize Land Application for sewage sludge disposal, so these potential regulatory limits were not considered in this review. The maximum concentration limits defining characteristic toxic wastes, as measured by the Toxicity Characterization Leaching Procedure (TCLP) test method, were implemented in 1990 for landfill disposal of AWT sludge, and these regulatory limits were included in the Local Limits review.

- Changes to Incinerator air emissions regulations- Significant changes to air emissions regulations from the AWT sludge incinerators have occurred since 1983. The pertinent regulations governing these emissions include the following:

    1. 40 CFR- Part 503 Risk Specific Concentrations limits for As, Cd, Cr and Ni, respectively, issued in 1993, and amended in 1999;
    2. 40 CFR- Part 503 Federal Ambient Air Quality Standards for Pb issued in 1993, and amended in 1999;

3. 40 CFR- Part 61, Parts C & E Federal Emissions Standards Hg and Be, respectively, issued in 1975, and amended in 2000;
4. 40 CFR- Part 60, subpart LLLL "CAA Section 129" Air Emissions Limits for Cd, Pb and Hg, newly issued in 2011 with compliance date in 2016 .

The incinerators currently comply with all regulations in items 1 -3, above. Additional capital changes to the incinerators are in progress that will ensure compliance with the new Part 60 regulations in item 4, above. These improvements will include upgrading the scrubber units to the latest Venturi-Pac scrubber systems, and installing new "low NOx" burners on the incinerators, as well as adding wet electrostatic precipitators (WESP) following the scrubbers.

- Industrial flow contributions- The volume and concentration of pollutants discharged from industrial sources have changed significantly since 1983, which affects the Local Limits evaluation. The Authority's IPP permit procedure is to apply Local Limits only to those SIUs that have a reasonable likelihood to discharge a particular POC at levels significantly higher than the domestic/commercial concentrations. The SIU volumes used for each POC in the allocation calculation are significantly lower than those used in the 1983 Local Limits development. These lower SIU flow allocations tend to increase the Local Limits compared to the values used in 1983.

Table 2 provides a summary of the major changes to these variables that have occurred since the 1983 study. Additional details of the comparison of these variables are included in the Technical Memorandum dated 2/21/12, included in Appendix B. Evaluation of the changed conditions will apply to all of the POCs in Table 1 for which an initial Local Limit was developed, except CN(T) and O&G, because the original Local Limits for these POCs were eliminated from the SUO, and there is no technical basis for including them in this evaluation. The new Local Limit for TPH is supportable, as-is, based upon consideration of the potential impact of petroleum hydrocarbons on sewers and sewer workers, upstream of the point at which wastewater treatment plant impacts and pass-through become a concern. This limit was not determined based on headworks loading calculations or regulatory factors that are subject to change and need not be re-evaluated at this time.

Based on the above review, all of the other POCs that have current Local Limits will require a "detailed re-evaluation" due to the significant changes that have occurred since they were originally evaluated and adopted, in nearly all of the key variables affecting the Local Limits calculation. In addition, an "initial evaluation" will need to be conducted for the remaining Federal POCs, where applicable, and for any other new POCs identified during the review. Due to the scope and magnitude of the changes that have occurred since 1983, the Detailed Re-evaluation will need to follow essentially the same procedure as the Initial Evaluation for all POCs. The Detailed Re-evaluation and the Initial Evaluation are therefore combined in the Local Limits Evaluation in this document.

FIGURE 1 EPA Local Limits Guidance Decision Tree

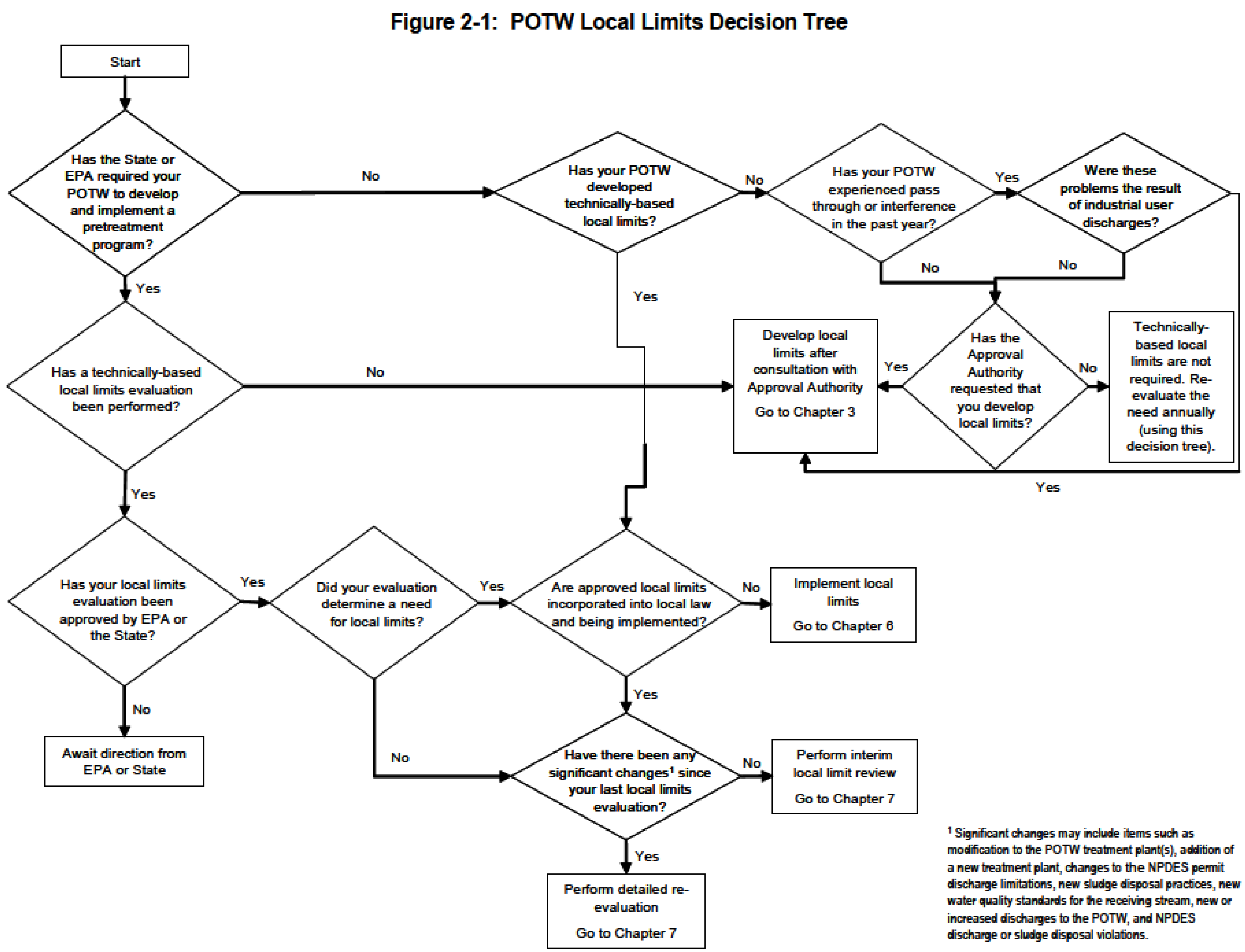


TABLE 2 Summary of Changed Conditions for Local Limit POCs Since 1983 Review

POCs With Current Local Limits for Review	Toxicity/WQ Limits Concentration % Change	Air Permit Regulations	Landfill Disposal Regulations	NPDES Permit Limits	Industrial Flow % Change	Dom/Com Background % Change	Upstream Water Quality % Change
As	9400%	503 Rules Added	TCLP Limits Added		<90.3%>	<90%>	<75%>
Cd	<94%>	503 & 129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<77.6%>	<93%>	<95%>
Cr(T)	1138%	503 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<88.6%>	<72%>	No change
Cr(VI)	<48%>				<99.8%>	No Change	No Data available 1983
Cu	<38%>			Eliminated in 2008 Permit	<80.1%>	<38%>	<35%>
CN(A)	<54%>			Reduced in 2008 Permit	<90.7%>	<54%>	Below LOD
Pb	<45%>	503 & 129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<79.7%>	<65%>	<82%>
Hg	<94%>	129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<97.1%>	<90%>	<88%>
Ni	<84%>	503 Rules Added		Eliminated in 2008 Permit	<88.1%>	No Change	<74%>
Ag	76%		TCLP Limits Added		<55.4%>	No Change	<90%>
Zn	<81%>			Eliminated in 2008 Permit	<75.1%>	No Change	42%
Phenol	WQ Limit Eliminated				<99.8>	<60%>	<90%>
Penta-chlorophenol	300%				<100%> None	No Data available in 1983	No Data available in 1983

OVERVIEW OF AWTs AND INDUSTRIAL PRETREATMENT PROGRAM

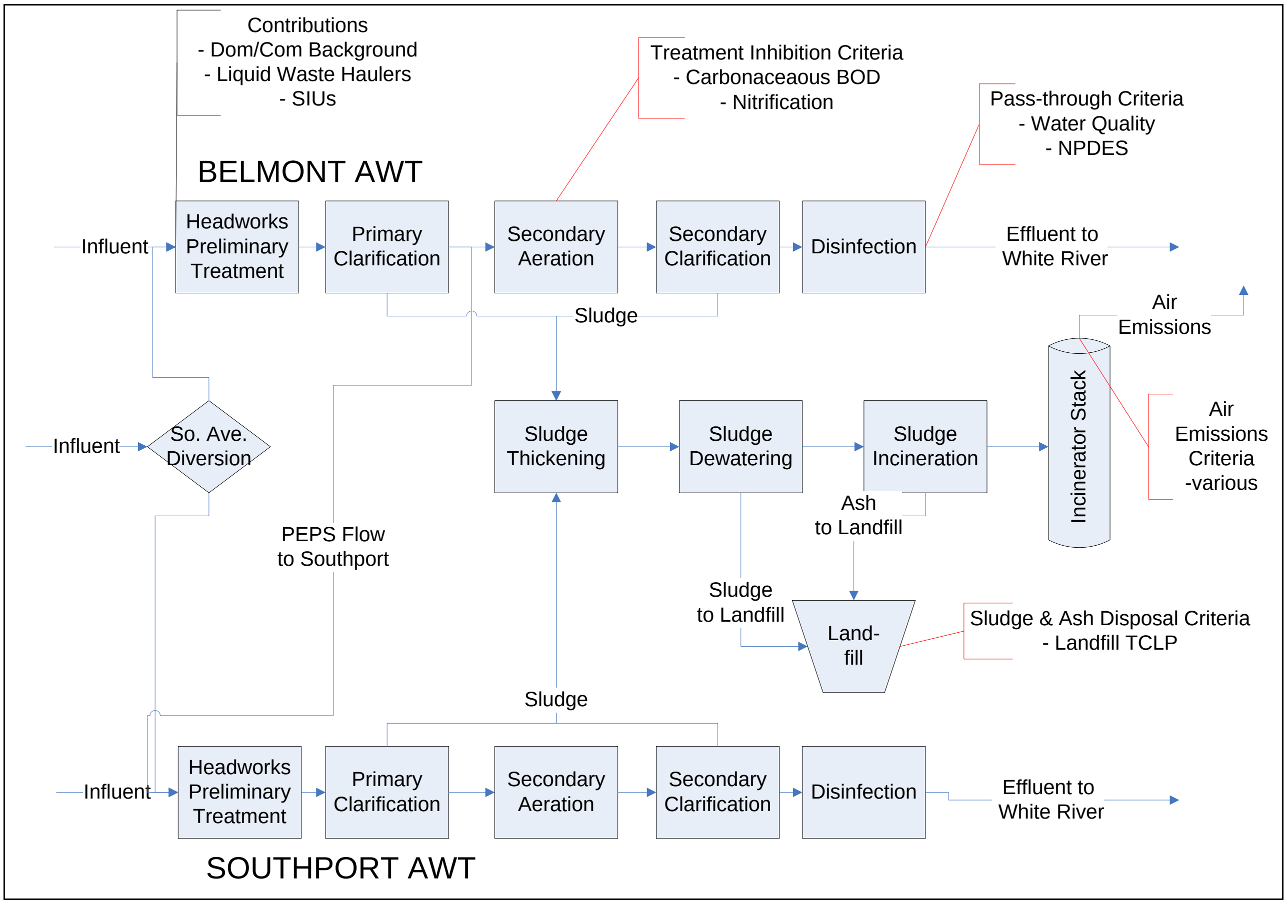
The Belmont AWT is a 120- million gallons per day (MGD) capacity secondary treatment plant with filtration and nitrification capabilities, and the Southport AWT is a 125 MGD capacity secondary treatment plant with filtration and nitrification capabilities. There are two (2)- methods of splitting and balancing flows and loads between the AWTs;

- Utilization of the Southern Avenue diversion structure that allows splitting flows from the Adler-McCarty & Pleasant Run Interceptor sewers between the two (2)- AWTs, and;
- Use of the Belmont AWT primary effluent pump station (PEPS) to transfer up to 35 MGD of primary effluent from the Belmont AWT to the Southport AWT via an interceptor sewer.

These flow and load balancing tools are actively utilized to manage flow and load during both dry weather and wet weather events to ensure that the AWTs operate within their capacities, while optimizing treatment costs, and maximizing wet weather flow capture. Current combined average daily flows are approximately 188 MGD. The water quality based effluent limits (WQBEL's) for the AWTs are based on the combined discharge capacity of 245 MGD and utilize a 10-year, 7 day average low flow ($7Q_{10}$) of 44.5 MGD. For reference, the $7Q_{10}$ that was used in the 1983 Local Limits Study was 32 MGD.

Combined sludges from the AWTs are thickened, dewatered and incinerated in multiple hearth incinerators at the Belmont AWT facility, with backup disposal to a local landfill. Incinerator ash is disposed of at a local landfill. A simplified schematic of the facilities is shown in Figure 2, along with the POC contribution sources and the various criteria for development of Local Limits throughout the AWTs.

FIGURE 2 Authority AWTs Simplified Schematic



The Authority's IPP currently permits 53- SIUs that have a cumulative average discharge flow of 9.0 MGD or slightly less than 5% of total AWT flows. Individual IPP Permits issued to the SIUs include Local Limits for a POC only if the SIU is a significant discharger of that POC, as determined by site investigation, IPP Permit application materials and review of historic testing data. A SIU is considered a significant discharger of a POC if the POC is utilized in their industrial process, or is present in the historical SIU discharge at levels significantly higher than the range of concentrations reasonably expected from typical domestic/commercial sources.

In addition to the Local Limits, the SIUs IPP Permits include applicable Federal Categorical discharge limits for 40- SIUs, regulating 13- different POCs. In general, current applicable Categorical Limits are lower than the Authority's IPP Local Limits, and are thus more restrictive than the Local Limits, with the exception for Cu and CN(A), for which the specific Categorical Limits are generally higher than the current Local Limit. The IPP Permits currently include the lower of the Federal Categorical Limit or the Local Limit, as required in the SUO. Several of the Categorical SIUs have difficulty meeting the lower Local Limit for Cu, and consideration for this has been incorporated in the Local Limits analysis, and is discussed further in the Local Limits calculation section.

Appendix C contains a more detailed list of the SIUs, including flow rates, POCs included in Permits as either Local Limits or Categorical Limits, and which AWT each SIU discharges to.

DATA COLLECTION AND REVIEW

The Local Limits evaluation included collection and review of POC concentration data from a variety of sources, as summarized below. The raw data and any graphical or statistical analysis are included in the Appendices, referenced below. In general, individual data points that were outside of three (3)-standard deviations from the average were considered as outliers and discarded from the analysis. This approach is somewhat more conservative than the option of discarding data points outside of two (2)-standard deviations from the average.

WWTP Influent and Effluent Data

The Authority samples for a variety of POCs in the AWT influent and effluent on a regular basis, as required by the NPDES permit. The full year of data from 2010 was used in this review. 2011 data was also reviewed after the 2010 data review was completed, and was considered to be statistically consistent with the 2010 data. Additional POC influent and effluent sampling and analysis was conducted to support the Local Limits evaluation process. This data was used to evaluate treatment plant removal rates, as discussed in a later section of this report. Influent data was also compared to the 1983 domestic/commercial background data to determine if reductions to those values were warranted. Influent data was also used to compare the current headworks concentrations to the maximum concentrations allowable to avoid pass-through, inhibition or sludge contamination. WWTP influent and effluent data is included in Appendices D-1 through D-5.

Domestic/ Commercial Background Data

The original 1983 data for domestic/commercial background data was considered to be applicable for this report, and this data was supplemented with a review of the current headworks data. No additional domestic/commercial sampling was found to be necessary for this review.

Sludge Total Metals Data

The Authority collects data on sludge total metals concentrations on a regular basis as required in the NPDES Permit, and as necessary to monitor compliance with the incinerator emissions regulations that are based on sludge total metals concentrations. Additional sampling of total Ag concentrations was conducted to support the analysis of Local Limits derived from landfill disposal criteria. This data from 2010 - 2011 is included in Appendix E.

Sludge TCLP Data

The Authority has collected TCLP data on sludge and ash as required to meet landfill disposal requirements. This data from 2011 is included in Appendix F.

Priority Pollutant Screening Data

The Authority samples for EPA Priority Pollutants on a regular schedule as required in the NPDES Permit. Data from 2008, 2009 and 2010 was reviewed, and this data is included in Appendix G.

Whole Effluent Toxicity (WET) Testing Data

The Authority collects WET testing data on a regular basis as required in the NPDES Permit. The AWTs have never failed any WET testing over at least the last five (5)- year period. WET test data has not been included in the Appendices, but has been provided to IDEM and EPA regularly as part of the NPDES Permit reporting.

White River Data

The Authority samples for background pollutant concentrations in the White River. Data available from 2010 - 2011 was reviewed. In addition, IDEM established receiving water concentrations for several POCs in the 2007 IDEM Waste Load Allocation- Reasonable Potential to Exceed Analysis (2007 IDEM WLA-RPE). This report and a summary of the data reviewed are included in Appendices H-1 & H-2.

SIU Discharge Data

The Authority collects data on all of the SIUs on a regular basis, as required in each SIU Permit. Data from January 2010 through February 2012 was reviewed to determine allocation requirements for certain POCs, as discussed later in this report.

Liquid Waste Hauler Data

The Authority allows for controlled discharge of certain liquid wastes that are hauled to the Belmont AWT, in accordance with the appropriate EPA Guidance for this activity. The majority of the hauled waste is from domestic septic tanks. As part of this program, data is collected on the composite samples taken from the liquid waste haulers. This data, and the calculation of annual mass loadings of POCs from liquid waste haulers are included in Appendix I.

Incinerator Air Emissions Data

The Authority monitors the incinerator stack emissions and incinerator feed sludge total metals as required to comply with the various air emissions regulatory requirements. The incinerator feed sludge equivalent limits were derived from analysis conducted in 1993 and 1996. Air emissions test data for 2011 for Hg and Be were reviewed. This data was used to determine an equivalent sludge based concentration limit for these POCs. The summary of sludge concentration limits from 1993 and 1996, as well as the 2011 Hg and Be air emissions stack testing are included in Appendices J-1 & J-2, respectively.

POC SELECTION FOR LOCAL LIMITS EVALUATION

The selection of POCs to be included in the Local Limits Evaluation was based on the 2004 EPA Guidance. The considerations are summarized below.

1. All of the 15- Federal POCs required in the EPA 2004 Guidance were considered for review for the Local Limits screening. The only POC of the 15- that was not included in the final Local Limits evaluation was Mo. The only controlling regulation or criteria for Mo is for Part 503 Land Application regulations. The Authority does not dispose of sludge via land application.

Therefore, there is no reason to evaluate Mo for a Local Limit at this time. There are no Federal or State Water Quality standards, air emissions standards, landfill disposal standards or treatment inhibition limits for Mo that would warrant inclusion in the Local Limits evaluation.

2. Annual Priority Pollutant scans were reviewed to determine if any other toxic organic POCs were present in the influent, effluent or sludge at sufficient quantities to warrant inclusion based on pass-through, inhibition or sludge contamination considerations. No additional POCs were identified from this review.

3. TCLP results for sludge were screened for POCs at sufficient concentrations to warrant inclusion based on landfill disposal considerations. No additional POCs were identified from this review.

4. Review of NPDES Permit Limits for POCs not included in the 2004 EPA Guidance list. The current Permit modified the Permit Limit for CN(A) to a lower limit for CN(free). Nevertheless, the Permit allows the permittee to use the exact same test method for CN(free) that is used for CN(A), and they are treated as being interchangeable for the purposes of this Local Limits evaluation, so that the Local Limits evaluation for CN(A) is essentially applicable to the CN(free) NPDES Permit Limit.

   The current Permit also added interim monitoring requirements and future final numerical limits for chlorides. Review of the 2007 IDEM WLA-RPE analysis shows that the Permit limits were derived from the lower, controlling Chronic Aquatic Criteria (CAC). The current and historic AWT discharges can generally meet the proposed final daily maximum discharge limit, but would regularly exceed the proposed final monthly average discharge limits. Therefore, the City filed an application for a variance to these final limits, which, after several modifications was approved and posted for the required Public Comment period. No comments were received, and the Authority is operating under the approved variance. The technical basis of the chlorides variance request were generally as follows:

   - The majority of the sources for chlorides are non-point sources including domestic and commercial water softeners, and road salt runoff to combined sewers, which are difficult to control;
   - There are no significant industrial sources of chlorides that would be suitable for regulation by development of Local Limits;
   - Treatment options for chlorides would involve highly expensive reverse osmosis treatment at the AWTs;
   - IDEM should modify the methodology for assessing acute and chronic toxicity limits for chlorides based on more current technical studies, including use of the so-called Iowa Method, which relates chloride toxicity as a function of both sulfate and total hardness concentrations.

IDEM has recently adopted the so-called Iowa method for determination of chloride toxicity, and the proposed rule change is in the period of public comment. Final adoption of the new rule is expected in mid-2012.

Preliminary reviews of the impact of using this new method, show that the CAC Water Quality limit would increase from the current 230 mg/L to approximately 420 mg/L. The Acute Aquatic Criteria (AAC) would decrease from the current 860 mg/L to approximately 680 mg/L. Preliminary calculations show that, if these revised CAC and AAC limits had been used in the 2007 IDEM WLA-RPE analysis, there would not have been a reasonable potential to exceed (RPE) determination, and that no NPDES Permit Limits would have been warranted. Even if an NPDES Permit limit is warranted by a future IDEM WLA-RPE study after the Iowa Method Water Quality standards are adopted, any potential Permit Limit will still be governed by the Iowa Method CAC Water Quality limits, and would therefore be increased significantly (approx 80%) from current proposed final NPDES Permit limits. This increased NPDES Permit limit could easily be met based on historic AWT discharge data. AWT loadings are also likely be less than any threshold values warranting a Local Limit under this scenario. Based on the above discussion, it was determined that there was no reason to evaluate a Local Limit for chlorides at this time. This evaluation will be re-visited in future Local Limits reviews.

No other POCs have specific limits in the NPDES Permit. All POCs that are listed as “monitor and report” are already included in the 15- Federal POCs, or are discussed under item 7, below.

5. Review of any historic pass through, inhibition or sludge contamination problems for additional POCs. There have been no occurrences of pass-through, inhibition or sludge contamination, and thus no other POCs were identified by these criteria.

6. Review of historic Whole Effluent Toxicity (WET) test results to determine if any other POCs have been identified and implicated in WET failures. All historic WET testing has been negative for toxicity, and thus no additional POCs have been identified from this analysis.

7. Review of Indiana Water Quality standards for CAC and AAC for other POCs that may have the potential to exceed these Water Quality Standards. In particular, any POCs included in any IDEM RPE evaluation should be considered, since these POCs are most likely to be measurable in the receiving stream, and potentially approaching the State Water Quality Standard to have warranted inclusion in a WLA-RPE study. The 2007 IDEM RPE evaluation included several POCs that do not currently have Local Limits, as discussed below.

   Chlorides were included in the 2007 IDEM WLA-RPE, and resulted in proposed final NPDES Permit Limits. No Local Limit will be evaluated for chlorides at this time, as discussed under item 4, above.

CN(T) was included in the 2007 WLA-RPE study, and was found to have no potential to exceed proposed potential effluent limits (PELs), and no numerical limits were added to the current NPDES Permit. Discharge potential effluent quality values (PEQs) were several orders of magnitude below the PELs. Considering these results, and since CN(T) Local Limits had been included in the original Local Limits, and were eliminated in the 2006 revision, CN(T) will not be re-evaluated for a Local Limit at this time.

Fluoride (Fl), Sulfate (SO4) and total dissolved solids (TDS) were included in the 2007 IDEM WLA-RPE study. No PEL was proposed for TDS. Neither Fl nor SO4 were found to have a reasonable potential to exceed proposed PELs, and no numerical limits were included in the current NPDES Permit. Requirements for ongoing monitoring and reporting were included in the NPDES Permit for Fl, SO4 and TDS. Based on this analysis, it was determined that there was no need to develop Local Limits for these POCs at this time.

8. Review of any air quality standards applicable to the AWTs. There are several air quality standards for the Authority's AWTs, as discussed previously. Most of the POCs included in these air quality standards already have Local Limits, with the exception of Beryllium, which was added to the Local Limits evaluation for this report.

9. Review of industrial and commercial discharges for other POCs that may be discharged in significant quantities. No additional POCs have been identified by the IPP coordinator based on historic review of discharges from SIUs.

10. Review of hauled waste discharged at the AWT. No additional POCs have been identified from hauled waste dischargers. The majority of hauled waste is from domestic sources, and there have been no instances of hazardous waste being accepted at the AWT.

11. Inclusion of any POC for which a Local Limit is already in place. All of the POCs with current Local Limits were included in the Local Limits re-evaluation, with the exception of TPH, as discussed previously.

The final list of 18- POCs that were included for a detailed Local Limits evaluation is shown in Table 3 below, along with the reason(s) for inclusion.

TABLE 3 Selected POCs for Local Limits Evaluation

POC to be Evaluated	Federal 15- POC List?	Current Local Limit?	NPDES Permit Limit?	Indiana Water Quality Limit?	2007 IDEM RPE ?	Incinerator Air Emissions Limit?	TCLP Sludge & Ash Landfill Limit?	Any significant dischargers, sources or Categorical SIUs?
As	Y	Y	N	Y	N	Y	Y	Y
Be	N	N	N	N	N	Y	N	N
Cd	Y	Y	N	Y	Y	Y	Y	Y
Cr(T)	Y	Y	N	Y	N	Y	Y	Y
Cr(VI)	N	Y	N	Y	N	N	N	Y
Cu	Y	Y	N	Y	N	N	N	Y
CN(a)	N	Y	Y	Y	Y	N	N	Y
Pb	Y	Y	N	Y	N	Y	Y	Y
Hg	Y	Y	N	Y	Y	Y	Y	Y
Ni	Y	Y	N	Y	N	Y	N	Y
Se	Y	Y	N	Y	N	N	Y	Y
Phenol	N	Y	N	N	N	N	N	Y
PCP	N	Y	N	Y	N	N	N	N
Ag	Y	Y	N	Y	N	N	Y	Y
Zn	Y	Y	N	Y	N	N	N	Y
BOD	Y	N	Y	N/A	N/A	N/A	N/A	Y
TSS	Y	N	Y	N/A	N/A	N/A	N/A	Y
NH3	Y	N	Y	N/A	N/A	N/A	N/A	Y

DETERMINATION OF VARIABLES USED IN LOCAL LIMITS CALCULATION

Domestic/Commercial Background Concentration

The 2004 EPA Guidance recommends that the value used for allocation to the non- SIU sources of each POC be a reasonable representation of the cumulative contribution from specific average domestic/commercial sources, as well as from inflow & infiltration (I&I) sources, and, if applicable, combined sewer sources. This overall non-SIU contribution is termed the domestic/commercial background concentration for the purposes of allocation of POCs to industrial users and subsequent calculation of Local Limits.

I&I and CSO sources are difficult, if not impossible, to isolate for measurement separate from other sewer system inputs. Therefore, it was considered to be impractical to attempt to separately quantify and test these various sources. Instead, the original 1983 domestic/commercial values were used as a reasonable default maximum value, and the AWT influent was used as a cross-check of the validity of that value. Specifically, the AWT influent concentrations include the combined average contributions of all domestic/commercial, I&I, combined sewer and SIU sources. Hence, by definition, the combined domestic/commercial background concentrations must be equal to or less than the influent values, by mass balance. When the influent values are normally below the 1983 domestic/commercial values, the effluent values can safely be used in lieu of the 1983 domestic/commercial values. If the influent values are greater than the 1983 values, that could be attributable to the SIUs, so that the converse is not true, and it is reasonable to utilize the 1983 values, as there is no reasonable basis to believe that the domestic/commercial contributions would have increased since 1983.

The cumulative distribution curves were evaluated for each POC's combined AWT influent values to determine the most reasonable AWT influent value to assume for this approach. In most cases, the 75th percentile AWT influent concentrations were used as a conservative surrogate for the maximum possible domestic/commercial background values, where that value was less than the 1983 value, rather than the median or average value. However, for Hg and Zn, the 60th percentile values were used, because of a sharp inflection in the distribution frequency at this point, indicating an intermittent industrial discharge source above this value. If the selected AWT influent value was less than the 1983 value, it was assumed as the new domestic/commercial concentration. Otherwise, the 1983 values were retained for this analysis.

This approach is considered to be very conservative since it yields a higher domestic/commercial background concentration than is probable, and thus a lower industrial allowance and lower Local Limits than other methods. Where all influent data was less than the level of detection (LOD), a concentration of ½ of the LOD was assumed, per the statistical methodology used by IDEM discussed in the following Removal Rate section of this report. However, for As, all of the influent and effluent values were below the LOD, but a mass balance of this conservative pollutant using measured sludge concentrations and assuming a reasonable removal rate, indicated a value of less than ½ of the LOD. Therefore, this lower value was used for the upper limit for the domestic commercial concentration for As.

Table 4 summarizes this data, along with recommended values from the 2004 EPA Guidance- Appendix V for comparison, and provides the final domestic/commercial background concentrations used in the Local Limits analysis.

TABLE 4 Domestic/Commercial Background Levels

Parameter		As (1)	Cd	Cr(t)	Cr(VI) (2)	Cu	CN(a)	Pb	Hg	Ni	Ag (3)	Zn	Se (3)	Be (3)	Phenol	Pentachlorophenol (3)
1983 Value Used	ug/L	10.0	5.0	20.0	1.0	100.0	25.0	20.0	0.2	10.0	5.0	260.0			5.0	0
1982 Indianapolis Survey Data	ug/L		30	20		100		20		10		260				
EPA (Ave)	ug/L	7	8	34		140	82	58	2	47	19	231			4	
EPA Min	ug/L	0.4	0.76	1		5	10	1	0.1	1	0.7	10				
EPA Max	ug/L	88	110	1200		740	370	2004	54	1600	1052	1280				
2010 AWT Influent Data Review Statistical MAX Possible Dom/Com (75th percentile, ex. Hg & Zn 60th %)	ug/L	1.5	0.38	5.93	5.0	109.4	15.25	7.01	0.030	14.8	5.0	460.8	5.0	2.0	62.25	10.0
FINAL 2011 Selected	ug/L	**1.0**	0.38	5.93	1.0	109.4	15.25	7.01	0.030	10.0	**5.0**	260	**5.0**	**2.0**	5.0	**10.0**
Percentage Change from 1983 Value	%	-90%	-93%	-70%	0%	9%	-39%	-65%	-85%	0%	0%	0%			0%	

(1) Arsenic All AWT influent <3 ug/L detection Limit. Mass balance with sludge implies 1 ug/L or less. Use 1 ug/L.

(2) Cr (VI) 1982 data showed <10 ug/L detection limit in domestic sewage and <1 ug/L detection limit in tap water. All 2011 AWT Influent <10 LOD. Use 1 ug/L

(3) All Ag, Be, Se & pentachlorophenol AWT influent <LOD. Use 1/2 LOD.

Removal Rate

The AWT influent and effluent data, as well as AWT sludge concentration data, was analyzed to determine appropriate AWT removal rates for each POC. In many cases, most or even all of the influent and/or effluent data indicated concentrations below the Limit of Detection (LOD). 2004 EPA Guidance provides a variety of options to deal with data below the LOD, including;

- Assuming that the concentration is equal to the LOD,
- Assuming that the concentration is equal to ½ of the LOD,
- Assuming that the concentration is equal to zero,
- Performing more robust statistical review of the data to establish reasonable data values.

IDEM uses a simplified statistical method when evaluating discharge data for an IDEM WLA-RPE analysis. This method determines the percentage of data points below the LOD, and multiplies one (1)- minus that percentage value by the LOD to set a value for those samples below the LOD, unless more than 50% of the samples are below the LOD, in which case they apply ½ of the LOD as a lower bound; i.e.

(1 - %samples < LOD) x LOD = sample value, with sample value minimum = 0.5 x LOD

This simplified method was used, where appropriate, in evaluation of the data for calculation of removal rates, and for comparison of headworks concentrations to allowable maximums.

There are four (4)- methods available for the determination of AWT POC removal rates, as detailed in the 2004 EPA Guidance.

1. Average Daily Removal Efficiency (ADRE)- Average of individual daily removal rates from sets of paired influent and effluent data.
2. Mean Removal Efficiency (MRE)- Removal rate of the average influent data and the average effluent data, using either paired or unpaired data.
3. Decile Method- Evaluation of the cumulative distribution of daily removal rates from at least 10-paired data sets to determine the most reasonable decile percentage value applicable.
4. Conservative Pollutant Removal (CPR)- Derived from influent data and sludge concentration data for pollutants that are not created or destroyed in the treatment process.

Each of these techniques was reviewed for each POC, if applicable based on the data, for comparison, and to reach the most reasonable value for each POC. The ADRE approach was generally rejected as being non-representative for all of the POCs based on this review. The cumulative distribution curves generally supported using at least the 50^{th} percentile, or median removal rate, or even higher percentile removal rate. Several of the POCs showed a strong relationship of influent concentration to removal rate (i.e. higher influent concentrations yielded higher removal rates). This tends to support the use of the MRE and/or CPR method as representative of long term average conditions. The final best estimate of removal rates was selected based on an engineering evaluation of the reasonableness of each result, and the correlation or “consensus” of the various approaches. However, when there was insufficient, or no influent data above the LOD, calculation of the removal rate is not possible using any of these methods. In these cases, typical values derived from other treatment plants were assumed, using values from the 2004 EPA Guidance, Appendix R, where available. Treatment plant removal rates for Cr(VI) were not available in 2004 EPA Guidance, Appendix R, so a literature review source was found that provided typical removal rates. This source is included in Appendix K.

Table 5 provides a summary of the AWT removal rates using the MRE method derived from the 1983 study and from data from 2010 as available for each POC. In some cases as indicated in Table 5, the 2010 data did not yield sufficient data above the LOD to be useful in calculating removal rates. The CPR method is also shown for each POC, along with the values from 2004 EPA Guidance- Appendix R, as well as the Cr(VI) removal rates from the literature review source. The final selected AWT removal rate is also provided. This removal rate methodology does not apply to the analysis of the three (3)- conventional POCs, BOD, TSS and NH3, and they are not shown on this Table.

Primary treatment removal rates were based on 2004 EPA Guidance- Appendix R values, or the mass balance removal rates from the original 1983 study, which were in some cases adjusted to reflect somewhat improved primary treatment TSS removal rates due to the expansion of additional primary clarifiers at the AWTs.

TABLE 5 AWT Removal Rates

Parameter		As (3)	Cd (1)	Cr(t)	Cr(VI)	Cu	CN(a)	Pb (3)	Hg (1)	Ni	Ag (1)	Zn	Se (2)	Be	Phenol	Pentachlorophenol
Primary Treatment																
1983 Value Used	%	46%	0%	29%		38%	0%	46%	0%	0%	0%	42%			0%	
1983 Mass Balance	%	66%	0%	29%		38%	0%	51%		0%		42%			0%	
EPA (Median)	%		15%	27%		22%	27%	57%	10%	14%	20%	27%			8%	
FINAL 2011 Selected	%	63%	15%	29%		38%	0%	51%	10%	0%	20%	42%			8%	

(1) Cadmium, Mercury, Silver 1982 data below LOD. Use EPA Median.

(2) Selenium Primary Removal N/A since no Inhibition Limits.

(3) Arsenic & Lead Primary Removal Rate in 1982 limited to average TSS removal rate of 46%. Current ave primary TSS removal rate = 63%, for use as Max primary removal.

Table 5 (Continued)

Parameter		As	Cd	Cr(t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Se	Be	Phenol	Pentachlorophenol
Overall Treatment																
1983 Value Used	%	95.0%	61.0%	94.0%	0.0%	85.0%	85.0%	99.0%	90.0%	19.0%	99.0%	52.0%			94.0%	99.0%
1983 PILOT MRE (1)	%	86.4%	96.7%	92.0%	0.0%	89.8%	85.2%	99.5%	70.0%	3.8%	82.9%	50.2%	82.4%		94.1%	99.99%
EPA (Median Activated Sludge Treatment)	%	45.0%	67.0%	82.0%		86.0%	69.0%	61.0%	60.0%	42.0%	75.0%	79.0%	50.0%		90.0%	
EPA Min	%	11.0%	25.0%	25.0%		2.0%	3.0%		1.0%	2.0%	17.0%	23.0%	25.0%		3.0%	
EPA Max	%	78.0%	99.0%	97.0%		99.0%	99.0%	92.0%	95.0%	99.0%	95.0%	99.0%	89.0%		99.0%	
Literature Review	%				40.0%											
2010 AWT Influent/Effluent Data (MRE Method) (2)	%		58.0%	53.3%		88.2%	54.3%	77.6%	98.2%	45.0%		76.5%	77.2%		90.0%	
12 Month- AWT Sludge Based (CPR Method) (2)	%	57.4%	99.9%	72.2%	no data	99.9%	n/a	99.9%	63.7%	48.5%		99.9%	57.2%	49.5%	n/a	n/a
FINAL 2011	%	86.4%	96.7%	92.0%	40.0%	89.8%	54.3%	99.5%	90.0%	46.7%	82.9%	88.2%	82.4%	50.0%	94.1%	99.99%

(1) 1983 PILOT MRE Based on Final Data compilation. 1983 Value used was prior to completion of PILOT Test Data.
(2) Blank values indicates that there was insufficient data above the LOD to quantify removal rates.

POC	2010 DATA QUALITY	FINAL BASIS OF REMOVAL RATE
Arsenic	All Influent and (by extension) All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Cadmium	Some Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Chromium (total)	Most Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Hexavalent Chromium	All Influent and Most Effluent < Detection Limit	Use Literature Value
Copper	No Influent and No Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Cyanide (amenable)	Few Influent and Some Effluent Data < Detection Limit	Use 2010 MRE
Lead	Most Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Mercury	No Influent and All Effluent Data < Detection Limit	Intermediate value- Best Judgement
Nickel	No Influent and No Effluent Data < Detection Limit	Use Ave 2010 MRE & CPR
Silver	All Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Zinc	No Influent and No Effluent Data < Detection Limit	Use Ave 2010 MRE & CPR
Selenium	Most Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Beryllium	All Influent and All Effluent Data < Detection Limit	Use 50% removal, based on CPR
Phenol	No Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE
Pentachlorophenol	All Influent and All Effluent Data < Detection Limit	Use 1983 PILOT Data MRE

SIU Flows

The SIU Permits were reviewed to determine which SIUs would need an allocation for each POC. In addition, the Categorical SIUs were reviewed to determine which POCs were governed by Federal Categorical Limits, and at which concentrations, so that mass allocations of each POC could be determined for Categorical SIUs.

The allocation method selected for determination of Local Limits was to allocate the Federal Categorical Limit level of discharge for each of the Categorical SIUs first, and then to allocate the remaining allowable discharge mass uniformly amongst the non-Categorical SIUs that were determined to discharge at concentrations significantly greater than the normal range of domestic/commercial background level. Since most of the Categorical Limits are below the Local Limit, this approach prevents the Local Limit from being overly restrictive on the remaining non-Categorical SIUs. The higher Categorical Limits were allowed in this allocation for Categorical Cu dischargers, to allow them to meet the higher Categorical Limits, since there is an excess of Cu allocation available. However, for CN, the Categorical allocation was limited to the current Local Limit, or lower Categorical Limit, as applicable, since the current headworks loadings are closer to the allowable levels to meet the NPDES Permit Limits, and allocation at the higher Categorical Limits, would potentially result in non-compliance with these NPDES Permit Limits.

The results of this review are summarized in Table 6, below. Appendix C contains additional details on the information summarized here.

TABLE 6 Summary of SIU Flows and Categorical Loads

POC	Total SIU Flows (MGD)	Categorical SIU Flows (MGD)	Categorical SIU Allocation (lbs/day)	Non-Categorical Flows for Local Limits Allocation (MGD)
As	0.41	0.28	4.86	0.13
Be	--	--	--	--
Cd	2.37	1.22	6.37	1.15
Cr(T)	1.44	1.41	40.47	0.03
Cr(VI)	0.02	--	--	0.02
Cu	2.43	1.38	34.98	1.05
CN(A)	1.07	0.85	1.78	0.22
Pb	2.44	1.64	7.72	0.80
Hg	0.36	0.03	0.0006	0.33
Ni	1.24	1.21	37.62	0.03
Phenol	0.03	--	--	0.03
Penta-chlorophenol	--	--	--	--
Se	0.25	0.004	0.05	0.25
Ag	0.95	0.94	3.12	--
Zn	2.66	2.08	46.31	0.58

Treatment Inhibition

The AWTs have had no instances of treatment plant inhibition of the secondary treatment process for either carbonaceous treatment of for nitrification treatment in at least the last 5 years. The 1983 study included specific pilot testing for inhibition using spiking studies to develop some additional site specific inhibition limits. The spiking studies did not attempt to identify the concentration at which inhibition occurred, but were instead intended to determine the impact of potentially anticipated pollutant concentrations on the AWT processes. All spike concentrations were well tolerated by the pilot plant treatment system, and are therefore considered as minimum tolerable levels. In some cases, literature values suggest lower inhibition values than warranted from the pilot plant spiking studies, in which case the higher pilot plant values are used. In other cases, literature values are higher than the maximum attempted pilot plant spiking values, and the higher literature values are used. There are no site specific inhibition concentrations established, but rather maximum values tested. Treatment inhibition literature values were derived from the 2004 EPA Guidance- Appendix G and from a literature review source for Cr(VI) where no EPA Guidance was available. Table 7 provides a summary of the inhibition data reviewed and the final selected inhibition values for the Local Limits analysis.

TABLE 7 Treatment Process Inhibition Concentrations

Parameter		As	Cd	Cr(t/III)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Se	Be	Phenol	Pentachlorophenol
1983 Value Used	ug/L	270.0	60.0	890.0	250.0	450.0	600.0	700.0	4.0	300.0	5,000.0	900.0			4,000.0	1.0
1982 PILOT Max Concentration/ Spike Attempted With no Inhibition	ug/L	270.0	60.0	630.0	30.0	450.0	600.0	700.0	4.0	300.0		900.0			500.0	30.0
Carbonaceous																
EPA Min	ug/L	100.0	1,000.0	1,000.0	1,000.0	1,000.0	100.0	10,000.0	100.0	1,000.0	250.0	5,000.0			50,000.0	950.0
EPA Max	ug/L	100.0	10,000.0	100,000.0	1,000.0	1,000.0	5,000.0	100,000.0	1,000.0	2,500.0	5,000.0	10,000.0			200,000.0	150,000.0
FINAL 2011 Selected Carbonaceous	ug/L	270.0	5,500.0	50,500.0	1,000.0	1,000.0	2,550.0	55,000.0	550.0	1,750.0	2,625.0	7,500.0			125,000.0	75,475.0
Nitrification																
EPA Min	ug/L	1,500.0	5,200.0	250.0	1,000.0	50.0	340.0	500.0		250.0		80.0			4,000.0	
EPA Max	ug/L	1,500.0	5,200.0	1,900.0	10,000.0	480.0	500.0	500.0		5,000.0		500.0			10,000.0	
FINAL 2011 Selected Nitrification	ug/L	1,500.0	5,200.0	1,075.0	5,500.0	480.0	600.0	700.0		2,625.0		900.0			7,000.0	30.0

Use Average of EPA Min & Max, unless PILOT Max is greater

Use EPA MAX for Cu, based on 1983 PILOT Max Spike

TCLP Landfill Disposal Limits for Sludge & Ash

The TCLP requirements for landfill disposal of sludge and ash establish upper limits for the total leachable concentration of metals in each. The total metals concentration in the incinerator ash is a function of the incinerator capture efficiency of each POC. Therefore, the TCLP data derived from the sludge and from the ash can each be stated as a ratio to the total pollutant concentration found in the sludge; i.e. the ratio of the POC that will leach from the sludge or ash and be measured in the TCLP test. This ratio can then be used to determine the maximum allowable sludge concentration for a Local Limits determination, in conjunction with the plant removal rate. This approach only applies to conservative pollutants such as heavy metals that are not created or destroyed in the treatment and/or incineration process. Table 8 below provides the determination of the TCLP/sludge ratio and the maximum allowable sludge concentration for use in the Local Limits calculation for sludge and ash disposal.

TABLE 8 TCLP Limits for Sludge and Ash Disposal

Parameter		As	Cd	Cr(t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag (1)	Zn	Se	Be	Phenol	Pentachlorophenol
TCLP Max Landfill Disposal	mg/L	5.00	1.00	5.00				5.00	0.20		1.00		1.00			
Sludge Concentration	mg/Kg	4.65	7.61	26.36				61.49	0.13		1		33.27			
Sludge TCLP Concentration (all < detection limit. Use 1/2 detection limit)	mg/L	0.025	0.025	0.05				0.1	0.00125		0.025		0.025			
Sludge TCLP/ Sludge [C] Ratio		0.0054	0.0033	0.0019				0.0016	0.00955		0.0250		0.0008			
Max Sludge Concentration	mg/Kg	931	304	2,636				3,075	21		40		1,331			
Ash TCLP Concentration	mg/L	0.05	0.0125	0.025				0.025	0.001		0.025		0.2			
ASH TCLP/ Sludge [C] Ratio		0.0107	0.0016	0.0009				0.0004	0.00764		0.0250		0.0060			
Max Sludge Concentration	mg/Kg	465	609	5,272				12,299	26		40.0		166			

(1) Silver Data all <LOD use 1/2 LOD

Incinerator Air Emissions Limits

The various incinerator emissions regulations were reviewed along with current and historic incinerator stack air emissions data to determine the equivalent maximum sludge concentrations that can be tolerated while still meeting the regulations. These maximum allowable sludge concentrations were then used to determine Local Limits for these regulatory criteria. Table 9 shows the summary of this analysis, and provides the maximum total metals concentration in the sludge based on current incinerator performance.

TABLE 9 Incinerator Air Emissions Based Maximum Sludge Concentrations

Pollutant	Regulation Source	Dispersion Factor (DF) (ug/m3/g/s)	Sludge Feeding Rate (SF) (Dry tonnes/per day)	Sludge Control Efficiency (CE)	Risk Specific Concentration (RSC) (ug/m3)	New Section 129 Air Emission Limits (mg/m3)	NAAQS Lead Limit (ug/m3)	National Emissions Standards	Maximum Allowable Daily Concentration in Sludge (mg/Kg)
Arsenic	40 CFR Part 503	2.3	131.54	97.50%	0.023				262.7
Cadmium	40 CFR Part 503	2.3	131.54	96.55%	0.057				471.8
Cadmium	New 40 CFR Part 60	2.3	131.54	96.55%		0.095			7.5
Chromium	40 CFR Part 503	2.3	131.54	99.85%	0.064				12,184.8
Lead	40 CFR Part 503	2.3	131.54	98.85%			0.15		372.5
Lead	New 40 CFR Part 60	2.3	131.54	98.85%		0.3			71.3
Nickel	40 CFR Part 503	2.3	131.54	99.80%	2.00				285,580.2
Mercury	40 CFR Part 61	2.3	131.54	0.00%				12.8	97.3
Mercury	New 40 CFR Part 60	2.3	131.54	0.00%		0.28			0.8
Beryllium	40 CFR Part 61	2.3	131.54	97.57%				0.04	12.5

Total Emission Air flow 8827 DSCFM = 359,717.90 m3/day

129 Air Regulations compliance effective 3/2016. Incinerator retro-fitting project in place to improve scrubbers and CE.

Preliminary 129 Reg limits presented for information and not used in current Local Limit Study.

Local Limits will be updated for 129 Regs, with new CE and performance data collected at time of Incinerator Start-up.

CE Source: 1993 & 1996 Stack Test & Sludge Data for Incinerator #4 with Venturi Pac Scrubber

CE Source for Hg, Be: 2011 Stack Test Data & Sludge Data, shown below.

Mercury air emissions data shows higher mass than total sludge mass.Use 0.0001% Control Efficiency for worst case.

	Sludge [C] (mg/kg)	Sludge Load (lbs/day)	Incinerator Stack Emission Rate (lb/Dton)	Air Stack Load (lbs/day)	Removal Efficiency
Hg	0.13	0.038	0.00090	0.1305	-2.4615
Be	0.27	0.078	0.000013	0.001885	0.9757

The new Part 129 regulations will significantly reduce the maximum emissions limits, and therefore the maximum allowable sludge concentrations for Cd, Pb and Hg. However, since these new regulations are not yet in effect, and there are significant capital improvements in progress that are expected to improve the capture of these POCs during the incineration process, it is premature to use these values to set Local Limits at this time. Once the new incinerator scrubbers and burner systems are installed, the capture rate for these POCS, termed the Incinerator Control Efficiency (CE), in Table 9, will be determined, and a re-evaluation of the Local Limits criteria will be reviewed. This current Local Limits evaluation will utilize the currently enforceable limits for these POCs.

Water Quality Standards

The Indiana Water Quality Standards include chronic and acute criteria based on aquatic toxicity. The more stringent chronic criteria will govern in the calculation of Local Limits, except that for silver, the acute criterion applies because no chronic criterion has been set. As noted previously, most of the applicable water quality criteria are lower than those applied in 1983, and thus more protective of the environment. However, in the case of arsenic, chrome, and silver, the currently applicable limits are higher. While the silver limit increases moderately, (by a factor of less than 2), the arsenic and total chromium limits are dramatically higher because relatively conservative (protective) judgments were made in 1983, relating to potential criteria that are not strictly applicable at this time. Now that the Indiana Water Quality Standards have been officially enacted, these judgments are no longer appropriate. Table 10 shows the Chronic Aquatic Criteria (CAC) and Acute Aquatic Criteria (AAC) from the Indiana Code for each of the selected POCs. The values listed are for total pollutant concentration.

Background Water Quality Concentrations

Background water quality concentrations are monitored on a regular basis. Table 11 provides a summary of the water quality data from 2010 – 2011, as well as additional sampling conducted in 2012 for Cr(VI).

TABLE 10 Water Quality Limits

Parameter		As (III)	Cd	Cr (III)	Cr(VI)	Cu	CN(a) (1)	Pb	Hg	Ni	Ag	Zn	Se	Be	Phenol	Pentachlorophenol
IDEM Chronic TRC Limit	ug/L	190	2.9	545	11.0	32.5		14.3	0.012	428		288	35			12.8
IDEM Acute TRC Limit	ug/L	360	14.9	4571	16.0	54.0		367.5	2.4	3854	15.5	319	130			20.3

pH	7.8	downstream of AWT's
Hardness (mg/L)	326	From IDEM 2007 WLA RPE Report- Median Value

Lowest Governing Water Quality Limit

(1) CN(a) has a site specific WQ Standard that was used to develop NPDES Permit limits, so the State WQ Standard was not included here.

TABLE 11 White River Water Quality Data

Parameter		As (1)	Cd	Cr(t)	Cr(VI) (1, 2)	Cu	CN(a) (1,3)	Pb	Hg (1,4)	Ni	Ag (1)	Zn	Se (1)	Be (1)	Phenol (1)	Pentachlorophenol (5)
2007 IDEM WLA	ug/L		0.0041				0		0.000							
2011 Data	ug/L	**0.5000**	0.1424	0.6833	**2.5000**	2.4713	**2.5000**	0.5424	**0.2500**	1.9746	**0.5000**	10.7302	**2.5000**	**0.5000**	**2.5000**	
2011 Use	ug/L	0.5000	0.1424	0.6833	0.6833	2.4713	0.0000	0.5424	0.0120	1.9746	0.5000	10.7302	2.5000	0.5000	2.5000	**10.0000**
Limit of Detection		1.0	0.2	1.0	5.0	2.0	5.0	1.0	0.5		1.0	5.0	5.0	1.0	5.0	20.0
% of data <LOD		100%	88%	83%	100%	37%	100%	92%	100%	None	100%	2%	100%	100%	100%	100%

(1) All As, Cr(VI), CN(a), Hg, Ag, Se, Be & Phenol data < LOD, therefore use 1/2 LOD.

(2) Cr(VI) all below 5 ug/L LOD. Assume 100% Cr (t) = Cr (VI) form for worse case scenario.

(3) CN(a) < LOD. Use IDEM WLA - RPE values.

(4) Mercury Set at Lowest Water Quality (WQ) Limit for Bio-Accumulative pollutants. Plant effluent must not exceed WQ limit, undiluted. All data < LOD = 0.5 ug/L

(5) Pentachlorophenol set at 1/2 LOD. No recent data, but all historic data <LOD 20 ug/L.

Safety Factor and Growth Allocation Reserve

The 2004 EPA Guidance recommends that a Safety Factor be considered in the development of Local Limits to ensure that POCs are not over-allocated. Region V EPA guidance recommends that a minimum Safety Factor of 10% be utilized. This Local Limits analysis utilized a 10% Safety Factor.

The 2004 EPA Guidance also recommends that consideration be given to creating a reserve allocation for future growth of SIUs in the area. It is not considered necessary at this time to create a growth allocation reserve for any of the POCs evaluated, and none was used in the Local Limits analysis and calculations. This is because the actual SIU base in generally shrinking in the Indianapolis area, and because the AWT influent concentrations are generally well below the maximum allowable levels from the Local Limits analysis. Growth or reduction of SIU flows will be evaluated in ongoing “interim reviews” in accordance with 2004 EPA Guidance.

LOCAL LIMITS CALCULATION METHODOLOGY & RESULTS

2004 EPA Guidance provides the calculation methodology for determination of MAHLs, and MAILs after application of the Safety Factor, and after subtracting the domestic/commercial background loadings and liquid hauled waste loadings from the MAHL.

Region V EPA has created an MSExcel based spreadsheet form for use in calculating Local Limits which requires entering of the key variables discussed in the prior section of this report. The spreadsheet calculates a Local Limit for each of the applicable criteria for each POC. The lowest Local Limit from these calculations is then the governing Local Limit that should be considered for application. Region V EPA has also indicated to IDEM that they prefer to see all Local Limits evaluations on this spreadsheet template format. This spreadsheet form is roughly consistent with the 2004 EPA Guidance with some exceptions, noted below:

1. Does not provide a template form for calculation of Local Limits for landfill disposal requirements based on TCLP evaluations per 2004 EPA Guidance;
2. Does not provide a template form for calculation of Local Limits derived from any Air Permit regulatory requirements per 2004 EPA Guidance;
3. Does not provide for subtraction of the liquid hauled waste allocation prior to calculating MAILs per 2004 EPA Guidance;
4. Does not provide for alternative allocation methods, as allowed under 2004 EPA Guidance. Specifically for this analysis, the spreadsheet does not provide for the use of a Categorical Allocation for Categorical SIUs, and a subsequent uniform allocation to remaining SIUs discharging each POC.

In order to best meet the Region V requirements, the Region V EPA spreadsheet template was used as the underlying basis of the Local Limits calculations, but was modified to provide the necessary additional calculations discussed above. The Region V spreadsheet does not apply to the three (3)-conventional pollutants, BOD, TSS and NH3.

The results of the individual Local Limits calculations are provided in Appendix L. Table 12 below provides a summary of the individual Local Limits calculated from each criteria, as well as identifying the controlling Local Limit criteria. Finally, the new calculated controlling Local Limit is compared to the current Local Limit.

TABLE 12 Comparison of Local Limits Calculated Based on Alternative Criteria

	NDPES Daily (mg/l)	NPDES Monthly (mg/l)	Activated Sludge Inhibition (mg/l)	Nitrification Inhibition (mg/l)	Incinerator Emmissions (mg/l)	Sludge Landfill Disposal (mg/L)	Ash Landfill Disposal (mg/L)	Indiana Chronic WQS (mg/l)	Indiana Acute WQS (mg/l)	Current Local Limit (mg/l)	New Calc. Local Limit (mg/l)
Arsenic	-	-	943.11	5266.52	67.17	253.08	123.57	2246.56	4262.96	4.00	67.17
Beryllium	-	-	-	-	406.38	-	-	-	-		406.38
Cadmium	-	-	948.82	897.03	12.53	7.82	16.37	14.67	79.71	1.20	7.82
Chromium	-	-	343676.95	7149.39	11676.25	2392.36	4957.56	40384.14	340138.31	24.00	2392.36
Hex. Chrom.	-	-	7682.36	42291.46	-	-	-	163.76	243.02	3.40	163.76
Copper	-	-	235.78	101.01	-	-	-	38.92	80.84	2.20	38.92
Cyanide (a)	17.62	2.81	1903.96	437.56	-	-	-	-	-	0.40	2.81
Lead	-	-	23648.33	298.24	11.82	117.72	478.60	683.29	17726.44	4.70	11.82
Mercury	-	-	313.22	-	10.23	2.20	2.74	0.044	15.18	0.025	0.044
Nickel	-	-	8277.70	12386.85	546603.62	-	-	4619.50	43045.21	7.30	4619.50
Phenol	-	-	766273.02	42881.72	-	-	-	-	-	46.00	42881.72
Pentachlorophenol	-	-	12772720.01	3196.01	-	-	-	22765199.21	42404947297.81	0.01	3196.01
Selenium	-	-	-	-	-	198.37	21.48	160.39	612.18		21.48
Silver	-	-	548589.57	1056189.57	-	199.94	199.94	-	17507.63	4.20	199.94
Zinc	-	-	3698.54	361.66	-	-	-	786.94	879.21	38.00	361.66

Controlling Local Limit

Table 12 indicates that all of the current Local Limits are more stringent than are required, compared to the new Local Limits calculation. These Local Limits could potentially be relaxed, or possibly eliminated altogether, depending on a review of the current industry loadings and AWT influent loadings, as discussed in the next section. Alternately, they could be left as-is in the SUO.

The determination of whether new Local Limits are needed for Be and Se is also discussed in the following section.

COMPARISON OF CURRENT HEADWORKS CONCENTRATIONS TO MAXIMUM ALLOWABLE HEADWORKS CONCENTRATIONS

The results from the Local Limits calculation were used to determine the MAHL and the equivalent Maximum Allowable Headworks Concentration (MAHC) for the controlling Local Limits criteria. The MAHC was compared to the actual maximum and average headworks concentrations from the influent data. Table 13 shows the MAHLs and MAHC for each POC, along with the maximum and average headworks concentrations. The 2004 EPA Guidance recommends that Local Limits be established for a POC when either the maximum headworks concentration exceeds 80% of the MAHC, or the average MAHC exceeds 60% of the MAHC.

TABLE 13 Comparison of MAHC to Actual HW Concentrations

	MAHL	MAHC	2011 Data Actual Concentrations			
POC	**(lbs/day)**	**(mg/L)**	**Max HW [C]**	**% MAHC**	**Ave HW [C]**	**% MAHC**
Arsenic	88.13	0.0562	**0.0015**	2.7%	**0.0015**	2.7%
Beryllium	7.25	0.0046	**0.002**	43.3%	**0.002**	43.3%
Cadmium	91.31	0.0582	0.00123	2.1%	0.00036	0.6%
Chromium	831.10	0.5301	0.0285	5.4%	0.0064	1.2%
Hex. Chrom.	35.13	0.0224	**0.005**	22.3%	**0.005**	22.3%
Copper	608.02	0.3878	0.226	58.3%	0.09290	24.0%
Cyanide (a)	34.31	0.0219	0.044	201.1%	0.01050	48.0%
Lead	108.61	0.0693	0.0308	44.5%	0.00670	9.7%
Mercury	0.19	0.000120	0.000057	47.5%	0.000038	31.7%
Nickel	1557.38	0.9933	0.0391	3.9%	0.0131	1.3%
Phenol	11929.83	7.6087	0.066	0.9%	0.05200	0.7%
Pentachlorophenol	47.04	0.0300	**0.010**	33.3%	**0.010**	33.3%
Selenium	58.54	0.0373	0.0171	45.8%	0.01080	28.9%
Silver	14.00	0.0089	**0.005**	56.0%	**0.005**	56.0%
Zinc	2432.98	1.5517	1.419	91.4%	0.593	38.2%
				0.8		0.6
				Local Limit Needed if > 80%		Local Limit Needed if > 60%

Indicates Data < LOD, use 1/2 LOD

The actual headworks concentrations for Be and Se are substantially below the threshold levels recommended in the 2004 EPA Guidance that would indicate a need for new Local Limits for these POCs.

In fact Be is below the LOD in the AWT effluent, and is well below the governing incinerator air emission limits. Se is typically below the LOD in the AWT influent, with only occasional measurable levels, and is well below the governing ash landfill disposal TLCP governing limit.

In addition, current loadings for the other POCs that currently have Local Limits are all below the 2004 EPA Guidance thresholds, with the exception of CN(A) and Zn, which have exceeded 80% of the MAHC in maximum day events.

The CN(A) MAHL & MAHC are derived from the monthly average NPDES Permit limit, since a site specific Water Quality standard and NPDES Permit limit have been established by IDEM. In general, the average headworks concentration is well below the MAHC. However, individual daily headworks concentrations have exceeded the MAHC, and even approached the level which could cause an exceedance of the daily maximum NPDES Permit limit (2 x monthly average limit). Therefore, it may be prudent to retain the current Local Limits, even though the new calculations could support a higher Local Limit. Additional efforts may be needed to determine the source of intermittent high daily loads if NPDES Permit exceedances were to occur. Evaluation of any final approach should take into consideration that there is a significant internal source of CN(A) from the incinerator scrubber water at the Belmont AWT, and that it may be more appropriate to address the CN(A) loadings with an internal cyanide treatment system. In addition, recent testing has shown that there is actually some internal generation of CN(A) through the chlorination disinfection process, potentially from cyanide precursors present in the wastewater. This will likely change significantly in the near future when the Belmont AWT converts to the new ultraviolet light (UV) disinfection process.

The Zn MAHL and MAHC are derived from maximum allowable concentration for nitrification inhibition. No occurrences of nitrification inhibition have occurred in recent history. The average Zn concentrations are quite low, and there are only occasional high daily influent concentrations. The current Local Limit is more than sufficient to control daily and monthly average Zn concentrations, even with these occasional high daily concentrations.

The levels of Cr(VI), pentachlorophenol and Ag are all too low to be found above detection levels in any AWT influent, effluent, or sludge samples, and for this reason, could be particularly considered for elimination of the current Local Limits at this time.

In addition, there are no known non-Categorical SIUs with the potential to contribute Cr(VI), phenol or pentachlorophenol. For this additional reason, the existing Local Limits for these POCs could be eliminated at this time.

Hexavalent chromium (Cr(VI)) is recognized to be more toxic than the oxidized trivalent chrome. However, although there is a separate local limit and river water quality standard for Cr (VI), compliance is generally checked by monitoring for total chromium (Cr(T)). Little or no monitoring data is being collected for Cr (VI), other than for a single Categorical SIU that has a Categorical limit for Cr(VI). Consequently, the past documentation of the Local Limit for this POC has relied partly on data collected for Cr(T) subject to several assumptions. Recognizing that discharge loadings of all forms of chromium are now low enough to enable compliance with a limit that is conservatively set low enough to protect against Cr(VI), the existing chromium Local Limits could be unified into a single limit for Cr(T).

In summary, all of the current Local Limits analyzed in this review could theoretically be considered for elimination altogether at this time, with the exception of CN(a) and Zn. However, in practice, it may be reasonable to maintain the existing limits and the associated monitoring and permitting program in view of their demonstrated success in control of industrial POCs. This is strictly a policy decision of the Authority, and could be evaluated for each POC in light of the number of non-Categorical SIU discharge sources, the current headworks loading rates, costs of continuing administration and testing of individual Local Limits, and other factors.

CONVENTIONAL POCs

The 2004 EPA Guidance recommends that Local Limits should be considered as an option for the control of conventional POCs when influent loadings approach or exceed 80% of the design capacity of the treatment plant(s), in order to assure that overloading of the treatment plants does not occur. The current IPP SUO allows for specific restrictions on SIUs to prevent overloading of the AWTs for these conventional pollutants on a case-by-case basis. The SUO also provides for a cost surcharge for all discharges that contain these POCs at concentrations above the domestic background concentrations. The cumulative annual average loading of the conventional POCs from all surcharged sewer users is listed below, along with the approximate percentage of the total loading capacity of the two AWTs.

BOD- 140,000 lb/day or 22% of capacity

TSS- 50,000 lb/day or 7% of capacity

NH3- 1,700 lb/day or 3% of capacity

The AWTs were designed to meet the surcharge loadings from multiple industrial dischargers that were present in the 1970's. The quantity of discharge loading of conventional POCs has declined steadily since that time due to the subsequent shutdown of significant dischargers of these pollutants. Discharges have continued to decline since 2000, as the sewer rates and surcharge rates have increased. The majority of the surcharge loading for BOD and TSS is from a single discharger that produces a relatively regular, stable loading with daily variations that are well tolerated by the AWTs.

There is currently one SIU, the Indianapolis Airport Authority (IAA), that has a specific (i.e. case-by-case) mass-based daily discharge limit for BOD to prevent overloading of the Southport AWT with excess discharges of airport deicing fluids during high usage periods. The IAA has storage basins to equalize the discharge of these pollutants during peak usage periods, and the peak mass discharge rates have been established to prevent overloading of the Southport AWT as these stored wastes are discharged to the sewer system. Without these daily mass discharge limits for BOD, the Southport AWT could be overwhelmed with excess peak loadings from the IAA facility.

Table 14 shows the current design treatment capacities of the AWTs, along with the actual peak month loading experienced from 2006 - 2011. The peak loadings are derived from peak secondary treatment loadings, after average primary treatment removals. Primary treatment capacity is actually only flow limited as opposed to being loading limited. Because primary effluent flow can be diverted from the Belmont AWT to the Southport AWT, overloading conditions can be avoided at the Belmont secondary treatment process by shifting these loads to the more lightly loaded Southport AWT. The Belmont AWT primary treatment process is not adversely affected by higher than design loads, since the headworks design load is derived from the secondary treatment capacity limits. Therefore, the AWT loadings should be viewed on a combined loading basis, rather than on an individual AWT loading basis.

Both AWTs are being expanded to accommodate increased wet weather flows as part of the combined sewer overflow (CSO) Long Term Control Plan (LTCP). The Belmont AWT is in the construction phase of the wet weather expansion, and is scheduled for start-up in the Fall of 2012. The Southport AWT is in the design phase of the wet weather expansion, and is not scheduled for completion until December 2017. Therefore, the future Belmont AWT wet weather design capacities are also shown in Table 14.

The Local Limits analysis will assume the new capacity of the Belmont AWT, and the current capacity of the Southport AWT for comparison against current loadings. As discussed previously, there are several ways to actively control and shift flow and load between the two (2)- AWTs using the existing Southern Avenue diversion structure and the Belmont AWT PEPS capabilities. Approximately 20 - 40% of the Belmont flow & load can be transferred to the Southport AWT in order to balance peak flow and loading events. Therefore, Table 14 also shows the combined capacity of the AWTs, which will also be used in this Local Limits analysis.

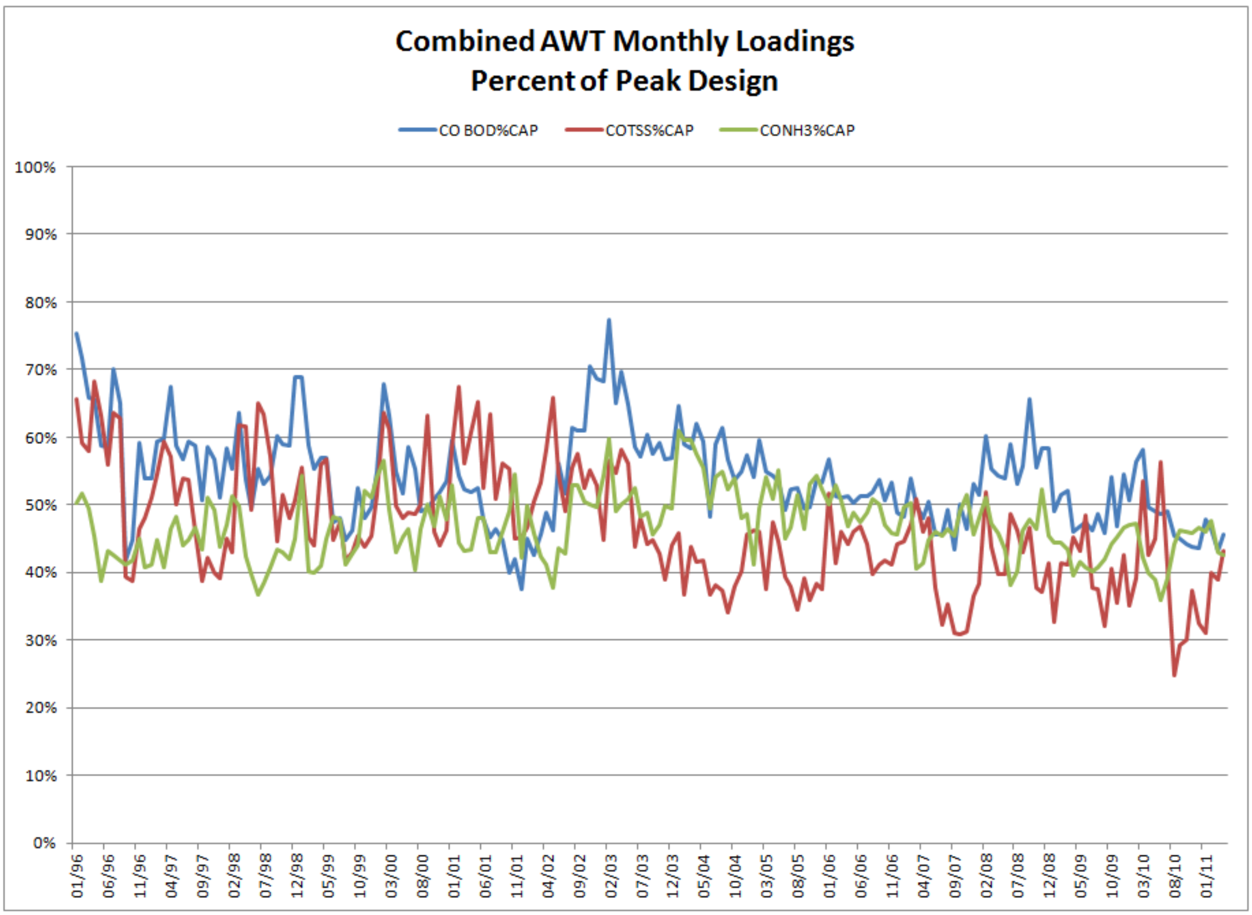
TABLE 14 AWT Treatment Capacity

	Original Design Peak Capacity (1) (1,000 lb/day)	Actual Peak Month Loading (1,000 lb/day)	Actual Peak Month/Original Design Peak (%)	Belmont Wet Weather Expansion Design Peak Capacity (1,000 lb/day)	Current Peak Month/Wet Weather Design Peak (%)
BELMONT AWT					
BOD	271	331	122%	314	105%
TSS	365	325	89%	458	71%
NH3	30	14	46%	16	86%
Southport AWT					
BOD	346	142	41%	No change until 2017	
TSS	360	179	50%	No change until 2017	
NH3	30	11	37%	No change until 2017	
Combined					

AWT					
BOD	618	433	70%	660	66%
TSS	725	459	63%	817	56%
NH3	60	24	41%	46	53%

Again, although Table 14 seems to indicate that current peak month Belmont AWT loadings appear to be at or over the current and anticipated wet weather capacity, in reality, these loadings are balanced between the AWTs on a real-time basis during routine operations to move additional load to the currently under-loaded Southport AWT during these peak events, and no overloading of either AWT has occurred during this period. Figure 3 shows the combined monthly average AWT loadings as a percentage of the peak design capacity from 1996 through early 2011, and shows that the loadings have not exceeded 80% of the peak design in the last 15 years.

FIGURE 3 Combined Monthly AWT Loading



Significant modeling has been performed on the interaction of the collection system with the two (2)-AWTs to ensure that sufficient combined capacity is available to handle current and future anticipated loadings, including additional CSO loadings after the LTCP is fully implemented. Therefore, the combined treatment capacity should be considered for the determination of whether or not Local Limits might or might not be warranted for conventional POCs. On this basis, the actual peak month loadings are well under 80% of the current and anticipated wet weather design capacities. The AWTs have managed the actual loadings while maintaining 100% compliance with all NPDES Permit Limits for the last 10- year period. Therefore, there is no reason to calculate and adopt Local Limits for these conventional POCs at this time. Wet Weather expansion projects will further improve the ability of the AWTs to handle current and projected plant loadings. Current commercial and industrial loadings are manageable and are trending downwards as the sewer rates and strength surcharge rates have increased over the recent 10 years. Special mass permits can be issued as needed if peak loadings begin to present operational problems in the future.

LOCAL LIMITS SUMMARY & OPTIONS

The Local Limits evaluation has resulted in several optional approaches that could be adopted by the Authority for each of the POCs evaluated. These options have been discussed previously in the report, and are summarized in Table 15, below, along with some key data considerations. The Authority will make the final decision on the final Local Limits which will then be adopted in the SUO, and included in SIU IPP Permits.

TABLE 15 Local Limits Summary & Options

POC	Current Local Limit (mg/L)	New Calc. Local Limit (mg/L)	No. Categorical SIUs (#)	No. non Categorical SIUs (#)	AWT Max Load vs. MAHL (%)	OPTIONS AVAILABLE		
						Retain Current LL	Adopt New Higher LL	Eliminate Current LL/ No New LL
As	4.0	67.2	2	2	< LOD	X	X	X
Be		1,660	0	0	< LOD		X	X
Cd	1.2	7.8	28	7	2%	X	X	X
Cr(T)	24.0	2,390	28	2	5%	X	X	X
Cr(VI)	3.4	163	0	1	< LOD	X	X	X
Cu	2.2	38.9	29	7	60%	X & Allow higher CAT Limit	X	X
CN(A)	0.4	2.8	5	3	200%	X & Not allow higher CAT Limit	X	
Pb	4.7	11.8	30	6	45%	X	X	X
Hg	0.025	0.044	1	4	48%	X	X	X
Ni	7.3	4,620	27	2	4%	X	X	X
Phenol	46.0	42,900	0	1	1%	X	X	X
PCP	0.012	3,200	0	0	< LOD	X	X	X
Se		21.5	1	1	46%		X	X
Ag	4.2	200	24	0	< LOD	X	X	X
Zn	38.0	362	29	6	91%	X	X	
BOD					66%			X
TSS					63%			X
NH3					53%			X

APPENDIX

A-1

NPDES PERMIT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

December 26, 2007

VIA CERTIFIED MAIL 7002 0510 0002 5826 4321

The Honorable Bart Peterson, Mayor
City of Indianapolis
2460 City-County Building,
200 East Washington Street
Indianapolis, Indiana 46204

Re: Final NPDES Permit No. IN0023183
City of Indianapolis's Belmont & Southport Advanced
Wastewater Treatment Plants
Marion County

Dear Mayor Peterson:

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been processed in accordance with Sections 402 and 405 of the Federal Water Pollution Control Act as amended, (33 U.S.C. 1251, et seq.), and IDEM's permitting authority under IC 13-15. The enclosed NPDES permit covers your discharges to the West Fork of the White River. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition of your permit requires monthly reporting of several effluent parameters. Reporting is to be done on the Monthly Report of Operation (MRO) form. This form is available on the internet at the following web site:

http://www.in.gov/idem/compliance/water/wastewater/compeval/forms/index.html

You should duplicate this form as needed for future reporting.

Another condition which needs to be clearly understood concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of the permit and may bring criminal or civil penalties upon the permittee. (See Part II.A.1 and II.A.11 of this permit). It is very important that your office and treatment operator understand this part of the permit.

Please note that this permit issuance can be appealed. An appeal must be filed under procedures outlined in IC 13-15-6, IC 4-21.5, and the enclosed public notice. The appeal must be initiated by you within 18 days from the date this letter is postmarked, by filing a request for an adjudicatory hearing with the Office of Environmental Adjudication (OEA), at the following address:

Office of Environmental Adjudication
Indiana Government Center North
100 North Senate Avenue, Room 1049
Indianapolis, IN 46204

Please send a copy of any such appeal to me at IDEM, Office of Water Quality-Mail Code 65-42, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251.

Please reference the Post Public Notice Addendum, on the final pages of the Fact Sheet, for this Office's response to comments submitted during the public notice period.

The permit should be read and studied. It requires certain action at specific times by you, the discharger, or your authorized representative. One copy of this permit is also being sent to your operator to be kept at the treatment facility. You may wish to call this permit to the attention of your consulting engineer and/or attorney.

If you have any questions concerning your NPDES permit, please contact Jason House at 317/233-0470. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/232-8591.

Sincerely,

Bruno Pigott
Assistant Commissioner
Office of Water Quality

Enclosures
cc: Tim Method, City of Indianapolis, Department of Public Works
Carlton Ray, City of Indianapolis Department of Public Works
Kumar Menon, Director, City of Indianapolis, Department of Public Works
Mario Mazza, City of Indianapolis, Department of Public Works
Larry Maddux, City of Indianapolis, Department of Public Works
Steve Stahley, City of Indianapolis, Department of Public Works
Carlton Ray, City of Indianapolis, Department of Public Works
James Parks, City of Indianapolis, Department of Public Works
Joe Watson, City of Indianapolis, Department of Public Works
Len Ashack, Bernardin Lochmueller & Associates, Inc.
Rosemary Spalding, Attorney at Law, Spalding & Hilmes

Tom Brown, United Water
Tim Blagsvedt, United Water
Peter Swenson, U.S. EPA, Region 5
Janet Pellegrini, U.S. EPA, Region 5
Irvin Dzikowski, U.S. EPA, Region 5
Beth Admire, IDEM, Office of Legal Counsel
Cindy Wagner, IDEM, Wet Weather Section
Todd Trinkle, IDEM, Wet Weather Section
Glenn Pratt, Sierra Club – Urban League
Dick Van Frank, Improving Kids Environment
Hoosier Environmental Council

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), Title 13 of the Indiana Code, and regulations adopted by the Water Pollution Control Board, the Indiana Department of Environmental Management (IDEM) is issuing this permit to the

CITY OF INDIANAPOLIS, DEPARTMENT OF PUBLIC WORKS AND ITS CONTRACT OPERATOR, UNITED WATER SERVICES INDIANA

hereinafter collectively referred to as "the permittee". The City of Indianapolis (the "City") owns and United Water Services Indiana operates the following advanced wastewater treatment plants and associated collection system:

Facility Name:	***Belmont Advanced Wastewater Treatment (AWT) Plant***	***Southport Advanced Wastewater Treatment (AWT) Plant***
Address:	2700 South Belmont Ave. Indianapolis, Indiana	3800 West Southport Rd. Indianapolis, Indiana
Receiving Water:	West Fork of the White River	West Fork of the White River

The permittee is authorized to discharge to receiving waters named the West Fork of the White River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and Attachment A hereof. The permittee is also authorized to discharge from combined sewer overflow outfalls listed in Attachment A of this permit to the receiving waters identified in this permit in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in Attachment A of this permit.

Effective Date: February 1, 2008.

Expiration Date: January 31, 2013.

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management. The application shall be submitted to the IDEM at least 180 days prior to the expiration date of this permit, unless a later date is allowed by the Commissioner in accordance with 327 IAC 5-3-2 and Part II.A.4 of this permit.

Issued this 26th day of December, 2007, for the Indiana Department of Environmental Management.

Bruno Pigott
Assistant Commissioner
Office of Water Quality

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TREATMENT FACILITY DESCRIPTIONS

Wastewater from the Indianapolis collection system is treated by one of two advanced wastewater treatment (AWT) plants. The Belmont AWT plant receives flow predominantly from the central, west, north and east sides of Marion County. The Southport AWT plant receives flow predominantly from the east and south sides of Marion County and from the City of Greenwood. As further described below; flow from the Belmont AWT can be diverted to the Southport AWT during both wet and dry weather. The sludge generated at the Southport AWT plant is pumped to the Belmont AWT plant for treatment and ultimate disposal. Thus, the two AWT plants function and are operated as a single system.

Belmont Advanced Wastewater Treatment (AWT) Plant

The Belmont Advanced Wastewater Treatment (AWT) Plant is a Class IV nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing system (BRS) towers, oxygen nitrification system (ONS) reactors, final clarifiers, coarse sand mono-media tertiary filters, effluent disinfection by chlorination/dechlorination and effluent flow monitoring. The facility is also changing the method of disinfection to ozonation.

The AWT Plant has a design average flow of 120 MGD with a peak design flow of 150 MGD. The AWT Plant has two wet weather storage basins: a 30-million gallon basin to store primary influent and/or primary effluent during wet weather and a 4-million gallon basin to store primary effluent during wet weather. Sludge treatment includes gravity belt thickening (operational in 2008), gravity thickening, equalization, belt filter press dewatering, and incineration or landfilling. The mass limits for $CBOD_5$ and TSS at Outfall 006 are based on the peak design flow of 150 MGD.

As part of the City's CSO Long-Term Control Plan, the permittee will be replacing the existing Bio-Roughing System with a 150 MGD Trickling Filter/Solids Contact (TF/SC) secondary treatment process followed by a wet weather disinfection system which will increase the wet weather treatment capacity to a peak hourly rate of 300 MGD. When certain criteria are met the effluent from the TF/SC process may be diverted to the wet weather disinfection facilities and discharged to the river through Wet Weather Discharge Outfall 005.

The new 150 MGD Trickling Filter/Solids Contact (TF/SC) process includes construction of the following:

- new primary effluent conduits to enable various amounts of primary effluent to be split between the TF/SC process and the existing ONS system;
- new Bio-Roughing pump station
- new Bio-Roughing towers
- new Aerated Solids Contact and Reaeration tankage;
- new aeration equipment;
- new intermediate clarifiers;
- new conveyance lines to enable the effluent from the TF/SC process to be progressively shifted away from the ONS process during wet weather and discharged to the wet weather disinfection facilities;

- new chlorine contact tank and installation of related dechlorination facilities for seasonal disinfection of the TF/SC effluent sent to Outfall 005 (Latitude 39° 43' 34.18" N, Longitude. 86° 11' 25.40" W) during wet weather.

The Belmont AWT Plant has the following flow diversions located within the facility:

1. Bio-Roughing and TF/SC Diversions: A primary effluent diversion exists prior to the facility's existing bio-roughing towers (or TF/SC when it is constructed). A portion of the primary effluent can be diverted to the oxygen nitrification facilities.

2. Effluent Filters Diversion: An oxygen nitrification system effluent diversion exists prior to the facility's effluent filters. All or a portion of the oxygen nitrification system effluent up to 150 MGD can be diverted around the effluent filters to the ozone contact tanks.

The Belmont AWT Plant has the following flow diversions located in the collection system or at the AWT facility, all of which are capable of diverting flow from the Belmont AWT Plant to the Southport AWT Plant.

1. Southwest (Southern Avenue) Diversion: A raw wastewater flow diversion exists external to the Belmont AWT Plant at the Southwest Diversion Structure located near Southern Avenue. Raw wastewater may be diverted via a 60-inch diameter gravity sewer to the Southport AWT Plant depending on the system hydraulics and plant capacities. Actual flow rates during wet weather events have been 40 – 45 MGD.

2. Belmont Wet Weather Pump Station (Raw Wastewater): A raw wastewater diversion exists prior to the facility's headworks. Raw wastewater from the Belmont Interceptor may be pumped by Belmont's Wet Weather Pump Station to the Southport AWT Plant via a 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is 28-30 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont Primary Effluent Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

3. Belmont Wet Weather Pump Station (Primary Effluent): A primary effluent flow diversion exists after the Belmont Primary Clarifiers. Primary effluent stored in Wet Weather Storage Basin No. 1 may be pumped by Belmont's Wet Weather Pump Station to the Southport AWT Plant via a 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is approximately 28-30 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Primary Effluent Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

4. Gravity Diversion (Primary Influent): A preliminary treatment flow diversion exists prior to the facility's primary clarifiers. Preliminary treatment flow from the diversion may be conveyed by gravity via the 42-inch force main to the Southport AWT Plant via the Tibbs Interceptor. Depending on the system hydraulics, the diversion capacity is 16-18 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont

Primary Effluent Pump Station (Primary Effluent), or the Gravity Diversion (Primary Effluent) are activated.

5. Gravity Diversion (Primary Effluent): A primary effluent diversion exists after the facility's primary clarifiers. Primary effluent from the primary effluent channel may be conveyed by gravity via the 42-inch force main to the Southport AWT Plant via the Tibbs Interceptor. Depending on the system hydraulics, the diversion capacity is 11-14 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont Primary Effluent Pump Station, or the Gravity Diversion (Primary Influent) are activated.

6. Belmont Primary Effluent Pump Station (Primary Effluent)(Future - 2008): A primary effluent diversion will exist after the facility's primary clarifiers. Primary effluent from the primary effluent channel will be pumped by the Belmont Primary Effluent Pump Station (PEPS) to the Southport AWT Plant via the 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is 30 to 35 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), Belmont Wet Weather Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

7. Belmont-Southport Interplant Connection (Raw Sewage)(Future): The Interplant Connection between Belmont and Southport will consist of a 144-inch-diameter interceptor originating near CSO 117 and the Southwest Diversion Structure (east of the Belmont AWT Plant) terminating near the headworks of the Southport AWT Plant. Initially the interceptor would store 13 to 21 MG and convey up to 75 MGD of combined sewage captured from the Southwest Diversion Structure. The captured combined sewage from the future deep tunnel would also be treated at the Southport facility via expanded, upgraded and new equipment or at the Belmont facility.

Southport Advanced Wastewater Treatment (AWT) Plant

The Southport Advanced Wastewater Treatment (AWT) Plant is a Class IV nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing towers, oxygen and air nitrification reactors, secondary clarifiers, mixed media tertiary filters, effluent disinfection by chlorination/dechlorination, effluent flow monitoring, and effluent pumping. The permittee will be changing the method of disinfection to ozonation.

The Southport AWT Plant has a design average flow of 125 MGD with a peak design flow of 150 MGD. Sludges are conveyed to and centrally processed by thickening, dewatering and incineration operations at the Belmont AWT Plant's Solids Handling Section. Mass limits are calculated based upon the 150 MGD peak design flow. The Southport AWT Plant has an equalization basin storage capacity of 25 million gallons. This basin is used to store screened raw wastewater. The basin is designed to be used during wet weather when the plant's treatment capacity has been reached. The mass limits for $CBOD_5$ and TSS at Outfall 006 are based on the peak design flow of 150 MGD.

As part of the City's CSO Long-Term Control Plan, the Southport AWT Plant will be expanded to provide a total maximum treatment rate of 300 MGD with a maximum pumping rate of 350 MGD. The planned improvements will include expansion of the primary clarification facility, expansion of the air

nitrification system (ANS) from 30 MGD to 150 MGD with fine bubble aeration, new blowers, new final clarifiers, new disinfection facility, pump station, and new process/yard piping.
The Southport AWT Facility has the following flow diversions:

1. Raw Wastewater Diversion: Raw wastewater can be diverted to the 25 MG equalization basin after the screening process. The stored wastewater is returned to Southport's Headworks for full treatment after the influent flow rate decreases. The screened wastewater can also be diverted around the grit tanks, primary clarifiers, and bio-roughing towers directly to the Air Nitrification System (ANS).

2. Grit Chamber Diversion: A screened raw wastewater flow diversion exists prior to the grit chambers that allows flow to be diverted around the grit tanks at Structure 2-B to either the primary clarifiers or the bio-roughing towers.

3. Preliminary Treatment Effluent Diversion/Bypass: A preliminary treatment effluent diversion exists that allows flows to be diverted around the primary clarifiers to the bio-roughing towers. This diversion is located at the effluent channel of the grit chambers and sends screened and degritted flows to Structure 5-K and onto the bio-roughing towers. Under emergency conditions the preliminary treatment effluent flow can be mixed with primary effluent and bypassed via a 54-inch pipe to Little Buck Creek through Outfall 002 (formerly listed as Outfall 002B).

4. Primary Effluent Diversion/Bypasses: A primary effluent diversion exists after the primary clarifiers prior to the bio-roughing towers. Primary effluent can be diverted around the bio-roughing towers from Structures 7-F and 7-C directly to the ANS. Primary effluent can also be bypassed through Structure S-6 to a 60-inch pipe and discharged to Little Buck Creek through Outfall 004 (formerly listed as Outfall 002A). Primary effluent can also flow to Structure 5-K and be discharged through Outfall 002.

5. Bio-Roughing Diversion: Primary effluent diversions exist prior to the facility's bio-roughing towers. All or a portion of the primary effluent from the east and west primary clarifiers up to 90 MGD can be diverted to the oxygen nitrification facilities.

6. Air Nitrification Diversion: A bio-roughing tower effluent diversion exists which allows flow to be diverted to the air nitrification system.

7. ANS Effluent Diversion to Disinfection System: An air nitrification effluent diversion exists prior to the facility's tertiary filters. All or a portion of the air nitrification system effluent can be diverted around the intermediate pump station. This diversion system allows ANS effluent to be diverted around the effluent filters and flow by gravity to the effluent disinfection system.

8. Effluent Filters Diversion: An air and oxygen nitrification system effluent diversion exists prior to the facility's tertiary filters. All or a portion of the air and oxygen nitrification system effluent (up to 150 MGD) can be diverted around the effluent filters to the effluent disinfection system.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from the outfalls listed below in accordance with the terms and conditions of this permit. The permittee shall take samples and measurements at a location representative of the discharge to determine whether the effluent limitations have been met. Refer to Part I.B. of this permit for additional monitoring and reporting requirements.

1. Outfall 001 - Southport AWT Plant Final Effluent
(Located at Latitude 39° 39' 51" N, Longitude 86° 14' 08" W)

Beginning on the effective date of this permit, the permittee is authorized to discharge from Outfall 001.

TABLE 1

	Quantity or Loading			*Quality or Concentration*			*Monitoring Requirements*	
Parameter	*Monthly Average*	*Weekly Average*	*Units*	*Monthly Average*	*Weekly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Flow [1]	Report	Report	MGD	----	----	----	Continuous	24-Hr. Total
$CBOD_5$								
Summer [2]	12,518	18,776	lbs/day	10	15	mg/L	Daily	24-Hr. Comp.
Winter [3]	31,294	50,070	lbs/day	25+	40	mg/L	Daily	24-Hr. Comp.
TSS								
Summer [2]	12,518	18,776	lbs/day	10	15	mg/L	Daily	24-Hr. Comp.
Winter [3]	37,553	50,070	lbs/day	30+	40	mg/L	Daily	24-Hr. Comp.
Ammonia-N								
Summer [2]	3,129	4,694	lbs/day	3.0	4.5	mg/L	Daily	24-Hr. Comp.
Winter [3]	6,154	9,284	lbs/day	5.9	8.9	mg/L	Daily	24-Hr Comp.

+ Or 85% removal, whichever is more stringent.

TABLE 2

Parameter		*Quality or Concentration*			*Monitoring Requirements*	
	Daily Minimum	*Daily Maximum*	*Monthly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Dissolved Oxygen [4]						
Summer [2]	8.0	----	----	mg/L	Daily	12 Grabs/24-hr.
Winter [3]	6.0	----	----	mg/L	Daily	12 Grabs/24-hr
pH [6]	6.0	9.0	----	s.u.	Daily	Grab
E. coli [*][5]						
Interim	----	Report	125	col/100 mL	Daily	Grab
Final		235	125	col/100 mL	Daily	Grab
TRC [5][7]	----	0.02	0.01	mg/L	Daily	Grab
Cyanide [*, 9,12,13,18,19]						
Interim (Amenable) [10]	----	0.027	----	mg/L	1 X Weekly	24 Hr. Comp.
Final (Free) [11]	----	0.019	0.01	mg/L	1 X Weekly	24 Hr. Comp.
Chloride [*,9,18,19]						
Interim	----	Report	Report	mg/L	1 X Weekly	24 Hr. Comp.
Final	----	404	201	mg/L	1 X Weekly	24 Hr. Comp.
Fluoride [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.
Sulfate [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.
TDS [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.

NOTE: Refer to Part I.E. of this permit for Whole Effluent Toxicity Requirements.

2. Outfall 006 – Belmont AWT Plant Final Effluent
(Located at Latitude 39° 43' 05" N, Longitude. 86° 11' 08" W)

Beginning on the effective date of this permit, the permittee is authorized to discharge from Outfall 006.

TABLE 3

Parameter	*Quantity or Loading*			*Quality or Concentration*			*Monitoring Requirements*	
	Monthly Average	*Weekly Average*	*Units*	*Monthly Average*	*Weekly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Flow [1]	Report	Report	MGD	----	----	----	Continuous	24-Hr. Total
$CBOD_5$								
Summer [2]	12,518	18,776	lbs/day	10	15	mg/L	Daily	24-Hr. Comp.
Winter [3]	25,035	37,553	lbs/day	20+	30	mg/L	Daily	24-Hr. Comp.
TSS								
Summer [2]	12,518	18,776	lbs/day	10	15	mg/L	Daily	24-Hr. Comp.
Winter [3]	25,035	37,553	lbs/day	20+	30	mg/L	Daily	24-Hr. Comp.
Ammonia-N								
Summer [2]	3,129	4,694	lbs/day	3.0	4.5	mg/L	Daily	24-Hr. Comp.
Winter [3]	6,154	9,284	lbs/day	5.9	8.9	mg/L	Daily	24-Hr Comp.

+ Or 85% removal, whichever is more stringent.

TABLE 4

Parameter	*Daily Minimum*	*Quality or Concentration* *Daily Maximum*	*Monthly Average*	*Units*	*Monitoring Requirements* *Measurement Frequency*	*Sample Type*
Dissolved Oxygen [4]						
Summer [2]	8.0	----	----	mg/L	Daily	12 Grabs/24-hr.
Winter [3]	6.0	----	----	mg/L	Daily	12 Grabs/24-hr.
pH [6]	6.0	9.0	----	s.u.	Daily	Grab
E. coli [*][5]						
Interim	----	Report	125	col/100 mL	Daily	Grab
Final	----	235	125	col/100 mL	Daily	Grab
TRC [5][7]		0.02	0.01	mg/L	Daily	Grab
Cyanide [*, 9,12,13,18,19]						
Interim, (Amenable) [10]	----	0.027	----	mg/L	1 X Weekly	24 Hr. Comp.
Final, (Free) [11]	----	0.019	0.01	mg/L	1 X Weekly	24 Hr. Comp.
Chloride [*,9,18,19]						
Interim	----	Report	Report	mg/L	1 X Weekly	24 Hr. Comp.
Final	----	404	201	mg/L	1 X Weekly	24 Hr. Comp.
Fluoride [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.
Sulfate [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.
TDS [9,19]	----	Report	Report	mg/L	2 X Monthly	24 Hr. Comp.

NOTE: Refer to Part I.E. of this permit for Whole Effluent Toxicity Requirements.

3. Outfall 005 – Belmont Trickling Filter/Solids Contact (TF/SC) Effluent

Limited Discharge Authorization for Outfall 005
(Located at Lat 39° 43' 34.18" N, Long. 86° 11' 25.40" W)

After the TF/SC facilities are operational, the permittee is authorized to discharge effluent from the TF/SC process through internal Outfall 305 to Outfall 005 only during those times when the flow rate to ONS is equal to or exceeds the AWT peak hourly rated capacity of 150 MGD. In addition, discharge is not allowed unless there has been a precipitation event of at least 0.10 inches within twenty-four (24) hours preceding initiation of the discharge from Outfall 005. The permittee shall take samples and measurements to meet the monitoring requirements at a location representative of the Outfall 005 discharge. Such discharge shall be limited and shall be monitored by the permittee as specified below:

TABLE 5

	Quantity or Loading			*Quality or Concentration*			*Monitoring Requirements*	
Parameter	*Monthly Average*	*Weekly Average*	*Units*	*Monthly Average*	*Weekly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Stream Flow [14]	Report	Report	MGD	----	----	----	Continuous	Gauge
Influent Flow [14]	Report	Report	MGD	----	----	----	Continuous	24-Hr. Total
Effluent Flow [14]	Report	Report	MGD	----	----	----	Continuous	24-Hr. Total
$CBOD_5$	Report	Report	lbs/day	Report	Report	mg/L	When Discharging	Composite [15]
TSS	Report	Report	lbs/day	Report	Report	mg/L	When Discharging	Composite [15]
Ammonia-N	Report	Report	lbs/day	Report	Report	mg/L	When Discharging	Composite [15]

TABLE 6

	Quality or Concentration				*Monitoring Requirements*	
Parameter	*Daily Minimum*	*Daily Maximum*	*Monthly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Effluent/Stream Ratio	Report	----	----	----	When Discharging	Instantaneous
Dissolved Oxygen [4]	Report	----	----	mg/L	When Discharging	12 grabs/24 Hr.
pH [6]	6.0	9.0	----	s.u.	When Discharging	Grab
TRC [7] [16]	----	0.02	0.01	mg/L	When Discharging	Grab
E. coli [5][16]	----	235	125	col/100 mL	When Discharging	Grab
Cadmium [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab
Copper [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab
Cyanide, Free [19]	----	Report	Report	mg/L	Quarterly**	Grab
Lead [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab
Mercury [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab
Nickel [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab
Zinc [8] [19]	----	Report	Report	mg/L	Quarterly**	Grab

** Shall be reported on the March, June, September, and December DMR forms.

4. Outfall 305 – Belmont Internal TF/SC Outfall

Limitations and Monitoring Requirements for Internal Outfall 305
(Located at Latitude 39° 43' 30.55" N, Longitude 86° 11' 32.72" W)

Beginning thirty (30) days after the permittee provides IDEM with notification that the TF/SC facilities have been constructed and are operational, the permittee is required to comply with the following requirements for the discharge from the TF/SC process. Such discharge shall be limited and monitored by the permittee as specified below:

TABLE 7

	Quantity or Loading			*Quality or Concentration*			*Monitoring Requirements*	
Parameter	*Monthly Average*	*Weekly Average*	*Units*	*Monthly Average*	*Weekly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Flow [17]	Report	Report	MGD	----	----	----	Continuous	24-Hr. Total
$CBOD_5$	Report	Report	lbs/day	25+	40	mg/L	Daily	Composite
TSS	Report	Report	lbs/day	30+	45	mg/L	Daily	Composite
Ammonia-N	Report	Report	lbs/day	Report	Report	mg/L	Daily	Composite

+ - percent removal shall be monitored and reported

TABLE 8

	Quality or Concentration				*Monitoring Requirements*	
Parameter	*Daily Minimum*	*Daily Maximum*	*Monthly Average*	*Units*	*Measurement Frequency*	*Sample Type*
Dissolved Oxygen [4]	Report	----	----	mg/L	Daily	12 grabs/24 Hrs.
pH [6]	6.0	9.0	----	s.u.	Daily	Grab

5. Storm Water Discharges Associated With Industrial Activity

Beginning on the effective date of this permit, the permittee is authorized to discharge storm water from the storm water retention basin which combines with the treated effluent prior to discharge from Outfall 001. Since the discharges from the retention basin to Outfall 001 rarely occur, the storm water is only required to be monitored in the event that such a discharge to Outfall 001 does occur.

Samples must be taken within the first thirty minutes of discharge from the retention basin after initiation of a storm event. In addition to any other pollutants which are expected to be present in the discharge, the permittee shall monitor for the following parameters:

TABLE 9

Parameter	*Quality or Concentration*		
	Daily Max	*Units*	*Sample Type*
Flow	Report	MGD	Estimated Total
Total Suspended Solids	Report	mg/L	Grab
pH	Report	s.u.	Grab
Oil & Grease	Report	mg/L	Grab
$CBOD_5$	Report	mg/L	Grab
COD	Report	mg/L	Grab
Total Kjeldahl Nitrogen	Report	mg/L	Grab
Nitrate plus Nitrite Nitrogen	Report	mg/L	Grab
Total Phosphorus	Report	mg/L	Grab

Within 90 days of the effective date of the permit, the permittee shall review and modify as necessary, the Storm Water Pollution Prevention Plan (SWPPP) previously developed using the procedures outlined in 327 IAC 15-6-7 for the storm water runoff from the wastewater treatment plant site. The updated SWPPP shall be retained on-site at the Southport AWT Plant.

FOOTNOTES

[*] Refer to Part I.D. of this permit for the Schedules of Compliance.

[1] Flow measurement is required per 327 IAC 5-2-13. The flow meter(s) shall be calibrated at least once annually.

[2] Summer limitations apply from May 1 through November 30 of each year.

[3] Winter limitations apply from December 1 through April 30 of each year.

[4] The reported daily average concentration of dissolved oxygen in the effluent shall be the arithmetic mean determined by summation of the twelve (12) daily grab sample results and dividing this sum by the number of grab samples taken. These samples are to be collected over equal time intervals.

[5] The effluent shall be disinfected on a continuous basis such that violations above the *E. coli* limitations do not occur from April 1 through October 31, annually.

If the permittee uses chlorine as a back-up system for the ozonation disinfection process, pursuant to the Compliance Schedule in Part I.D., or for any reason at any time, then the limits and monitoring requirements in Tables 2, 4, and 6 for residual chlorine shall be in effect. If chlorine is not utilized during any reporting period the permittee shall report 'not required' on the monthly discharge monitoring report.

IDEM has specified the following methods as allowable for the detection and enumeration of *Escherichia coli (E. coli)*:

1. Coliscan MF® Method
2. EPA Method 1103.1 using original m-TEC agar.
3. EPA revised Method 1103.1 using modified m-TEC agar.
4. *Standard Methods* 20th Edition Method 9223 B using Colilert®

[6] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. For pH, the permittee must report the minimum or maximum value of any individual sample during the month on the Discharge Monitoring Report forms.

[7] In accordance with 327 IAC 5-2-11.1(f), compliance with this permit requirement will be demonstrated if the observed effluent concentrations are less than the limit of quantitation (LOQ) (0.06 mg/l). If the measured effluent concentrations are above the water quality-based permit limitations and above the limit of detection (LOD) specified by the permit in any of three (3) consecutive analyses or any five (5) out of nine (9) analyses, the permittee is required to reevaluate its chlorination/dechlorination practices to make any necessary changes to assure compliance with the permit limitation for TRC. After submission of the first re-evaluation to IDEM- OWQ, the permittee shall only be required to complete

additional re-evaluations when the circumstances which caused the effluent concentration to exceed the LOD are different than the previous re-evaluation, or upon request of the IDEM, Office of Water Quality. If the permittee determines additional reevaluations of exceedances are not necessary because the cause of the exceedance is the same, the permittee shall document the basis for its determination. These records must be retained in accordance with the record retention requirements of Part I.B.8 of this permit.

Effluent concentrations less than the limit of quantitation shall be reported on the discharge monitoring report forms as the actual value. Effluent concentrations less than the limit of detection shall be reported on the discharge monitoring report forms as less than the value of the limit of detection. For example, if a substance is not detected at a concentration of 0.02 mg/l, report the value as 0.02 mg/l. At present, two methods are considered to be acceptable to IDEM, amperometric and DPD colorimetric methods, for chlorine concentrations at the level of 0.06 mg/l.

Parameter	LOD/MDL	LOQ
Chlorine	0.02 mg/L	0.06 mg/L

The permittee may determine a case-specific limit of detection (LOD) or limit of quantitation using the analytical method specified above. The limit of detection shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the limit of quantitation (LOQ) shall be set equal to 3.18 times the limit of detection. Other methods may be used if first approved by EPA and IDEM.

[8] The above-noted parameters are intended to be analyzed by a test method which will measure the quantity of acid-soluble metal present; however, an approved analytical method for acid-soluble metal is not yet available. The permittee shall measure and report this parameter as total recoverable metal.

[9] The permittee shall vary the day of the week on which the monitoring is performed throughout every month.

[10] The interim cyanide limit is based upon amenable cyanide and is to be reported as amenable cyanide.

[11] The final cyanide limits are based upon free cyanide and is to be reported as free cyanide.

[12] The following test methods shall be utilized and are allowed as specified below:

Parameter	Test Method	LOD	LOQ
Cyanide, Free	1677 or 4500 CN-G	0.003 mg/l	0.0095 mg/l
Cyanide, Amenable	4500 CN-G	0.003 mg/l	0.0095 mg/l

[13] The permittee may determine a case-specific limit of detection or limit of quantitation using the analytical method specified above. The limit of detection shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B,

and the limit of quantitation (LOQ) shall be set equal to 3.18 times the limit of detection. Other methods may be used if first approved by EPA and IDEM.

Effluent concentrations less than the limit of quantitation shall be reported on the discharge monitoring report forms as the actual value. Effluent concentrations less than the limit of detection shall be reported on the discharge monitoring report forms as less than the value of the limit of detection. For example, if a substance is not detected at a concentration of 0.1 ug/l, report the value as 0.1 ug/l. If the measured effluent concentrations for a substance are above the water quality-based permit limitations and above the limit of detection specified by the permit in any three (3) consecutive analyses, or any five (5) out of nine (9) analyses, or the additional requirements, if any, required below indicate that the substance is present in the effluent at concentrations exceeding the water quality-based permit limitations, the discharger will be required to:

1. Determine the source of this substance through evaluation of sampling techniques, analytical/laboratory procedures, and industrial processes and waste streams, and

2. Increase the frequency of sampling and testing for the substance.

The permittee may also be required to take corrective action to reduce the pollutant in the effluent below the water quality-based effluent limit by means of the modification or revocation and reissuance of this permit.

[14] The actual stream flow shall be measured at the Morris Street USGS Gauging Station – Gauge No. 03353000. Influent flow to the TF/SC process shall be measured at a point of entry into the TF/SC process. Effluent flow from the TF/SC process shall be measured at a point representative of the discharge into the White River. The flow meters shall be calibrated at least once annually.

[15] A flow proportional composite sample shall be taken over the period of discharge. If the discharge occurs for more than 24 hours, then the sampling shall represent each calendar day consistent with the sampling requirements for Outfall 006. In addition, if there is more than one period of discharge during any calendar day, then the composite sample shall be representative of the total discharge during that calendar day.

[16] The effluent shall be disinfected on a continuous basis such that violations of the *E. coli* limitations do not occur from April 1 through October 31, annually. If there are less than five (5) discharges in a calendar month, then the monthly average does not need to be reported on the Discharge Monitoring Form (DMR). If Outfall 005 discharges five (5) times or more during a calendar month, then the monthly average *E. coli* value shall be calculated as a geometric mean and shall be reported on the DMR. If the permittee uses chlorine for any reason, at any time including the period from November 1 through March 31, then the limits and monitoring requirements in Table 6 for total residual chlorine shall be in effect whenever chlorine is used.

[17] Influent and effluent flow to and from the TF/SC process shall be measured at a point that is representative of the volume of the TF/SC process.

[18] The City of Indianapolis has submitted an application for a variance from the effluent limitations for free cyanide and chloride. Therefore, these effluent limitations for free cyanide and chloride are subject to the reopening clause in Part I.C.9 of this permit.

[19] Metals shall be reported as total recoverable. The following EPA test methods and/or Standard Methods and associated LODs and LOQs are recommended for use in the analysis of the effluent samples. Alternative 40 CFR 136 approved methods may be used provided the LOD is less than the monthly average and/or daily maximum effluent limitations.

The permittee may determine a case-specific method detection level (MDL) using one of the analytical methods specified below, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. NOTE: The MDL for purposes of this document, is synonymous with the "limit of detection" or "LOD" as defined in 327 IAC 5-1.5-26: "the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix".

Parameter	EPA Method	LOD, mg/L	LOQ, mg/L
Arsenic	3113 B	0.001	0.0032
Cadmium	3113 B	0.0001	0.0003
Chloride	*	1.0	3.2
Chromium	3111C or 3113B	0.002	0.006
Copper	3113 B	0.001	0.003
Cyanide, Free	1677 or 4500 CN-G	0.003	0.0095
Cyanide, Amenable	4500 CN-G	0.003	0.0095
Fluoride	4500 F-E	0.016	0.050
Lead	3113 B	0.001	0.003
Nickel	3113 B	0.001	0.003
Sulfate	375.2, Revision 2.0	3.0	9.54
TDS	160.1 or 2540C	10.0	31.8
Zinc	200.7, Revision 4.4	0.002	0.006

* The permittee may use any method listed in the latest version of 40 CFR Part 136 provided that the method has a LOD less than or equal to the LOD listed above.

6. Minimum Water Quality Requirements

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

a. including the mixing zone, to contain substances, materials, floating debris, oil, scum or other pollutants:

(1) that will settle to form putrescent or otherwise objectionable deposits;

(2) that are in amounts sufficient to be unsightly or deleterious;

(3) that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;

(4) which are in amounts sufficient to be acutely toxic to, or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;

(5) which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

b. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

7. Additional Monitoring Requirements

During the period beginning on the effective date of this permit, the permittee shall conduct the following monitoring activities:

a. Influent Monitoring

The permittee shall monitor the influent at both the Belmont and Southport AWT facilities for the following pollutants. Samples shall be representative of the raw influent, prior to mixing with any other wastewater (recycle streams, supernatant return, etc.).

Table 10

	Quality or Concentration			Monitoring Requirements	
Parameter	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Arsenic [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Cadmium [1][2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Copper [1] [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Cyanide, Free [1] [2]	Report	Report	mg/L	1 X Weekly	24 hr. Comp.
Chromium [1] [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Lead [1] [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Mercury [1][3]	Report	Report	ng/L	2 X Annually	Grab
Nickel [1][2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Zinc [1][2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Chloride [2]	Report	Report	mg/L	1 X Weekly	24 hr. Comp.
Fluoride [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
Sulfate [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.
TDS [2]	Report	Report	mg/L	2 X Monthly	24 hr. Comp.

[1] The permittee shall measure and report this parameter as total recoverable metal. Cyanide shall be reported as free cyanide.

[2] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are recommended for use in the analysis of the influent samples.

The permittee may determine a case-specific method detection level (MDL) using one of the analytical methods specified below, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. NOTE: The MDL for purposes of this document is synonymous with the "limit of detection" or "LOD" as defined in 327 IAC 5-1.5-26: "the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix".

Parameter	EPA Method	LOD, mg/L	LOQ, mg/L
Arsenic	3113 B	0.001	0.0032
Cadmium	3113 B	0.0001	0.0003
Chloride	*	1.0	3.2
Chromium	3111C or 3113B	0.002	0.006
Copper	3113 B	0.001	0.003
Cyanide, Free	1677 or 4500 CN-G	0.003	0.0095
Fluoride	4500 F-E	0.016	0.050
Lead	3113 B	0.001	0.003
Nickel	3113 B	0.001	0.003
Sulfate	375.2, Revision 2.0	3.0	9.54
TDS	160.1 or 2540C	10.0	31.8
Zinc	200.7, Revision 4.4	0.002	0.006

* The permittee may use any method listed in the latest version of 40 CFR Part 136 provided that the method has a LOD less than or equal to the LOD listed above.

[3] Mercury influent monitoring shall be conducted two times yearly for the term of the permit. Monitoring shall be conducted in the months of February and August of each year. Mercury monitoring and analysis will be performed using EPA Test Method 1631, Revision E. If Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as practicable after approval by EPA. The permittee shall measure and report this parameter as total recoverable metal.

8. Additional Discharge Monitoring Requirements

a. Beginning on the effective date of the permit, the effluent from Outfalls 001 & 006 shall be monitored by the permittee as follows:

Table 11

	Quality or Concentration			**Monitoring Requirements**	
Pollutant	Monthly Average	Daily Maximum	Unit	Measurement Frequency	Sample Type
Arsenic [2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Cadmium [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Chromium [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Copper [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Lead [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Mercury [1] [3]	Report	Report	ng/l	2 X Annually	Grab
Nickel [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Zinc [1][2]	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.

[1] The permittee shall measure and report this parameter as total recoverable metal.

[2] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are recommended for use in the analysis of the effluent samples. Alternative 40 CFR 136 approved methods may be used provided the LOD is less than the monthly average and/or daily maximum effluent limitations.

The permittee may determine a case-specific method detection level (MDL) using one of the analytical methods specified below, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. NOTE: The MDL for purposes of this document, is synonymous with the "limit of detection" or "LOD" as defined in 327 IAC 5-1.5-26: "the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix".

Parameter	EPA Method	LOD	LOQ
Arsenic	3113 B	0.001 mg/l	0.0032 mg/l
Cadmium	3113 B	0.0001 mg/l	0.00032 mg/l
Chromium	3111 C or 3113 B	0.002 mg/l	0.0064 mg/l
Copper	3113 B	0.001 mg/l	0.0032 mg/l
Lead	3113 B	0.001 mg/l	0.0032 mg/l
Nickel	3113 B	0.001 mg/l	0.0032 mg/l
Zinc	200.7, Revision 4.4	0.002 mg/l	0.0064 mg/l

[3] Mercury effluent monitoring shall be conducted two times yearly for the term of the permit. Monitoring shall be conducted in the months of February and August of each year. Mercury monitoring and analysis will be performed using EPA Test Method 1631, Revision E. If Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as practicable after approval by EPA. The permittee shall measure and report this parameter as total recoverable metal.

b. Organic Pollutant Monitoring

The permittee shall conduct an annual inventory of organic pollutants and shall identify and quantify additional organic compounds which occur in the influent, effluent, and sludge at both the Belmont and Southport AWT facilities. The analytical report shall be sent to the Pretreatment Group, Office of Water Quality. This report is due December 31st each year. The inventory shall consist of:

1. Sampling and Analysis of Influent and Effluent

Sampling shall be conducted on a day when industrial discharges are occurring at normal production levels. The samples shall be 24-hour flow proportional composites, except for volatile organics, which shall be taken by appropriate grab sampling techniques. Analysis for the U.S. EPA organic priority pollutants shall be performed using U.S. EPA methods 624, 625 and 608 in 40 CFR 136, or other equivalent methods approved by U.S.

EPA. Equivalent methods must be at least as sensitive and specific as methods 624, 625 and 608.

All samples must be collected, preserved and stored in accordance with 40 CFR 136, Appendix A. Samples for volatile organics must be analyzed within 14 days of collection. Samples for semivolatile organics, PCBs and pesticides must be extracted within 7 days of collection and analyzed within 40 days of extraction. For composite samples, the collection date shall be the date at the end of the daily collection period.

2. Sampling and Analysis of Sludge

Sampling collection, storage, and analysis shall conform to the U.S. EPA recommended procedures equivalent to methods 624, 625 and 608 in 40 CFR 136 or applicable methods in SW 846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Special sampling and/or preservation techniques will be required for those pollutants which deteriorate rapidly.

Sludge samples for volatile organics must be analyzed within 14 days of collection. Sludge samples for semivolatile organics, PCBs and pesticides must be extracted within 14 days of collection and analyzed within 40 days of extraction.

3. Additional Pollutant Identification

In addition to the priority pollutants, a reasonable attempt shall be made to identify and quantify the ten most abundant constituents of each fraction (excluding priority pollutants and unsubstituted aliphatic compounds) shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) more than ten times higher than the adjacent background noise. Identification shall be attempted through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation by an experienced analyst. Quantification may be based on an order of magnitude estimate based upon comparison with an internal standard.

The annual program effectiveness review, Part III.A.7, should identify the additional steps necessary to determine whether the pollutants present interfere, pass through, or otherwise violate 40 CFR 403.2. Upon such determination, the report must also identify the steps taken to develop and enforce local limitations on industrial discharges for those pollutants. This is a requirement of 40 CFR 403.5.

B. MONITORING AND REPORTING

1. Representative Sampling

   Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge and shall be taken at times which reflect the full range and concentration of effluent parameters normally expected to be present. Samples shall not be taken at times to avoid showing the presence or peak concentrations of any parameter.

2. Data on Plant Operation

   The raw influent and the wastewater from intermediate unit treatment processes, as well as the final effluent shall be sampled and analyzed for the pollutants and operational parameters specified by the applicable Monthly Report of Operation Form, as appropriate, in accordance with 327 IAC 5-2-13. Except where the permit specifically states otherwise, the sample frequency for the raw influent and intermediate unit treatment process shall be at a minimum the same frequency as that for the final effluent. The measurement frequencies specified in each of the tables in Part I.A. of this permit are the minimum frequencies required by this permit.

3. Reporting

   The permittee shall submit monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month and shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective. These reports shall include, but not necessarily be limited to, the Discharge Monitoring Report and the Monthly Report of Operation. The Permittee must submit the CSO Hydraulic Model Report as described in Attachment A.II.A to the Compliance Evaluation Section. Permittees with Pretreatment Programs, Non-delegated Pretreatment Programs or metals monitoring requirements shall also complete and submit the Indiana Monthly Monitoring Report Form (MMR-State Form 30530) or an equivalent form to report their influent and/or effluent data for metals and other toxics. All reports, with the exception of the CSO Discharge Monitoring Reports, shall be mailed to IDEM, Office of Water Quality, Data & Information Services Section, 100 N. Senate Ave. Mail Code 65-42, Indianapolis, Indiana 46204. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

   A calendar week will begin on Sunday and end on Saturday. Partial weeks consisting of four or more days at the end of any month will include the remaining days of the week, which occur in the following month in order to calculate a consecutive seven-day average. This value will be reported as a weekly average or seven-day average on the MRO for the month containing the partial week of four or more days. Partial calendar weeks at the end of any month will be carried forward to the succeeding month and reported as a weekly average or a seven-day average for the calendar week that ends with the first Saturday of that month.

4. Definitions

a. Calculation of Averages

Pursuant to 327 IAC 5-2-11(a)(5), the calculation of the average of discharge data shall be determined as follows: For all parameters except fecal coliform and *E. coli*, calculations that require averaging of sample analyses or measurements of daily discharges shall use an arithmetic mean unless otherwise specified in this permit. For fecal coliform, the monthly average discharge and weekly average discharge, as concentrations, shall be calculated as a geometric mean. For *E. coli*, the monthly average discharge, as a concentration, shall be calculated as a geometric mean.

b. Terms

(1) "Monthly Average" - The monthly average discharge means the total mass or flow-weighted concentration of all daily discharges during a calendar month on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar month. The monthly average discharge limitation is the highest allowable average monthly discharge for any calendar month.

(2) "Weekly Average" - The weekly average discharge means the total mass or flow-weighted concentration of all daily discharges during any calendar week on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar week. The average weekly discharge limitation is the maximum allowable average weekly discharge for any calendar week.

(3) "Daily Maximum" -The daily maximum discharge limitation is the maximum allowable daily discharge for any calendar day. The "daily discharge" means the total mass of a pollutant discharged during the calendar day or, in the case of a pollutant limited in terms other than mass pursuant to 327 IAC 5-2-11(e), the average concentration or other measurement of the pollutant specified over the calendar day or any twenty-four hour period that reasonably represents the calendar day for the purpose of sampling.

(4) The 24-hour Composite Sample consists of at least 12 grab samples collected over equal time intervals during the period of operator attendance. The grab samples for the composites shall be proportioned to flow. A flow-proportioned composite sample is obtained by:

(a) recording the discharge flow rate at the time each individual sample is taken,

(b) adding together the discharge flow rates recorded from each individual sampling time to formulate the "total flow value,"

(c) dividing the discharge flow rate of each individual sampling time by the total flow value to determine its percentage of the total flow value, and

(d) multiplying the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.

(5) $CBOD_5$: Carbonaceous Biochemical Oxygen Demand

(6) TSS: Total Suspended Solids

(7) *E. coli:* Escherichia coli bacteria

(8) The "Regional Administrator" is defined as the Region V Administrator, U.S. EPA, located at: 77 West Jackson Boulevard, Chicago, Illinois 60604.

(9) The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.

(10)Limit of Detection or LOD is defined as a measurement of the concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.

(11)Limit of Quantitation or LOQ is defined as a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration about the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also called the limit of quantification or quantification level.

(12)Method Detection Level or MDL is defined as the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by the procedure set forth in 40 CFR Part 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

5. <u>Test Procedures</u>

The analytical and sampling methods used shall conform to the current version of 40 CFR, Part 136, unless otherwise specified within this permit. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for <u>most</u>

methods; however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the State agency and the U.S. Environmental Protection Agency.

a. Standard Methods for the Examination of Water and Wastewater
18th, 19th and 20th Edition, 1992, 1995 or 1998 American Public Health Association, Washington, D.C. 20005.

b. A.S.T.M. Standards, Part 23, Water; Atmospheric Analysis
1972 American Society for Testing and Materials, Philadelphia, PA 19103.

c. Methods for Chemical Analysis of Water and Wastes
June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

6. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record and maintain records of all monitoring information and monitoring activities under this permit, including the following information:

a. The exact place, date, and time of sampling or measurements;

b. The person(s) who performed the sampling or measurements;

c. The dates the analyses were performed;

d. The person(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of all required analyses and measurements.

7. Additional Monitoring by the Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Discharge Monitoring Report and on the Monthly Report of Operation forms. Such increased frequency shall also be indicated on these forms. Any such additional monitoring data which indicates a violation of a permit limitation shall be followed up by the permittee, whenever feasible, with a monitoring sample obtained and analyzed pursuant to approved analytical methods. The results of the follow-up sample shall be reported to the Commissioner in the Monthly Discharge Monitoring Report.

8. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three-year period shall be extended:

a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

C. REOPENING CLAUSES

In addition to the reopening clause provisions cited at 327 IAC 5-2-16, the following reopening clauses are incorporated into this permit:

1. This permit may be modified or, alternately, revoked and reissued after public notice and opportunity for hearing to incorporate effluent limitations reflecting the results of a total maximum daily load (TMDL), wasteload allocation, additional stream studies, new or increased discharges of a pollutant(s) by industrial users, changes in water quality standards, or other information if the Department of Environmental Management determines that such effluent limitations are needed to assure that state water quality standards are met in the receiving stream.

2. This permit may be modified due to a change in sludge disposal standards pursuant to Section 405(d) of the Clean Water Act, if the standards when promulgated contain different conditions, are otherwise more stringent, or control pollutants not addressed by this permit.

3. This permit may be modified in whole or in part, or, alternately, revoked and reissued, to comply with any applicable effluent limitation or standard issued or approved under Sections 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains conditions otherwise more stringent than any effluent limitation in the permit; or
   b. controls any pollutant not limited in the permit.

4. This permit may be modified, or alternately, revoked and reissued after public notice and opportunity for hearing to include whole effluent toxicity limitations or to include limitations for specific pollutants if the results of the biomonitoring and/or the TRE study indicate that such limitations are necessary.

5. This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing, to include a case-specific Method Detection Level (MDL). The permittee must demonstrate that such action is warranted in accordance with the procedure specified under Appendix B, 40 CFR Part 136, or approved by the Indiana Department of Environmental Management.

6. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to incorporate additional requirements or limitations for specific pollutants if the required additional analyses in Part I.A. indicate that such additional requirements and/or limitations are necessary to assure that state water quality standards are met in the receiving stream.

7. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to include and/or modify limitations to reflect any change in Indiana water quality standards.

8. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to incorporate additional requirements or limitations for specific effluent constituents when an approved EPA analytical protocol is developed for endocrine disruption.

9. This permit may be modified or, alternatively, revoked and reissued, after public notice and opportunity for hearing to incorporate revised effluent limits relating to the permittee's submission of a complete application for and subsequent IDEM and U.S. EPA approval of a variance from the water quality criteria for free cyanide and/or chloride.

10. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to include effluent limitations for arsenic, cadmium, chromium, copper, fluoride, mercury, nickel, lead, sulfate, and/or zinc should they be found to be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above the water quality criterion as contained under 327 IAC 2-1.

11. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to include alternate ammonia-nitrogen limitations if the City of Indianapolis does not timely change its wastewater effluent disinfection system from chlorination to ozonation.

D. SCHEDULES OF COMPLIANCE

1. Free Cyanide

This schedule of compliance shall not commence until a final determination on the free cyanide variance submittal is made by the commissioner. Until a final determination on the variance request is made, the permittee shall continue to evaluate whether additional control technologies or pollution prevention measures exist to comply with the final effluent limitations or reduce the level of those pollutants currently being discharged to the sewer system or by the AWT plants. This evaluation shall be submitted to IDEM, OWQ, Compliance Evaluation Section every twelve (12) months from the effective date of the permit. Monitoring and reporting of influent (free cyanide) and effluent (amenable) cyanide is required during the interim period.

In the event IDEM denies the permittee's variance as requested for free cyanide, the permittee shall comply with the following schedule:

a. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality nine (9) months from the effective date of the variance denial. Beginning with the first progress report after a denial of the variance application, the progress report shall, among other items, include a description of the method(s) selected for meeting the final requirements for free cyanide. The permittee shall submit written progress reports to the Compliance Evaluation Section, Office of Water Quality beginning nine (9) months after the submittal of the initial nine (9) month progress report and every nine (9) months thereafter until the completion of this compliance schedule. Monitoring and reporting of influent (free cyanide) and effluent (amenable) cyanide is required during the interim period.

b. If the permittee determines that construction and/or changes in the local limits are not required to meet the final limits for free cyanide within the thirty-six month schedule of compliance, the permittee shall immediately notify the Compliance Evaluation Section, Office of Water Quality (OWQ). Upon receipt of such notification by the OWQ, the final limitations for free cyanide will become effective, but no later than thirty-six (36) months from the effective date of the denial of the variance application.

c. The permittee shall comply with all final effluent limitations no later than thirty-six (36) months from the effective date of the denial of the permittee's variance application.

d. **If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days** following the missed deadline, submit a written notice of noncompliance to the Compliance Evaluation Section of the Office of Water Quality stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

2. *E. Coli*

The permittee is changing its primary method of disinfection from chlorination to ozonation. The permittee shall achieve compliance with the final effluent limits for *E. coli* in accordance with the following schedule:

a. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality nine (9) months from the effective date of the permit and every nine (9) months thereafter until the completion of this compliance schedule. The final effluent limitations for *E. coli* are deferred for the term of this compliance schedule, unless the final effluent limitations can be met at an earlier date. The permittee shall notify the Compliance Evaluation Section of OWQ as soon as the final effluent limitations for *E. coli* can be met. Upon receipt of such notification by OWQ, the final limitations for *E. coli* will become effective, but no later than twenty-four (24) months from the effective date of this permit. Monitoring and reporting of effluent *E. coli* is required during the interim period. The monthly average limitation is effective during the schedule of compliance.

b. The change of disinfection method from chlorination to ozonation shall be completed within twenty-three (23) months from the effective date of the permit. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality when construction has been completed.

c. The permittee shall comply with all final requirements no later than twenty-four (24) months from the effective date of the permit.

d. **If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days** following the missed deadline, submit a written notice of noncompliance to the Compliance Evaluation Section of the Office of Water Quality stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

3. **Chlorides**

This schedule of compliance shall not commence until a final determination on the chlorides variance submittal is made by the commissioner. Until a final determination on the variance request is made, the permittee shall continue to evaluate whether additional control technologies or pollution prevention measures exist to comply with the final effluent limitations or reduce the level of those pollutants currently being discharged to the sewer system or by the AWT plants. This evaluation shall be submitted to IDEM, OWQ, Compliance Evaluation Section every twelve (12) months beginning with the effective date of the permit. Monitoring and reporting of influent and effluent chlorides is required during the interim period.

In the event IDEM denies the permittee's variance as requested for chlorides, the permittee shall comply with the following schedule:

a. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality, nine (9) months from the effective date of the variance denial. The progress report shall, among other items, include a description of the method(s) selected for meeting the final requirements for chlorides. The permittee shall submit written progress reports to the Compliance Evaluation Section, Office of Water Quality beginning nine (9) months after the submittal of the initial nine (9) month progress report and every nine (9) months thereafter until the completion of this compliance schedule. Monitoring and reporting of influent and effluent chlorides is required during the interim period.

b. If the permittee determines that construction and/or changes in the local limits are not required to meet the final limits for chlorides within the thirty-six month schedule of compliance, the permittee shall immediately notify the Compliance Evaluation Section, Office of Water Quality (OWQ). Upon receipt of such notification by the OWQ, the final limitations for chlorides will become effective, but no later than thirty-six (36) months from the effective date of the denial of the variance application.

c. The permittee shall comply with all final effluent limitations no later than thirty-six (36) months from the effective date of the denial of the permittee's variance application.

d. **If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days** following the missed deadline, submit a written notice of noncompliance to the Compliance Evaluation Section of the Office of Water Quality stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

E. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended the 40 CFR 136.3 (Tables IA and II) by adding testing methods for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation which is only required if the effluent demonstrates toxicity, as described in paragraph f.

1. Whole Effluent Toxicity Tests

   The permittee shall conduct the series of bioassay tests described below to monitor the toxicity of the discharge from Outfalls 001 and 006. If toxicity is demonstrated as defined under paragraph f below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

   a. Bioassay Test Procedures and Data Analysis

      (1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0; and Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method, (1000.0) EPA 821-R-02-013, October 2002, or most recent update.

      (2) Any circumstances not covered by the above methods, or that require deviation from the specified methods shall first be approved by the IDEM's Environmental Toxicology and Chemistry Section.

      (3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA 821-R-02-013), Fourth Edition, October 2002 or most recent update.

   b. Types of Bioassay Tests

      The permittee shall conduct a 7-day Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test and a 7-day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test on samples of the final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.

If in any control more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the *Ceriodaphnia* test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods; and in the fathead minnow test if the mean dry weight of surviving fish in the control group is less than 0.25 mg, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

(1) Samples for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.

(2) Chemical analysis must accompany each effluent sample taken for bioassay test. The analysis detailed under Part I.A. should be conducted for the effluent sample. Chemical analysis must comply with approved EPA test methods.

d. Frequency and Duration

The toxicity tests specified in paragraph b. shall be conducted once **every six months** for the duration of the permit.

If toxicity is demonstrated as defined under paragraph f (1), (2) or (3), the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Section 2.

e. Reporting

(1) Results shall be reported according to EPA 821-R-02-013, Section 10 (Report Preparation). Two copies of the completed report for each test shall be submitted to the Compliance Evaluation Section of the IDEM no later than sixty days after completion of the test.

(2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the respective test species *Ceriodaphnia dubia* and *Pimephales promelas*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.

(3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance used to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

(1) Acute toxicity will be demonstrated if the effluent is observed to have LC_{50} of less than 100% effluent for the test organism in 48 and 96 hours for *Ceriodaphnia dubia* or *Pimephales promelas*, which ever is more sensitive.

(2) Chronic toxicity will be demonstrated if the No Observed Effect Level (NOEL) is less than **92%** for *Ceriodaphnia dubia* or *Pimephales promelas.*

(3) If chronic toxicity is found in any of the tests specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks of receiving the chronic toxicity test results. If any two (2) consecutive tests, <u>including any and all confirmation tests</u>, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE is being conducted.

2. <u>Toxicity Reduction Evaluation (TRE) Schedule of Compliance</u>

The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined by Paragraph 1.f.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Evaluation Section of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicant and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications listed below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characterization Procedures, Second Edition (EPA/600/6-91/003), February 1991.

Phase II Toxicity Identification Procedures (EPA 600R92-080), September 1993.

Phase III Toxicity Confirmation Procedures (EPA 600R92-081), September 1993

(2) Methods for Chronic Toxicity Identification
Phase I Characterization of Chronically Toxic Effluents EPA/600/6-91/005, June 1991.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070), March 1989.

(4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatment Plants (EPA/600/2-88/062), April 1989.

b. Conduct the Plan

Within 30 days after submission of the TRE plan to the IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Evaluation Sections of the Office of Water Quality (OWQ) beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Evaluation Sections of the Office of Water Quality (OWQ) the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Section 2 and reduce the toxicity to acceptable levels as soon as possible but <u>no later than three years after the date of determination of toxicity</u>.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three consecutive monthly tests demonstrate no toxicity, the permittee shall <u>conduct chronic tests every six months for the duration of the permit</u>.

If toxicity is demonstrated as defined in paragraph 1.f after the initial three month period, testing must revert to a TRE as in Part 2 (TRE). These tests shall be conducted in accordance with the procedures under the Whole Effluent Toxicity Tests Section.

PART II

A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all conditions of this permit in accordance with 327 IAC 5-2-8(1) and all applicable requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application. In the event of a permit violation and/or applicable regulation, the City of Indianapolis and/or United Water may be held liable.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Provide Information

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the facility that:

a. could significantly change the nature of, or increase the quantity of, pollutants discharged; or

b. the Commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit a renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. The application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

a. permission is requested in writing before such deadline;

b. IDEM grants permission to submit the application after the deadline; and

c. the application is received no later than the permit expiration date.

As required under 327 IAC 5-2-3(g)(1) and (2), POTWs with design influent flows equal to or greater than one million (1,000,000) gallons per day and POTWs with an approved pretreatment program or that are to required to develop a pretreatment program, will be required to provide the results of whole effluent toxicity testing as part of their NPDES renewal application.

5. Transfers

The City of Indianapolis and its contract operator, United Water, are both listed as permittees on this permit. If this contractual relationship is terminated, the City of Indianapolis becomes the sole permittee. The City of Indianapolis must notify IDEM if it contracts with another entity or person other than an employee of the City to operate the facility.

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date.

b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner.

c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility.

d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

6. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4)(A), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge controlled by the permittee (e.g., plant closure, termination of the discharge by connecting to a POTW, a change in state law or information indicating the discharge poses a substantial threat to human health or welfare).

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

1. could significantly change the nature of, or increase the quantity of, pollutants discharged; or
2. the commissioner may request to evaluate whether such cause exists.

7. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or an invasion of rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

8. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

11. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Water Pollution Control Board is liable for a civil penalty not to exceed twenty-five thousand dollars ($25,000) per day of any violation. Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation commits a class C infraction. Pursuant to IC 13-30-10, a person who intentionally, knowingly, or recklessly violates any provision of this permit, the water pollution control laws or a rule or standard adopted by the Water Pollution Control Board commits a class D felony punishable by the term of imprisonment established under IC 35-50-2-7(a) (up to one year), and/or by a fine of not less than five thousand dollars ($5,000) and not more than fifty thousand dollars ($50,000) per day of violation. A person convicted for a violation committed after a first conviction of such person under this provision is subject to a fine of not more than one hundred thousand dollars ($100,000) per day of violation, or by imprisonment for not more than two (2) years, or both.

12. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10, provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under a permit shall, upon conviction, be punished by a fine of not more than ten thousand dollars ($10,000) per violation, or by imprisonment for not more than one hundred eighty (180) days per violation, or by both.

13. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

14. Operator Certification

The permittee shall have the wastewater treatment facilities under the direct supervision of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22.

In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7. The permittee shall designate one (1) person as the certified operator with complete responsibility for the proper operations of the wastewater facility.

327 IAC 5-22-10(b) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(10), "responsible charge" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(a), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

15. Construction Requirements

Except in accordance with 327 IAC 3, the permittee shall not construct, install, or modify any water pollution treatment/control facility as defined in 327 IAC 3-1-2(24). Upon completion of any construction, the permittee must notify the Compliance Evaluation Section of the Office of Water Quality in writing.

16. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative (including an authorized contractor acting as a representative of the Commissioner), upon the presentation of credentials and other documents as may be required by law, to:

a. enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. inspect at reasonable times any facilities, equipment or methods(including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

17. Annual Fees

In accordance with IC 13-18-20, each facility is required to pay annual fees. Since this permit regulates both the Belmont AWT and Southport AWT facilities, the permittee is responsible for payment of annual fees for each of these facilities.

B. MANAGEMENT REQUIREMENTS

1. Facility Operation, Maintenance and Quality Control

   a. In accordance with 327 IAC 5-2-8(8), the permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for collection and treatment that are:

      1. installed or used by the permittee; and
      2. necessary for achieving compliance with the terms and conditions of the permit.

      Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

   b. The permittee shall operate the permitted facility in a manner which will minimize upsets and discharges of excessive pollutants. The permittee shall properly remove and dispose of excessive solids and sludges.

   c. The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

   d. Maintenance of all waste collection, control, treatment, and disposal facilities shall be conducted in a manner that complies with the bypass provisions set forth below.

   e. Any extensions to the sewer system must continue to be constructed on a separated basis. Plans and specifications, when required, for extension of the sanitary system must be submitted to the Facility Construction Section, Office of Water Quality in accordance with 327 IAC 3-2-1. There shall also be an ongoing preventative maintenance program for the sanitary sewer system.

2. Bypass of Treatment Facilities

   Pursuant to 327 IAC 5-2-8(11):

   a. Terms as defined in 327 IAC 5-2-8(11)(A):

      (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.

      (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses, as defined herein, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined herein;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II.B.2.d; or

(4) The conditions under Part II.B.2.f, h, i, and j below are met.

c. In accordance with 327 IAC 2-6.1, bypasses which result or may result in death, acute injury or illness to animals or humans are subject to the "Spill Reporting Requirements" in Part II.C.9 of this permit.

d. The permittee must provide the Commissioner with the following notice:

(1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.

(2) The permittee shall orally report an unanticipated bypass within 24 hours of becoming aware of the bypass event. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance (i.e. the bypass) and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event.

e. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.b. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

f. The permittee may allow any bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.d and e of this permit.

g. The Belmont and Southport AWT facilities have the following bypass points (outfalls):

Outfall No.	Location (Latitude/Longitude)	Receiving Stream
007	Belmont Primary Effluent Bypass 39° 43' 34.18" N; 86° 11' 25.40" W	West Fork White River
002	Southport Primary Influent Bypass 39° 40' 10.87" N; 86° 13' 33.02" W	Little Buck Creek
004 (Formerly 002B)	Southport Primary Effluent Bypass 39° 40' 10.93" N; 86° 13' 28.35" W	Little Buck Creek

Belmont Primary Effluent Bypass: A primary effluent bypass exists after the primary clarifiers and prior to the TF/SC system. Primary effluent from this bypass discharges over adjustable weirs located in the Primary Effluent Diversion Structure and enters the White River via Outfall 007.

Southport Primary Influent Bypass: A preliminary treatment effluent diversion exists that allows flow to be diverted around the primary clarifiers to the bio-roughing towers. This diversion is located at the effluent channel of the grit chambers and diverts screened and degritted wastewater to Structure 5-K and onto the BRS or the flow is mixed with primary effluent and bypassed to Little Buck Creek through Outfall 002.

Southport Primary Effluent Bypass: Primary effluent diversions exist after the primary clarifiers prior to the bio-roughing towers. Primary effluent from these diversions flow through 60-inch pipes and enters Little Buck Creek via Outfall 004 and/or Outfall 002.

h. Belmont and Southport AWT Facilities

The bioroughing towers or TF/SC process, oxygen nitrification and air nitrification facilities listed in the Treatment Facility Description will be treated as one combined unit treatment process for the purpose of providing secondary/biological treatment in order to give the permittee flexibility to produce the best quality effluent possible. Diversions around individual components of this combined unit will not be considered bypasses provided:

(1) the final effluent quality is in strict compliance with the permit limits;
(2) the permittee maximizes the treatment capability of the plant during wet weather events as described in the facility's Wet Weather Standard Operating Procedures; and
(3) the permittee maintains the records required under subdivision i. below.

Diversions of flow around the entire integrated biological treatment system shall be considered bypasses subject to Part II.B.2.a - f of this permit.

Belmont AWT Dry Weather Operation:

The trickling filter/solids contact (TF/SC) and oxygen nitrification (ONS) processes listed in the Treatment Facility Description will be treated as an integrated biological treatment system during dry weather to give the permittee operational flexibility to optimize effluent quality. Splitting the primary effluent flow between the TF/SC and ONS processes is a necessary feature of the integrated system during dry weather as well as wet weather periods. The ability to split the BRS effluent flow between the contact/reaeration tankage and ONS is another desirable feature of the integrated system. Such flow splitting between individual unit operations and processes within the integrated biological treatment system are necessary and will not be considered bypasses or diversions provided that:

(1) the final effluent quality at Outfalls 005 and 006 is in strict compliance with the permit limits;
(2) the permittee maximizes the treatment capability of the plant during wet weather events as described below; and
(3) the permittee maintains the records required under subdivision (i) below.

Belmont AWT Wet Weather Operation: When the flow to ONS reaches or exceeds its 150 MGD peak hourly rated capacity, the integrated system may be uncoupled and effluent from the TF/SC system may be diverted to the wet weather disinfection facilities and discharged through Outfall 005. During the period when TF/SC effluent is discharged to Outfall 005 (including half-hour discretionary periods before, during and after wet-weather episodes), the flow through ONS must be maintained at or above the 150 MGD peak hourly rated capacity. The effluent limits contained in Tables 5 and 6 (Part I.A.3) apply to the effluent as long as the discharge occurs. The effluent limits contained in Tables 7 and 8 (Part I.A.4 of the permit) apply to the discharge from the TF/SC process, but prior to entering Outfall 005. Within a half-hour after the flow to the integrated biological system has decreased to less than 150 MGD, the discharge from Outfall 005 must cease.

Sixty 60 days before the TF/SC process is placed in full-time operation at the Belmont AWT Plant, the standard operating procedures (SOPs) must be updated to include the conditions in which partial diversion of flow occurs, including the flow-splitting of primary effluent between the TF/SC and the ONS processes.

i. For each day that a diversion occurs for either wet weather or dry weather, the permittee shall maintain records that document that the criteria listed in subdivision h. above have been satisfied. The records must include documentation of the portion of each unit treatment process utilized to comply with the above criteria. The records shall include the time that an individual component of the unit treatment process is removed from service or placed back into service.

j. The permittee must submit updated standard operating procedures (SOPs) to the Compliance Branch documenting the use of the unit treatment processes both during wet and dry weather conditions.

   The SOPs for both the Belmont and Southport AWT facility must be reviewed and revised as the improvements are constructed consistent with the approved CSO Long-Term Control Plan. These SOPs shall also be included in the CSOOP as required by Attachment A of this permit.

k. The partial diversion of flow around the effluent filters is authorized provided that the effluent filters are operated consistent with the SOPs.

3. Upset Conditions

   Pursuant to 327 IAC 5-2-8(12):

   a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

   b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this subsection, are met.

   c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

      (1) An upset occurred and the permittee has identified the specific cause(s) of the upset, if possible;

      (2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures;

      (3) The permittee complied with any remedial measures required under "Duty to Mitigate", Part II.A.2; and

      (4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements", Part II.C.3, or 327 IAC 2-6.1, whichever is applicable.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal.

a. Collected screenings, slurries, sludges, and other such pollutants shall be disposed of in accordance with methods established in 329 IAC 10 and 327 IAC 6.1, or another method approved by the Commissioner.

b. The permittee shall comply with existing federal regulations governing solids disposal, and with applicable 40 CFR Part 503, the federal sludge disposal regulation standards.

c. The permittee shall notify the Commissioner prior to any changes in sludge use or disposal practices.

d. The permittee shall maintain records to demonstrate its compliance with the above disposal requirements.

5. Power Failures

In accordance with 327 IAC 5-2-10 and 327 IAC 5-2-8(13), in order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

a. provide an alternative power source, such as a dual power feed, sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, or

b. shall halt, reduce or otherwise control all discharge in order to maintain compliance with the effluent limitations and conditions of this permit upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F) and 5-2-16(d), the permittee shall give notice to the Commissioner as soon as possible of any planned alterations or additions to the facility (which includes any point source) that could significantly change the nature of, or increase the quantity of, pollutants discharged. Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited. Material and substantial alterations or additions to the permittee's operation that were not covered in the permit (e.g., production changes, relocation or combination of discharge points, changes in the nature or mix of products produced) are also cause for modification of the permit. However those alterations which constitute total replacement of the process or the production equipment causing the discharge converts it into a new source, which requires the submittal of a new NPDES application.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9), 327 IAC 5-2-13, and 327 IAC5-2-15, monitoring results shall be reported at the intervals and in the form specified in "Data On Plant Operation," Part I.B.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(10), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time the permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames.

a. any unanticipated bypass which exceeds any effluent limitation in the permit;

b. any noncompliance which may pose a significant danger to human health or the environment. Reports under this item must be made as soon as the permittee becomes aware of the noncomplying circumstances by calling 317/233-7745 (888/233-7745 toll free in Indiana);

c. any upset (as defined in Part II.B.3 above) that exceeds any technology-based effluent limitations in the permit;

d any discharge from the sanitary sewer system;

e. any dry weather discharge from a combined sewer overflow which is identified in this permit; or

f. any violation of a maximum daily discharge limitation for the following toxic pollutant:

Cyanide

The permittee can make the oral reports by calling 317/232-8670 during regular business hours or by calling 317/233-7745 (888/233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass/ Overflow Incident Report" or a "Noncompliance Notification Report," whichever is applicable" to IDEM at 317/232-8637. If a complete fax submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

4. Other Noncompliance

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, not related to the failure to report planned changes in the permitted facility, or not relating to any compliance schedules, at the time the pertinent Discharge Monitoring Report is submitted. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent the noncompliance.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

The permittee shall submit to the Compliance Branch an annual report on April 1 of each year informing OWQ of any changes to the description of the operational capacity (hydraulic and organic loading) of each unit process of the treatment system, Standard Operating Procedures for the AWT plant during wet weather and dry weather, or the process flow schematic, made during the preceding calendar year.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) For a corporation: by a principal executive defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making functions for the corporation or the manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars ($25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a federal, state, or local governmental body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under paragraphs a and b of this section, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine or not more than $10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Progress Reports

In accordance with 327 IAC 5-2-8(10)(A), reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

10. Advance Notice for Planned Changes

In accordance with 327 IAC 5-2-8(10)(B), the permittee shall give advance notice to IDEM of any planned changes in the permitted facility, any activity, or other circumstances that the permittee has reason to believe may result in noncompliance with permit requirements.

11. Additional Requirements for POTWs and/or Treatment Works Treating Domestic Sewage

a. All POTWs shall identify, in terms of character and volume of pollutants, any significant indirect discharges into the POTW which are subject to pretreatment standards under section 307(b) and 307 (c) of the CWA.

b. All POTWs must provide adequate notice to the Commissioner of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants.

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by any source where such change would render the source subject to pretreatment standards under section 307(b) or 307(c) of the CWA or would result in a modified application of such standards.

As used in this clause, "adequate notice" includes information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of the effluent to be discharged from the POTW.

c. This permit incorporates any conditions imposed in grants made by the U.S. EPA and/or IDEM to a POTW pursuant to Sections 201 and 204 of the Clean Water Act, that are reasonably necessary for the achievement of effluent limitations required by Section 301 of the Clean Water Act.

d. This permit incorporates any requirements of Section 405 of the Clean Water Act governing the disposal of sewage sludge from POTWs or any other treatment works treating domestic sewage for any use for which rules have been established in accordance with any applicable rules.

D. ADDRESSES

1. Cashiers Office

Indiana Department of Environmental Management
Cashiers Office – Mail Code 50-10C
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Cashiers Office:

a. NPDES permit applications (new, renewal or modifications) with fee
b. Construction permit applications with fee

2. Municipal Permits Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Municipal Permits Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Municipal Permits Section:

a. Preliminary Effluent Limits request letters
b. Comment letters pertaining to draft NPDES permits
c. NPDES permit transfer of ownership requests
d. NPDES permit termination requests
e. Notifications of substantial changes to a treatment facility, including new industrial sources

3. Data & Information Services Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Data & Information Services Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Data & Information Services Section:

a. Discharge Monitoring Reports (DMRs), Monthly Reports of Operation (MROs), and Monthly Monitoring Reports (MMRs)

4. Compliance Evaluation Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Compliance Evaluation Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Compliance Evaluation Section:

a. Gauging station and flow meter calibration documentation
b. Compliance schedule progress reports
c. Completion of Construction notifications
d. Whole Effluent Toxicity Testing reports
e. Toxicity Reduction Evaluation (TRE) plans and progress reports
f. Bypass/Overflow reports
g. Anticipated Bypass reports
h. CSO Discharge Monitoring Reports

5. Wet Weather Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Wet Weather Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Wet Weather Section:

a. Combined Sewer Overflow (CSO) Operational Plans
b. CSO Long Term Control Plans (LTCP)
c. Stream Reach Characterization and Evaluation Reports (SRCER)

6. Pretreatment Group

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Compliance Evaluation Section – Pretreatment Group
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Pretreatment Group:

a. Organic Pollutant Monitoring Reports
b. Significant Industrial User (SIU) Quarterly Noncompliance Reports
c. Pretreatment Program Annual Reports

d. Sewer Use Ordinances
e. Enforcement Response Guides (ERG)
f. Sludge analytical results

PART III - REQUIREMENT TO OPERATE A PRETREATMENT PROGRAM

A. CONDITIONS

The permittee, hereinafter referred to as the "Control Authority", is required to operate its approved industrial pretreatment program approved on January 11, 1985 and modified as approved on March 3, 1994. To ensure the program is operated as approved and consistent with 327 IAC 5-16 through 5-21, the following conditions and reporting requirements are hereby established. The Control Authority (CA) shall:

1. LEGAL AUTHORITY - The CA shall develop, enforce and maintain adequate legal authority in its Sewer Use Ordinance (SUO) to fully implement the pretreatment program in compliance with State and local law. As part of this requirement, the CA shall develop and maintain local limits as necessary to implement the prohibitions and standards in 327 IAC 5-18. The Control Authority shall perform a technical re-evaluation of local limits at least once during the term of this permit. The local limit re-evaluation shall be in accordance with EPA Guidance document Local Limits Development Guidance (EPA 833-R-04-002A), July 2004.

2. PERMIT ISSUANCE - In accordance with 327 IAC 5-19-3(1), the CA is required to issue/reissue permits to Significant Industrial User(s) (SIU) as stated in the SUO. The Control Authority must issue permits to new SIUs prior to the commencement of discharge. A SIU is defined in the SUO.

3. INDUSTRIAL COMPLIANCE MONITORING - The CA is required to conduct inspection, surveillance, and monitoring activities to determine SIU compliance status with the approved program and the SUO independent of data supplied by the SIU. SIU compliance monitoring performed by the CA will be conducted in accordance with the program plan or yearly program plan. SIUs will be inspected once per year, at minimum.

4. ENFORCEMENT - The CA is required to initiate the appropriate enforcement action against a SIU violating any provision of the SUO and/or discharge permit in accordance with the Enforcement Response Procedures (ERP) adopted by the CA. The CA must investigate violations by collecting and analyzing samples and collecting other information with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions in accordance with 40 CFR 403.8(f)(1)(iii) and 327 IAC 5-19-3(1)(F).

5. SIU QUARTERLY NONCOMPLIANCE REPORT - The CA is required to report the compliance status of each SIU quarterly. The report is due by the 28th of the following months: May, August, November and February of each year. The report shall include a description of corrective actions that have or will be taken by the CA and SIU to resolve the noncompliance situations. This report is to be sent to the Compliance Branch of the Office of Water Quality.

6. PUBLIC PARTICIPATION AND ANNUAL PUBLISHING OF SIUs IN SIGNIFICANT NONCOMPLIANCE - The CA is required to comply with the public participation requirements under 40 CFR 25 and 327 IAC 5-19-3(2)(L). The CA must publish annually, by January 28, in the largest daily newspaper in the area, a list of SIUs that have been in significant noncompliance (SNC) with the SUO during the calendar year. The CA shall include in the ANNUAL REPORT a list of the SIUs published along with the newspaper clipping.

7. ANNUAL REPORT - Pursuant to 327 IAC 5-16-5(d), the CA is required to submit an annual report to the IDEM, OWQ, Pretreatment Group by April 1 of each year. The annual report will be submitted in accordance with the State supplied "POTW PRETREATMENT PROGRAM ANNUAL REPORT GUIDANCE".

8. RECORDS RETENTION - The CA shall retain any pretreatment reports from an industrial user a minimum of three (3) years and shall make such reports available for inspection and copying by IDEM or the U.S. EPA. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the industrial user or the operation of the Belmont AWT Plant's pretreatment program or when requested by IDEM or the U.S. EPA.

9. CONFIDENTIALITY - The CA is required to comply with all confidentiality requirements set forth in 40 CFR 403.14, as well as the procedures established in the SUO.

10. PROGRAM RESOURCES - Pursuant to 327 IAC 5-19-3(3), the CA shall maintain sufficient resources and qualified personnel to carry out the pretreatment program requirements.

11. INTERJURISDICTIONAL AGREEMENTS - The CA must maintain sufficient legal authority to ensure compliance with all applicable pretreatment limits and requirements by all SIUs discharging to the POTW, including SIUs within governmental jurisdictions outside the immediate jurisdiction of the POTW. The CA must maintain the interjurisdictional agreements necessary to ensure full compliance by SIUs located within other jurisdictions, as discussed in 40 CFR 403.8(f)(1).

12. POTW PRETREATMENT PROGRAM REVISION REQUIREMENTS - Unless already completed, the CA is required to update its pretreatment program and SUO in accordance with the Pretreatment Implementation Review Task Force (PIRT) revisions and the Domestic Sewage Study (DSS) rule. The updating shall be completed according to the following schedule:

    a. The CA shall re-evaluate its pretreatment program for consistency with 40 CFR 403, particularly the PIRT and DSS revisions, then submit a draft of any program modification, with a request for approval of the modification under 40 CFR 403.18, to the Pretreatment Group and the U.S. EPA, Region 5, within twelve (12) months of the effective date of this permit. The pretreatment program modification shall include a technical evaluation of the need to revise local pretreatment limitations in accordance with 40 CFR 122.44(j)(2)(ii). The CA is to conduct the local limitations technical evaluation consistent with U.S. EPA's Local Limits Development Guidance (July 2004) document.

The request must identify or highlight the new provisions in the modification (or pre-existing provisions in the original program) that fulfill the requirements of the PIRT and DSS revisions.

b. The CA shall make any changes to its pretreatment program necessary for the program to be consistent with 40 CFR 403, particularly the PIRT and DSS revisions, within 90 days after approval by the approval authority.

c. The CA shall issue pretreatment permits to all SIUs (or modify existing SIU permits) that are affected by the revisions within one year after approval of the revisions by the approval authority.

13. PROGRAM MODIFICATION - Pursuant to 327 IAC 5-19-6 and 40 CFR 403.18, any significant proposed program modification shall be submitted to the Pretreatment Group and the U.S. EPA for approval. A significant modification shall include, but not be limited to, any change in the SUO, major modification in the approval program's administrative procedures, a significant reduction in monitoring procedures, a significant change in the financial/revenue system, a significant change in the local limitations contained in the SUO, and a change in the industrial survey.

NOTE: A summary of the revisions to the General Pretreatment Regulations (40 CFR 403) is available from the Pretreatment Group.

ATTACHMENT A
PRECIPITATION RELATED COMBINED SEWER OVERFLOW AUTHORIZATION REQUIREMENTS

I. Discharge Requirements

A. Combined Sewer Overflows are point sources subject to both technology-based and water quality-based requirements of the Clean Water Act and state law. The permittee is authorized to have wet weather discharges from outfalls listed below subject to the requirements and provisions of this permit, including Attachment A.

Outfall Number	Location (Latitude/Longitude)	Receiving Water
003	Raw Wastewater Overflow prior to Southport AWT Plant's headworks 39° 40'10.94" N; 86° 13'29.31" W	Little Buck Creek
008	Raw Wastewater Overflow prior to Belmont AWT Plant's headworks 39° 43'41.58" N; 86° 11'17.03" W	White River
011	Minnesota Street & Pershing Avenue 39° 44'36.48" N; 86° 12'4.05" W	Big Eagle Creek
012	Raymond Street & West Street 39° 44'11.94" N; 86° 10'9.75" W	White River
013	Meridian Street & Adler Street 39° 44'31.55" N; 86° 10'5.45" W	White River
015	Southern Avenue & Manker Avenue 39° 43'47.87" N; 86° 8'30.88" W	Bean Creek
016	Shelby Street & Willow Drive 39° 43'44.04" N; 86° 8'22.60" W	Bean Creek
017	Boyd Avenue & Nelson Avenue 39° 43'44.22" N; 86° 8'4.19" W	Bean Creek
019	Pleasant Run Parkway North Drive & Meridian Street 39° 43'55.33" N; 86° 9'29.00" W	Pleasant Run
020	Pleasant Run Parkway North Drive & Pennsylvania Street 39° 43' 58.01" N; 86° 9'23.24" W	Pleasant Run

021	Pleasant Run Parkway North Drive & Ransdell Street 39° 44'5.69" N; 86° 9'6.24" W	Pleasant Run
022	Pleasant Run Parkway North Drive & Raymond Street 39° 44'13.90" N; 86° 8'46.85" W	Pleasant Run
023	Pleasant Run Parkway North Drive & Iowa Street 39° 44'36.78" N; 86° 8'34.64" W	Pleasant Run
025	Pleasant Run Parkway North Drive & Shelby Street 39° 44'41.43" N; 86° 8'23.61" W	Pleasant Run
027	Pleasant Run Parkway South Drive & Cottage Avenue 39° 44'51.00" N; 86° 8'5.89" W	Pleasant Run
028	Pleasant Run Parkway South Drive & State Street 39° 44'58.20" N; 86° 7'50.31" W	Pleasant Run
029	Orange Street & Randolph Street 39° 44'55.96" N; 86° 7'39.48" W	Pleasant Run
030	Pleasant Run Parkway South Drive & Randolph Street 39° 44'54.81" N; 86° 7'37.87" W	Pleasant Run
031	Pleasant Run Parkway South Drive & Churchman Avenue 39° 44'57.69" N; 86° 7'28.16" W	Pleasant Run
032	Morris Street & Warman Avenue 39° 45'3.31" N; 86° 12'27.02" W	Big Eagle Creek
033	Vermont Street & Somerset Avenue 39° 46'17.98" N; 86° 13'19.03" W	Big Eagle Creek
034	Michigan Street & Dorman Street 39° 46'25.57" N; 86° 8'20.58" W	Pogues Run
035	Arsenal Avenue & 10th Street 39° 46'52.53" N; 86° 7'58.73" W	Pogues Run

036	Nowland Avenue & Tecumseh Street 39° 47'8.44" N; 86° 7'34.49" W	Pogues Run
037	Washington Street & Geisendorff Street 39° 46'2.78" N; 86° 10'22.63" W	White River
038	New York Street & Agnes Street 39° 46'8.54"N; 86° 10'33.33" W	White River
039	New York Street & Beauty Avenue 39° 46'13.98" N; 86° 10'46.80" W	White River
040	New York Street & Koehne Street 39° 46'17.96" N; 86° 11'12.61" W	White River
041	White River Parkway West Drive & Michigan Street 39° 46'28.76" N; 86° 11'21.80" W	White River
042	Saint Clair Street & Lynn Avenue 39° 46'43.72" N; 86° 11'29.04" W	White River
043	Harding Street & Waterway Boulevard 39° 47'8.98" N; 86° 11'15.18" W	White River
044	Waterway Boulevard & Riverside Drive 39° 47'10.97" N; 86° 11'27.60" W	White River
045	White River Parkway West Drive & Belmont Avenue 39° 47'9.39" N; 86° 11'40.42"W	White River
046	Lafayette Road & 19th Street 39 47'29.51" N; 86 12'3.85" W	White River
049	Stadium Drive & Fall Creek 39° 46'54.70" N; 86° 10'38.47" W	Fall Creek
050	Fall Creek Boulevard & Burdsal Parkway 39° 48'1.94" N; 86° 10'28.07" W	Fall Creek

051	Capitol Avenue & 22nd Street 3°9 47'50.26" N; 86° 9'44.50" W	Fall Creek
052	Fall Creek Boulevard & Boulevard Place 39° 48'5.79" N; 86° 9'45.83" W	Fall Creek
053	Fall Creek Parkway North Drive & Illinois Street 39° 48'10.07" N; 86° 9'32.30" W	Fall Creek
054	Fall Creek Parkway North Drive & Meridian Street 39° 48'13.53" N; 86° 9'24.29" W	Fall Creek
055	28th Street & Talbot Street 39° 48'18.64" N; 86° 9'15.46" W	Fall Creek
057	28th Street & Washington Boulevard 39° 48'20.80" N; 86° 9'6.84" W	Fall Creek
058	28th Street & New Jersey Street 39° 48'20.75" N; 86° 9'2.48" W	Fall Creek
059	Fall Creek Parkway North Drive & Central Avenue 39° 48'21.03" N; 86° 8'57.97" W	Fall Creek
060	Sutherland Avenue & Central Avenue 39° 48'20.22" N; 86° 8'56.34" W	Fall Creek
061	Fall Creek Parkway North Drive & Ruckle Street 39° 48'23.09" N; 86° 8'53.16" W	Fall Creek
062	Guilford Avenue & 30th Street 39° 48'37.49" N; 86° 8'30.94" W	Fall Creek
063	Fall Creek Parkway North Drive & 32nd Street 39° 48'50.37" N; 86° 8'36.54" W	Fall Creek
064	Winthrop Avenue & 34th Street 39° 49'0.25" N; 86° 8'22.03" W	Fall Creek

065	Sutherland Avenue & 34th Street 39° 49'3.83" N; 86° 8'14.83" W	Fall Creek
066	Fall Creek Boulevard & Balsam Avenue 39° 49'15.68" N; 86° 8'9.66" W	Fall Creek
072	Pleasant Run Parkway North Drive & Saint Peter Street 39° 44'59.96" N; 86° 7'20.32" W	Pleasant Run
073	Pleasant Run Parkway North Drive & Keystone Avenue 39° 45'1.82" N; 86° 7'15.28" W	Pleasant Run
074	Pleasant Run Parkway North Drive & Prospect Street 39° 45'8.80" N; 86° 7'3.93" W	Pleasant Run
075	Pleasant Run Parkway North Drive & Southeastern Avenue 39° 45'28.70" N; 86° 6'30.88" W	Pleasant Run
076	Pleasant Run Parkway North Drive & English Avenue 45'35.10" N; 39°86° 6'17.91" W	Pleasant Run
077	Pleasant Run Parkway North Drive & Sherman Drive 39° 45'47.03" N; 86° 6'7.45" W	Pleasant Run
078	Pleasant Run Parkway North Drive & Brookville Road 39° 45'50.23" N; 86° 5'43.15" W	Pleasant Run
080	Pleasant Run Parkway North Drive & Wallace Avenue 39° 46'2.22" N; 86° 5'18.83" W	Pleasant Run
081	Pleasant Run Parkway North Drive & Riley Avenue 39° 46'10.34" N; 86° 5'9.30" W	Pleasant Run
083	Hawthorne Lane & Lowell Avenue 39° 46'23.36" N; 86° 4'47.61" W	Pleasant Run

084	Pleasant Run Parkway North Drive & Michigan Street 39° 46'31.88" N; 86° 4'39.96" W	Pleasant Run
085	Pleasant Run Parkway North Drive & Ritter Avenue 39° 46'32.61" N; 86° 4'25.68" W	Pleasant Run
086	Pleasant Run Parkway North Drive & Ritter Avenue 39° 46'32.95" N; 86° 4'25.82" W	Pleasant Run
087	Pleasant Run Parkway North Drive & Audubon Road 39° 46'35.27" N; 86° 4'11.41" W	Pleasant Run
088	Pleasant Run Parkway North Drive & Graham Avenue 39° 46'33.03" N; 86° 4'5.84" W	Pleasant Run
089	Pleasant Run Parkway North Drive & Arlington Avenue 39° 46'33.14" N; 86° 3'50.75" W	Pleasant Run
090	Lowell Avenue & Sheridan Avenue 39 46'30.24" N; 86 3'36.59" W	Pleasant Run
091	Pleasant Run Parkway South Drive & Kenmore Road 39° 46'31.37" N; 86° 3'30.23" W	Pleasant Run
092	Pleasant Run Parkway South Drive & Ridgeview Drive 39° 46'31.87" N; 86° 3'27.11" W	Pleasant Run
095	Brookside Parkway North Drive & Coyner Avenue 39° 47'11.67" N; 86° 7'27.22" W	Pogues Run
096	Brookside Parkway South Drive & Nowland Avenue 39° 47'12.00" N; 86° 7'27.28" W	Pogues Run
097	Brookside Parkway South Drive & Keystone Avenue 39° 47'11.18" N; 86° 7' 14.59" W	Pogues Run

098	Tacoma Avenue & Nowland Avenue 39° 47'9.96" N; 86° 7'10.68" W	Pogues Run
099	Brookside Parkway South Drive & Temple Avenue 39° 47'8.35" N; 86° 7'5.27" W	Pogues Run
100	Brookside Parkway South Drive & Rural Street 39° 47'8.71" N; 86° 7'2.34" W	Pogues Run
101	Sherman Drive & Brookside Parkway North Drive 39° 47'29.94" N; 86° 6'14.14" W	Pogues Run
102	Forest Manor Avenue & 19th Street 39° 47'32.31" N; 86° 6'2.67" W	Pogues Run
103	Sherman & Denwood Drs. Lift Station 39 49'44.67" N; 86 6'10.16" W	Meadow Brook
106	Pleasant Run Parkway North Drive & Orange Street 39° 44'54.53" N; 86° 7'31.19" W	Pleasant Run
107	Pleasant Run Parkway North Drive & Saint Paul Street 39° 44'58.77" N; 86° 7'23.70" W	Pleasant Run
108	Pleasant Run Parkway North Drive & Saint Paul Street 39° 44'58.21" N; 86° 7'23.81" W	Pleasant Run
109	Pleasant Run Parkway North Drive & Churchman Street 39° 44'58.05" N; 86° 7'27.45" W	Pleasant Run
115	Henry Street & Kentucky Avenue 39° 45'22.43" N; 86° 10'20.55" W	Pogues Run
116	Meikel Street & Ray Street 39° 45'16.26" N; 86° 10'22.37" W	White River
117	Southern Avenue & White River 39° 43'46.60" N; 86° 10'26.43" W	White River

118	White River Parkway East Drive & West Street 39° 44'38.80" N; 86° 10'8.17" W	White River
119	Pleasant Run Parkway South Drive & Beecher Street 39° 44'30.15" N; 86° 8'34.09" W	Pleasant Run
120	Pleasant Run Parkway South Drive & Southern Avenue 39° 43'46.15" N; 86° 9'57.60" W	Pleasant Run
125	Meridian Street & South Street 39° 45'41.40" N; 86° 9'29.79" W	Pogues Run
127	1325 South State Street 39° 44'57.99" N; 86° 7'50.12" W	Pleasant Run
128	Senate Avenue & Merrill Street 39° 45'33.10" N; 86° 9'49.36" W	Pogues Run
129	Meridian Street & Merrill Street 39° 45'33.50" N; 86° 9'33.55" W	Pogues Run
130	Manual High School 39° 44'5.25" N; 86° 9'6.69" W	Pleasant Run
131	Fall Creek Boulevard & Capitol Avenue 39° 48'8.59" N; 86° 9'41.58" W	Fall Creek
132	Fall Creek Parkway North Drive & Pennsylvania Street 39° 48'16.29" N; 86° 9'19.51" W	Fall Creek
133	Market Street & Pine Street 39° 46'5.29" N; 86° 8'40.70" W	Pogues Run
135	Orchard Avenue & 39th Street 39° 49'36.17" N; 86° 7'45.15" W	Fall Creek
136	New York Street & Dorman Street 39° 46'15.94" N; 86° 8'25.78" W	Pogues Run
137	Pine Street & Ohio Street 39° 46'10.20" N; 86° 8'32.71" W	Pogues Run

138	College Avenue & Washington Street 39° 46'0.44" N; 86° 8'44.91" W	Pogues Run
141	Winthrop Avenue & 38th Street 39° 49'31.05" N; 86° 7'52.49"W	Fall Creek
142	College Avenue & 38th Street 39° 49'2.09" N; 86° 8'19.28" W	Fall Creek
143	Forest Manor Avenue & 21st Street 39° 47'45.18" N; 86° 5'54.45" W	Pogues Run
145	Raymond Street & Kentucky Avenue 39° 44'9.44" N; 86° 11'47.10" W	Big Eagle Creek
147	White River Parkway West Drive & Vermont Street 39° 46'22.73" N; 86° 11'17.29" W	White River
148	Pleasant Run Parkway North Drive & Madison Avenue 39° 44'1.70" N; 86° 9'16.07" W	Pleasant Run
149	Pleasant Run Parkway South Drive & Garfield Drive 39° 44'22.36" N; 86° 8'46.46" W	Pleasant Run
150	Pleasant Run Parkway North Drive & Raymond Street 39° 44'12.33" N; 86° 8'49.45" W	Pleasant Run
151	Pleasant Run Parkway North Drive & Beecher Street 39° 44'30.20" N; 86° 8'33.52" W	Pleasant Run
152	Pine Street & Ohio Street 39° 46'10.27" N; 86° 8'32.79" W	Pogues Run
153	Illinois Avenue & Merrill Street 39° 45'33.75" N; 86° 9'36.95" W	Pogues Run
154	Pleasant Run Parkway North Drive & Michigan Street 39° 46'29.19" N; 86° 4'43.06" W	Pleasant Run

155	Pennsylvania Street & 54th Street 39° 51'14.55" N; 86° 9'46.84" W	White River
205	Boulevard Place & Westfield Boulevard 39° 51'9.63" N; 86° 9'51.76" W	White River
210	Indiana Avenue & 10th Street 39° 46'53.24" N; 86° 10'35.93" W	Fall Creek
213	2900 North Hillside 39° 48'31.32" N; 86° 8'34.29" W	Fall Creek
216	Critenden Avenue & 42nd Street 39° 49'56.15" N; 86° 7'31.36" W	Fall Creek
217	Gadsden Street & Lyons Avenue 39° 43'33.99" N; 86° 13'58.47" W	State Ditch
218	Gadsden Street & Fleming Street 39° 43'37.20" N; 86° 14'14.21" W	State Ditch
223	Victoria Street & Warman Avenue 39 45'34.96" N; 86° 12'37.95" W	Big Eagle Creek
224	Pleasant Run Parkway North Drive & Washington Street 39° 46'13.02" N; 86° 5'3.71" W	Pleasant Run
227	5700 Emich 39° 46'36.37" N; 86° 4'15.22" W	Pleasant Run
228	Michigan Street & Graham Avenue 39° 46'32.96" N; 86° 4'6.71" W	Pleasant Run
229	Pleasant Run Parkway North Drive & Arlington Avenue 39° 46'33.02" N; 86° 3'51.23" W	Pleasant Run
235	Shelby Street & Markwood Avenue 39° 41'53.44" N; 86° 8'16.86" W	Lick Creek
275	4945 South Foltz 39° 41'33.36" N; 86° 13'25.63" W	White River

50A	Northwestern Avenue & 24th Street 39° 48'1.92" N; 86° 10'27.97" W	Fall Creek
63A	Fall Creek Parkway North Drive & 32nd Street 39° 48'50.10" N; 86° 8'36.82" W	Fall Creek
89A	North Arlington Avenue 39° 46'33.26" N; 86° 3'50.39" W	Pleasant Run
A38	Davidson Street & Washington Street 39° 46'0.94" N; 86° 8'44.48" W	Pogues Run

B. Discharge from the CSO outfalls herein shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:

    a. that will settle to form putrescent or otherwise objectionable deposits;
    b. that are in amounts sufficient to be unsightly or deleterious;
    c. that produce color, visible oil sheen, odor, or other conditions in such a degree as to create a nuisance;
    d. which are in amounts sufficient to be acutely toxic to, or otherwise severely injure or kill aquatic life, other animals, plants, or humans; and
    e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. Dry weather discharges from any portion of the sewer collection system, including the outfalls listed in Part I.A of this Attachment A, are prohibited. If a dry weather discharge occurs, the permittee shall notify the Office of Water Quality, Compliance Evaluation Section, by phone within 24 hours and in writing within five days of the occurrence in accordance with the requirements in Part II.C.3 of this permit. The correspondence shall include the duration and cause of the discharge as well as the remedial action taken to end the discharge.

II. Monitoring and Reporting Requirements

A. The permittee has developed a hydraulics model of its sewer collection system. The model generates continuous volumes and discharges from each permitted outfall listed in Part I.A of this Attachment A. The permittee shall report those volumes and discharges, as produced by the hydraulics model, semiannually to the Office of Water Quality, Compliance Evaluation Section. The semiannual hydraulic model reports ("Model Reports") shall be prepared for the six (6) month periods of January 1 through June 30, and July 1 through December 31 of each calendar year. The Model Reports shall be submitted six (6) months after the close of the preceding period. If the permit becomes effective on a date other than January 1 or July 1, the Model Report for the partial period between the effective date and the following January 1 or July 1 shall be submitted six (6) months after the close of the partial period.

B. The permittee has calibrated and verified the model according to the Hydraulics Model Calibration and Verification Plan (HMCVP) submitted to IDEM August 20, 2003 and incorporated herein by reference. The permittee shall continue to implement the HMCVP to assure that the model is calibrated and verified to assure representative reporting of CSO frequency, duration, and volumes on the Model Report.

C. The permittee shall monitor and report all CSO outfalls listed in Part I.A of this Attachment A consistent with the requirements in Part II.A of this Attachment A. All submittals under this provision shall be subject to the reporting requirements of this permit, including, but not limited to, Part II, Section C.6 ("Signatory Requirements"), Section C.7 ("Availability of Reports"), and Section C.8 ("Penalties for Falsification of Reports") of this Permit.

III. CSO Operational Plan

A. The permittee shall comply with the following minimum technology-based controls, in accordance with the EPA 1994 National CSO Policy:

1. The permittee shall implement a proper operation and regular maintenance program for the sewer system and the CSOs. The purpose of the operation and maintenance program is to reduce the magnitude, frequency and duration of CSOs. The program shall consider regular sewer inspections; sewer, catch basin, and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; and disconnection of illegal connections.

2. The permittee shall implement procedures that will maximize the use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency and duration of CSOs.

3. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from non-domestic users. The permittee shall identify all industrial users that discharge to the collection system upstream of any CSO outfalls; this

identification shall also include the pollutants in the industrial user's wastewater and the specific CSO outfall(s) that are likely to discharge the wastewater.

4. The permittee shall operate the AWT facilities at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency and duration of CSOs. The permittee shall operate the AWT facilities consistent with the WW SOP as required in Part II.B.2. of the permit.

5. Dry weather overflows from CSO outfalls are prohibited. Each dry weather overflow must be reported to IDEM as soon as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, it shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

6. The permittee shall implement measures to control solid and floatable materials in CSO discharges.

7. The permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.

8. The permittee shall implement a public notification process to inform citizens of when and where CSO discharges occur and their impacts. This notification must also be done in accordance with 327 IAC 5-2.1.

B. The permittee's implementation of each of the minimum controls in Part III.A of this Attachment A shall be documented in its CSO Operational Plan (CSOOP), which was submitted in December 1995, approved on September 26, 1997, and updated on May 20, 2003. The permittee shall update the CSOOP as needed consistent with the implementation of the long-term CSO control plan described in Part V of this Attachment A. The permittee shall submit CSOOP updates to IDEM, Office of Water Quality, Wet Weather Section.

The CSOOP update(s) shall include a summary of the revisions to the CSOOP as well as a reference to the page(s) that have been modified. Any CSOOP updates shall not result in:

1. a lower amount of flow being sent to and through the plant for treatment, or
2. more discharges (measured either by volume, duration, frequency, or pollutant concentration) occurring from the CSO outfalls.

The permittee shall maintain a current CSO Operational Plan, including all approved updates, on file at the AWTs.

IV. <u>Sewer Use Ordinance Review/Revision</u>

The permittee's Sewer Use Ordinance must contain provisions which: (1) prohibit introduction of inflow sources to any sanitary sewer; (2) prohibit construction of new combined sewers outside of the existing combined sewer service area; and (3) provide that for any new building the inflow/clear water connection to a combined sewer shall be made separate and distinct from sanitary waste connection to facilitate disconnection of the former if a separate storm sewer subsequently becomes available. The permittee shall continuously enforce these provisions.

V. Long-Term CSO Requirements

A. The permittee has developed a CSO Long-Term Control Plan (LTCP) that includes a request for a wet-weather limited use subcategory and a Use Attainability Analysis in support to ensure that when the LTCP is fully implemented, CSO discharges will comply with the technology-based and water quality-based requirements of the Clean Water Act (CWA) (including section 402(q) of the CWA) and state law (IC 13-11-2-120.5 and applicable state water quality standards). The permittee's CSO LTCP was approved by IDEM on January 4, 2007.

B. The permittee shall perform the activities and construct CSO control measures numbers 1-14 that are set forth in Table 7-5 of the City's September 2006 LTCP, in accordance with the descriptions, design criteria and schedule contained in Table 7-5. In order to maintain authorization to discharge from CSOs beyond the date of expiration of this permit, the permittee shall continue to implement CSO control measures numbers 1-14, and shall submit the approved LTCP, or any approved revised LTCP, with the other required information and permit renewal application forms to the Office of Water Quality, Permits Branch no later than 180 days prior to the date of expiration.

C. The permittee will conduct post-construction monitoring, as set forth in the approved LTCP, to determine whether CSO control measures are performing as designed and whether, upon completion of the LTCP, water quality standards are being achieved.

D. The permittee shall review the feasibility of implementing additional or new CSO control alternatives necessary to comply with the water quality standards. The permittee shall conduct such a review periodically, but not less than every five (5) years. The permittee shall submit amendments to the LTCP to IDEM. The LTCP amendments may be imposed through modification of this permit, after public notice and opportunity for hearing.

E. The permittee shall submit a progress report to the Office of Water Quality (OWQ), Data and Information Services Section, on the implementation of the approved LTCP on or before February 1 of each year, or part of the year, that the permit is effective, including any period of administrative extension. Progress reports shall include:

1. a general description of the work completed during the prior year and, to the extent known, a statement as to whether the work completed in that period meets applicable design criteria;

2. a projection of work to be performed during the next year, if different from that specified in the LTCP implementation schedule;

3. information, if any, generated in accordance with the Post-Construction Monitoring Program contained in the approved LTCP; and

4. a general description of any revisions to the approved LTCP that are considered necessary or are otherwise anticipated by the permittee.

VI. Reopening Clauses

A. After LTCP implementation, if IDEM has evidence that a CSO discharge is causing or contributing to exceedences of water quality standards, then additional control measures, effluent limitations, and/or monitoring requirements may be imposed on the CSO through a modification of this permit, after public notice and opportunity for hearing.

B. This permit may be reopened, after public notice and opportunity for hearing, to address changes in the EPA National CSO Policy or state or federal law.

C. The permit may be reopened, after public notice and opportunity for hearing, to incorporate applicable provisions of IC 13-18.

D. The permit may be reopened if the permittee's request for a wet-weather limited use subcategory is denied or approved for a level of control inconsistent with the level of control in the permittee's approved LTCP.

ATTACHMENT B – SANITARY SEWER OVERFLOWS

Overflows in the sanitary sewer system or in a sanitary portion of a combined sewer system are expressly **prohibited** from discharging at any time. If any release from the sanitary sewer system occurs, the permittee is required to notify the Compliance Evaluation Section of the Office of Water Quality orally within twenty-four (24) hours and in writing within five (5) days of the event in accordance with the requirements in Part II.C.3.d of this permit. The correspondence shall include the duration and cause of discharge as well as the remedial action taken to abate it.

The following SSO points are present in the collection system and shall be eliminated by December 31, 2007:

Overflow Point	Location (Latitude, Longitude)	Receiving Water
105	Fall Creek & Shadeland Avenue 39° 52' 6.924" N; 86° 02' 43.970" W	Fall Creek
113	Rodney Drive & Country Club Road 39° 47' 54.885" N; 86° 18' 33.995" W	Union Creek
124	Landborough South Drive. & Creekside Lane Lift Station 39° 52' 34.723" N; 86° 03' 17.229" W	Blue Creek

Fact Sheet

June 2007
Updated: December 2007

The City of Indianapolis's Belmont Advanced Wastewater Treatment (AWT) Plant is located at 2700 South Belmont Avenue, Indianapolis, Indiana, Marion County. The treated effluent is discharged via Outfall 006, which is located at Latitude 39° 43' 05" N, Longitude 86° 11' 08" W.

The City of Indianapolis's Southport AWT Plant is located at 3800 West Southport Road, Indianapolis, Indiana, Marion County. The treated effluent is discharged via Outfall 001, which is located at Latitude 39° 39' 51" N, Longitude 86° 14' 08" W.

NPDES Permit No. IN0023183

The NPDES Permit applies to the following co-permittees: 1.) City of Indianapolis Department of Public Works (Owner); 2.) United Water Services Indiana (Operator)

Background

This is the proposed renewal of the NPDES permit for the City of Indianapolis's Belmont and Southport AWT Plants. The proposed renewal combines the two facilities into one NPDES Permit (IN0023183). NPDES Permit No. IN0031950 (Southport AWT Plant) will be terminated upon the issuance of the renewal permit and both facilities will be regulated under NPDES Permit No. IN0023183. The Southport AWT Plant's NPDES Permit and the Belmont AWT Plant's NPDES Permit were last issued on October 26, 2001 and expired on September 30, 2006. However, the NPDES Permits are considered to be administratively extended due to the submittal of a timely permit renewal application. Two comment letters were provided during the public comment period. These comments resulted in minor changes being made to the permit and this fact sheet. Please refer to the "Post Public Notice Addendum" section of this fact sheet for details related to the comments and this Office's responses.

The two AWT Plants serve residents, industries, and commercial establishments in the City of Indianapolis, the City of Lawrence, the City of Beech Grove, the City of Greenwood, and the Ben Davis & Tri-County Conservancy District.

Facilities Description

Wastewater from the Indianapolis collection system is treated by one of two advanced wastewater treatment (AWT) plants. The Belmont AWT plant receives flow predominantly from the central, west, north and east sides of Marion County. The Southport AWT plant receives flow predominantly from the east and south sides of Marion County and from the City of Greenwood. As further described below; flow from the Belmont AWT can be diverted to the

Southport AWT during both wet and dry weather. The sludge generated at the Southport AWT plant is pumped to the Belmont AWT plant for treatment and ultimate disposal. Thus, the two AWT plants function and are operated as a single system.

Belmont Advanced Wastewater Treatment (AWT) Plant

The Belmont Advanced Wastewater Treatment (AWT) Plant is a Class IV nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing system (BRS) towers, oxygen nitrification system (ONS) reactors, final clarifiers, coarse sand mono-media tertiary filters, effluent disinfection by chlorination/dechlorination and effluent flow monitoring. The facility is also changing the method of disinfection to ozonation.

The AWT Plant has a design average flow of 120 MGD with a peak design flow of 150 MGD. The AWT Plant has two wet weather storage basins: a 30-million gallon basin to store primary influent and/or primary effluent during wet weather and a 4-million gallon basin to store primary effluent during wet weather. Sludge treatment includes gravity belt thickening (operational in 2008), gravity thickening, equalization, belt filter press dewatering, and incineration or landfilling. The mass limits for $CBOD_5$ and TSS at Outfall 006 are based on the peak design flow of 150 MGD.

As part of the City's CSO Long-Term Control Plan, the permittee will be replacing the existing Bio-Roughing System with a 150 MGD Trickling Filter/Solids Contact (TF/SC) secondary treatment process followed by a wet weather disinfection system which will increase the wet weather treatment capacity to a peak hourly rate of 300 MGD. When certain criteria are met the effluent from the TF/SC process may be diverted to the wet weather disinfection facilities and discharged to the river through Wet Weather Discharge Outfall 005.

The new 150 MGD Trickling Filter/Solids Contact (TF/SC) process includes construction of the following:

- new primary effluent conduits to enable various amounts of primary effluent to be split between the TF/SC process and the existing ONS system;
- new Bio-Roughing pump station
- new Bio-Roughing towers
- new Aerated Solids Contact and Reaeration tankage;
- new aeration equipment;
- new intermediate clarifiers;
- new conveyance lines to enable the effluent from the TF/SC process to be progressively shifted away from the ONS process during wet weather and discharged to the wet weather disinfection facilities;
- new chlorine contact tank and installation of related dechlorination facilities for seasonal disinfection of the TF/SC effluent sent to Outfall 005 (Latitude 39° 43' 34.18" N, Longitude. 86° 11' 25.40" W) during wet weather.

The Belmont AWT Plant has the following flow diversions located within the facility:

1. Bio-Roughing and TF/SC Diversions: A primary effluent diversion exists prior to the facility's existing bio-roughing towers (or TF/SC when it is constructed). A portion of the primary effluent can be diverted to the oxygen nitrification facilities.

2. Effluent Filters Diversion: An oxygen nitrification system effluent diversion exists prior to the facility's effluent filters. All or a portion of the oxygen nitrification system effluent up to 150 MGD can be diverted around the effluent filters to the ozone contact tanks.

The Belmont AWT Plant has the following flow diversions located in the collection system or at the AWT facility, all of which are capable of diverting flow from the Belmont AWT Plant to the Southport AWT Plant.

1. Southwest (Southern Avenue) Diversion: A raw wastewater flow diversion exists external to the Belmont AWT Plant at the Southwest Diversion Structure located near Southern Avenue. Raw wastewater may be diverted via a 60-inch diameter gravity sewer to the Southport AWT Plant depending on the system hydraulics and plant capacities. Actual flow rates during wet weather events have been 40 – 45 MGD.

2. Belmont Wet Weather Pump Station (Raw Wastewater): A raw wastewater diversion exists prior to the facility's headworks. Raw wastewater from the Belmont Interceptor may be pumped by Belmont's Wet Weather Pump Station to the Southport AWT Plant via a 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is 28-30 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont Primary Effluent Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

3. Belmont Wet Weather Pump Station (Primary Effluent): A primary effluent flow diversion exists after the Belmont Primary Clarifiers. Primary effluent stored in Wet Weather Storage Basin No. 1 may be pumped by Belmont's Wet Weather Pump Station to the Southport AWT Plant via a 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is approximately 28-30 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Primary Effluent Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

4. Gravity Diversion (Primary Influent): A preliminary treatment flow diversion exists prior to the facility's primary clarifiers. Preliminary treatment flow from the diversion may be conveyed by gravity via the 42-inch force main to the Southport AWT Plant via the Tibbs Interceptor. Depending on the system hydraulics, the diversion capacity is 16-

18 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont Primary Effluent Pump Station (Primary Effluent), or the Gravity Diversion (Primary Effluent) are activated.

5. Gravity Diversion (Primary Effluent): A primary effluent diversion exists after the facility's primary clarifiers. Primary effluent from the primary effluent channel may be conveyed by gravity via the 42-inch force main to the Southport AWT Plant via the Tibbs Interceptor. Depending on the system hydraulics, the diversion capacity is 11-14 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), the Belmont Wet Weather Pump Station (Primary Effluent), the Belmont Primary Effluent Pump Station, or the Gravity Diversion (Primary Influent) are activated.

6. Belmont Primary Effluent Pump Station (Primary Effluent)(Future - 2008): A primary effluent diversion will exist after the facility's primary clarifiers. Primary effluent from the primary effluent channel will be pumped by the Belmont Primary Effluent Pump Station (PEPS) to the Southport AWT Plant via the 42-inch force main to the Tibbs Interceptor. Depending on the system hydraulics, the pumping capacity is 30 to 35 MGD. This diversion cannot be utilized when either the Belmont Wet Weather Pump Station (Raw Wastewater), Belmont Wet Weather Pump Station (Primary Effluent), the Gravity Diversion (Primary Influent), or the Gravity Diversion (Primary Effluent) are activated.

7. Belmont-Southport Interplant Connection (Raw Sewage)(Future): The Interplant Connection between Belmont and Southport will consist of a 144-inch-diameter interceptor originating near CSO 117 and the Southwest Diversion Structure (east of the Belmont AWT Plant) terminating near the headworks of the Southport AWT Plant. Initially the interceptor would store 13 to 21 MG and convey up to 75 MGD of combined sewage captured from the Southwest Diversion Structure. The captured combined sewage from the future deep tunnel would also be treated at the Southport facility via expanded, upgraded and new equipment or at the Belmont facility.

Southport Advanced Wastewater Treatment (AWT) Plant

The Southport Advanced Wastewater Treatment (AWT) Plant is a Class IV, nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing towers, oxygen and air nitrification reactors, secondary clarifiers, mixed media tertiary filters, effluent disinfection by chlorination/dechlorination, effluent flow monitoring, and effluent pumping. The permittee will be changing the method of disinfection to ozonation.

The Southport AWT Plant has a design average flow of 125 MGD with a peak design flow of 150 MGD. Sludges are conveyed to and centrally processed by thickening, dewatering and incineration operations at the Belmont AWT Plant's Solids Handling Section. Mass limits are calculated based upon the 150 MGD peak design flow. The Southport AWT Plant has an equalization basin storage capacity of 25 million gallons. This basin is used to store screened raw wastewater. The basin is designed to be used during wet weather when the plant's treatment capacity has been reached. The mass limits for $CBOD_5$ and TSS at Outfall 006 are based on the peak design flow of 150 MGD.

As part of the City's CSO Long-Term Control Plan, the Southport AWT Plant will be expanded to provide a total maximum treatment rate of 300 MGD with a maximum pumping rate of 350 MGD. The planned improvements will include expansion of the primary clarification facility, expansion of the air nitrification system (ANS) from 30 MGD to 150 MGD with fine bubble aeration, new blowers, new final clarifiers, new disinfection facility, pump station, and new process/yard piping.

The Southport AWT Facility has the following flow diversions:

1. Raw Wastewater Diversion: Raw wastewater can be diverted to the 25 MG equalization basin after the screening process. The stored wastewater is returned to Southport's Headworks for full treatment after the influent flow rate decreases. The screened wastewater can also be diverted around the grit tanks, primary clarifiers, and bio-roughing towers directly to the Air Nitrification System (ANS).

2. Grit Chamber Diversion: A screened raw wastewater flow diversion exists prior to the grit chambers that allows flow to be diverted around the grit tanks at Structure 2-B to either the primary clarifiers or the bio-roughing towers.

3. Preliminary Treatment Effluent Diversion/Bypass: A preliminary treatment effluent diversion exists that allows flows to be diverted around the primary clarifiers to the bio-roughing towers. This diversion is located at the effluent channel of the grit chambers and sends screened and degritted flows to Structure 5-K and onto the bio-roughing towers. Under emergency conditions the preliminary treatment effluent flow can be mixed with primary effluent and bypassed via a 54-inch pipe to Little Buck Creek through Outfall 002 (formerly listed as Outfall 002B).

4. Primary Effluent Diversion/Bypasses: A primary effluent diversion exists after the primary clarifiers prior to the bio-roughing towers. Primary effluent can be diverted around the bio-roughing towers from Structures 7-F and 7-C directly to the ANS. Primary effluent can also be bypassed through Structure S-6 to a 60-inch pipe and discharged to Little Buck Creek through Outfall 004 (formerly listed as Outfall 002A). Primary effluent can also flow to Structure 5-K and be discharged through Outfall 002.

5. Bio-Roughing Diversion: Primary effluent diversions exist prior to the facility's bio-roughing towers. All or a portion of the primary effluent from the east and west primary clarifiers up to 90 MGD can be diverted to the oxygen nitrification facilities.

6. Air Nitrification Diversion: A bio-roughing tower effluent diversion exists which allows flow to be diverted to the air nitrification system.

7. ANS Effluent Diversion to Disinfection System: An air nitrification effluent diversion exists prior to the facility's tertiary filters. All or a portion of the air nitrification system effluent can be diverted around the intermediate pump station. This diversion system allows ANS effluent to be diverted around the effluent filters and flow by gravity to the effluent disinfection system.

8. Effluent Filters Diversion: An air and oxygen nitrification system effluent diversion exists prior to the facility's tertiary filters. All or a portion of the air and oxygen nitrification system effluent (up to 150 MGD) can be diverted around the effluent filters to the chlorination/dechlorination disinfection contact tanks.

Collection System

The City of Indianapolis's wastewater collection system is partially separate and partially combined sanitary and storm sewer system by design. One hundred and thirty-one (131) CSO points exist in the collection system and are identified, and are subject to, the provisions contained in Attachment A of the permit. Additionally, three (3) sanitary sewer overflow (SSO) points are known in the collection system. The sanitary sewer overflow points are listed in the Attachment B of the permit and are strictly prohibited from discharging. The SSO points are to be eliminated by December 31, 2007.

Statutory or Regulatory Basis for CSO Permit Provisions

CSOs are point sources subject to NPDES permit requirements, including both technology-based and water quality-based requirements of the CWA and state law. Thus, this permit renewal contains provisions IDEM deems necessary to meet water quality standards, as well as technology-based treatment requirements, operation and maintenance requirements, and best management practices. Language within this permit renewal is based on various provisions of state and federal law, including (1) Title 13 of the Indiana Code; (2) the water quality standards set forth in 327 IAC 2-1; (3) the NPDES rules set forth in 327 IAC 2 and 327 IAC 5, including 327 IAC 5-2-8 and 327 IAC 5-2-10; and (4) section 402(q) of the CWA (33 USC § 1342), which requires all permits or orders issued for discharges from municipal CSOs to conform with the provisions of EPA's National CSO Control Policy (58 Fed. Reg. 18688, April 19, 1994). EPA's CSO Policy contains provisions that, among other things, require permittees to develop and implement minimum technological and operational controls and long term control plans to meet state water quality standards. In addition to the regulatory provisions previously cited, the data collection and reporting requirements are based in part on 327 IAC 5-1-3, 327 IAC 5-2-13 and section 402(q) of the CWA. The long term control plan provisions were included to ensure compliance with water quality standards.

Explanation of CSO Effluent Limitations and Conditions

The effluent limitations set forth in Part I of Attachment A are derived in part from the narrative water quality standards set forth in 327 IAC 2-1-6. The narrative standards are minimum standards that apply to all waters at all times, and therefore are applicable to all discharges of pollutants. Consistent with their plain language, the narrative limitations in Section I of Attachment A to NPDES permits prohibit CSO discharges that contain high levels of *E. coli* that cause or contribute to substantial in-stream exceedences of Indiana's *E. coli* criteria, or that are in amounts sufficient to impair the designated uses of a water body. Because EPA has not issued national effluent limitation guidelines for this category of discharges, the technology-based BAT/BCT provisions are based on best professional judgment (BPJ) in addition to section 402(q) of the CWA. (CSO discharges are not subject to the secondary treatment requirements applicable to publicly owned treatment works because overflow points have been determined to not be part of the treatment plant. Montgomery Environmental Coalition v. Costle, 646 F.2d 568 (D.C. Cir. 1980).)

Indianapolis CSO Long Term Control Plan, Use Attainability Analysis and Compliance with other Consent Decree Requirements

The U.S EPA, and the Indiana Department of Environmental Management (IDEM), Office of Water Quality (OWQ) have conducted a substantive review of the City of Indianapolis' (the City) Long Term Control Plan (LTCP). On October 4, 2006, the United States, on behalf of the United States Environmental Protection Agency, and the State of Indiana, filed a complaint against the City in connection with the City's operation of its municipal wastewater and sewer system. Concurrent with the filing of the Complaint, the United States lodged with the Court a Consent Decree that has been finalized by the United States, the State of Indiana, and the City of Indianapolis. The Consent Decree requires the City to comply with its approved Nine Minimum Controls Program (NMC), its CMOM Program, O & M and Mitigation Requirements of Indianapolis' current permit. The Consent Decree requires the City to carry out Sanitary Sewer System Capital Improvement Projects to alleviate Sanitary Sewer Overflows and identifies a Supplemental Environmental Project to alleviate septic system contamination.

The Consent Decree also incorporates the City's Long Term Control Plan (LTCP). The Indianapolis LTCP proposes to achieve 97 percent capture of combined sewage flows on Fall Creek and 95 percent capture on other waterways. The selected plan is expected to result in reducing the average annual combined sewer overflow frequency from 60 overflow events per year to approximately two overflow events per year on Fall Creek and four overflow events per year on other waterways, based on average rainfall statistics for Indianapolis.

The plan proposes the use of storage/conveyance facilities in all major watersheds combined with advanced wastewater treatment plant improvements. Facilities will be designed to achieve 97 percent capture on Fall Creek and 95 percent capture on White River, Pleasant Run/Bean Creek, Pogues Run and Eagle Creek. Sewer separation will be employed along Lick Creek, State Ditch and other isolated outfall locations. Flows will be collected from outfalls on a regional basis using conveyance facilities connected to a single deep tunnel. The deep tunnel will serve primarily as a storage facility, and the stored flows will be pumped out to the Advanced Wastewater Treatment (AWT) plants at the end of a storm event. The AWT facilities will be expanded and upgraded to provide treatment of wet-weather flows. The plan also includes the use of near-surface collection conduits and satellite near-surface storage facilities to control remotely located outfalls on upper White River and Pogues Run.

The key features of the plan are:

- A central tunnel system along Fall Creek and the White River, with a pumping facility located near the Southwest Diversion Structure
- A collection interceptor for remote outfalls along Fall Creek and the White River to convey wet-weather flows into the central tunnel system
- Satellite storage facilities for remotely located outfalls along upper White River and upper Pogues Run
- Collection interceptors along Pogues Run, Pleasant Run and Bean Creek to convey wet-weather flows into the central tunnel system
- A collection interceptor along Eagle Creek to convey wet weather flows to the Belmont AWT plant
- An interplant connection interceptor from the Southwest Diversion Structure to the Southport AWT plant to convey stored tunnel flows to the Southport plant for treatment
- Local sewer separation projects to eliminate isolated overflows on State Ditch, Lick Creek, White River and the upstream ends of Fall Creek, Pogues Run and Bean Creek
- Belmont and Southport AWT plant improvements
- Watershed improvements

The LTCP allows for a few residual CSOs to occur during storms that exceed the LTCP design and performance criteria. Because of this, the City has also submitted as a part of the LTCP, a Use Attainability Analysis (UAA), as provided for in both federal and state law. The UAA is a process to identify attainable use designations for CSO receiving waters. The City believes the UAA supports the assertion that complete elimination of combined sewer overflow impacts to water quality would be both unaffordable and infeasible, and requests approval of a refinement to the recreational designated use in waterways affected by Indianapolis CSOs. The UAA, if approved, will require a formal change to the water quality standard for the affected waterways.

This renewal permit reaffirms the fact that EPA and IDEM have approved Sections 1 through 8 of the Indianapolis LTCP, pursuant to paragraph M. of the Federal Consent Decree and IDEM's letter dated January 4, 2007. Section 9 of the Indianapolis LTCP is their UAA submission, which is currently under review by this Office. IDEM will provide written notice to the City when it deems the UAA and supporting information to be complete. IDEM will either initiate the process to revise water quality standards or issue a final agency decision that a water quality standards revision will not be undertaken.

Spill Reporting Requirements

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.c. and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedences that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedence to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

Receiving Stream

The Southport AWT Plant and the Belmont AWT Plant discharge to the West Fork of the White River via Outfall 006 and Outfall 001. The receiving stream has a seven-day, ten-year low flow ($Q_{7,10}$) of 69 cubic feet per second (44.5 MGD) at the outfall locations. The receiving stream is designated for full body contact recreational use and shall be capable of supporting a well-balanced warm water aquatic community in accordance with 327 IAC 2-1.

Solids Disposal

The permittees are required to dispose of sludge in accordance with 329 IAC 10, 327 IAC 6.1, 40 CFR Part 503, or any applicable Land Application Approval issued by IDEM.

Industrial Contributions/Pretreatment

The City of Indianapolis is designated as a City that is required by U.S. EPA to have a federal pretreatment program in place to control its significant industrial users. The City of Indianapolis operates a pretreatment program, which was approved on January 11, 1985 and was modified as approved on March 3, 1994.

Since the City of Indianapolis is required by U. S. EPA to have a federal delegated pretreatment program to control industrial users; the NPDES permit contains comprehensive requirements for the continued operation of a pretreatment program (see Part III of the permit). In addition to the pretreatment requirements contained in Part III of the permit, the permit renewal has requirements for the monitoring of specific metals, specific dissolved solids, cyanide, and semi-annual (2 X per year) whole effluent toxicity testing.

Organic Pollutant Monitoring

The permittee shall conduct an annual inventory of organic pollutants and shall identify and quantify additional organic compounds which occur in the influent, effluent, and sludge at both the Belmont and Southport AWT facilities. The analytical report shall be sent to the Pretreatment Group, Office of Water Quality. This report is due December 31st each year. The inventory shall consist of:

Sampling and Analysis of Influent and Effluent

Sampling shall be conducted on a day when industrial discharges are occurring at normal production levels. The samples shall be 24-hour flow proportional composites, except for volatile organics, which shall be taken by appropriate grab sampling techniques. Analysis for the U.S. EPA organic priority pollutants shall be performed using U.S. EPA methods 624, 625 and 608 in 40 CFR 136, or other equivalent methods approved by U.S. EPA. Equivalent methods must be at least as sensitive and specific as methods 624, 625 and 608.

All samples must be collected, preserved and stored in accordance with 40 CFR 136, Appendix A. Samples for volatile organics must be analyzed within 14 days of collection. Samples for semivolatile organics, PCBs and pesticides must be extracted within 7 days of collection and analyzed within 40 days of extraction. For composite samples, the collection date shall be the date at the end of the daily collection period.

Sampling and Analysis of Sludge

Sampling collection, storage, and analysis shall conform to the U.S. EPA recommended procedures equivalent to methods 624, 625 and 608 in 40 CFR 136 or applicable methods in SW 846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Special sampling and/or preservation techniques will be required for those pollutants which deteriorate rapidly.

Sludge samples for volatile organics must be analyzed within 14 days of collection. Sludge samples for semivolatile organics, PCBs and pesticides must be extracted within 14 days of collection and analyzed within 40 days of extraction.

Additional Pollutant Identification

In addition to the priority pollutants, a reasonable attempt shall be made to identify and quantify the ten most abundant constituents of each fraction (excluding priority pollutants and unsubstituted aliphatic compounds) shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) more than ten times higher than the adjacent background noise. Identification shall be attempted through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation by an experienced analyst. Quantification may be based on an order of magnitude estimate based upon comparison with an internal standard.

The annual program effectiveness review, Part III. A.7, should identify the additional steps necessary to determine whether the pollutants present interfere, pass through, or otherwise violate 40 CFR 403.2. Upon such determination, the report must also identify the steps taken to develop and enforce local limitations on industrial discharges for those pollutants. This is a requirement of 40 CFR 403.5.

Effluent Limitations and Rationale for Southport AWT Plant's Outfall 001

The effluent limitations proposed herein are based on NPDES regulations, State of Indiana Water Quality Standards, Wasteload Allocation Analyses (WLA) performed by this Office's Permits Technical Support Section staff on October 28, 1996, June 14, 2001, and April 10, 2007, and the facility's previous NPDES. Monitoring frequencies are based upon facility size, type, and past compliance.

The parameters to be limited and/or monitored during the permit period include: Flow, 5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), Total Suspended Solids (TSS), Ammonia-nitrogen, pH, Dissolved Oxygen, Total Residual Chlorine (TRC), *Escherichia coli* (*E. coli*), Arsenic, Cyanide, Mercury, Chloride, Fluoride, Sulfate, Total Dissolved Solids, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, and Whole Effluent Toxicity.

The summer monitoring period runs from May 1 through November 30 of each year. The winter monitoring period runs from December 1 through April 30 of each year.

Final Effluent Limitations

Flow

Flow is to be measured continuously and reported as a 24-hour total. Reporting of flow is required by 327 IAC 5-2-13.

$CBOD_5$

$CBOD_5$ is limited to 10 mg/l (12,518 lbs/day) as a monthly average and 15 mg/l (18,776 lbs/day) as a weekly average during the summer monitoring period. $CBOD_5$ is limited to 25 mg/l (31,294 lbs/day) as a monthly average, or 85% removal, whichever is more stringent and 40 mg/l (50,070 lbs/day) as a weekly average during the winter monitoring period. Monitoring is to be conducted daily by 24-hour composite sampling. The $CBOD_5$ concentration limitations included in this permit are the same concentration limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on October 28, 1996.

TSS

TSS is limited to 10 mg/l (12,518 lbs/day) as a monthly average and 15 mg/l (18,766 lbs/day) as a weekly average during the summer monitoring period. TSS is limited to 30 mg/l (37,553 lbs/day) as a monthly average, or 85% removal, whichever is more stringent and 40 mg/l (50,070 lbs/day) as a weekly average during the winter monitoring period. Monitoring is to be conducted daily by 24-hour composite sampling. The TSS concentration limitations included in this permit are the same limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on October 28, 1996.

Ammonia-nitrogen

Ammonia-nitrogen is limited to 3.0 mg/l (3,129 lbs/day) as a monthly average and 4.5 mg/l (4,694 lbs/day) as a weekly average during the summer monitoring period. Ammonia-nitrogen is limited to 5.9 mg/l (6,154 lbs/day) as a monthly average and 8.9 mg/l (9,284 lbs/day) as a weekly average. Monitoring is to be conducted daily by 24-hour composite sampling. The ammonia-nitrogen concentrations limitations included in this permit are the same limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on June 14, 2001.

pH

The pH limitations are based on 40 CFR 133.102 which is cross-referenced in 327 IAC 5-5-3. To ensure conditions necessary for the maintenance of a well-balanced aquatic community, the pH of the final effluent must be between 6.0 and 9.0 standard units in accordance with provisions in 327 IAC 2-1-6(b)(2). pH must be measured daily by grab sampling. These pH limitations are the same limitations contained in the facility's previous permit.

Dissolved Oxygen

Dissolved oxygen shall not fall below 8.0 mg/l as a daily minimum average during the summer monitoring period. Dissolved oxygen shall not fall below 6.0 mg/l as a daily minimum average during the winter monitoring period. Dissolved oxygen measurements must be based on the average of twelve (12) grab samples taken within a 24-hr. period and is to be monitored daily. These dissolved oxygen limitations are the same limitations found in the facility's previous permit and are in accordance with the WLA conducted on October 28, 1996.

E. coli

The *E. coli* limitations in the previous permits were stayed by order of the Office of Environmental Adjudication and never became effective limitations.

Indiana water quality standards for *E. coli* are applicable April 1 through October 31. The permit contains both interim and final limitations along with a schedule of compliance (24 months) to meet the final limitations. The schedule of compliance is being granted due to a switch in disinfection methods from chlorination to ozonation. Refer to Part I.D of the permit.

Interim Limitations:
During this period, *E. coli* is limited to 125 col/100 mL as a monthly average. The monthly average *E. coli* values shall be calculated as a geometric mean. The daily maximum limit of 235 col/100 mL is deferred until the limit can be met or when the schedule of compliance period ends, whichever occurs first. *E. coli* must be measured daily by grab sample. The daily maximum *E. coli* result shall be reported during this period.

Final Limitations:
During this period, *E. coli* is limited to 235 col/100 mL as a daily maximum and 125 col/100 mL as a monthly average. The monthly average *E. coli* values shall be calculated as a geometric mean. *E. coli* must be measured daily by grab sample. The *E. coli* limitations included in this permit are identical to the limitations contained in the facility's previous permit and are being retained in accordance with 327 IAC 5-2-10(11) and 327 IAC 5-10-6(d).

TRC

Disinfection of the effluent is required from April 1 though October 31, annually. Effluent dechlorination is required in order to protect aquatic life. In accordance with Indiana Water Quality Standards; final effluent limits for TRC are 0.01 mg/l monthly average and 0.02 mg/l daily maximum. Compliance will be demonstrated if the observed effluent concentrations are less than the Limit of Quantification of 0.06 mg/l. TRC shall be measured daily by grab sample. The TRC limitations included in this permit are the same limitations found in the facility's previous permit and are in accordance with the WLA conducted on October 28, 1996.

The permittee is changing its method of disinfection from chlorination to ozonation, but will retain the chlorination system as a back-up. Therefore, the TRC limitations will be maintained in the permit. However, if chlorination is not used during any reporting period the permittee is to report 'not required' on the monthly discharge monitoring report. However, if chlorination is used, then the applicable monitoring requirements and effluent limitations shall apply to the discharge.

Mercury

The previous permits contained limitations for mercury. However, the WLA conducted on April 10, 2007 included a reasonable potential to exceed (RPE) analysis which concluded that the discharge did not have a reasonable potential to exceed the water quality criteria for mercury in the receiving water. Therefore, the limitations have been removed from the permit. The permit requires that mercury sampling (influent and effluent) be conducted two (2) times annually for the term of the permit as a report only requirement so that this Office has data to make future permitting decisions dealing with mercury.

Cyanide

The previous permit contained interim amenable cyanide limitations and final total cyanide limitations; however, the final limits were stayed by order of the Office of Environmental

Adjudication and never became effective limitations. Please note that the final limitations were a measure of the total cyanide in the discharge as the water quality criterion was represented as total cyanide at the time of the permit issuance. The water quality criteria for cyanide is currently represented as free cyanide, this includes the West Fork of the White River site-specific criteria for cyanide applicable to Belmont and Southport. As the final limitations for cyanide never became effective and the water quality criterion for cyanide has changed since the last permit was issued; the permittee is eligible for a schedule of compliance to meet the new water quality based effluent limits for free cyanide. Refer to Part I.D of the permit for information pertaining to the three (3) year compliance schedule for free cyanide. During the public comment period, the permittee submitted a variance application for free cyanide. The schedule of compliance shall not commence until the commissioner makes a final determination on the variance submittal. This Office is currently reviewing the variance submittal.

Interim Limitation: Amenable Cyanide
The interim limitation included is the same limitation included in the previous permit. During the interim period amenable cyanide is limited to 0.027 mg/l as a daily maximum. Amenable cyanide is to be monitored one (1) time weekly.

Final Limitations: Free Cyanide
During this period, free cyanide is limited to 0.01 mg/l as a monthly average and 0.019 mg/l as a daily maximum. Free cyanide is to be monitored one (1) time weekly. The final limitations are in accordance with the WLA conducted on April 10, 2007.

<u>Chloride</u>

The WLA conducted on April 10, 2007 by this Office's Permits Technical Support Section staff included a Reasonable Potential to Exceed (RPE) analysis for chloride. The RPE analysis concluded that the discharge from Outfall 001 has the potential to exceed the water quality criteria for chloride in the receiving water. Therefore, a permit limitation is required for chloride. As the limitation is a new requirement the permittee is eligible for a schedule of compliance and will be granted a three (3) year compliance schedule for meeting the final effluent limitations due to the nature of reducing and/or treating chlorides. During the public comment period, the permittee submitted a variance application for chloride. The schedule of compliance shall not commence until the commissioner makes a final determination on the variance submittal. This Office is currently reviewing the variance submittal.

Interim Requirements:
During the interim period when the three (3) year schedule of compliance is in effect the permittee is required to monitor and report chloride one (1) time weekly as a daily maximum and as a monthly average.

Final Limitations:
After the three (3) year schedule of compliance or when the permittee is capable of complying with the final limitations, whichever occurs first, the final limitations will become effective. When the final limitations become effective, the permittee shall meet a monthly average chloride

limitation of 201 mg/l and a daily maximum limitation of 404 mg/l. The permittee is required to monitor chloride one (1) time weekly.

Fluoride and Sulfate

The WLA conducted on April 10, 2007 by this Office's Permits Technical Support Section staff included a RPE analysis for fluoride and sulfate. The result of the analysis concluded that these parameters did not have the potential to exceed the water quality criteria for either of these parameters. Therefore, no limitations are being included in the permit. However, the permittee is required to monitor these parameters two (2) times monthly for additional data collection so that this Office can make appropriate future permitting decisions regarding these parameters.

Total Dissolved Solids

Total dissolved solids are to be monitored two (2) times monthly in the wastewater influent and effluent. This is the same requirement contained in the previous NPDES permit.

Effluent Limitations and Rationale for Belmont AWT Plant's Outfall 006

The effluent limitations proposed herein are based on NPDES regulations, State of Indiana Water Quality Standards, Wasteload Allocation Analyses (WLA) performed by this Office's Permits Technical Support Section staff on October 28, 1996, June 14, 2001, and April 10, 2007, and the facility's previous NPDES. Monitoring frequencies are based upon facility size, type, and past compliance.

The parameters to be limited and/or monitored during the permit period include: Flow, 5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), Total Suspended Solids (TSS), Ammonia-nitrogen, pH, Dissolved Oxygen, Total Residual Chlorine (TRC), *Escherichia coli* (*E. coli*), Arsenic, Cyanide, Mercury, Chloride, Fluoride, Sulfate, Total Dissolved Solids, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, and Whole Effluent Toxicity.

The summer monitoring period runs from May 1 through November 30 of each year. The winter monitoring period runs from December 1 through April 30 of each year.

Final Effluent Limitations

Flow

Flow is to be measured continuously and reported as a 24-hour total. Reporting of flow is required by 327 IAC 5-2-13.

$CBOD_5$

$CBOD_5$ is limited to 10 mg/l (12,518 lbs/day) as a monthly average and 15 mg/l (18,776 lbs/day) as a weekly average during the summer monitoring period. $CBOD_5$ is limited to 20 mg/l (25,035 lbs/day) as a monthly average, or 85% removal, whichever is more stringent and 30 mg/l (37,553 lbs/day) as a weekly average during the winter monitoring period. Monitoring is to be conducted daily by 24-hour composite sampling. The $CBOD_5$ concentration limitations included in this permit are the same limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on October 28, 1996.

<u>TSS</u>

TSS is limited to 10 mg/l (12,518 lbs/day) as a monthly average and 15 mg/l (18,776 lbs/day) as a weekly average during the summer monitoring period. TSS is limited to 20 mg/l (25,035 lbs/day) as a monthly average, or 85% removal, whichever is more stringent and 30 mg/l (37,553 lbs/day) as a weekly average during the winter monitoring period. Monitoring is to be conducted daily by 24-hour composite sampling. The TSS concentration limitations included in this permit are the same limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on October 28, 1996.

<u>Ammonia-nitrogen</u>

Ammonia-nitrogen is limited to 3.0 mg/l (3,129 lbs/day) as a monthly average and 4.5 mg/l (4,694 lbs/day) as a weekly average during the summer monitoring period. Ammonia-nitrogen is limited to 5.9 mg/l (6,154 lbs/day) as a monthly average and 8.9 mg/l (9,284 lbs/day) as a weekly average. Monitoring is to be conducted daily by 24-hour composite sampling. The ammonia-nitrogen limitations included in this permit are the same concentration limitations found in the facility's previous permit and reflect the WLA performed by this Office's Permits Technical Support Section staff on June 14, 2001.

<u>pH</u>

The pH limitations are based on 40 CFR 133.102 which is cross-referenced in 327 IAC 5-5-3. To ensure conditions necessary for the maintenance of a well-balanced aquatic community, the pH of the final effluent must be between 6.0 and 9.0 standard units in accordance with provisions in 327 IAC 2-1-6(b)(2). pH must be measured daily by grab sampling. These pH limitations are the same limitations contained in the facility's previous permit.

<u>Dissolved Oxygen</u>

Dissolved oxygen shall not fall below 8.0 mg/l as a daily minimum average during the summer monitoring period. Dissolved oxygen shall not fall below 6.0 mg/l as a daily minimum average. Dissolved oxygen measurements must be based on the average of twelve (12) grab samples taken within a 24-hr. period and is to be monitored daily. These dissolved oxygen limitations are the same limitations found in the facility's previous permit and are in accordance with the WLA conducted on October 28, 1996.

TRC

Disinfection of the effluent is required from April 1 though October 31, annually. Effluent dechlorination is required in order to protect aquatic life. In accordance with Indiana Water Quality Standards; final effluent limits for TRC are 0.01 mg/l monthly average and 0.02 mg/l daily maximum. Compliance will be demonstrated if the observed effluent concentrations are less than the Limit of Quantification of 0.06 mg/l. TRC shall be measured daily by grab sample. The TRC limitations included in this permit are the same limitations found in the facility's previous permit and are in accordance with the WLA conducted on October 28, 1996.

The permittee is changing its method of disinfection from chlorination to ozonation, but will retain the chlorination system as a back-up. Therefore, the TRC limitations will be maintained in the permit. However, if chlorination is not used during any reporting period the permittee is to report 'not required' on the monthly discharge monitoring report. However, if chlorination is used, then the applicable monitoring requirements and effluent limitations shall apply to the discharge.

E. coli

The *E. coli* limitations in the previous permits were stayed by order of the Office of Environmental Adjudication and never became effective limitations.

Indiana water quality standards for *E. coli* are applicable April 1 through October 31. The permit contains both interim and final limitations along with a schedule of compliance (24 months) to meet the final limitations. The schedule of compliance is being granted due to a switch in disinfection methods from chlorination to ozonation. Refer to Part I.D of the permit.

Interim Limitations:
During this period, *E. coli* is limited to 125 col/100 mL as a monthly average. The monthly average *E. coli* values shall be calculated as a geometric mean. The daily maximum limit of 235 col/100 mL is deferred until the limit can be met or when the schedule of compliance period ends, whichever occurs first. *E. coli* must be measured daily by grab sample. The daily maximum *E. coli* result shall be reported during this period.

Final Limitations:
During this period, *E. coli* is limited to 235 col/100 mL as a daily maximum and 125 col/100 mL as a monthly average. The monthly average *E. coli* values shall be calculated as a geometric mean. *E. coli* must be measured daily by grab sample. The *E. coli* limitations included in this permit are identical to the limitations contained in the facility's previous permit and are being retained in accordance with 327 IAC 5-2-10(11) and 327 IAC 5-10-6(d).

Mercury

The previous permits contained limitations for mercury. However, the WLA conducted on April 10, 2007 included a reasonable potential to exceed (RPE) analysis which concluded that the discharge did not have a reasonable potential to exceed the water quality criteria for mercury in the receiving water. Therefore, the limitations have been removed from the permit. The permit requires that mercury sampling (influent and effluent) be conducted two (2) times annually for the term of the permit as a report only requirement so that this Office has data to make future permitting decisions dealing with mercury.

Cyanide

The previous permit contained interim amenable cyanide limitations and final total cyanide limitations; however, the final limits were stayed by order of the Office of Environmental Adjudication and never became effective limitations. Please note that the final limitations were a measure of the total cyanide in the discharge as the water quality criterion was represented as total cyanide at the time of the permit issuance. The water quality criteria for cyanide is currently represented as free cyanide, this includes the West Fork of the White River site-specific criteria for cyanide applicable to Belmont and Southport. As the final limitations for cyanide never became effective and the water quality criterion for cyanide has changed since the last permit was issued; the permittee is eligible for a schedule of compliance to meet the new water quality based effluent limits for free cyanide. Refer to Part I.D of the permit for information pertaining to the three (3) year compliance schedule for free cyanide. During the public comment period, the permittee submitted a variance application for free cyanide. The schedule of compliance shall not commence until the commissioner makes a final determination on the variance submittal. This Office is currently reviewing the variance submittal.

Interim Limitation: Amenable Cyanide
The interim limitation included is the same limitation included in the previous permit. During the interim period amenable cyanide is limited to 0.027 mg/l as a daily maximum. Amenable cyanide is to be monitored one (1) time weekly.

Final Limitations: Free Cyanide
During this period free cyanide is limited to 0.01 mg/l as a monthly average and 0.019 mg/l as a daily maximum. Free cyanide is to be monitored one (1) time weekly. The final limitations are in accordance with the WLA conducted on April 10, 2007.

Chloride

The WLA conducted on April 10, 2007 by this Office's Permits Technical Support Section staff included a Reasonable Potential to Exceed (RPE) analysis for chloride. The RPE analysis concluded that the discharges from Outfall 006 have the potential to exceed the water quality criteria for chloride in the receiving water. Therefore, a permit limitation is required for chloride. As the limitation is a new requirement the permittee is eligible for a schedule of compliance and will be granted a three (3) year compliance schedule for meeting the final effluent limitations due to the nature of reducing and/or treating chlorides. During the public comment period, the permittee submitted a variance application for chloride. The schedule of compliance shall not commence until the commissioner makes a final determination on the variance submittal. This Office is currently reviewing the variance submittal.

Interim Requirements:
During the interim period when the three (3) year schedule of compliance is in effect, the permittee is required to monitor and report chloride in the wastewater influent and effluent one (1) time weekly as a daily maximum and as a monthly average.

Final Limitations:
After the three (3) year schedule of compliance or when the permittee can meet the final limitations, whichever occurs first, the final limitations will become effective. When the final limitations become effective the permittee shall meet a monthly average chloride limitation of 201 mg/l and a daily maximum limitation of 404 mg/l. The permittee is required to monitor wastewater influent and effluent chloride one (1) time weekly.

Fluoride and Sulfate

The WLA conducted on April 10, 2007 by this Office's Permits Technical Support Section staff included a RPE analysis for fluoride and sulfate. The result of the analysis concluded that these parameters did not have the potential to exceed the water quality criteria for either of these parameters. Therefore, no limitations are being included in the permit. However, the permittee is required to monitor these parameters two (2) times monthly for additional data collection so that this Office can make appropriate future permitting decisions regarding these parameters.

Total Dissolved Solids

Total dissolved solids are to be monitored two (2) times monthly in the wastewater influent and effluent. This is the same requirement contained in the previous NPDES permit.

Other Non-Conventional Parameters for Outfalls 001 & 006

Due to the significant amount of industrial wastewater received by the facilities, monitoring of specific metals is being required in the permit. The wastewater influent and effluent of both AWT Plants are to be monitored and reported two (2) times monthly for arsenic, cadmium, chromium, copper, lead, nickel, and zinc. This data will be used in future permitting actions to determine if additional monitoring and/or limitations are warranted to protect waters of the state.

The previous NPDES permit contained limitations for cadmium. During the permit renewal process a WLA and Reasonable Potential to Exceed (RPE) Analysis was conducted. The result of the WLA/RPE Analysis conducted by this Office's Permits Technical Support Section staff on April 10, 2007, concluded that cadmium discharged from Outfall 001 and 006 did not show RPE the State of Indiana Water Quality Standards in the receiving waterway. Since no RPE existed for cadmium; no limits were included in the renewal permit. However, due to the significant amount of industrial contribution to the WWTP, monitoring of the wastewater influent and effluent is being required. Additionally, a reopening clause is being included in Part I.C of the renewal permit to include additional monitoring and limitations for arsenic, cadmium, chromium, copper, fluoride, lead, mercury, nickel, sulfate, and zinc if it is determined that such monitoring and limitations are required to ensure that the receiving waterway is protected.

Whole Effluent Toxicity Testing

The permittee shall conduct the whole effluent toxicity tests described in Part I.E of the permit to monitor the toxicity of the discharge from Outfall 001 & 006. This toxicity testing is to be conducted two (2) times annually for the duration of the permit.

Chronic toxicity will be demonstrated if the no observed effect level (NOEL) is less than 92% in-stream waste concentration (IWC) for *Ceriodaphnia dubia* and *Pimephales promelas.* If acute or chronic toxicity is found in any of the tests specified above, another toxicity test using the specified methodology and same test species shall be conducted within two weeks. If any two tests indicate the presence of toxicity, the permittee must begin the implementation of a toxicity reduction evaluation (TRE) as is described in Part I.E.2 of the permit.

The IWC determination of chronic toxicity of 92 % was developed by the use of the following formula:

$$IWC = \frac{Q_e}{Q_e + 1/4(Q_{7,10})}$$

Q_e = Facility Effluent Flow

Storm Water Discharges from the Southport AWT Plant Storm Water Retention Basin

The Southport AWT Plant is subject to 327 IAC 15-6, commonly referred to Rule 6. These requirements were included in the previous permit and will be retained in the permit renewal.

Discharges from the stormwater retention basin are directed through the main plant outfall, Outfall 001. When a discharge from the retention basin occurs the permittee is required to monitor and sample via a grab sample the following parameters: TSS, pH, Oil & Grease, $CBOD_5$, COD, Total Kjeldahl Nitrogen, Nitrate plus Nitrite Nitrogen, and Total Phosphorus. Flow is to be reported as an estimated total. Samples must be taken within the first thirty minutes of discharge from the retention basin after initiation of a storm event.

Additionally, within 90 days of the effective date of the permit, the permittee shall review and modify as necessary, the Storm Water Pollution Prevention Plan (SWPPP) previously developed using the procedures outlined in 327 IAC 15-6-7 for the storm water runoff from the wastewater treatment plant site. The updated SWPPP shall be retained on-site at the Southport AWT facility.

Wet Weather Outfalls 005 and 305

The permittee plans to use Outfall 005 when the flow from the TF/SC process exceeds the capacity (150 MGD) of the ONS process at the Belmont AWT Plant. Due to the infrequent nature of the discharges from Outfall 005, it is proposed to have two (2) monitoring locations to determine compliance with the NPDES permit for the wet weather discharges from the TF/SC process. Outfall 005 shall be the monitoring point that is representative of the actual discharge which bypasses the ONS process. Outfall 305 shall be the internal monitoring point that is representative of the daily flows through the TF/SC process, regardless of whether those flows result in further treatment through the ONS process or result in discharges through Outfall 005 (to the West Fork of the White River).

Outfall 005 is located at Lat 39° 43' 34.18", Long 86°11' 25.40"
Outfall 305 is located at Lat 39° 43' 30.55", Long 86°11' 32.72"

The following parameters shall be monitored and/or limited at Outfall 005: stream flow, effluent flow, influent flow, $CBOD_5$, TSS, ammonia-nitrogen, pH, TRC, *E. coli*, stream/effluent dilution ratio, dissolved oxygen, cadmium, copper, free cyanide, lead, mercury, nickel, and zinc. Monitoring (only) shall be required for all of these parameters except for pH, TRC, and *E. coli*. All parameters related to flow, $CBOD_5$, TSS, pH, TRC, *E. coli* and ammonia-nitrogen shall be monitored daily during periods of discharge. The permittee shall use the Morris Street USGS Gauging Station – Gage No. 03353000 for monitoring the stream flow. Metals and free cyanide shall be monitored on a quarterly basis. The pH shall be no less than 6.0 standard units and no greater than 9.0 standard units. *E. coli* is limited 125 col/100mL monthly average calculated as a geometric mean and 235 col/100mL daily maximum during the recreational season of April 1 through October 31, annually. For any calendar month in which there are less than five (5) total discharge events, the monthly average value is not required to be reported on the Discharge Monitoring Report (DMR) form.

TRC is limited to 0.01 mg/l monthly average and 0.02 daily maximum. Since these limits are less than the LOQ value for TRC, compliance with these limits will be demonstrated as long as the values are less than the LOQ value of 0.06 mg/l.

Additionally, discharges from Outfall 005 are restricted to those times when the flow rates through the ONS process exceed 150 MGD and when there has been a precipitation event of at least 0.10 inches.

The following parameters shall be monitored and/or limited at Outfall 305: effluent flow, $CBOD_5$, TSS, ammonia-nitrogen, dissolved oxygen, and pH. All parameters shall be monitored on a daily basis. $CBOD_5$ is limited to 25 mg/l monthly average and 40 mg/l weekly average. TSS is limited to 30 mg/l monthly average and 45 mg/l weekly average. Dissolved oxygen and ammonia-nitrogen shall be monitored and reported. The pH shall be no less than 6.0 standard units and no greater than 9.0 standard units. The effluent limitations are in accordance with the federal secondary treatment requirements set forth in 327 IAC 5-5-3 and 40 CFR 133.102. Sampling for $CBOD_5$, TSS, and ammonia-nitrogen shall be conducted as 24-hour composite samples. The percent removal for the monthly average $CBOD_5$ and TSS shall also be monitored and reported. Monitoring for pH and dissolved oxygen shall be via grab sample.

Reopening Clauses

Eleven reopening clauses were incorporated into the Part I.C of the renewal permit. One clause is to incorporate effluent limits from any further wasteload allocations performed; a second clause is to allow for changes in the sludge disposal standards; a third clause is to ensure compliance with applicable effluent limits or standards of the Clean Water Act; a fourth clause is to include limitations for whole effluent toxicity, if deemed necessary; a fifth clause is to include a case-specific MDL; a sixth clause to include limitations and additional requirements for specific pollutants, if deemed necessary; a seventh clause to include or modify any limitation to reflect a change in Indiana water quality standards; an eighth clause to include requirements and/or limitations for endocrine disruption, if an EPA approved analytical protocol is developed; a ninth clause to include a revised limitation for cyanide and/or chloride due to a IDEM and EPA approved variance; a tenth clause to include effluent limitations for arsenic, cadmium, chromium, copper, fluoride, mercury, nickel, lead, sulfate and/or zinc, if deemed necessary; and an eleventh clause to include alternate ammonia-nitrogen limitations if the ozonation disinfection system is not timely constructed and utilized.

Compliance Status

The permittee is subject to a Federal Consent Decree dated October 5, 2006. Information pertaining to the Federal Consent Decree can be obtained by contacting EPA Region 5.

Backsliding

None of the concentration limits included in this permit conflict with anti-backsliding regulations found in 327 IAC 5-2-10(11); therefore, backsliding is not an issue.

Expiration Date

A five-year NPDES permit is proposed.

Drafted by: Jason House
June 2007

Updated by: Jason House
December 2007

POST PUBLIC NOTICE ADDENDUM: November 2007

The draft NPDES permit renewal for the City of Indianapolis' Belmont and Southport Advanced Wastewater Treatment Plants was made available for public comment from September 13 through November 15, 2007 as part of Public Notice No. 2007-9B-RD. During this comment period, a comment letter dated October 13, 2007, from Mr. Glenn Pratt was received as well as a comment letter from the City of Indianapolis dated November 15, 2007 and a subsequent follow-up comment letter submitted on December 7, 2007. The comments submitted by Mr. Pratt, the City of Indianapolis, and this Office's corresponding responses are summarized below. Any changes to the permit and/or fact sheet are so noted below.

Comments provided by Mr. Glenn Pratt:

Comment 1: The City is to be complimented for returning to ozonation vs. chlorination as their primary method of final disinfection. While adequately providing disinfection, of major importance is that ozonation should provide significant control of "endocrine disruptors", materials which cause intersex development of fish and perhaps other aquatic or terrestrial life. To be able to measure the success of this anticipated reduction, a permit requirement needs to be added to require effluent testing before and after the installation of ozone treatment.

Response 1: The State of Indiana does not have any water quality standards for endocrine disruptors. Additionally, there is not an EPA approved analytical protocol for the measurement of endocrine disrupting agents. Therefore, accurately assessing the success or lack of success of ozonation to reduce those disruption agents is not possible at this time. However, this Office has included a reopening clause to place additional requirements, if warranted for endocrine disruptors when analytical protocols are developed by EPA (please refer to the reopening clause 8 in Part I.C of the permit).

Comment 2: The NPDES program requires that new permits implement "Best Available Treatment" controls and programs. An increasing concern is of the quantity of medications that pass thru the treatment system and impact uses of the receiving waters. Therefore, a permit requirement needs to be added to the permit that establishes a medication reduction program via collection of unused medications that are presently flushed down the sewers.

Response 2: The State of Indiana does not have the regulatory authority to require a medication reduction program. No changes are being made to the permit due to this comment.

Comment 3: In large part because of my suggestion the previous permit required an evaluation of mercury as to significant sources and the fate of the mercury. This study has never been adequately completed. It is believed that while the plant discharge meets water quality requirements, this is only because the mercury is concentrated in the plant sludge which is then incinerated. Trading a water pollutant for an air pollutant which ends up back in the water is not an acceptable resolution. The evaluation of previous potential significant sources from industry, educational facilities, hospitals, etc needs to be completed and required in the permit. Also, as has been accomplished in other municipalities, the City needs to enact requirements for dental facilities to recover mercury and eliminate this easily controllable mercury source. This would represent "Best Available Treatment."

Response 3: This permit regulates the discharge from the treatment facilities, not air pollution sources. This Office conducted an RPE analysis on mercury being discharged from the facilities and found that the discharge did not have the potential to exceed the water quality criteria in the receiving waters. Therefore, no additional requirements, other than continued monitoring of mercury will be required in this permit. No changes are being made to the NPDES permit in regard to this comment.

Comment 4: The largest omission in the draft permit is the essential requirement to address the raw sewage discharged from failing septic systems in a number of City neighborhoods. This situation is far more significant of a human health hazard to children in the City than the discharges of combined sewer overflows. In recent years, the bacterial levels from human sources in Pogue's Run, Bean Creek, Buck Creek and other neighborhood waters where children regularly play were an order of magnitude higher than the values found in Fall Creek and the White River. These highly enriched effluents also serve as an ideal breading ground for mosquitoes which are the source of West Nile Virus. The City did not carry out its fiduciary responsibility when it allowed these systems to be installed without required state soil suitability testing. Also, in establishing their Septic Tank Elimination Program (STEP) the City has further placed itself as the controlling agent in eliminating this significant human health problem. After significant public pressure, the City has started to implement a significant sewer construction program to address the issue. However, there is presently no enforceable requirement to assure that the needed work is completed and that it is expedited. We presently only have a statement that the City will complete the work within twenty years. The completion of this critical work to address the present human health situation can easily be completed within four to five years since bonding is available and the fees the City now requires for all new connections is more then adequate to cover anticipated costs. Therefore, a requirement for elimination of this significant human source in four to five years needs to be included in this proposed permit. In the alternative, IDEM must issue, in parallel, a separate NPDES permit that establishes the needed septic tank elimination control program.

Response 4: This NPDES permit is meant to regulate the discharge quality, operation, and maintenance of the Belmont and Southport AWT Plants. As stated, the City of Indianapolis is taking steps to eliminate septic systems within its jurisdiction. The elimination of septic systems is not within the framework of this NPDES permit action. Therefore, no changes will be made to the NPDES permit due to this comment.

Comments provided by the City of Indianapolis on November 15, 2007:

PART I – A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Comment 1: The Draft NPDES Permit contains new, more stringent effluent limitations for *E. coli*, cyanide and chloride. (See Part I.A.1 Table 2; Part I.A.2 Table 4; Part I.A.3 Table 6.) With respect to *E. coli*, the City supports the pending Water Pollution Control Board rulemaking relating to the compliance methodology. As IDEM is aware, occasional exceedences of the single sample maximum do not indicate inadequate wastewater disinfection as part of the treatment processes. Consistent with the NPDES permit, the City is installing equipment to switch to ozonation rather than chemical disinfection for the current design capacity at the Belmont and Southport facilities. However, even ozonation will not prevent all exceedences of the single sample maximum because such exceedences are inherent in the process of sampling and analysis of individual bacteriological samples.

For the purpose of determining compliance with NPDES permits, the City supports IDEM's draft rule language basing compliance with wastewater effluent limitations upon no more than 10 percent of the discharge samples during a 30-day period exceeding the 235 cfu/mpn per 100 mL. It is the City understands that if the rule is adopted and becomes effective as currently drafted, the rule will apply to the city's NPDES Permit without the need for a permit modification. The city suggests that this be reflected in the Fact Sheet.

Response 1: The referenced rulemaking has not been finalized and adopted, as of the preparation of this Post Public Notice Addendum. Since it has not been adopted this Office cannot make reference to the proposed rule in the NPDES permit or the associated fact sheet. No changes have been made to the NPDES permit or fact sheet due to this comment.

Comment 2: For cyanide and chloride, the city has determined that compliance with the new limitations will cause an undue burden or hardship upon the City. Therefore, the city hereby submits its applications for variances pursuant to IC 13-14-8-9, 327 IAC 2-1-8.8 and in accordance with 327 IAC 5-3-4.1. (See enclosures.) The city requests that these variance applications be appropriately referenced in the NPDES Permit, including adding chloride to the paragraph numbered 9 on page 31 (see Part I.C. – REOPENING CLAUSES). The city requests that paragraph 9 be modified as follows:

> This permit may be modified or, alternatively, revoked and reissued, after public notice and opportunity for hearing to incorporate revised effluent limits relating to the permittee's submission of a complete application for and subsequent IDEM and U.S. EPA approval of a variance from the water quality criteria for cyanide and/or chloride.

The city also has specific comments related to the cyanide and chloride effluent limitations, as well as a minor comment regarding mercury effluent monitoring.

Response 2: As noted, this Office received two variance applications from the permittee (free cyanide and chloride). These applications are currently being processed by this Office.

The requested change to paragraph 9 (Part I.C. – REOPENING CLAUSES) has been made to the NPDES permit and is noted in the fact sheet. Additionally, the appropriate references to the variance applications have been included in footnote [18] of the permit.

Comment 3: Cyanide
With respect to cyanide, the city requests clarification and correction to the "name" of the "cyanide" to be monitored and limited and the analytical method to be used for monitoring. As presented on pages 14 and 18 of the draft Fact Sheet, the final treated discharges from Southport and Belmont are currently subject to discharge limits for "amenable cyanide." These discharge limits are the ones in effect for Southport and Belmont. Compliance monitoring with the amenable cyanide daily maximum limit of 27 μg/L is conducted weekly using the USEPA-approved test method that measures the quantity of cyanide amenable to chlorination (or CATC). The USEPA-approved amenable cyanide test method is Standard Methods 4500-CN^- G (Cyanides Amenable to Chlorination after Distillation). Within this CATC method is recognition of the difficulties in application of the CATC method to treated wastewaters due to various matrix interferences. Specifically:

> For samples containing significant qualities of iron cyanides, it is possible that the second distillation will give a higher value for CN^- than the test for total cyanide, leading to a negative result. When the difference is within the precision limits of the method, report "no determinable quantities of cyanide amenable to chlorination." If the difference is greater than the precision limit, ascertain the cause such as interferences, manipulation of procedure, etc., or use Method I.

Standard Methods; Method 4500-CN^- G.

Method 4500-CN^-I measures the weak acid dissociable cyanide of WAD cyanide.

The current amenable cyanide limit that is applicable to Southport and Belmont is based on historical performance (i.e., statistical analysis of the CATC discharge monitoring data from the 1980s) and has been carried over since the 1985 NPDES Permit for Belmont and Southport.

Response 3: The clarifications requested have been made in the NPDES permit and fact sheet. The interim limits for cyanide are now clearly represented as amenable cyanide. The final limits for cyanide have been listed as free cyanide. Please refer to Part I.A of the permit.

Comment 4: Cyanide, Amenable – Interim

a. IDEM is proposing to continue the daily maximum amenable cyanide limit until compliance can be achieved with the free cyanide water quality-based effluent limit or until three years from the effective date of the permit, whichever comes first. During this compliance schedule time period the city suggests that IDEM needs to clarify the draft Permit interim limits and interim conditions (or footnotes) as follows:

Parameter to be Monitored:	Cyanide, Amenable
Parameter Limit:	0.027 mg/L Daily Maximum
Frequency of Monitoring:	Composite, Once per Week
USEPA-Approved Test Method:	4500-CN^- G

b. The Draft NPDES Permit footnote [10] should only apply to the interim limit.

c. The Draft NPDES Permit footnote [11] is not needed. The city has been monitoring amenable cyanide since the mid-1980s and has more than adequately demonstrated that sulfide levels are not present to the level of needing to grab sample and preserve to remove sulfide. A composite effluent sample can be collected, preserved to pH 12, and analyzed within 48 hrs. As these interim limits and conditions are continued from the current permits, then the current LOD of 0.005 mg/L (5.0 μg/L) and LOQ of 0.016 (16.0 μg/L) is appropriate.

Response 4: a. The interim cyanide limit is based upon amenable cyanide. The requested changes have been made to the permit.

b. This change has been made to the permit.

c. The City has adequately demonstrated that sulfide levels are not present in amounts which require grab sampling and preserving to remove sulfide. Therefore, the requested deletion has been made to the permit.

Comment 5: Cyanide, Free - Final
IDEM has determined that the effluents from Belmont and Southport have a reasonable potential to cause or contribute to an exceedence (RPE) of the in-stream free cyanide site-specific chronic criterion. The in-stream free cyanide site-specific criteria were adopted by the Indiana WPCB February 15, 2005 and approved by USEPA March 2006 as follows:

327 IAC 2-1-8.9 Site-specific modifications to criteria
(g) The following site-specific modifications to water quality criteria have been granted: ...(table edited for formatting)...

Table 8.9-1
Site-Specific Surface Water Quality Criteria (in µg/L)

Waterbody	Starting Location	Ending Location	Substances	AAC	CAC
West Fork, White River	Outfall of the Belmont POTW (River Mile 227)	Marion-Johnson County Line (River Mile 220)	Cyanide (Free)	45.8	10.7

The specific 'name' of cyanide as "Cyanide (Free)" is intentionally a different 'name' than cyanide, amenable or amenable cyanide. Indiana (and USEPA) ambient water quality criteria for the protection of aquatic life is as Cyanide (Free) as presented in 327 IAC 2-1-6(a)(3) Table 6-1.

In addition, Indiana has, for the specific name of Cyanide (Free) or free cyanide, established the test method for measuring compliance with water quality-based effluent limits based on free cyanide as presented in 327 IAC 5-2-11.1:

> (e) WQBELs for cyanide, calculated from a criterion for free cyanide contained in 327 IAC 2-1, shall be limited in the permit as free cyanide and monitored in the effluent using the "Cyanides Amenable to Chlorination" (CATC) method (40 CFR 136, Method 4500-CN^- G) or another method approved by the commissioner. The commissioner may include additional monitoring, limitations, or other requirements in a permit, on a case-by-case basis, if the additional requirements are necessary to ensure that water quality standards will be attained.

a. IDEM is, due to the RPE result, proposing water quality-based effluent limits for free cyanide to be in effect 3 years after the permit effect date. However, IDEM needs to clarify the draft Permit <u>final</u> limits and <u>final</u> conditions (or footnotes) as follows:

Parameter to be Monitored:	Cyanide, Free or Free Cyanide (IDEM choice)
Parameter Limits:	0.019 mg/L Daily Maximum; 0.010 mg/L Monthly Average
Frequency of Monitoring:	Composite, Once per Week
USEPA-Approved Test Method:	4500-CN^- G

b. The Draft NPDES Permit footnote [10] should only apply to the interim limit and should not apply to the final limit for Cyanide, Free. A new footnote for the final limit should be: "The final Cyanide, Free limits are based on free cyanide".

c. The Draft NPDES Permit footnote [11] is not needed. The city has been monitoring amenable cyanide since the mid-1980's and has more than adequately demonstrated that sulfide levels are not present to the level of needing to grab sample and preserve to remove sulfide. A composite effluent sample can be collected, preserved to pH 12, and analyzed within 48 hrs.

d. The draft Permit footnote [12] should be corrected as follows:

> The water quality-based monthly average effluent limitation for Cyanide, Free is less than the limit of quantitation (LOQ) as defined below. Compliance with this permit limit will be demonstrated if the observed effluent concentrations in each sample used in calculation the monthly average is less than the limit of quantitation and the observed daily maximum effluent limitation is equal to or less than the daily maximum limitation in the table.

Parameter	Test Method	LOD	LOQ
Cyanide, Free	4500-CN^- G	0.005 mg/L	0.016 mg/L

e. The Draft NPDES Permit footnote [18] should also be corrected to reflect the distinct difference between the interim and final limits for cyanide. The suggested corrections are:

> When reporting results in support of the interim limits for cyanide, results shall be reported as Cyanide, Amenable. When reporting results in support of the final limits for cyanide, results shall be reported as Cyanide, Free. ......

Parameter	Test Method	LOD	LOQ
Cyanide, Amenable	4500-CN^- G	0.005 mg/L	0.016 mg/L
Cyanide, Free	4500-CN^- G	0.005 mg/L	0.016 mg/L

f. The EPA Method 1677 is for Available Cyanide by Flow Injection with Ligand Exchange and is not equivalent to Method 4500- CN^- G either in technique or form of cyanide measured. Method 1677 is not appropriate or applicable for monitoring for the interim amenable cyanide limits or for the final free cyanide limits.

Response 5: a. The final cyanide limits have been clearly noted as free cyanide. Either test method 1677 or 4500 CN-G may be used to analyze for the final free cyanide limitations as long as the associated detection and quantification levels are adequately sensitive.

b. A footnote has been added to the permit which clearly lists that the final limits for cyanide as "free".

c. This change has been made to the permit.

d. Footnote [12] has been modified as follows:

The following test methods shall be utilized and are allowed as specified below:

Parameter	Test Method	LOD	LOQ
Cyanide, Free	1677 or 4500 CN-G	0.003 mg/l	0.0095 mg/l
Cyanide, Amenable	4500 CN-G	0.003 mg/l	0.0095 mg/l

e. Footnotes [10] and [11] now clearly define the interim (amenable cyanide) and final (free cyanide) parameters. Footnote [12] (above) defines the applicable methods.

f. Please refer to Footnote [12] (above) for clarification on the applicable and approved methods for free and amenable cyanide.

Comment 6: The Draft NPDES Permit Part I.D. Schedules of Compliance needs to be corrected to indicate the application of a compliance schedule to Free Cyanide. The corrections would include:

1. Free Cyanide
   a. … The new effluent limits for free cyanide are deferred until …
   b. If the permittee determines that construction and/or changes in the local limits are not required to meet the final limits for free cyanide within…
   c. Until the final limits for free cyanide become effective, the permittee…

Response 6: The schedule of compliance for free cyanide has been amended to include the designation of 'free' cyanide and to include language pertaining to the submittal of a variance for free cyanide.

Comment 7: Finally, pages 14 and 18 of the draft Fact Sheet also need to be corrected to mirror the corrections and clarifications to the "name" of cyanide subject to limits. Specifically:

> The water quality criteria for cyanide is currently represented as free cyanide, this includes the West Fork of the White River site-specific criteria for cyanide applicable to Belmont and Southport. … the permittee is eligible for a schedule of compliance to meet the new water quality-based effluent limit for free cyanide.

Response 7: The clarifications and corrections required to specify the 'name' of cyanide have been made to the fact sheet.

Comment 8: Cyanide, Free – Analytical Method
The effluent for Belmont and Southport has been monitored since the mid-1980s using the USEPA Method 4500-CN⁻ G (or its predecessor method). During this time period, rarely is the analytical laboratory able to achieve results for CATC that are not a negative result (i.e., CATC exceeds Total Cyanide). In addition, the differences are greater than the precision limit for the CATC method, and even after attempting to modify sample for interferences, negative results continued. Therefore, Method 4500-CN⁻ I is used to generate data to compare to the current daily maximum result of 0.027 mg/L amenable cyanide.

In addition, the Water Environment Research Foundation (WERF) has done extensive research on the problem with cyanide at municipal wastewater treatment plants [1]. The WERF project reviewed seven (7) analytical methods currently being used for analyzing for cyanide. The WERF research concluded that all seven of the analytical methods were capable of analyzing the wastewater with reasonably good accuracy and precision with some exceptions noted. The recommendation of the research project was that the most appropriate alternative to the CATC method was to measure WAD cyanide in wastewater samples.

Therefore, the city requests that IDEM, particularly for Cyanide, Free compliance monitoring, acknowledge this inconsistent performance of the CATC method and simply state draft Permit footnotes [12] and [18]:

> Final limits for cyanide shall be measured and reported as Free Cyanide, Weak Acid Dissociable (WAD) as Method 4500-CN⁻ I.

Another WERF research study [2] reviewed and updated the current scientific knowledge on the aquatic chemistry and toxicity of cyanide and new aquatic toxicity studies were conducted to fill critical data gaps. As part of that study a review of the current analytical methods was conducted. The results of that study concluded that since free cyanide is the most toxicologically relevant form of cyanide, the toxicity studies should use a reliable analytical method for free cyanide to quantify the exposure concentrations in any test solutions. The research concluded that the most representative measure of the free cyanide is by either SM 4500-C⁻ F or ASTM 4282.

[1] *Cyanide Formation and Fate in Complex Effluents and its Relation to Water Quality Criteria*; Report No. 98-HHE-5; 2003; WERF.

[2] *Scientific Review of Cyanide Ecotoxicology and Evaluation of Ambient Water Quality;* Report No. 01-ECO-1; 2007; WERF.

Since 327 IAC 5-2-11.1 provides the commissioner the ability to approve an alternative method for the analysis of "free" cyanide, IDEM can approve the use of the free cyanide method as referenced above in lieu of the CATC or WAD methods. The city respectfully requests that IDEM consider this alternative.

Response 8: This Office has determined that cyanide may be analyzed by method 4500-CN^- G or method 1677 provided that each method is adequately sensitive to detect and quantify free cyanide below the actual limitations. Part I.A of the permit has been amended accordingly.

Comment 9: Chloride -The City is in the process of reviewing existing data to determine site specific water quality criteria to allow for a revised wasteload allocation to derive a site-specific chloride limits for Belmont and Southport. The City will work with IDEM to ensure that any evaluations conducted are consistent with state and federal approved methodology.

With respect to chloride effluent monitoring, 40 CFR 136 lists all of the approved method for the NPDES program. Those approved methods include the following methods.

Standard Methods 4500 – Cl^- B; 4500-Cl^- C; 4500-Cl^- E; and 4500-Cl^- D.

In addition, 40 CFR Part 136, also lists EPA Methods 300.0 and 300.1 as approved methods. Unless IDEM has a reason for not allowing any of the approved methods other than 4500-Cl^- E to be used, the city would like to use any of the methods identified in 40 CFR Part 136.

Response 9: This Office has reviewed the applicable chloride analytical methods and agrees that any of the methods listed in 40 CFR 136 may be used to analyze for chloride, since the associated level of detection and quantification are sensitive enough for permit reporting purposes. Pages 18 and 21 of the permit have been changed to reflect this allowance.

Comment 10: Mercury - With respect to mercury effluent monitoring, the city requests that in footnote 3 on page 23 of the Draft NPDES Permit (see Part I.A.8.a) , the word "immediately" in the 3rd sentence be changed to "as soon as practicable." The city is concerned that it may take some time for laboratories to be able to use a revised test method.

Reponses 10: The requested change has been made to the NPDES permit.

PART I – E. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

Comment 11: Part I.E.1.d. (Page 33 of 77) The previous NPDES permit gave the city the ability to reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent. Since the effluent from the Belmont and Southport AWT facilities have not shown any toxicity, the city requests that it be allowed to reduce the number of species after one year, This request is based on its past performance of the AWT toxicity testing and current permit requirements.

Response 11: This Office has determined that facilities with significant industrial users and delegated pretreatment programs will be required to conduct twice yearly WET testing utilizing two species. This Office has determined that the use of two species in every test is necessary in order to accurately assess the overall toxicity of the effluent because the two species have different sensitivities to particular pollutants. The requested change will not be made in the NPDES permit.

Comment 12: Part I.E.2.a. (Page 37 of 77) The Phase II and Phase III references are out of date. The updated versions are as follows:

Phase II Toxicity Identification Procedures (EPA 600R92-080), September 1993

Phase III Toxicity Confirmation Procedures (EPA 600R92-081), September 1993

Response 12: The requested updates have been made to the NPDES permit.

PART II – A. GENERAL CONDITIONS

Comment 13: Paragraphs numbered 11 (Penalties for Violation of Permit Conditions) and 12 (Penalties for Tampering or Falsification) on pages 42 and 43 of the Draft NPDES Permit refer to IC 13-30-6. This provision was repealed in 2007 (see P.L.137-2007, SEC.37). In addition, IC 35-50-3-3, also referred to in paragraph 12, seems to be incorrectly cited.

Response 13: The appropriate citations have been included, which required minor revisions to those paragraphs, in Part II.A.11. and 12.

PART II – D. ADDRESSES

Comment 14: Part I.B.3 (Reporting) requires the city to submit CSO Discharge Monitoring Reports to the Data & Information Services Section along with the Discharge Monitoring Reports and the Monthly Reports of Operation. This is consistent with the city's current practice.

Part II.D.4 requires that the CSO Discharge Monitoring Reports be sent to the Compliance Evaluation Section. The city requests clarification so that the CSO Discharge Monitoring Reports are properly submitted.

Response 14: The correct Section to submit the CSO Discharge Monitoring Reports to is the Compliance Evaluation Section. This change has been made to Part I.B.3 of the NPDES Permit.

PART III – REQUIREMENT TO OPERATE A PRETREATMENT PROGRAM

Comment 15: <u>SIU QUARTERLY NONCOMPLIANCE REPORT</u> **(Part III.A.5)**
As the "Controlling Authority" of the industrial pretreatment program, the city is required to report the compliance status of each Significant Industrial User (SIU) quarterly. This requirement is intended to capture all noncompliance events during a particular quarter. However, the reporting periods need to be modified in order to ensure that all noncompliance is reported for the appropriate quarter. For example, SUIs have until April 28th to submit the results of self-monitoring conducted during the month of March. Since March falls within the first quarter, the city would not be able to characterize all compliance events during the first quarter if the Quarterly Noncompliance Report is due to IDEM by April 28th. Therefore, the city requests that the due dates for the Quarterly Noncompliance Reports be changed from the 28th of April, July, September and January of each year to the 28th of May, August, November and February.

Response 15: The requested change has been made to the NPDES permit.

ATTACHMENT A – PRECIPITATION-RELATED COMBINED SEWER OVERFLOW AUTHORIZATION REQUIREMENTS

Comment 16: II. Monitoring and Reporting Requirements - In the 1990s, the city decided to develop a sophisticated hydraulic model of its sewer collection system to use for several purposes, including satisfying the monitoring and reporting requirements for CSO wet-weather discharges. At that time, because the city had over 130 CSO outfalls, IDEM agreed that the model was an acceptable and appropriate method to comply with CSO discharge monitoring and reporting requirements. In order to calibrate and verify the hydraulic model, the city continuously monitors permanent flow meters on at least 19 CSO outfalls for volume and duration. The city also monitors a number of other flow meters at various locations as needed and appropriate.

Consistent with IDEM's previous determination and the city's original intent, the city believes that the CSO monitoring requirements in paragraph C on page 73 of the Draft NPDES Permit are unnecessary and should not be required in light of the hydraulic model reporting requirements in paragraph A. Accordingly, the city requests that Attachment A, Part II.B and C be revised as follows:

> B. The permittee has calibrated and verified the model according to the Hydraulics Model Calibration and Verification Plan (HMCVP) submitted to IDEM August 20, 2003 and incorporated herein by reference. The permittee shall continue to implement the HMCVP to assure that the model is calibrated and verified to assure representative reporting of CSO frequency, duration, and volumes on the Model Report.
>
> C. The permittee shall monitor and report all CSO outfalls listed in Part I.A of this Attachment A consistent with the requirements in Part II.A of this Attachment A. All submittals under this provision shall be subject to the reporting requirements of this permit, including, but not limited to, Part II, Section C.6 ("Signatory Requirements"), Section C.7 ("Availability of Reports"), and Section C.8 ("Penalties for Falsification of Reports") of this Permit.

Response 16: The requested changes have been made to Attachment A of the NPDES permit.

Comment 17: Other Suggested Revisions
The city suggests various minor revisions to the Draft NPDES Permit to correct clerical errors and for purposes of clarification or consistency. These suggested revisions are included in the table below.

Page	Permit Provision	Reason	Draft Permit Language	Recommended Change
1	Cover Page	typo/ clarification	**CITY OF INDIANAPOLIS, DEPARTMENT OF PUBLIC WORKS AND IT'S CONTRACT OPERATOR, UNITED WATER**	**CITY OF INDIANAPOLIS, DEPARTMENT OF PUBLIC WORKS AND ITS CONTRACT OPERATOR, UNITED WATER SERVICES INDIANA**
1	Fact Sheet	clarification		Change "United Water" to "United Water Services Indiana" consistent with the above change
7	Southport AWT Plant, ¶ 1, line 1	typo		Delete "," after "Class IV"
8	Southport flow diversions, #4, line 5	typo		Insert ")" after "Outfall 002A"

8	Southport flow diversions, #8, line 4	consistency	… chlorination/dechlorination disinfection contact tanks.	Change "chlorination/dechlorination" to "effluent disinfection" to be consistent with flow diversion #7
46	Part II.B.2.b.(4)	typo		Insert "s" to "condition"
52	Part II.C.4, line 3	typo		Insert "," after "Part II.C.3"
52	Part II.C.4, line 5	typo		Insert "," after "compliance schedules"
74	Attachment A, III.A.4	consistency	The permittee shall operate the Publicly Owned Treatment Works (POTW) treatment plant …	Change "Publicly Owned Treatment Works (POTW) treatment plant" to "AWT facilities"

Response 17: All of the listed suggested revisions have been made to the NPDES permit and this fact sheet.

Follow-Up Comments provided by the City of Indianapolis on December 7, 2007:

Comment 1: Free Cyanide and Chloride compliance schedules and final limits and pending action on pending City variance applications.

Footnotes in Part I.A
The city recommends that rather than include reference to the variance applications in footnote 18, there be a separate footnote for each (e.g., create footnote 19 and footnote 20). The city requests the following language for those new footnotes:

> The City of Indianapolis has submitted an application for a variance from the water quality standard for [free cyanide] [chloride]. Accordingly, pursuant to 327 IAC 5-3-4.1, the effluent limitation for [free cyanide] [chloride] will not be issued until such time that the commissioner makes the variance determination for that substance.

If the reference stays in footnote 18, the city suggests making it a separate paragraph and the city requests the following language:

> The City of Indianapolis has submitted applications for variances from the water quality standards for free cyanide and chloride. Accordingly, pursuant to 327 IAC 5-3-4.1, the effluent limitation for each of those substances will not be issued until such time that the commissioner makes the variance determination for the particular substance.

The city also requests that the following language regarding the compliance schedules for free cyanide and chloride be included as part of the footnote labeled [*] on p. 15 of the draft permit rather than be included in the compliance schedules themselves:

> Because the City of Indianapolis has submitted applications for variances from the water quality standards for free cyanide and chloride, the Schedules of Compliance for free cyanide and chloride in Parts I.D. 1 and 3 will not commence unless and until the variance request for the

particular substance is denied. Until the determinations on the variance applications are made and the effluent limitations for free cyanide and chloride are issued, the permittee shall continue to evaluate whether additional control technologies or pollution prevention measures exist to comply with the applicable water quality standards or to reduce the level of those pollutants currently being discharged to the sewer system or by the AWT plants.

It is also suggested that the Fact Sheet be revised to provide the rationale for the above footnotes, explaining that the rule specifies that the permit limits aren't issued until the pending variance applications are denied or withdrawn and that issuance in this context means that the compliance schedules do not begin until final action is taken on the variance applications.

Response 1: This Office has the duty to ensure that all applicable regulations are implemented. In this case there are two regulations which must be met. First, 327 IAC 5-2-11.1 requires that pollutants which have the reasonable potential to exceed the water quality criteria in the receiving stream have water quality based effluent limitations (WQBEL) developed and placed in the discharger's NPDES permit. Second, 327 IAC 5-3-4.1 contains a provision for permit limitations for a substance that is under a variance request review. This provision provides that current limitations from the previous permit will remain in effect during the consideration of the variance request. To ensure that both regulations are implemented, this Office proposes the inclusion of the WQBEL for both free cyanide and chloride (327 IAC 5-2-11.1) and proposes that the schedules of compliance for these two parameters not commence until this Office makes a final determination on the variance applications (327 IAC 5-3-4.1). This Office has amended the language in the schedules of compliance in Part I.D of the permit to clarify.

Comment 2: Chlorides test methods – the following is suggested language such that any EPA approved test method may be used.

This Table would replace the Table in Footnote [19] and Footnote [2] for Table 10 in Part I.A of the permit.

Parameter	EPA Method	LOD, mg/L	LOQ, mg/L
Arsenic	3113 B	0.001	0.0032
Cadmium	3113 B	0.0001	0.0003
Chloride	*	1.0	3.2
Chromium	3111C or 3113B	0.002	0.006
Copper	3113 B	0.001	0.003
Cyanide, Free	1677 or 4500 CN-G	0.003	0.0095
Cyanide, Amenable	4500 CN-G	0.003	0.0095
Fluoride	4500 F-E	0.016	0.050
Lead	3113 B	0.001	0.003

Nickel	3113 B	0.001	0.003
Sulfate	*375.2,* Revision 2.0	3.0	9.54
TDS	160.1 or 2540C	10.0	31.8
Zinc	200.7, Revision 4.4	0.002	0.006

* The permittee may use any method listed in the latest version of 40 CFR Part 136 provided that the method has a LOD less than or equal to the LOD listed above.

Response 2: The requested changes to Footnote [19] have been made to the permit. Footnote [2] for Table 10 in Part I.A of the permit has been changed, with the exception of listing amenable cyanide. Table 10 requires cyanide to be monitored and reported as free cyanide.

Comment 3: Cyanide test method

The City's position remains that Method 4500 CN-G/I is the appropriate test for free cyanide for compliance purposes with the free cyanide water quality-based effluent limit. The City understands that IDEM is concerned with assuring analytical reliability in determining compliance with the 10 μg/L free cyanide monthly average limit, hence the analytical LOQ needs to be 10 μg/L or less.

Therefore, the City of Indianapolis commits to contracting with an analytical laboratory capable of demonstrating, as per 40 CFR 136 Appendix B, that their performance of Method 4500-CN-G and 4500-CN-I will consistently result in an LOD of 3 μg/L or less or a LOQ of less than 9.9 μg/L. The City believes this is achievable and recognizes that IDEM has approved Method 4500-CN-I for free cyanide with a LOD of 1.0 μg/L and a LOQ of 3.2 μg/L for NPDES IN0000281 (page 66d). Therefore, the City requests that for compliance monitoring for the final free cyanide limits Method 4500-CN-G with a LOD of 3 μg/L and LOQ of 9.5 μg/L be cited in the Permit (will change Footnote [12], Footnote [18] in Part I.A, and Footnote [2] of Part I.A, Table 10).

The Fact Sheet should be revised accordingly. The City recommends that language indicating that IDEM is making a determination to approve Method 1677 be removed as unnecessary. Instead, IDEM may add language in the permit to ensure that the City provides certification of the above LOD and LOQ in its use of 4500-CN-G.

Response 3: The permittee may use either method 4500 CN-G or method 1677 provided that the level of detection and quantification is below the applicable permit limitation. Changes to Part I.A of the permit allow for the use the both methods and list the LOD as 0.003 mg/l and LOQ as 0.0095 mg/l. The Fact Sheet has been modified to reflect this change.

Comment 4: Clarify, in Part II.B.3 on p.24, the reference to Attachment A such that it's clear we're relying upon the DMRs from the modeling:

3. Reporting

The permittee shall submit monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month and shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective. These reports shall include, but not necessarily be limited to, the Discharge Monitoring Report and the Monthly Report of Operation. The Permittee must submit the CSO Hydraulic Model Report as described in Attachment A.II.A to the Compliance Evaluation Section. The Permittee shall also complete and submit the Indiana Monthly Monitoring Report Form (MMR-State Form 30530) or an equivalent form to report their influent and/or effluent data for metals and other toxics. All reports, with the exception of the CSO Discharge Monitoring Reports, shall be mailed to IDEM, Office of Water Quality, Data & Information Services Section, 100 N. Senate Ave. Mail Code 65-42, Indianapolis, Indiana 46204. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

Response 4: The requested language (highlighted) has been added to Part I.B of the permit.

Additional Changes/Revisions - An additional requirement was added to in Part II.A (No. 17) of the permit. The addition specifies that each facility is liable for the payment of annual fees in accordance with Indiana Code. Additionally, Part I.A of the permit was modified to correct units of measurements listed in the analytical method tables to be consistent with the reporting requirements. A minor change was made to footnote [18] and a footnote [19] in Part I.A of the permit. Footnote [18] now solely pertains to chloride and cyanide to explain that the variance submittals were received for these parameters. Other various typographical errors were corrected throughout the permit.

The changes made to the permit are not considered to be substantial, and will not require additional public notice.

Drafted by: Jason House
December 2007

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

PUBLIC NOTICE NO. 2007 – 12H- F

DATE OF NOTICE: DECEMBER 26, 2007

The Office of Water Quality issues the following NPDES FINAL PERMIT.

MAJOR –RENEWAL

CITY OF INDIANAPOLIS – BELMONT & SOUTHPORT AWT PLANTS, proposed to combine under Permit No. IN0023183, MARION COUNTY, 2700 S Belmont Av and 3800 W Southport Rd, respectively, Indianapolis, IN. These municipal facilities discharge 125 & 120 million gallons per day, respectively, of sanitary, industrial and combined sewer wastewater into the West Fork of the White River. Permit Writer: Jason House at 317/233-0470.

APPEAL PROCEDURES FOR FINAL PERMITS

Regarding your rights and responsibilities pertaining to the Public Notice process and timeframes, please refer to IDEM websites: http://www.in.gov/idem/permits/water/wastewater/public_notice/appeal.html and http://www.in.gov/idem/your_environment/community_involvement/publicparticipation/index.html.

The Final Permit is available for review & copies at IDEM, Indiana Government Center, North Bldg, 100 N Senate Ave, Indianapolis, IN, Rm 1203, Office of Water Quality/NPDES Permit Section, from 9 – 4, M - F (copies 10¢ per page). The Final Permit is also available at the local County Health Department. Please tell others you think would be interested in this matter.

Appeal Procedure: Any person affected by the issuance of the Final Permit may appeal by filing a Petition for Administrative Review with the Office of Environmental Adjudication **within** eighteen (18) days of the date of this Public Notice. Any appeal request must be filed in accordance with IC 4-21.5-3-7 and must include facts demonstrating that the party requesting appeal is the applicant; a person aggrieved or adversely affected or is otherwise entitled to review by law.
Timely filing: The Petition for Administrative Review must be received by the Office of Environmental Adjudication (OEA) **within** 18 days of the date of this Public Notice; either by U.S. Mail postmark or by private carrier with dated receipt. This Petition for Administrative Review represents a request for an Adjudicatory Hearing, therefore must:

- state the name and address of the person making the request;
- identify the interest of the person making the request;
- identify any persons represented by the person making the request;
- state specifically the reasons for the request;
- state specifically the issues proposed for consideration at the hearing;
- identify the Final Permit Rule terms and conditions which, in the judgment of the person making the request, would be appropriate to satisfy the requirements of the law governing this NPDES Permit rule.

If the person filing the Petition for Administrative Review desires any part of the NPDES Final Permit Rule to be stayed pending the outcome of the appeal, a Petition for Stay must be included in the appeal request, identifying those parts to be stayed. Both Petitions shall be mailed or delivered to the address here:
Phone: 317/232-8591.

Environmental Law Judge
Office of Environmental Adjudication
IGC – North Building- Rm 1049
100 N. Senate Avenue
Indianapolis IN 46204

Stay Time frame: If the Petition (s) is filed **within** eighteen (18) days of the mailing of this Public Notice, the effective date of any part of the permit, within the scope of the Petition for Stay is suspended for fifteen (15) days. The Permit will become effective again upon expiration of the fifteen (15) days, unless or until an Environmental Law Judge stays the permit action in whole or in part.

Hearing Notification: Pursuant to Indiana Code, when a written request is submitted, the OEA will provide the petitioner or any person wanting notification, with the Notice of pre-hearing conferences, preliminary hearings, hearing stays or orders disposing of the Petition for Administrative Review. Petition for Administrative Review must be filed in compliance with the procedures and time frames outlined above. Procedural or scheduling questions should be directed to the OEA at the phone listed above.

APPENDIX

A-2G

Sewer User Ordinance

Effective Date: July 28, 2011.

Chapter 671 SEWERS AND SEWAGE DISPOSAL*

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***Cross references:** Disposal of matter from privies, § 391-116; streets, sidewalks and public ways, ch. 431; buildings and construction, ch. 536; environmental public nuisances, ch. 575; garbage, trash and refuse, ch. 601; public rights-of-way, ch. 645.

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ARTICLE I. IN GENERAL

Sec. 671-1. Purpose and policy.

(a) This chapter sets forth uniform requirements for discharges into, the construction of and additions to the City of Indianapolis wastewater collection and treatment system. These requirements enable the city to protect public health, ensure a sound sewer infrastructure system in the future, and comply with all applicable local, state and federal laws relating thereto.

(b) The objectives of this chapter are:

1. To prevent the introduction of pollutants into the city wastewater system that will interfere with the normal operation of the system or contaminate the resulting municipal sludge;

2. To prevent the introduction of pollutants into the city wastewater system that do not receive adequate treatment in the POTW and that will pass through the system into receiving waters or the atmosphere;

3. To improve the opportunity to recycle and reclaim wastewater and sludge from the system;

4. To prevent the introduction of infiltration and inflow into the wastewater collection system that will occupy capacity reserved for community growth;

5. To discourage the construction of new sanitary sewers that do not accommodate future growth and lack the quality expected of the city's infrastructure;

6. To discourage the construction of privately owned sanitary sewers; and

7. To disallow the issuance of sanitary sewer connection permits for gravity service to buildings with inadequate elevation.

(c) This chapter provides for the regulation of discharges into the city's wastewater system through the issuance of industrial discharge and building permits, the execution of special agreements, and the enforcement of administrative regulations.

(d) In furtherance of these objectives, this chapter details the general regulation of discharges to public sewers; the issuance of connecting permits for building sewers; the inspection of building sewers; the issuance of construction permits for sewer expansions; the issuance of discharge permits for industrial users of the system; the establishment of a system of rates, charges and billings for the use of the system; and regulations for private disposal facilities.

(G.O. 27, 1991§ 1; G.O. 25, 2011, § 61)

Sec. 671-2. Definitions.

As used in this chapter, the following terms shall have the meanings ascribed to them in this section unless the context specifically indicates otherwise.

ASTM means the American Society for Testing and Materials.

Accidental discharge means an unintentional release of a material that could potentially violate the requirements of subsection 671-4(c), (d) or (e).

Act means the Federal Water Pollution Control Act, as amended as of January 1, 1995, 33 USC 1251 et seq., also known as the Clean Water Act or CWA.

Administrative fee means a fee assessed to all parcels that require a new or modified sewer service agreement with the city.

Administrator means the Regional Administrator of Region V, U.S. Environmental Protection Agency or Commissioner of the Indiana Department of Environmental Management or its successor, provided such state agency has a pretreatment program approved by the EPA.

Applicable pretreatment standard means, for any specified pollutant, the city's prohibitive discharge standards, the city's specific limitations on discharges, the State of Indiana pretreatment standards, or the federal general or categorical pretreatment standards (when effective), whichever standard is most stringent.

Approval authority means the administrator.

Authorized representative of industrial user means:

1. A responsible corporate officer if the industrial user is a corporation. A responsible corporate officer means:

    a. A president, vice-president, treasurer or secretary of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or

    b. A manager of one (1) or more manufacturing, production or operation facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars ($25,000,000.00) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to such manager in accordance with corporate procedures.

2. A general partner or proprietor if the industrial user is a partnership or sole proprietorship, respectively.

3. For a municipality, state, federal or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

4. An individual duly authorized by the person designated in subsection (1), (2) or (3) above, provided:

    a. The authorization is made in writing by the individual described in subsection (1), (2) or (3) above;

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the discharge originates, such as the position of plant manager, plant engineer, superintendent, or a position of equivalent responsibility or having overall responsibility for environmental matters for the company; and

    c. The written authorization is submitted to the city.

Best management practices or *BMP* means any or all of the following:

1. Schedules of activities;

2. Prohibitions of practices;

3. Maintenance procedures and other management practices to implement the prohibitions listed in 30 CFR 403.5(a)(1) and 40 CFR 403.5 (b);

4. Treatment requirements

5. Operating procedures; and/or
6. Practices to control any of the following:
    a. Plant site runoff;
    b. Spillages or leaks;
    c. Sludge or waste disposal; and/or
    d. Drainage for raw materials storage.

Board means the board of public works.

BOD (denoting biochemical oxygen demand) means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees centigrade, expressed in milligrams per liter.

Building drain means that part of the lowest horizontal piping of a drainage system that receives the discharge from solid waste and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet (one and one-half (1.5) meters) outside the inner face of the building wall.

Building sewer means the extension from the building drain to the public sewer or other place of disposal and shall include that portion of the drain within the public right-of-way.

Bureau of license and permit services or *bureau* means the bureau of license and permit services of the department of code enforcement.

Categorical pretreatment standard means any regulation containing pollutant discharge limits or alternative best management practices promulgated by the EPA in accordance with section 307(b) and (c) of the Act that apply to a specific category of industrial user.

City sewer means a sewer owned and operated by the city.

Combined sewer means a sewer that has been designed or intended to receive both surface runoff and sewage.

Composite sample means a sample representative of a user's discharge within a given twenty-four (24) hour period of operation. Samples may be done either manually or automatically, and continuously or discretely, with not less than four (4) samples to be composited or a sufficient number of individual aliquots to comprise a representative sample as determined by the City.

Connection fee means an assessment to compensate the city for all the costs of capacity for the city's sewer including the entire combined sewer system and its treatment facilities.

Cooling water means the water discharged from any use such as air conditioning, cooling or refrigeration or to which the only pollutant added is heat.

Daily maximum means the analytical value representative of either a composite or grab sample collected from a user's discharge.

Department means the Department of Public Works, City of Indianapolis.

Direct discharge means the discharge of treated or untreated wastewater directly to the surface waters of the state.

Director means the director of the department of public works or his or her authorized deputy, agent or representative.

Division of inspections means the division of inspections of the department of code enforcement.

Discharge report means any report required of an industrial user by section B.2. of the industrial discharge permit.

Domestic wastewater means wastewater of the type commonly introduced into a POTW by residential users.

EDU's means equivalent dwelling unit, and shall be determined in accordance with industry standards and shall reflecting the greater of the actual daily flow requirements (per 327 IAC 3), the area ratio of the water meter size serving a particular user, or such means of determination deemed appropriate by the director. One (1) EDU shall be estimated as equal to equal three hundred ten (310) gallons per day.

EPA means the U.S. Environmental Protection Agency, or, where appropriate, the term may also be used as a designation for the administrator or other duly authorized official of such agency.

Existing Source means any source that is not a New Source.

Foundation drains means any network of pipes, pumps or drainage mechanism located at, near or under a footing, foundation or floor slab of any building or structure that intentionally or unintentionally conveys groundwater away from a building or structure.

Garbage means solid wastes from the domestic and commercial preparation, cooking and dispensing of food and from the handling, storage and sale of produce.

General pretreatment regulations means "General Pretreatment Regulations for Existing and New Sources of Pollution," 40 CFR Part 403.

Grab sample means a sample that is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.

Heat pump discharge means water discharged from a heat pump or other device that uses water as a heat source or heat sink.

Indirect discharge means the discharge or the introduction of nondomestic pollutants from any source regulated under section 307(b) or (c) of the Act (33 USC § 1317) into the POTW (including holding tank waste discharged into the system).

Industrial surveillance section means the industrial surveillance section of the department of public works.

Industrial user means any user of the POTW who discharges, causes or permits the discharge of nondomestic wastewater into the POTW.

Industrial wastewater means a combination of liquid and water-carried waste discharged from any industrial user's establishment and resulting from any trade or process carried on in that establishment, including the wastewater from pretreatment facilities and polluted cooling water.

Infiltration means the groundwater entering the sewer system from the ground through such means as, but not limited to, defective or poorly constructed pipes, pipe joints, connections and manholes or from drainage pipes constructed to remove groundwater from areas such as building foundations and farm fields.

Inflow means the stormwater and surface water entering directly into sewers from such sources as, but not limited to, manhole covers, roof drains, basement drains, land drains, foundation drains, cooling/heating water discharges, catch basins or stormwater inlets.

Instantaneous limit means the maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

Interference means any discharge that, alone or in conjunction with a discharge or discharges from other sources, both: (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and (2) therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Lift station means any arrangement of pumps, valves and controls that lifts wastewater to a higher elevation.

Monthly average limitation means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

NH3-N (denoting ammonia nitrogen) means all of the nitrogen in water, sewage or other liquid waste present in the form of ammonia, ammonia ion or in the equilibrium NH+4 NH3 + H+.

Natural outlet means any outlet into a watercourse, pond, ditch, lake or other body of surface water or groundwater.

New source means any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under Section 307(c) of the Act, which will be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

1. The building, structure, facility or installation is constructed at a site at which no other source is located;

2. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

3. The production or wastewater-generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site.

Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of (2) or (3) above but otherwise alters, replaces, or adds to existing process or production equipment.

Construction of a new source has commenced if the owner or operator has:

1. Begun or caused to begin as part of a continuous on-site construction program:

   a. Any placement, assembly or installation of facilities or equipment; or

   b. Significant site preparation work, including clearing, excavation or removal of existing buildings, structures or facilities that is necessary for the placement, assembly or installation of new source facilities or equipment; or

2. Entered into a binding contractual obligation for the purchase of facilities or equipment that are intended to be used in its operation within a reasonable time. Options to purchase or contracts that can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

Nonindustrial user means all users of the POTW not included in the definition of "industrial user."

Pass-through means a discharge that exits the POTW into waters of the state in quantities or concentrations that, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation.)

Person means any individual, partnership, trust, firm, company, association, society, corporation, group, governmental agency including, but not limited to, the United States of America, the State of Indiana and all political subdivisions, authorities, districts, departments, agencies, bureaus and instrumentalities thereof, or any other legal entity or any combination of such.

pH means the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

Pollutant means, but is not limited to, any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical materials, chemical wastes, biological materials, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water.

Pollution means the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water.

POTW means all publicly owned facilities for collecting, pumping, treating and disposing of wastewater, including sewers, lift stations, manhole stations and the wastewater treatment plants.

Pretreatment or *treatment* means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into the POTW. The reduction or alteration can be obtained by physical, chemical or biological processes or process changes or other means, except as prohibited by 40 CFR section 403.6(d).

Pretreatment standard or regulation means any substantive or procedural requirement related to pretreatment contained in this chapter.

Process wastewater means any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Properly shredded garbage means the wastes from the preparation, cooking and dispensing of food that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (½) inch (one and twenty-seven one-hundredths (1.27) centimeters) in any dimension.

Public sewer means any combined or sanitary sewer or lift station located within the public right-of-way or a dedicated easement and that is controlled by public authority.

Radioactive material means any material (solid, liquid or gas) that spontaneously emits ionizing radiation and that is regulated by the Nuclear Regulatory Commission (NRC) or the Indiana State Board of Health. This may include naturally occurring radioactive material, by-product material, accelerator produced material, source material or special nuclear material.

Sanitary district means that area incorporated into the Marion County Liquid Waste Sanitary District.

Sanitary sewer means a sewer that carries sewage and to which stormwaters, surface waters and groundwaters are not intentionally admitted.

Sewage normally discharged by a residence means the liquid waste contributed by a residential living unit and shall not exceed a volume of ten thousand five hundred (10,500) gallons per month, thirty (30) pounds of BOD per month, and thirty-five (35) pounds of suspended solids per month.

Sewer means a pipe or conduit for carrying sewage.

Sewer work means the connecting of any building sewer to a city sewer, the making of a significant alteration to or significant repair of a building sewer, the connecting of a building sewer to a building drain or the altering or repairing of a city sewer.

Shall is mandatory; *may* is permissive.

Significant industrial user (SIU) means any industrial user that is:

1. A facility regulated by a national categorical pretreatment standard and generates a process discharge;

2. A noncategorical facility with a process wastewater discharge greater than an average of twenty-five thousand (25,000) gallons per day;

3. Any industrial user with a reasonable potential to adversely affect the POTW, its treatment processes or operations, or its sludge use or disposal or for violating any pretreatment standard or requirement;

4. Any other industrial user deemed to be significant by the director on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement; or

5. Any other industrial user that contributes process wastewater that makes up five (5) percent or more of the dry weather average hydraulic or organic capacity of the POTW treatment plant.

Upon a finding that an industrial user meeting the criteria of paragraphs (2), (3), (4) and (5) of this section has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the director may at any time, on its own initiative or in response to a petition received from an industrial user, and in accordance with 40 CFR § 403.8(f)(6), determine that such industrial user is not a significant industrial user.

Slug means any discharge of a non-routine, episodic nature, including but not limited to an accidental discharge or a non-customary batch discharge, which has reasonable potential to cause interference or pass through, or in any other way violate any requirement of this article or the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Storm drain or *storm sewer* means a sewer that carries stormwaters and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling water.

Stormwater means any flow occurring during or following any form of natural precipitation and resulting therefrom.

Suspended solids (SS) means solids that either float on the surface of or are in suspension in water, sewage or other liquids and that are removable by laboratory filtering.

Toxic pollutant means any pollutant or combination of pollutants listed as toxic in regulations promulgated by the administrator of the Environmental Protection Agency under the provisions of CWA §§ 307(a) or 405(d) or other Acts.

Upset means an exceptional incident in an industrial user's facility, in which there is unintentional and temporary noncompliance with applicable pretreatment standards because of factors beyond the reasonable control of the industrial user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance or careless or improper operation.

User means any person who contributes causes or permits the contribution of wastewater into the city's POTW.

Wastewater means a combination of the liquid and water-carried pollutants from residences, commercial businesses, institutions and industrial establishments, together with such groundwaters, surface waters and stormwaters as may be present.

Wastewater treatment plant means any arrangement of devices and structures used for treating wastewater.

Wastewater works means all facilities for collecting, pumping, treating and disposing of wastewater.

Watercourse means a channel in which a flow of water occurs, either continuously or intermittently.

Abbreviations. The following abbreviations shall have the designated meanings:

BOD or BOD5:	Biochemical oxygen demand
CFR:	Code of Federal Regulations (July 1, 1994 edition)
COD:	Chemical oxygen demand
CWA:	Clean Water Act
G.O.:	General Ordinance
IC:	Indiana Code
IAC:	Indiana Administrative Code (as amended as of December 1, 1994)
IDEM:	Indiana Department of Environmental Management
ISBH:	Indiana State Board of Health
l:	Liter
mg:	Milligrams
mg/l:	Milligrams per liter
NPDES:	National Pollutant Discharge Elimination System

SIC:	Standard industrial classification
SS:	Suspended solids
SWDA:	Solid Waste Disposal Act, 42 USC § 6901 et seq.
TSS:	Total suspended solids
40 CFR 136:	"Guidelines Establishing Test Procedures for the Analyses of Pollutants"

(G.O. 27, 1991, § 1; G.O. 22, 1995 § 1; G.O.3, 2002, § 40; G.O. 107, 2005, § 1; G.O. 63, 2009, § 85; G.O. 25, 2011, § 61))

Sec. 671-3. Unlawful disposal of wastes.

(a) It shall be unlawful to discharge to any natural outlet or watercourse within the city any wastewater or other polluted waters, except where suitable treatment has been provided in accordance with the laws of the United States, the State of Indiana and the city.

(b) Except where a valid NPDES permit exists, the owner of all houses, buildings or properties used for human occupancy, employment, recreation or other purposes, situated within the city and abutting on any street, alley or right-of-way in which there is now located or may in the future be located a city sewer, is hereby required at his/her expense to connect such facilities directly with the proper city sewer in accordance with the provisions of this chapter within ninety (90) days after the day of official notice to do so, provided that such city sewer is within one hundred (100) feet (30.5 meters) of the property line, notwithstanding whether or not the facilities are served by any private sewage disposal system and within conditions as hereinafter provided.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-4. Regulation of discharges to public sewers.

(a) No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff or subsurface drainage into any sanitary sewer.

(b) Stormwater and all other unpolluted drainage may be discharged through existing structures to such sewers as are specifically designated as combined sewers or storm sewers. No additional flow shall be introduced. Industrial cooling waters or unpolluted process waters may be discharged, on approval of application as provided in section 671-41.

(c) No person shall discharge or cause to be discharged to any city sewer wastewater or pollutants that cause, threaten to cause or are capable of causing, either alone or by interaction with other substances:

1. Fire or explosion hazard;

2. Corrosive structural damage to the POTW but in no case water with a pH lower than 5.0 or higher than 12.0;

3. Obstruction to the flow in city sewers or other interference with the proper operation of the POTW;

4. An interference;

5. A pass-through.

(d) No person shall discharge or cause to be discharged to any city sewer:

1. A slug or a flow rate and/or pollutant discharge rate that is excessive over a relatively short time period so that there is a treatment process upset and subsequent loss of treatment efficiency;

2. Heat in amounts that will inhibit biological activity at the wastewater treatment plant but in no case greater than sixty (60) degrees centigrade (one hundred forty (140) degrees Fahrenheit) or heat in such quantities that the temperature at the wastewater treatment plant exceeds forty (40) degrees centigrade (one hundred four (104) degrees Fahrenheit);

3. Any wastewater containing toxic pollutants or any discharge that could result in toxic gases, fumes or vapors in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters of the POTW, or to exceed applicable categorical pretreatment standards;

4. A wastewater with a closed cup flash point of less than one hundred forty (140) degrees Fahrenheit or any liquids, solids or gases that, by reason of their nature or quantity, are or may be sufficient, either alone or by interaction with other substances, to cause fire or explosion or be injurious or hazardous in any other way to the POTW or to the operation of the wastewater treatment plant. At no time shall a discharge cause a reading on a meter capable of reading L.E.L. (lower explosive limit) to be greater than ten (10) percent at the point of discharge to the POTW or at any point in the POTW;

5. Any noxious or malodorous liquids, gases or solids that, either singly or by interaction with other wastes, are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for maintenance and repair;

6. Solid or viscous substances and/or other pollutants that may cause obstruction to the flow in a sewer or other interference with the operation of the POTW such as, but not limited to, grease, improperly shredded garbage, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, tar, asphalt residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes, or tumbling and deburring stones;

7. Any substance that may cause the POTW's effluent or any other product of the wastewater works such as residues, sludges or scums to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under section 405 of the Act;

8. Any substance that will cause the POTW to violate its NPDES permit or the receiving stream's water quality standards;

9. Any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes, inks and vegetable tanning solutions;

10. Any wastewater containing radioactive material above limits contained in regulations, licenses or orders issued by the appropriate authority having control over their use. The disposal of any licensed radioactive material must meet applicable local, state or federal requirements;

11. Any wastewater containing a total petroleum hydrocarbons concentration as determined by a procedure deemed appropriate by the director in excess of two hundred (200) mg/l. This limitation shall apply at the point of discharge to the city sewer system and is the maximum concentration allowed in any single grab sample collected from the waste stream;

12. Any gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, carbides, hydrides, stoddard solvents, sulfides, epoxides, esters, amines, polynuclear aromatic hydrocarbons, pyridines, new and used motor oil, or antifreeze, except at concentrations that do not exceed levels of such substances that are routinely present in the normal wastewater discharge and do not otherwise violate any section of this chapter or the conditions of an industrial discharge permit or a special agreement; and

13. Polychlorinated biphenyls (PCBs) in any detectable concentrations.

14. Any pollutant, including oxygen demanding pollutants, released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the POTW; and

15. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

(e) No person shall discharge or cause to be discharged a wastewater that has a value in excess of the values shown on table 1.

TABLE 1
NONCATEGORICAL DISCHARGE LIMITS

Pollutant	**Daily Maximum Allowable Concentration Value (mg/l)**
Arsenic	4.0
Cadmium	1.2
Chromium (total)	24.0
Chromium (hex)	3.4
Copper	2.2
Cyanide (amenable)	0.4
Lead	4.7
Nickel	7.3
Phenol	46.0
Pentachlorophenol	0.012
Zinc	38.0
Mercury	0.025
Silver	4.2

(f) The limitations set forth in table 1 above apply at the point of discharge to the city sewer system. The limitations for amenable cyanide, total cyanide and phenols apply to composite samples only in those cases where the composite sample is preserved according to EPA approved methods prior to collection. Otherwise, the values set forth for amenable cyanide, total cyanide and phenols or, with the approval of the director, any other listed pollutants shall apply to an instantaneous grab sample taken during prevailing discharge conditions and representative of the facility's discharge in general. The limitations and requirements imposed in subsections (c) and (d) of this section shall apply at the point of discharge to the city sewer unless specified otherwise.

(g) A grease interceptor shall be installed in the waste line leading from sinks, drains and other fixtures or equipment in restaurants, cafes, lunch counters, cafeterias, bars and clubs; hotel, hospital, sanitarium, factory or school kitchens; or other establishments where grease may be introduced into the drainage or sewage system in quantities that can affect line stoppage or hinder sewage treatment. The characteristics, size and method of installation of the grease interceptor shall meet the requirements imposed by the department of fire prevention and building services and shall be reviewed and approved by the department of public works prior to the commencement of installation. Approval of proposed facilities or equipment does not relieve the person of the responsibility of enlarging or otherwise modifying such facilities to accomplish the intended purpose. On a showing of good cause, the director may waive this requirement. A grease interceptor is not required for individual dwelling units or for any private living quarters.

(h) No user shall introduce new constituents or change substantially the character or volume of pollutants discharged to the POTW without prior written notification to the city. Such prior notification shall include hazardous wastes for which an industrial user has submitted notification to the director pursuant to subsection 671-62.

(G.O. 27, 1991, §1; G.O. 22, 1995, § 1; G.O. 177, 1996, § 1; G.O. 25, 2011, § 61)

Sec. 671-5. Removal credits

When the city demonstrates consistent removal of pollutants limited by federal categorical pretreatment standards, as required by 40 CFR 403.7, the city may apply to the administrator of the EPA, or the state if it has an approved pretreatment program, for authorization to give a removal credit to industrial users reflect removal of toxic or other regulated pollutants by the city's wastewater treatment system.

(G.O. 27, 1991, § 1; G.O. 22, 1995,§ 1; G.O. 25, 2011, § 61)

Sec. 671-6. State and Federal Requirements

Federal categorical pretreatment standards or state requirements and limitations on discharges shall apply in any case where they are more stringent than those in this chapter. To the extent the federal regulations contain stricter standards, the categorical pretreatment standards, found in 40 CFR Chapter I, Subchapter N, Parts 405—471, are hereby incorporated by reference into this chapter. To the extent the state regulations contain stricter standards, the pretreatment standards found in 327 IAC 5-12-6 are hereby incorporated by reference into this chapter.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-7. City's right of revision

The city reserves the right to establish by ordinance more stringent limitations or requirements on discharges to the wastewater system than those in this chapter if deemed necessary to comply with the objectives presented in section 671-1 of this chapter or to comply with federal or state laws.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-8. Baseline report.

(a) Within one hundred eighty (180) days after the effective date of a federal categorical pretreatment standard, or one hundred eighty (180) days after the final administrative decision made on a category, whichever is later, existing industrial users subject to such categorical pretreatment standards and currently discharging to or scheduled to discharge to the POTW will be required to submit to the director a report containing the following information in subsections (1) through (6) as required by 40 CFR 403.12(b). At least ninety (90) days prior to the commencement of discharge new sources and sources that become industrial users subsequent to the promulgation of an applicable categorical pretreatment standard will be required to submit to the director a report that contains the information listed in subsections (1) through (5) of this section. New sources also will be required to include in this report information on the method of pretreatment the source intends to use to meet the applicable pretreatment standards. New sources shall give estimates of the information requested in subsection (6).

1. *Identifying information.* The user shall submit the name and address of the facility, including the name of the operator and owners.

2. *Permits.* A list of any environmental control permits held by or for the facility.

3. *Description of operations.* User shall submit a brief description of the nature, average rate of production, and standard industrial classification of the operation(s) carried out by such industrial user. This description should include a schematic process diagram which indicates points of discharge to the wastewater works from the regulated processes.

4. *Flow measurement.* Information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from each of the following:

   a. Regulated process streams; and

   b. Other streams as necessary to allow use of the combined waste stream formula of 40 CFR 403.6(e).

(b) The director may allow for verifiable estimates of these flows where justified by cost or feasibility considerations.

1. *Measurement of pollutants.* The pretreatment standards applicable to each regulated process and concentration and nature (or mass) as measured according to 40 CFR 403.12(b)(5).

2. *Report of compliance.* The report shall state whether the applicable pretreatment standards or regulations are being met on a consistent basis. If not, then the report shall state what operation and maintenance and/or pretreatment is necessary to bring the user into compliance and the shortest schedule by which the user will provide such additional operation and maintenance and/or pretreatment, provided that the completion date shall not be later than the compliance date established for the applicable categorical pretreatment standard. This statement shall be signed by an authorized representative of the industrial user and certified by a professional engineer licensed in the State of Indiana.

(G.O. 27, 1991, § 1; G.O. 22, 1995 § 1)

Sec. 671-9. Excessive discharge

No industrial user shall ever increase the use of process water or other flows to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the federal categorical pretreatment standards or in any other pollutant-specific limitation developed by the city or state.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-10. Accidental discharge.

(a) Each industrial user shall provide protection from accidental discharge of substances regulated by this chapter. Facilities to prevent accidental discharge shall be provided and maintained at the owner's or users own cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be available to the city for review. All existing industrial users shall complete such a plan within six (6) months after the effective date of this chapter. No industrial user who commences contribution to the POTW after the effective date of this chapter shall be permitted to introduce pollutants into the system until accidental discharge procedures are available. Such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the industrial user's facility as necessary to meet the requirements of this chapter.

(b) In the case of an accidental discharge, it is the responsibility of the industrial user to immediately telephone and notify the director of the incident. The notification shall include:

1. Name of company;

2. Location of discharge;

3. Type of waste discharged;

4. Concentration and volume of waste discharged;

5. Corrective actions taken to minimize the impact of the discharge to the POTW.

(c) The industrial user shall notify the city if it is unable to comply with any requirement of this chapter because of a breakdown of its treatment equipment, accidents caused by human error, or upsets. The notification should include the information required in subsection (b) above.

(d) Within five (5) working days, unless extended by the director in writing, the industrial user shall submit to the director a detailed written report describing the accidental discharge, including:

1. The cause of the accidental discharge;

2. The period of the accidental discharge, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue;

3. Steps being taken and/or planned to reduce, eliminate or prevent recurrence of the accidental discharge.

(e) Such notification shall not relieve the user of any expense, loss, damage or other liability which may be incurred as a result of damage to the wastewater works or aquatic life, fish kills, or any other damage to persons or property; nor shall such notification relieve the user of any fines, civil penalties or other liability which may be imposed by this chapter or other applicable law.

(f) An affirmative defense of upset may be available to an industrial user in an enforcement proceeding. In any enforcement proceeding, the industrial user seeking to establish the occurrence of an upset shall have the burden of proof. An industrial user who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

1. An upset occurred and the industrial user can identify the specific cause(s) of the upset;

2. The facility was at the time being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures;

3. The industrial user has submitted to the city the information required in subsections (c) and (d) above;

4. The industrial user complied with any reasonable remedial measures to minimize or prevent any discharge or sludge use or disposal in violation of this chapter which has a reasonable likelihood of adversely affecting human health or the environment.

Any upset defense is only available for violations of categorical pretreatment standards or technology-based permit effluent limitations.

(g) A notice shall be permanently posted on the user's bulletin board or other prominent place advising affected employees whom to call in the event of a dangerous discharge. Employers shall ensure that all employees who may cause or suffer such a dangerous discharge to occur are advised of the emergency notification procedure.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-10.5 Plan to control slug discharges

(a) The director shall evaluate and document whether each significant user needs a plan or other action to control slug discharges. For industrial users identified as significant prior to November 14, 2005, this evaluation shall have been conducted at least once by October 14, 2006. Additional significant industrial users shall be evaluated within one (1) year of being designated as an industrial user.

(b) Significant industrial users shall notify the director immediately of any changes at a facility affecting potential for slug discharge.

(c) Slug control plans shall contain, at a minimum, the following elements:

1. Description of discharge practices, including non-routine batch discharges;

2. Description of stored chemicals;

3. Procedures for immediately notifying the director of slug discharges, including any discharge that would violate a prohibition under section 647-4 with procedures for follow-up written notification within five (5) days; and

4. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintained of storage areas, handling and transfer of materials, loading and uploading operations, control of plant site run-off, worker training, building or containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

(G.O. 25, 2011, § 61)

Sec. 671-11. Liability for damage.

(a) If any person discharges or causes to be discharged a waste that causes interference, pass-through, obstruction, damage or any other impairment to the POTW, the director may assess a charge against such person for:

1. The work required to clean or repair the POTW;

2. Any civil penalty, fine or cost of compliance with injunctions or other orders of a court or governmental authority imposed against the city as a result of such interference, obstruction, damage or impairment; and

3. All other costs incurred by the city as a result of such interference, pass through, obstruction, damage or impairment including but not limited to expert, consultant and attorneys' fees;

and add such charges to such person's regular charge.

(b) A person shall have an affirmative defense to any charge assessed against it under this section where the person can demonstrate that it did not know or have reason to know that its discharge, alone or in conjunction with a discharge or discharges from other sources, would cause pass through or interference, and:

1. A local limit designed to prevent pass through and/or interference, as the case may be, has been developed for each pollutant in the person's discharge that caused pass through or interference, and the person was in compliance with such local limit directly prior to and during the pass through or interference; or

2. If a local limit designed to prevent pass through and/or interference, as the case may be, has not been developed for the pollutant(s) that caused the pass through or interference, the person's discharge directly prior to and during the pass through or interference did not change substantially in nature or constituents from the person's prior discharge activity when the POTW was regularly in compliance with the POTW's NPDES permit requirements and, in the case of interference, applicable requirements for sewage sludge use or disposal.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1; G.O. 25, 2011, § 61)

Sec. 671-12. Special agreements.

Special agreements and arrangements between the department and any person may be established when, in the opinion of the director, unusual or extraordinary circumstances compel special terms and conditions. The director shall consider the total cost of application of technology in relation to the pollutant reduction benefits to be achieved from such application, the quality of pollutants that will be included in the discharge, the impact of those pollutants on the POTW and the receiving stream, and such other factors as the director deems appropriate. A violation of a term of a special agreement shall be considered a violation of this chapter. There cannot be special agreements and arrangements where federal categorical pretreatment standards and requirements apply.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1)

Sec. 671-13. Monitoring devices; metering equipment.

(a) Installation and maintenance at industrial user's expense. The director may require, as is necessary to carry out the requirements of this chapter, any industrial user to construct at his/her own expense monitoring facilities to allow inspection, sampling and flow measurement of the building drain or sewer and may also require sampling or metering equipment to be provided, installed and operated at the industrial user's expense. The monitoring facility should normally be situated on the industrial user's premises, but the director may, when such a location would be impractical or cause undue hardship, upon his/her approval allow the facility to be constructed in the public right-of-way; provided, however, the department of public works shall be the authority, through the street maintenance, traffic and street engineering divisions, to determine the locations on the public right-of-way on or below which the monitoring device and facility shall be placed.

(b) Temporary right-of-way use permit. The owner of the property abutting the public right-of-way to be used for the installation of the monitoring device shall submit to the appropriate city agency a temporary right-of-way use permit request. The maintenance, traffic and street engineering divisions staff of the department of public works shall review the temporary right-of-way use request and site plan prior to issuing the permit.

(c) Industrial users. Industrial users subject to categorical pretreatment standards shall have the option to designate a sampling location at a point containing only regulated process wastewaters or at a point containing the combined waste stream to demonstrate compliance with the applicable standard. The industrial user shall prove to the satisfaction of the director that the selected self-monitoring location contains all regulated waste streams. This option does not relieve the industrial user of the requirements specified in subsection (a) of this section.

(d) An industrial user shall obtain written approval of the director prior to changing the point of self-monitoring activities.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1; G.O. 15, 2001, § 121)

Sec. 671-14. Right to inspect.

Whenever required to carry out the objectives of this Code, the director or his/her authorized representative shall have a right of entry to, upon and through any premises for purposes of reviewing and copying relevant records or inspecting, measuring and sampling. If requested, the director or his/her authorized representative shall present appropriate credentials. It shall be the duty of the person to provide all necessary clearance before entry and not to unnecessarily delay or hinder the director in carrying out the review of relevant records, inspection, measuring and sampling. The right of entry shall exist at any time.

(G.O. 27, 1991, § 1; G.O. 25, 2011, § 61)

Sec. 671-15. Rules and regulations.

After the passage of this chapter, and from time to time thereafter as may be needed, both the board of public works and the board of code enforcement may, by resolution, promulgate rules and regulations necessary to implement and carry out the provisions of this chapter and not inconsistent therewith. Before any such rules and regulations shall become effective, the board of public works and the board of code enforcement shall follow the procedures provided in Chapter 141 of this Code.

(G.O. 27, 1991, § 1; G.O. 15, 2001, § 122; G.O. 63, 2009, § 86; G.O. 25, 2011, § 61)

Sec. 671-16. Penalties.

(a) Notwithstanding any other section, any person who violates any provision or discharge limit of this chapter may be fined an amount not to exceed two thousand five hundred dollars ($2,500.00). A violation of any permit issued under this chapter or special agreement entered into under the authority of this chapter shall constitute a violation of this chapter. Each day's violation shall constitute a separate offense.

(b) Nothing in this chapter shall restrict any right that may be provided by statute (including but not limited to, IC 36-1-4-3 and IC 36-1-3-4) or common law to the city to bring other actions, at law or equity, including injunctive relief. Violations of this chapter may be resolved through administrative adjudication as provided in Article V, Chapter 103.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1; G.O. 181, 1997, § 3; G.O. 25, 2011, § 61)

Sec. 671-17. Recordkeeping requirement.

(a) Any industrial user subject to the reporting requirements established in this chapter shall maintain records of all information resulting from any monitoring activities required by this chapter, including documentation required by best management practices. Such records shall include for all samples:

1. The date, exact place, method and time of sampling and the name(s) of the person or persons taking the samples;

2. The dates analyses were performed;

3. Who performed the analyses;

4. The analytical techniques/methods used; and

5. The results of such analyses.

(b) Any industrial user subject to the reporting requirements established in this chapter shall be required to retain for a minimum of three (3) years any records of monitoring activities and results and shall make such records available for inspection and copying by the director, the EPA and the IDEM. The city may extend the record-keeping retention requirement beyond three (3) years during periods of litigation, in anticipation of litigation, or as requested by the approval authority.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 1; G.O. 25, 2011, § 61)

Secs. 671-18--671-21. Reserved.

ARTICLE II. BUILDING SEWERS

Secs. 671-22. --671-40. Repealed effective August 26, 2011.

(G.O. 25, 2011, § 61)

ARTICLE III. INDUSTRIAL DISCHARGE PERMITS

Sec. 671-41. Permit required.

(a) All industrial users proposing to connect to or discharge into a city sewer must complete an application for an industrial discharge permit before connecting to or discharging into a city sewer. All industrial users connected to or discharging into a city sewer, who do not currently have an industrial discharge permit, must complete an application for an industrial discharge permit within ninety (90) days after the effective date of this chapter. All significant industrial users (SIU's), including those users subject to federal standards, users not subject to federal standards but deemed significant by the director, or which otherwise meet the criteria of a significant industrial user shall obtain a permit from the department before connecting to or discharging into a city sewer.

(b) No person shall knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this chapter or the industrial discharge permit. Nor shall any person falsify, tamper with or knowingly render inaccurate any monitoring device or method required under this chapter.
(G.O. 27, 1991, § 1)

Sec. 671-42. Application.

(a) The director shall have the authority to prescribe an industrial discharge permit application form. The application form may require the following information:

1. Name, address and standard industrial classification number.

2. Volume of wastewater to be discharged.

3. The wastewater characteristics including, but not limited to, BOD, suspended solids, ammonia and pH.

4. Description of daily, weekly and seasonal variations in discharges.

5. Location of building drain and/or building sewer.

6. Pretreatment standards applicable to the discharge.

7. If additional pretreatment and/or operation and maintenance are required to meet the pretreatment standards, the user shall provide it by the shortest possible compliance schedules. The completion date in the schedule shall not be later than the compliance date established for any applicable federal pretreatment standard. The following conditions shall apply to this schedule:

   a. The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).

   b. No increment referred to in paragraph a. shall exceed nine (9) months.

   c. No later than fourteen (14) days following each date in the schedule and the final date for compliance, the user shall submit a progress report to the director including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay and the steps being taken by the user to return the construction to the schedule established. In no event shall more than nine (9) months elapse between such progress reports to the director.

8. Any other information as may be deemed by the director to be necessary to evaluate the industrial discharge permit application.

(b) The industrial discharge permit application shall be signed and sworn to by an authorized representative of the industrial user.

(G.O. 27, 1991, § 1)

Sec. 671-43. Term.

(a) The industrial discharge permit shall be for a term of no more than five (5) years. Any person wishing to continue to discharge to a city sewer beyond the term of the industrial discharge permit shall apply for renewal of the industrial discharge permit at least sixty (60) days prior to the expiration of such permit using forms prescribed by the director, which forms may require the information set forth in section 671-42.

(b) In the event the permittee does not receive permit renewal prior to the expiration date due to circumstances beyond the control of the permittee, the standards and requirements set forth in the expired permit shall remain in full force and effect until such renewal is received by the permittee.

(G.O. 27, 1991 § 1; G.O. 22, 1995,§ 2; G.O. 25, 2011, § 61)

Sec. 671-44. Conditions.

The director may prescribe conditions to the industrial discharge permit that shall or may, as applicable, include the following:

1. Applicable federal, state and/or local laws, ordinances, regulations or orders, including national categorical pretreatment standards for new and existing sources promulgated in 40 CFR parts 401 through 471.

2. Limits or prohibitions on the wastewater characteristics other than those in section 671-4 including, but not limited to, polychlorinated biphenyls and polybrominated biphenyls for the protection of public health or the POTW. The director shall apply applicable federal categorical pretreatment standards, or, in the absence of such standards, limits may be based on the best practical technology.

3. The unit charge or schedule of user charges and fees for the wastewater to be discharged to a city sewer, as established by the city-county council.

4. Limits on the average and maximum wastewater constituents and characteristics.

5. Limits on average and maximum rate and time of discharge or requirements for flow regulations and equalization.

6. Requirements for installation and maintenance of inspection and sampling facilities.

7. Specifications for monitoring programs, which may include sampling locations, frequency of sampling, number, types and standards for tests, and reporting schedule.

8. Compliance schedules, which may not extend the compliance date beyond applicable federal deadlines.

9. Best management practices.

10. Requirements for submission of technical reports or discharge reports.

11. Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the city, and affording the city access thereto.

12. Requirements for prior notification of the city of any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the POTW, including any hazardous wastes for which the industrial user has submitted notification to the city pursuant to section 671-62.

13. Requirements for notification of slug discharges and the submittal and implementation of a slug control plan, as described in Section 671-10.5(c).

14. Mandatory statement of duration as provided in section 671-43.

15. Mandatory statement of non-transferability as provided in section 671-47.

16. Mandatory effluent limits based on applicable general pretreatment standards in 40 CFR 403, categorical pretreatment standards, local limits and state and local law.

17. Mandatory self-monitoring, sampling, reporting notification and recordkeeping requirements, as provided in this chapter, including an identification of the pollutants to be monitored, sampling location, sampling frequency and sample type, based on the applicable general pretreatment standards in 40 CFR 403, categorical pretreatment standards, local limits and state and local law.

18. Mandatory statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements and any applicable compliance schedule.

19. Other conditions as deemed appropriate by the city to ensure compliance with this chapter.

(G.O. 27, 1991 § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Sec. 671-45. Permit modifications.

(a) Within nine (9) months of the promulgation of a categorical pretreatment standard, the industrial discharge permit of users subject to such standard shall be revised to require compliance with such standard within the time frame prescribed by such standard. In addition, the user with an existing industrial discharge permit shall submit to the director, within one hundred eighty (180) days after the promulgation of an applicable categorical pretreatment standard, the information required by section 671-42. Industrial discharge permits of users who must comply with federal categorical pretreatment standards prior to the effective date of this chapter shall be revised immediately upon the effective date of this chapter to reflect applicable pretreatment standards.

(b) Modification of an industrial discharge permit may also be accomplished at any time during the term of the permit when in the opinion of the director a modification is necessary to accurately characterize changes in industrial contribution, wastewater constituents or characteristics, ordinance requirements or any other applicable condition. An industrial user shall be given a thirty-day notice of the impending modification. Compliance deadlines with the modified requirements shall be determined on a case-specific basis.

(G.O. 27, 1991, § 1; G.O. 25, 2011, § 61)

Sec. 671-46. Fees.

There shall be an application fee of one hundred fifty dollars ($150.00) for an individual discharge permit. This fee shall apply to original and renewal permit applications and modifications of existing permits initiated by the permittee. Payment of the fee shall accompany submission of the completed application. The board of public works may revise the amount of such fee in accordance with Chapter 261 of this Code but not more often than once each calendar year.
(G.O. 27, 1991, § 1)

Sec. 671-47. Nonassignability.

The industrial discharge permits are issued to a specific person for a specific facility and do not constitute a property interest nor shall the industrial discharge permit be assigned, conveyed or sold to a new owner, new user, different premises or a new or changed operation, except as follows: Industrial discharge permits may be reassigned or transferred to a new owner and/or operator if the permittee gives at least thirty (30) days advance written notice to the director and the director approves the industrial discharge permit transfer in writing. The notice to the director must include a written certification by the new owner and/or operator which: (1) states that the new owner and/or operator has no immediate intent to change the facility's operations and process; (2) identifies the specific date on which the transfer is to occur; and (3) acknowledges full responsibility for complying with the existing industrial discharge permit and all applicable laws and regulations. Failure to provide advance notice of a transfer renders the industrial discharge permit voidable on the date of facility transfer.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2)

Sec. 671-48. Pretreatment.

Industrial users shall provide necessary wastewater treatment as required to comply with this chapter and shall achieve compliance with all federal categorical pretreatment standards within the time limitations as specified by the federal pretreatment regulations. Any facilities required to pretreat wastewater to a level acceptable to the city shall be provided, operated and maintained at the user's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the city for review and shall be acceptable to the city before final review and approval of such plans by the Indiana Department of Environmental Management and construction of the facility. The review of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the city under the provisions of this chapter. Any subsequent significant modifications in the pretreatment facilities or method of operation affecting its discharge shall be reported to and be acceptable to the city prior to the user's initiation of the changes.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2)

Sec. 671-48.5. Baseline report.

(a) Within one hundred eighty (180) days after the effective date of a federal categorical pretreatment standard, or one hundred eighty (180) days after the final administrative decision made on a category, whichever is later, existing industrial users subject to such categorical pretreatment standards and currently discharging to or scheduled to discharge to the POTW will be required to submit to the director a report containing the following information in subsections (1) through (6) as required by 40 CFR 403.12(b). At least ninety (90) days prior to the commencement of discharge new sources and sources that become industrial users subsequent to the promulgation of an applicable categorical pretreatment standard will be required to submit to the director a report that contains the information listed in subsections (1) through (5) of this section. New sources also will be required to include in this report information on the method of pretreatment the source intends to use to meet the applicable pretreatment standards. New sources shall give estimates of the information requested in subsection (6).

1. *Identifying information.* The user shall submit the name and address of the facility, including the name of the operator and owners.

2. *Permits.* A list of any environmental control permits held by or for the facility.

3. *Description of operations.* User shall submit a brief description of the nature, average rate of production, and standard industrial classification of the operation(s) carried out by such industrial user. This description should include a schematic process diagram which indicates points of discharge to the wastewater works from the regulated processes.

4. *Flow measurement.* Information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from each of the following:

    a. Regulated process streams; and

    b. Other streams as necessary to allow use of the combined waste stream formula of 40 CFR 403.6(e).

(b) The director may allow for verifiable estimates of these flows where justified by cost or feasibility considerations.

1. *Measurement of pollutants.* The pretreatment standards applicable to each regulated process and concentration and nature (or mass) as measured according to 40 CFR 403.12(b)(5).

2. *Report of compliance.* The report shall state whether the applicable pretreatment standards or regulations are being met on a consistent basis. If not, then the report shall state what operation and maintenance and/or pretreatment is necessary to bring the user into compliance and the shortest schedule by which the user will provide such additional operation and maintenance and/or pretreatment, provided that the completion date shall not be later than the compliance date established for the applicable categorical pretreatment standard. This statement shall be signed by an authorized representative of the industrial user and certified by a professional engineer licensed in the State of Indiana.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Sec. 671-49. Compliance date report.

Within ninety (90) days following the date for final compliance with applicable pretreatment standards or, in the case of a new source, following commencement of the introduction of wastewater into the system, any user subject to pretreatment standards or regulations shall submit to the director a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by pretreatment standards or regulations and the average and maximum daily flow for these process units in the user facility which are limited by such pretreatment standards or regulations. The report shall state whether the applicable pretreatment standards or regulations are being met on a consistent basis and, if not, what additional operation and maintenance and/or pretreatment are necessary to bring the user into compliance with the applicable pretreatment standards or regulations. This statement shall be signed by an authorized representative of the industrial user and certified by a professional engineer licensed in the State of Indiana.
(G.O. 27, 1991, § 1)

Sec. 671-50. Periodic compliance reports.

(a) Any user subject to a pretreatment standard set forth in this chapter, after the compliance date of such pretreatment standard or, in the case of a new source, after commencement of the discharge into the POTW, shall submit to the director, during the months of June and December (or alternative months specified by the director), unless required more frequently in the pretreatment standard or by the director, a report indicating the nature and concentration of pollutants in the effluent that are limited by such pretreatment standards. In addition, this report shall include a record of all daily flows that, during the reporting period, exceeded the average daily flow reported in section 671-49. In cases where the pretreatment standard requires compliance with a best management practice of pollution prevention alternative, the industrial user will submit documentation required by the director or the pretreatment standard necessary to determine the compliance status of the user. At the discretion of the director and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., the director may agree to alter the months during which the above reports are to be submitted.

(b) Reports of permittees shall contain the results of sampling and analyses of the discharge, including the flow and the nature and concentration, or production and mass where requested by the director, of pollutants contained therein which are limited by the applicable pretreatment standards. The frequency of monitoring shall be prescribed in the applicable pretreatment standard. All analyses shall be performed in accordance with 40 CFR Part 136 or with any other test procedures approved by the director. Sampling shall be performed in accordance with the techniques approved by the director. Where 40 CFR Part 136 does not include sampling or analytical techniques for the pollutants in questions or where the director determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed using validated analytical methods or other sampling and analytical procedures approved by the director.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Section 671-50.5 Reporting and sampling requirements

(a) The reports required by sections 671-48.5 (baseline reports), 671-49 (compliance date reports) and 671-50 (periodic compliance reports) shall be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of the conditions occurring during the reporting period. The director shall require a frequency of monitoring that is necessary to assess and assure compliance by industrial users with applicable pretreatment standards and requirements. Grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds. For all other pollutants, twenty four (24) hour composite samples must be obtained through flow proportional composite sampling techniques, unless time proportional composite sampling or grab sampling is authorized by the director. Where time-proportional composite sampling or gab sampling is authorized by the director, the samples must be representative of the discharge and the decision to allow the alternative sampling must be documented in the industrial user file for that facility or facilities. Using protocols, including appropriate preservation, as specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a twenty-four (24) hour period may be composited prior to analysis as follows:

1. For cyanide, total phenois and sulfides, that samples may be composited in the laboratory of the field;

2. For volatile organics and oil and grease, with the approval of the director, the samples may be composited in the laboratory;

3. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by the director, as appropriate.

(b) For sampling required by section 671-48.5 (baseline reports) and section 671-49 compliance date reports, a minimum of four (4) grab samples must be used for:

1. pH;

2. Cyanide;

3. Total phenois;

4. Oil and grease;

5. Sulfide; and

6. Volatile organic compounds

7. for facilities for which historical sampling data do not exist. For facilities for which historical sampling data are available, the director any authorize lower minimum.

(c) For periodic reports required by section 671-50 (periodic compliance reports), the director shall require the number of grab samples necessary to assess and assure compliance by industrial users with applicable pretreatment standards and requirements.

(d) If an industrial user subject to section 671-50 (periodic compliance reports) monitors any regulated pollutant at the appropriate sampling location more frequently than required by the director using the procedures described in section 671-50, the results of this monitoring shall be included in the report.

(G.O. 25, 2011, § 61)

Sec. 671-51. Confidential information.

(a) The director shall protect any information (other than effluent data) contained in the application forms or other records, reports or plans as confidential upon showing by any person that such information, if made public, would divulge methods or processes entitled to protection as trade secrets of such persons.

(b) Information accepted by the city with a claim for confidentiality shall be safeguarded by the city and shall not be transmitted to the public until and unless a fifteen-day notification is given to the user. During the fifteen-day period, the user shall submit a justification of confidentiality to the director. A determination of confidentiality shall be made by the director pursuant to regulations used by the EPA for acquisition of and public access to agency information, 40 CFR § 403.14.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Sec. 671-52. Emergency suspension of service and industrial discharge permit.

(a) Notwithstanding any other provisions of this chapter, the director may:

1. After informal notice to the user, suspend the wastewater treatment service and/or an Industrial discharge permit when such suspension is necessary, in the opinion of the director, in order to stop an actual or threatened discharge that presents or may present an imminent or substantial endangerment to the health or welfare of persons; and/or

2. After notice and an opportunity to respond, suspend the wastewater treatment service and/or an industrial discharge permit when such suspension is necessary, in the opinion of the director, in order to stop an actual or threatened discharge that presents may present an endangerment

to the environment, causes interference to the POTW, or causes the city to violate any condition of its NPDES permit.

(b) Any user notified of a suspension of the wastewater treatment service and/or the industrial discharge permit shall immediately stop or eliminate the contribution. In the event of a failure of the person to comply voluntarily with the suspension order, the director shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW or endangerment to any individuals. The director shall reinstate the industrial discharge permit and/or the wastewater treatment service upon proof of the elimination of the non-complying discharge. The user shall pay all costs associated with disconnecting from and reconnecting to the city sewer. A detailed written statement submitted by the user describing the cause(s) of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to the director within five (5) days of the date of occurrence.

(G.O. 27, 1991 § 1; G.O. 25, 2011, § 61)

Sec. 671-53. Revocation.

The director may revoke the industrial discharge permit of any person for any of the following:

1. Violation of any provisions of this chapter or of any applicable state and/or federal law including regulations;

2. Failure to timely file any discharge reports;

3. Failure to factually report wastewater characteristics;

4. Refusal of reasonable access to the user's premises for the purpose of review of records, inspection or monitoring; or

5. Violation of any condition of the industrial discharge permit.

(G.O. 27, 1991, § 1)

Sec. 671-54. Notice of revocation.

Except in cases of willfulness or those in which public health interest or safety require otherwise, the revocation, withdrawal or suspension of an industrial discharge permit is lawful only if, before the institution of proceedings thereof, the permittee has been given:

1. Notice by the director, in writing, of the facts or conduct which may warrant the action.

2. Opportunity to demonstrate or achieve compliance with all lawful requirements.

(G.O. 27, 1991, § 1)

Sec. 671-55. Notification of violation.

Whenever the director finds that any user has violated or is violating this article or any conditions of its industrial discharge permit, the director may serve upon such person a written notice stating the nature of the violation. Within fifteen (15) days of the date of the notice, a plan for the satisfactory correction thereof shall be submitted to the city by the user.

(G.O. 27, 1991, § 1)

Sec. 671-56. Show-cause hearing.

The director may order any user who causes or allows an unauthorized discharge to enter the POTW to show cause at a departmental hearing why the proposed enforcement action should not be taken. A notice shall be served on the user specifying the time and place of a hearing to be held before the director or an appointed hearing officer, the reasons why the action is to be taken, the proposed enforcement action, and directing the user to show cause why the proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail at least ten (10) days before the hearing.

(G.O. 27, 1991, § 1)

Sec. 671-57. Appeals.

(a) A user may file with the director a written request for reconsideration within fifteen (15) days of any action, decision or determination taken as part of the department's administrative enforcement program. The request shall set forth in detail the facts surrounding the request. The director shall respond within ten (10) days of receipt of the request and shall make his/her final determination within thirty (30) days of receipt of the request.

(b) The user may further appeal to the board of public works within fifteen (15) days of any final decision of the director.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Sec. 671-58. Publication of significant noncompliance.

(a) By April of each year, the city shall publish in a newspaper of general circulation that provides meaningful notice in the Central Indiana area a list of the users that at any time during the previous calendar year were in significant noncompliance with applicable pretreatment requirements. The list shall be published by April of each year summarizing the noncompliance of the previous calendar year.

(b) For purposes of this section, a significant industrial user (or any industrial user that violates subsection (3), (4) or (8) of this section) is in significant noncompliance if its violation meets one or more of the following criteria:

1. Chronic violations of discharge limitations in which sixty-six (66) percent or more of all measurements taken for the same pollutant parameter during a six-month period exceed by any magnitude a numeric pretreatment standard or requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);

2. Violations of technical review criteria (TRC) defined as those in which thirty-three (33) percent or more of all measurements for the same pollutant parameter taken during a six-month period equal or exceed the product of the numeric pretreatment standard or requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil and grease and 1.2 for all other pollutants except pH);

3. Any other violations of an effluent limit or a pretreatment standard or requirement as defined in 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit or narrative standard) that the director has determined have caused, alone or in combination with other discharges, interference or pass-through at the POTW or endangerment to POTW personnel or the public;

4. Any discharge of a pollutant causing imminent endangerment to human health, welfare or the environment or resulting in the director's exercise of emergency authority under section 671-52 to halt or prevent such a discharge;

5. Failure to meet, within ninety (90) days after a scheduled date, a compliance schedule milestone contained in a compliance schedule or order;

6. Failure to provide a required report within forty-fine (45) after the due date;

7. Failure to accurately report noncompliance; or

8. Any violation or group of violations, that may include violations of best management practices, that the director determines will adversely affect the operation or implementation of the city's pretreatment program.

(G.O. 27, 1991, § 1; G.O. 22, 1995, § 2; G.O. 25, 2011, § 61)

Sec. 671-59. Submission of self-monitoring reports.

Any industrial user required to complete self-monitoring reports as a condition of an industrial discharge permit shall submit the required reports to the industrial surveillance section of the department of public works. The reports shall be postmarked no later than the date specified in the permit. The reports shall be signed by an authorized representative of the industrial user as defined in section 671-2.

(G.O. 27, 1991, § 2)

Sec. 671-60. Signatory requirements.

(a) Reports and sworn statements required by sections, 671-10(c), 671-42(b),671-48.5, 671-49, 671-50, 671-59, and 671-61(b) shall be made by an authorized representative as defined in section 671-2 of this chapter. The reports and sworn statements that relate to the actual operation of or discharge from a pretreatment facility shall be prepared by or under the direction of a wastewater treatment plant operator certified under the provisions of 327 IAC 8, if the industrial user is required to have such a certified wastewater treatment plant operator.

(b) If an authorization allowed under this section is no longer accurate due to changes in the person or position designated, a new authorization satisfying the requirements of this section shall be submitted to the city prior to or together with any applicable report.

(c) Such reports and sworn statements shall be made as follows: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(G.O. 27, 1991, § 2; G.O. 22, 1995, § 2; 25, 2011, § 61)

Sec. 671-61. Violation of permit requirements.

(a) In the case of noncompliance with industrial discharge permit limitations, standards or requirements, the industrial user shall contact the industrial surveillance section within twenty-four (24) hours of knowledge of the noncompliance. The person representing the industrial user shall provide the following information:

1. Name of the company;

2. Facility location;

3. Limitation, standard or requirement in violation; and

4. Corrective actions taken to eliminate, prevent and/or minimize the violation.

(b) The industrial user shall provide a detailed written report describing the violation to the industrial surveillance section. The report shall be submitted within five (5) working days subsequent to knowledge of the noncompliance incident. The director may grant an extension in writing to the report deadline in consideration of special circumstances. The report shall contain the following information:

1. Description of the discharge and cause of the violation;

2. Parameters in violation; and

3. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue

and the steps being taken to reduce, eliminate and prevent recurrence of the non-complying discharge or violation.

(c) Within thirty (30) days of knowledge of a violation from self-monitoring activities, the industrial user shall sample and analyze for the parameter(s) found in violation to demonstrate that compliance has been achieved. The results shall be submitted to the department of public works on the appropriate self-monitoring report. Where the director has performed the sampling and analysis in lieu of the industrial user, the director must perform the repeat sampling and analysis unless he/she notifies the user of the violation and requires the user to perform the repeat analysis.

(d) A violation of a monthly average limitation that is derived from federal categorical pretreatment standards shall constitute a separate violation for each day the facility operates during a given month unless actual daily analyses are demonstrated to be less than the applicable monthly average limitation.

(G.O. 27, 1991, § 2; G.O. 25, 2011, § 61)

Sec. 671-62. Discharge of hazardous wastes.

Any industrial user which discharges a substance, which if disposed of otherwise would be a hazardous waste under 40 CFR Part 261, shall give prior written notification to the director, the Indiana Department of Environmental Management, and U.S. EPA Region V of such discharge, in accordance with the requirements of 40 CFR Part 261 and 40 CFR § 403.12(p).

(G.O. 22, 1995, § 2)

Sec.-671-63. Bypass.

(a) The following definitions apply to this section.

1. *Bypass* means the intentional diversion of wastestreams from any portion of an Industrial users treatment facility.

2. *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. *Severe property damage* does not mean economical loss caused by delays in production.

(b) An industrial user may allow any bypass to occur which does not cause pretreatment standards or permit limitations or requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. Such bypasses are not subject to subsections (c) and (d) of this section.

(c) Notice of bypass

1. If an industrial user knows in advance of the need for a bypass, it shall submit prior notice to the director, if possible at least ten (10) days before the date of bypass.

2. An industrial user shall submit oral notice of an unanticipated bypass that exceeds applicable pretreatment standards to the director within twenty-four (24) hours from the time the industrial user becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the industrial user becomes aware of the bypass. The written submission shall contain the following:

    a. A description of the bypass and its cause;

    b. The duration of the bypass, including exact dates and times;

    c. If the bypass has not been corrected, the anticipated time it is expected to continue; and

    d. Steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass.

The director may waive the written report on a case-by-case basis if the oral report has been received within twenty-four (24) hours.

(d) Bypass is prohibited and the director may take enforcement action against an industrial user for a bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

3. The industrial user submitted notices as required under subsection (c) this section.

(e) The director may approve an anticipated bypass, after considering its adverse effects, if the director determines that it will meet the three (3) conditions listed in subsection (d) of this section.

Secs. 671-64--671-74. Reserved.

ARTICLE IV. RATES, CHARGES AND BILLING

Secs. 671-75. --671-119. Repealed effective August 26, 2011.

(G.O. 25, 2011, § 61)

ARTICLE V. PRIVATE DISPOSAL FACILITIES

Secs. 671-120. --671-127. Repealed effective August 26, 2011.

(G.O. 25, 2011, § 61)

ARTICLE VI. WASTEWATER HAULING*

Sec. 671-128. Definitions.

For the purposes of this article, the following definitions shall apply:

Commercial wastewater shall mean the liquid or liquid-borne wastes from commercial establishments including, but not limited to, restaurants, dry cleaners, service stations or auto repair facilities and retail establishments or public or private nonresidential buildings; and shall include any grease, oil, solvents, sludge or other material removed from any sewage disposal system or wastewater treatment plant.

Domestic wastewater shall mean the liquid-borne wastes resulting from normal residential water-consuming activities including, but not limited to, disposal.

Industrial wastewater shall mean the liquid or liquid-borne waste from industrial manufacturing process, trades or businesses.

Land application shall mean the process of disposing of wastewater by burial or incorporation into the soil.

Sewage disposal system shall mean and include septic tanks, wastewater holding tanks, seepage pits, cesspools, privies, composting toilets, interceptors or grease traps, portable sanitary units and other equipment, facilities or other devices used to store, treat, render inoffensive or dispose of human excrement or liquid-borne wastewater.

Tank shall mean any container when placed on a vehicle to transport wastewater.

Vehicle shall mean that device used to transport a tank.

Wastewater hauler shall mean any person who engages in the activity, service, business or leasing of vehicles for the purpose of transporting domestic wastewater to another location for disposal.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Cross references: Definitions generally, ch. 102.

Sec. 671-129. Wastewater hauler criteria.

Any wastewater hauler whose legal business address is in Marion County or any wastewater hauler whose legal business address is outside Marion County but who engages in business in Marion County must comply with all of the following provisions of this article.

(G.O. 27, 1991, § 3)

Sec. 671-130. Registration.

(a) Any wastewater hauler as defined in section 671-129 must be registered with and receive a permit from the department and must display a valid decal issued by the department in the lower corner of the driver's side windshield of each vehicle. The charge for the permit and decal for each vehicle shall be established by rule or regulation of the board. Such charge shall be due and payable at the time of filing. Such charges may be revised by the board no more than once each calendar year in accordance with Chapter 261 of this Code.

(b) Each wastewater hauler shall update his/her permit application as required by the director and shall include the following information:

1. Proof of ownership of each vehicle, including owner's name and legal address.

2. Proof of a current valid ISBH permit.

3. Proof of insurance as specified in subsection (d) of this section.

4. The wastewater hauler's legal address and legal business address, type of business, i.e., domestic and/or industrial wastewater hauler.

5. The number of wastewater hauling vehicles, tank capacity in gallons of each vehicle, and license and vehicle identification numbers of all vehicles.

6. Any other information as may be deemed by the director to be necessary to evaluate the wastewater hauler's permit.

(c) Each vehicle shall be equipped with an entry port, which allows sampling of the contents of the tank from top to bottom by department personnel. This port shall have a minimum diameter of six (6) inches and shall be tightly secured to prevent leakage. Each vehicle must have the company name, address, telephone number, capacity in gallons, displayed in a manner similar to that required by the ISBH.

(d) Each wastewater hauler shall be insured in an amount set forth by rule or regulation of the board. The insurance coverage shall cover all work performed by the wastewater hauler while transporting and discharging wastewater and shall include, but not be limited to, liability arising out of disposal of any hazardous waste, spilled material on public property, and fines or any other costs incurred by the city as a result of the wastewater hauler's activities. The city shall be named as an additional insured. A certificate of such policies shall be delivered to the department prior to commencement of hauling. The insurance carrier shall give notice to the city at least thirty (30) days before such insurance is either canceled or not renewed, and the certificate shall state this obligation. Wastewater haulers permitted at the time of the effective date of this provision shall submit proof of adequate insurance coverage with the next permit application or upon expiration of their bond, whichever is sooner. Potential wastewater haulers applying for a permit subsequent to the effective date of this provision shall secure the proper insurance coverage at the time of filing.

(e) After the application has been received and reviewed by the director, and has been determined to satisfy the conditions above, a permit and decal for each vehicle shall be issued for a period not to exceed five (5) years from date of issuance. The director may prescribe additional permit conditions, including but not limited to:

1. Approved charges and fees;
2. Limits on the wastewater characteristics;
3. Restrictions on the times and days of discharge;
4. Requirements for the completion, submittal and retention of customer receipts and other documents and reports related to wastewater hauling;
5. Type of wastewater allowed to be hauled and disposed of at POTW;
6. Location of approved discharge sites;
7. Any other condition as deemed appropriate by the director to assure compliance with this chapter.

(f) A wastewater hauler's permit is issued to a specific person at a specific location and does not constitute a property interest nor shall the permit be assigned, conveyed or sold to a new owner, different premises or new or changed operation.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Sec. 671-131. Discharging procedures.

(a) All discharging of wastewater from the wastewater hauler's vehicle tanks must be done at designated sites approved by the department. The department shall have the right to limit the hours of the day and the days of the week during which discharging shall be allowed.

(b) Any unpermitted discharging of wastewater into the POTW at any location under the jurisdiction of the department is prohibited unless approved by the department prior to discharging.

(c) Any disposal of wastewater by land application must be approved by the department. Written permission of the owner of the property used for disposal and written approval by the ISBH and IDEM must be submitted to the department before any approval may be granted and prior to discharging any wastewater.

(d) The wastewater hauler shall be responsible for the cleanup to the satisfaction of the director for any and all spills on city streets, rights-of-way and property.

(e) The director may require any wastewater hauler to correct any defective equipment including hoses, valves, tanks, piping and permanent or flexible connections which may result in the leakage or spilling of wastewater from the vehicle. Defective equipment shall be repaired before the wastewater hauler is allowed to discharge at the site designated by the department.

(f) Any disposal of wastewater into the POTW must be performed by a wastewater hauler having the permit described in section 671-130(a). Disposal of domestic wastewater or restaurant grease trap waste generated inside or outside Marion County requires no further approval. A wastewater hauler disposing of industrial or commercial wastewater generated inside or outside Marion County must obtain special approval as specified by the department.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Sec. 671-132. Testing requirements.

(a) The contents of all wastewater haulers' vehicles are subject to preliminary sampling and testing by the department before discharging into the approved site at the department's wastewater treatment facility. The test results on any sample must be within a specified range for the specific test parameters established by the department in order not to inhibit the performance of the wastewater treatment plant into which the wastewater is discharged.

(b) Any wastewater hauler's tank contents that do not pass the preliminary testing procedures will be subject to additional specific testing to determine the nature of the contents. If the contents of the tank are deemed by the department to be an inhibitory substance, and unsatisfactory for discharging into the wastewater treatment plant, the wastewater hauler must arrange for proper disposal of the tank contents and submit to the director proof, by affidavit and receipt, of proper disposal. Until the director has determined that the conditions of proof have been satisfied, the wastewater hauler is prohibited from using all designated disposal sites approved by the department.

(c) The department shall notify the ISBH of the status of any wastewater hauler whose tank contents are determined to be unsatisfactory for discharging into a designated disposal site approved by the department.

(d) The director may refuse to accept any wastewater if, after testing, it is deemed unsatisfactory for discharge into the wastewater treatment plant.

(e) The wastewater hauler shall reimburse the department for all costs associated with the treatment, testing and disposal of any prohibited wastes.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Sec. 671-133. Administration procedures.

(a) All wastewater haulers shall maintain accurate business records pertaining to wastewater hauling, available to the director, EPA, IDEM and ISBH upon request, including names, addresses, and telephone numbers of the generators of all wastewater being transported and/or disposed of, county of origin, type of waste, volume of waste, and disposal site, customer receipts required under subsection (b) of this section, and approvals, permits and certifications issued by federal, state and local authorities. All records required to be retained under this article shall be retained for a minimum of three (3) years.

(b) The driver of each vehicle delivered to the wastewater treatment plant site for discharging shall have dated customer receipts for each source of wastewater showing the names and addresses of the customers, the nature of the wastewater, amount of wastewater in gallons, wastewater hauler's name and legal business address and telephone number, and vehicle driver's name.

(c) All wastewater haulers shall compensate the department for the full cost of all sampling, laboratory analysis and treatment costs. Fees shall reflect the costs associated with sampling and testing, treatment and administering the program and shall be based on a fee schedule published by the department.

(d) Whenever required to carry out the objectives of this article relating to the control of the discharging of wastewater or the collection of dump fees, the director shall have a right of entry to, upon or through any premises for purposes of inspection, measuring and sampling. This right of entry shall include, but not be limited to, any equipment necessary to conduct such inspections, measuring and sampling. It shall be the duty of the wastewater hauler to provide all necessary clearance before entry and not to unnecessarily delay or hinder the director in carrying out the inspection, measuring and sampling. The right of entry shall exist at any time.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Sec. 671-134. Enforcement.

(a) Any person who fails to comply with any provision of this article may be fined not more than two thousand five hundred dollars ($2,500.00) for each offense. A violation of a permit issued under this article or a special agreement entered into under the authority of this article shall constitute a violation of this article. Each violation of this article shall constitute a separate offense. In addition, the department shall be entitled to all reasonable expenses including court costs and attorney fees.

(b) Nothing in this article shall restrict any right which may be provided by statute or common law to the city to bring other actions, at law or in equity, including injunctive relief.

(G.O. 27, 1991, § 3; G.O. 22, 1995, § 4)

Sec. 671-135. Permit revocation.

(a) The director may revoke, suspend or modify the permit for any of the following reasons:

1. A violation of any provision of this article or of any applicable state or federal statute or regulation related to wastewater hauling;

2. Failure to report the characteristics of any load, including the furnishing of false information or misrepresentation of any material fact related to wastewater hauling;

3. Refusal of reasonable access to the wastewater hauler's premises for the purpose of inspecting records, inspection, sampling or monitoring;

4. Noncompliance with any condition of the permit or special agreement entered into under the authority of this article.

(b) The director shall send written notice of facts underlying the proposed revocation, suspension or modification to the wastewater hauler.

(c) The director shall grant a hearing upon the receipt of the wastewater hauler's written request made within fifteen (15) days of the notice of revocation. The director shall hold the hearing within ten (10) days of the receipt of the written request. If the wastewater hauler does not request a hearing as provided by this article, the revocation, suspension or modification shall be effective upon the date of the notice.

(d) At the hearing, the wastewater hauler may present any evidence which the director finds relevant and material to the issues underlying the proposed revocation, suspension or modification. Based on the evidence presented at the hearing, the director shall make a written determination either revoking, suspending, modifying or reinstating the permit.

(e) If the wastewater hauler objects to the decision made by the director, the wastewater hauler shall be entitled to a hearing before the board of public works upon such objection. The wastewater hauler shall file a written statement of his objections with the director, who shall call the same to the attention of the board. The appeal shall be scheduled before the board within thirty (30) days after such objections are filed with the director. Notice shall be given to the wastewater hauler identifying the time, place and date of the appeal hearing at least ten (10) days prior to the scheduled date. The board may hear any evidence it finds relevant. After the hearing, the board may confirm, reverse or modify the decision of the director. The order of the board shall be final. Such order shall be made within ten (10) days after the hearing and shall be in writing and sent to the wastewater hauler.

(G.O. 22, 1995, § 4)

Secs. 671-136--671-149. Reserved.

ARTICLE VII. SANITARY SEWER CONSTRUCTION PERMITS

Secs. 671-150. --671-170. Repealed effective August 26, 2011.

(G.O. 25, 2011, § 61)

ARTICLE VIII. CITY SEWER CONSTRUCTION; PRO RATA COST SHARING

Secs. 671-800. --671-805. Repealed effective August 26, 2011.

(G.O. 25, 2011, § 61)

APPENDIX

A-3

CN(T) Local Limit

Documentation for Elimination

from SUO Local Limits

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

Tim—
Great news!
MO 12/2

REPLY TO THE ATTENTION OF:

WN-16J

NOV 26 1996

Mr. Greg Henneke
City of Indianapolis
Department of Capital Asset Management
604 North Sherman Drive
Indianapolis, Indiana 46201

Dear Mr. Henneke:

In accordance with Section 403.18(b)(1)(ii) of the General Pretreatment Regulations, I am very pleased to inform you and your staff that your pretreatment program modification, which was recently public noticed, is hereby approved. Your National Pollutant Discharge Elimination System permit will be modified in the near future to incorporate the conditions of the revised program.

We believe that implementation of this modification, to revise the City's Sewer Use Ordinance, is consistent with Federal requirements and your responsibilities with regard to pretreatment.

The United States Environmental Protection Agency and the Indiana Department of Environmental Management request the submittal of a signed copy of the final version of your revised Sewer Use Ordinance for our records. Within 90 days, the City should also revise its Industrial User permits where necessary to reflect the program modification.

Sincerely yours,

E. I. Chaiken

Eugene I. Chaiken, Chief
NPDES Support and Technical Assistance Branch

cc: Reggie Baker, IDEM

RECEIVED
DEC 06 1996
ENVIRONMENTAL RESOURCES MANAGEMENT

RECEIVED
DEC 02 1996

REQUEST FOR ORDINANCE OR SPECIAL PROPOSAL

Date: November 15, 1996 Request No.________ Proposal No.__________

To: Mr. Robert G. Elrod, Esq.
241 City-County Building

Please prepare the attached proposal for introduction at the City-County Council meeting of November 25, 1996.

Originator: Department of Public Works

Sponsor: Beulah Coughenour

Drafted By: Sheila O'Bryan, Assistant Corporation Counsel

Subject: Wastewater Pretreatment Ordinance Amendment

Reason for Request: To delete the local limit for total cyanide, which is already adequately regulated by federal regulation.

Publication Required: Yes ____; No X ; §36-3-4-14______________;

Contact: Robert Holm

Departmental Attorney: Sheila O'Bryan

Departmental Director Signed: George L. Lynch Date: 11-15-96

Corporation Counsel: Approved ✓ Disapproved ___________

Corporation Counsel Signed: Candace Walker for Sue Beesley Date: 11/15/96

cc: Councillor Beurt SerVaas, President
Councillor W. Tobin McClamroch, Majority Leader
Committee Chairperson, Beulah Coughenour

RECEIVED
NOV 19 1996
ENVIRONMENTAL RESOURCES
MANAGEMENT

STATEMENT OF REGULATORY IMPACT

1. Chapter 671, which governs the City's wastewater pretreatment program, contains noncategorical discharge limits for industries discharging into the City's sewer system. These limits were developed in 1984 as a requirement for the City's pretreatment program. A total cyanide limit of 8.0 mg/l was included in the original program and remains in the current ordinance. The City's NPDES permit, however, regulates only the amenable form of cyanide, which is the most toxic form of cyanide. Amenable cyanide is limited by the City's ordinance to 0.4 mg/l. The industries that discharge cyanide into the City's sewer system are regulated by federal categorical standard more stringent then the local limit for total cyanide. As such, the City's limit is redundant and unnecessary.

2. DPW wishes to delete the local limit for total cyanide to eliminate this unnecessary regulation.

3. The proposed amendment eliminates a duplication of existing federal law.

4. No increased costs will be incurred by affected groups as a result of the proposed amendment.

5. No market-based approach exists in this particular situation.

6. DPW has worked with the Industrial Discharge Advisory Committee on this issue, as well as committed in agreed judgments with affected industries such as Reilly Industries and Citizen's Gas & Coke Utility to propose this deletion to the City County Council. The change to the program has been approved by IDEM and EPA and notice of the proposed change was published by IDEM. No comment was received.

CITY-COUNTY GENERAL ORDINANCE NO. ____, 1996
Proposal No. ___, 1996

A General Ordinance Amending Chapter 671, Sewers and Sewage Disposal, of the Revised Code of the Consolidated City and County, Indianapolis, Marion County, Indiana.

BE IT ORDAINED BY THE CITY-COUNTY COUNCIL OF THE CITY OF INDIANAPOLIS AND MARION COUNTY, INDIANA:

Section 1. Section 671-4 of the "Revised Code of the Consolidated City and County" be, and is hereby amended to delete the stricken-through text to read as follows:

Sec. 671-4. Regulation of discharges to public sewers.

(a) No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff or subsurface drainage into any sanitary sewer.

(b) Stormwater and all other unpolluted drainage may be discharged through existing structures to such sewers as are specifically designated as combined sewers or storm sewers. No additional flow shall be introduced. Industrial cooling waters or unpolluted process waters may be discharged, on approval of application as provided in section 671-41.

(c) No person shall discharge or cause to be discharged to any city sewer wastewater or pollutants which cause, threaten to cause or are capable of causing, either alone or by interaction with other substances:

(1) Fire or explosion hazard;

(2) Corrosive structural damage to the POTW but in no case water with a pH lower than 5.0 or higher than 12.0;

(3) Obstruction to the flow in city sewers or other interference with the proper operation of the POTW;

(4) An interference;

(5) A pass-through.

(d) No person shall discharge or cause to be discharged to any city sewer:

(1) A slug or a flow rate and/or pollutant discharge rate which is excessive over a relatively short time period so that there is a treatment process upset and subsequent loss of treatment efficiency;

(2) Heat in amounts which will inhibit biological activity at the wastewater treatment plant but in no case greater than sixty (60) degrees centigrade (one hundred forty (140) degrees Fahrenheit) or heat in such quantities that the temperature at the wastewater treatment plant exceeds forty (40) degrees centigrade (one hundred four (104) degrees Fahrenheit);

(3) Any wastewater containing toxic pollutants or any discharge which could result in toxic gases, fumes or vapors in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals,create a toxic effect in the receiving waters of the POTW, or to exceed applicable categorical pretreatment standards;

(4) A wastewater with a closed cup flash point of less than one hundred forty (140) degrees Fahrenheit or any liquids, solids or gases which, by reason of their nature or quantity, are or may be sufficient, either alone or by interaction with other substances, to cause fire or explosion or be injurious or hazardous in any other way to the POTW or to the operation of the wastewater treatment plant. At no time shall a discharge cause a reading on a meter capable of reading L.E.L. (lower explosive limit) to be greater than ten (10) percent at the point of discharge to the POTW or at any point in the POTW;

(5) Any noxious or malodorous liquids, gases or solids which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for maintenance and repair;

(6) Solid or viscous substances and/or other pollutants which may cause obstruction to the flow in a sewer or other interference with the operation of the POTW such as, but not limited to, grease, improperly shredded garbage, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, tar, asphalt residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes, or tumbling and deburring stones;

(7) Any substance which may cause the POTW's effluent or any other product of the wastewater works such as residues, sludges or scums to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under section 405 of the Act;

(8) Any substance which will cause the POTW to violate its NPDES permit or the receiving stream's water quality standards;

(9) Any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes, inks and vegetable tanning solutions;

(10) Any wastewater containing radioactive material above limits contained in regulations, licenses or orders issued by the appropriate authority having control over their use. The disposal of any licensed radioactive material must meet applicable local, state or federal requirements;

(11) Any wastewater containing a total petroleum hydrocarbons concentration as determined by a procedure deemed appropriate by the director in excess of two hundred (200) mg/l. This limitation shall apply at the point of discharge to the city sewer system and is the maximum concentration allowed in any single grab sample collected from the waste stream;

(12) Any gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, carbides, hydrides, stoddard solvents, sulfides, epoxides, esters, amines, polynuclear aromatic hydrocarbons, pyridines, new and used motor oil, or antifreeze, except at concentrations which do not exceed levels of such substances which are routinely present in the normal wastewater discharge and do not otherwise violate any section of this chapter or the conditions of an industrial discharge permit or a special agreement; and

(13) Polychlorinated biphenyls (PCBs) in any detectable concentrations.

(e) No person shall discharge or cause to be discharged a wastewater which has a twenty-four-hour composite value in excess of the values shown on table 1.

TABLE 1

NONCATEGORICAL DISCHARGE LIMITS

Pollutant	Maximum Allowable Concentration 24-Hour Composite Sample Value (mg/l)
Arsenic	4.0
Cadmium	1.2
Chromium (total)	24.0
Chromium (hex)	3.4
Copper	2.2
Cyanide (amenable)	0.4
~~Cyanide (total)~~	~~8.0~~
Lead	4.7
Nickel	7.3
Phenol	46.0
Pentachlorophenol	0.012
Zinc	38.0
Mercury	0.025
Silver	4.2

(f) The limitations set forth in table 1 above apply at the point of discharge to the city sewer system. The limitations for amenable cyanide, total cyanide and phenols apply to twenty-four-hour composite samples only in those cases where the composite sample is preserved according to EPA approved methods prior to collection. Otherwise, the values set forth for amenable cyanide, total cyanide and phenols or, with the approval of the director, any other listed pollutants shall apply to an instantaneous grab sample taken during prevailing discharge conditions and representative of the facility's discharge in general. The limitations and requirements imposed in subsections (c) and (d) of this section shall apply at the point of discharge to the city sewer unless specified otherwise.

(g) A grease interceptor shall be installed in the waste line leading from sinks, drains and other fixtures or equipment in restaurants, cafes, lunch counters, cafeterias, bars and clubs; hotel, hospital, sanitarium, factory or school kitchens; or other establishments where grease may be introduced into the drainage or sewage system in quantities that can affect line stoppage or hinder sewage treatment. The characteristics, size and method of installation of the grease interceptor shall meet the requirements imposed by the department of fire prevention and building services and shall be reviewed and approved by the department of public works prior to the commencement of installation. Approval of proposed facilities or equipment does not relieve the person of the responsibility of enlarging or otherwise modifying such facilities to accomplish the intended purpose. On a showing of good cause, the director may waive this requirement. A grease interceptor is not required for individual dwelling units or for any private living quarters.

(h) No user shall change substantially the character or volume of pollutants discharged to the POTW without prior written notification to the city.

Sec. 671-5. Modification of federal categorical pretreatment standards.

When the city demonstrates consistent removal of pollutants limited by federal categorical pretreatment standards, as required by 40 CFR 403.7, the city may apply to the administrator of the EPA, or the state if it has an approved pretreatment program, for authorization to give a removal credit to reflect removal of toxic or other regulated pollutants by the city's wastewater treatment system.

Sec. 671-6. State and federal requirements.

Federal categorical pretreatment standards or state requirements and limitations on discharges shall apply in any case where they are more stringent than those in this chapter. To the extent the federal regulations contain stricter standards, the categorical pretreatment standards, found in 40 CFR Chapter I, Subchapter N, Parts 405-471, are hereby incorporated by reference into this chapter. To the extent the state regulations contain stricter standards, the pretreatment standards found in 327 IAC 5-12-6 are hereby incorporated by reference into this chapter.

Section 2. This ordinance shall be in full force and effect upon adoption and compliance with I.C. 36-3-4-14.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor

~~Kathy Prosser~~
~~Commissioner~~

Michael O'Connor
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

AUGUST 23, 1996

Mr. Greg Henneke
City of Indianapolis
Department of Capital Asset Management
604 North Sherman Drive
Indianapolis, Indiana 46201

Dear Mr Henneke:

Re: Proposed Pretreatment Program Modification
NPDES Permit No. IN 0023183 and IN 0031950

On May 2, 1996, the Indiana Department of Environmental Management public noticed U.S. EPA's proposal to approve your pretreatment program modification. No comments to this notice have been received. Therefore, the program modification is approved and may be adopted by Indianapolis. The City should send this office a signed and dated copy of the modification. If you have any questions, please contact Mr. William Blue at this address or telephone him at 317/232-8729.

Sincerely,

Reggie Baker Jr.

Reggie Baker, Jr. Supervisor
NPDES Special Projects Group
Office of Water Management

RB:web

cc: Mr. Timothy Heider Indianapolis WWTP

SEP 03 1996

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

RECEIVED

SEP 09 1996

ENVIRONMENTAL RESOURCES MANAGEMENT

REPLY TO THE ATTENTION OF:

WN-16J

FEB 20 1996

Mr. Reggie Baker
Pretreatment Coordinator
Office of Water Management
Indiana Department of Environmental Management
Post Office Box 6015
Indianapolis, Indiana 46206-6015

Re: Pretreatment Program Modification
City of Indianapolis

Dear Mr. Baker:

We have reviewed the City of Indianapolis's, January 23, 1996, request to modify its pretreatment program. Specifically, the City has proposed eliminating its total cyanide local limit. The United States Environmental Protection Agency (USEPA) finds the modification to be consistent with Federal requirements and requests that you public notice our intent to approve the amendment.

USEPA will make its final decision whether to approve or deny the modification after taking into consideration comments received during the comment period and any public hearing, if held.

If you have any questions, please call Cathy Scudieri at (312) 353-2098.

Sincerely yours,

Matthew Gluckman
Pretreatment Program Manager

cc: Greg Henneke, City of Indianapolis, Department of Public Works, Environmental Resources Management Division, Water and Land Protection Section, 2700 South Belmont Avenue, Indianapolis, Indiana 46221

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor
Kathy Prosser
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

APRIL 22, 1996

VIA CERTIFIED MAIL Z 411 843 086

Mr. Greg Henneke
City of Indianapolis
Department of Capital Asset Management
604 North Sherman Drive
Indianapolis, Indiana 46201

Dear Mr. Henneke:

Re: Pretreatment Modification NPDES Permit
No. IN 0023183 and IN 0031950

The Indiana Department of Environmental Management on behalf of the U.S. Environmental Protection Agency, Region 5, is public noticing the proposed approval of a modification to the City of Indianapolis' Pretreatment Program. Public Notice is a requirement of the General Pretreatment Regulations [40 CFR 403].

The U.S. EPA is required to public notice for a period of 30 days this intent to approve the program and to notify you and all interested parties. Should you have any questions or comments, please contact Matt Gluckman of the U.S. EPA at (312) 886-6089 or myself at (317) 233-0437.

Sincerely,

Reggie Baker, Jr.

Reggie Baker, Jr. Supervisor
NPDES Special Projects Group
Office of Water Management

RB:web
cc: Mr. Matt Gluckman, U.S. EPA
Mr. Timorthy Heider, Indianapolis WWTP
Marion County Health Department

fringes, 2,500. Total ... 369,162.
The said additional appropriations are funded by the following reductions:
Fund: County General Fund. Amounts: Unappropriated and Unencumbered County General Fund, 369,162. Total Reduction, 369,162.
Taxpayers appearing at such meeting shall have a right to be heard thereon.
SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO TAXPAYERS
Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 316, 1996, approving the following additional appropriations in excess of the budget for the current year:
Fund: State and Federal Grants Fund. Agency: Prosecuting Attorney. Amounts: 1. Personal Services, 55,000; 3. Other Services and Charges, 97,500.
The said additional appropriations are funded by the following reductions:
Fund: State and Federal Grant Fund. Amounts: Unappropriated and Unencumbered State and Federal Grant Fund, 152,500. Total Reduction, 152,500.
Taxpayers appearing at such meeting shall have a right to be heard thereon.
SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO TAXPAYERS
Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 247, 1996, approving the following additional appropriations in excess of the budget for the current year:
Fund: County General Fund. Agency: Lawrence Township Assessor. Amounts: 1. Personal Services, 17,885.
Agency: County Auditor. Amounts: 1. Personal Services - fringes, 2,620. Total Increase: 20,505.
The said additional appropriations are funded by the following reductions:
Fund: County General Fund. Amounts: Unappropriated and Unencumbered County General Fund, 20,505. Total Reduction, 20,505.
Taxpayers appearing at such meeting shall have a right to be heard thereon.
SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

charges of Lincoln Utilities, Inc.
Notice is hereby given that the Indiana Utility Regulatory Commission will conduct a public Evidentiary Hearing in the above-captioned Cause in Room TC10, Indiana Government Center South, Indianapolis, Indiana, commencing at 1:30 P.M., EST, on May 23, 1996. This hearing is open to the public.
If an accommodation is required to allow an individual with a disability to participate in this meeting, please contact the Office of the Executive Secretary of the IURC at (317) 232-2716 or TDD (317) 232-8556 at least 48 hours before the meeting.
Indiana Utility
Regulatory Commission
(SJ) (317) 232-2701
(S & N—5-2)

PUBLIC NOTICE
The annual return of "The Ackerman Foundation" is available at the address noted below, for inspection during normal business hours, by any citizen who so request within 180 days after publication of this notice.
The Ackerman Foundation, 8910 Purdue Road, Suite 690, Indianapolis IN 46268
The principal trustee is James F. Ackerman, Telephone (317) 228-5070
(S—5-2)

NOTICE OF
PUBLIC MEETING
Indianapolis Riders Advisory Council will hold a public meeting on Tuesday, May 14, 1996 at 5:30 p.m. until 7:30 p.m. in Room 107 of the City-County Building located at 200 East Washington Street, Indianapolis, IN. Public comment is invited and welcome.
KAYE FROIO
Assistant to the Director
Office of Mobility Mgmt.
(S & N—5-2)

NOTICE OF
CONSTRUCTION ACTIVITY
In accordance with the terms of the specified General Permit Rule 327 IAC 15.3, notice is hereby given that land disturbing activity in excess of 17 acres is to commence for Bridgefield Villas subdivision(s). Said subdivision is located at approximately at the Northeast corner of West 46th Street and Bayswater in Marion County, Section 11, Township 16 North, Range 2 East. Construction activity is to begin approximately May, 1996. A copy of the Soil Erosion Control Plan has been forwarded to the Marion County Soil and Water Conservation District, 6960 Gray Road, Suite C, Indianapolis, Indiana 46237.
(S—5-2)

PUBLIC NOTICE
The annual return of "I Have A Dream Foundation, is available at the address noted below, for inspection during normal business hours, by any citizen who so request within 180 days after publication of this notice.
I Have A Dream Foundation, 201 West 103rd Street, Suite 630, Indianapolis, IN 46290
The principal manager is Barton L. Kaufman, Sec./Treas., Telephone (317) 581-7000
(S—5-2)

...ciples to be applicable to these proceedings; need for and time of prefiling testimony; dates and places for hearings on the merits of this proceeding; and issues related to prehearing discovery.
Any party who has an interest in or who may be affected by the procedural and other preliminary issues which may be determined in the Prehearing Conference and Preliminary Hearing should participate. All parties will be bound by the procedural and other preliminary finds and determinations made pursuant to agreements or evidence received at the Prehearing Conference and/or Preliminary Hearing held pursuant to this notice.
If an accommodation is required to follow an individual with a disability to participate in this meeting, please contact the Office of the Executive Secretary of the IURC at (317) 232-2716 or TDD (317) 232-8556 at least 48 hours before the meeting.
Indiana Utility
Regulatory Commission
KOSTAS POULAKIDAS
Executive Director
(317) 232-2701 (SJ)
(S & N—5-2)

NOTICE TO TAXPAYERS
Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County Indiana, at their regular meeting place, Second Floor, City County Building, at 7:00 P.M on Monday, May 20, 1996, will consider Proposal No. 309, 1996 approving the following additional appropriations in excess of the budget the current year:
Fund: County General Fund Agency: Clerk of the Circuit Court, Amounts: 3. Other Services and Charges, 8,251.
Agency: Voters Registration, Amounts: 3. Other Services and Charges, 72.
Agency: County Coroner, Amounts: 3. Other Services and Charges, 6,160.
Agency: Center Township Assessor, Amounts: 3. Other Services and Charges, 12,171.
Agency: Decatur Township Assessor, Amounts: 3. Other Services and Charges, 218.
Agency: Lawrence Township Assessor, Amounts: 3. Other Service and Charges, 4,425.
Agency: Perry Township Assessor, Amounts: 3. Other Services and Charges, 6,347.
Agency: Washington Township Assessor, Amounts: 3. Other Services and Charges, 8,761.
Agency: Wayne Township Assessor, Amounts: 3. Others Services and Charges, 6,863.
Agency: Marion County Public Defender Agency, Amounts: 3. Other Services and Charges, 22,976.
Agency: Prosecuting Attorney, Amounts: 3. Other Services and Charges, 150,353.
Agency: Forensic Services Agency, Amounts: 3. Other Services and Charges, 18,850.
Agency: County Sheriff, Amounts: 3. Other Services and Charges, 131,767.
Agency: Community Corrections, 3. Other Services and Charges, 3,297.
Agency: Circuit Court, Amounts: 3. Other Services and Charges, 100.

house, Indianapolis, 46204.
JOHN J. KISH
Executive Director
White River State Park
Development Commission
(S—5-2)

PUBLIC NOTICE OF
PROPOSED APPROVAL OF
PUBLICLY OWNED
TREATMENT WORKS (POTW)
PRETREATMENT
PROGRAM MODIFICATION
Public Notice Issued By: U.S. Environmental Protection Agency, Region 5, Water Division, Water Quality Branch, Permits Section, 77 West Jackson Blvd., Chicago, IL 60604-2105, (312) 353-2105.
Name and Address of POTW: Indianapolis Wastewater Treatment Plant, 2700 South Belmont Avenue, Indianapolis, Indiana 46221.
Public Notice Issued On: May 2, 1996. Public Notice Number: 96-4-G-RD-P. Comments Due: June 1, 1996.
NPDES Permit No. IN 0023183 and IN 0031950.
POTW Pretreatment Program.
The City of Indianapolis has requested approval of a modification to its Industrial Pretreatment Program. The modification revises the City's industrial pretreatment ordinance.
On the basis of staff review and application of pertinent regulations, the U.S. EPA, Region 5, proposes to approve the pretreatment program modification. The proposed determination is tentative.
Interested persons are invited to submit written comments on the proposed program modification. Copies of the relevant POTW documents are available for inspection and copying at the U.S. EPA and at the Indiana Department of Environmental Management in Indianapolis, Indiana.
Comments should be submitted in person or mailed no later than 30 days from the date of this Public Notice. Deliver or mail all requests or comments to the U.S. EPA at the address listed in this Public Notice (Attention: Matt Gluckman).
Any person may request a public hearing within 30 days of the date of the Public Notice by submitting a request to the U.S. EPA. The request shall indicate the interest of the person filing such request and the reasons why a hearing is warranted. A public hearing will be held if there is a significant degree of public interest in the program modification. Public notice of such a hearing will be circulated in the newspaper and to the parties requesting the hearing.
If no comments to this notice are received, the proposed Pretreatment Program modification will be approved as set forth without changes and without further public notice. In such event, this notice shall constitute the "notice of approval or disapproval" required by 403.11(e) and no additional notice shall be provided; the approved modification will be noted in Indianapolis' NPDES permit file at the Indiana Department of Environment Management. Anyone who wishes to be sent a notice of the approval of the modifications should send a request for such notice to the Indiana

Unencumbered, ... Fund, 650,000; Total Reduction, 650,000.
Taxpayers appearing at such meeting shall have a right to be heard thereon.
SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

LEGAL NOTICE OF
PUBLIC HEARING
STATE IMPLEMENTATION
PLAN (SIP) SUBMITTAL
326 IAC 6-1-18 NOTRE DAME
AT ST. JOSEPH COUNTY
Notice is hereby given under 40 CFR 51.102 that the Indiana Department of Environmental Management (IDEM) Air Pollution Control Board will hold a public hearing at its regularly scheduled meeting on June 5, 1996. The purpose of this hearing is to receive public comment on amendments to the particulate emission limits for Notre Dame University that are contained in 326 IAC 6-1-18, prior to the board considering the rule amendments for preliminary adoption. The meeting will convene at 1:00 p.m. in the Conference Center, Rooms 4 & 5, at the Indiana Government Center South, 402 West Washington, Indianapolis, Indiana. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed rules.
The rulemaking that is the subject of this hearing affects the rules that govern particulate matter emission limits established in 326 IAC 6-1-18 for Boilers 1,2,3,4, & 5 at Notre Dame University. Notre Dame has indicated that the current rule includes inaccurate long-term and short-term limits that result in overly stringent limits on some boilers and overly lenient limits on others. IDEM has performed air quality modeling which demonstrated that no significant impact on air quality would result from the emission limit changes reported by Notre Dame.
Copies of the proposed rules are available to any person upon request and are available for public inspection at the following locations:
Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Ave., 10th floor-East Wing, Indianapolis.
Legislative Services Agency, Indiana Government Center-South, RM E011, 302 W. Washington, Indianapolis.
Indianapolis-Marion County Public Library, 40 East St. Clair St., Indianapolis.
St. Joseph County Public Library, 304 South Main, South Bend.
Oral statements will be heard, but for the accuracy of the record, statements should be submitted in writing. Written statements may be submitted to the attendant designated to receive written comments at the public hearing.
A transcript of the hearing and all written submissions to the Board at the public hearing shall be open to public inspection at the offices named above and copies may be made available to any person upon payment of reproduction costs. Any person heard of represented at the hearing or re-

ment practices.
MSD of Washington Township encourages participation with Minority Business Enterprises. All bidders are required to include the completed form MBE-1 and return it with their bid in accordance with the Minority Business Participation Policy 3310.1 and Rules 3310.11 as shown in Section 00800 Supplementary Conditions, Article 15. Any bid received which does not include MBE-1 will be deemed unresponsive and rejected in its entirety. Any questions regarding the policy or completion of the Form MBE-1 should be directed to the Architect, Frederick Green (317) 574-6975.
Bidders shall attend a pre-bid conference with representatives of the Owner and Architect present to discuss construction sequence, securities, contractor's work and storage areas and requirements for contractor's personnel working on the Project. A tour of the existing facilities will be held in conjunction with the pre-bid conference. No additional costa of any type will be allowed by the failure of the Bidder to avail himself of the privilege of on-site inspection and pre-bid conference.
Site inspection and pre-bid conference will start at 10:30 a.m. local time, May 10, 1996, at North Central High School, Indianapolis, IN 46260. Site visit to follow Pre-Bid Conference.
MSD of Washington Township reserves the right to reject any and all Bids; is not obligated to accept the lowest or any other Bid; and may waive any formalities in bidding procedure.
April 30, 1996.
MSD of Washington Township
DR. WILLIAM R. FELLMY
RSBA
Assistant Superintendent
Business Service
(S—5-2, 9)

NOTICE TO TAXPAYERS
Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 319, 1996, approving the following additional appropriations in excess of the budget for the current year:
Fund: State and Federal Grants Fund. Agency: Marion County Justice Agency. Amounts: 1. Personal Services, 28,975; 2. Supplies, 750; 3. Other Services and Charges, 300.
Agency: County Auditor; Amounts: 1. Personal Services - fringes, 4,636. Total Increase: 34,661.
The said additional appropriations are funded by the following reductions:
Fund: State and Federal Grants Fund. Amounts: Unappropriated and Unemcumbered State- and Federal Grants Fund, 34,661. Total Reduction, 34,661.
Taxpayers appearing at such meeting shall have a right to be heard thereon.
SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

...participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at: Attn: Carla Poe, ADA Coordinator, Indiana Department of Environmental Management, 100 N. Senate Avenue, P.O. Box 6015, Indianapolis, IN 46206-6015 or call (317) 233-0544 (V), (317) 233-6087 (TT). Please provide a minimum of 72 hours notification.
(S—5-2)

PUBLIC NOTICE
April 26, 1996
To whom it may concern: Legislation has been enacted, IC 14-3-18, which ensures that adjacent property owners are both notified of permit applications and provided with an opportunity to present their views to the Department of Natural Resources prior to action.
Under this legislation, the applicant or agent is responsible for providing notice to property owners whose property shares a common border or point is located within 1/4 mile of the project site. Included is property which would share a common border, if not for the separation caused by a right-of-way, easement, or railroad.
Due to your proximity to the project site, you are considered to be an adjacent party. Therefore, notice is being provided in conformance with the provisions of IC 14-3-18 and 310 IAC 0.6:
Applicant's Names and Address; City of Indianapolis, Indy Parks, 1426 West 29th Street, Indianapolis, IN 46208-4999
Agent's Name, Address, and Telephone Number: Bruce Hagen, PE, Paul I. Cripe, Inc., 7172 Graham Road, Indianapolis, IN 46250, (317) 842-6777
Project Location: West bank of White River, just north of 30th Street
Name of Stream or Lake: White River
Project Description: Construction of floating docks for Indy Parks Riverside Marina
Relevant Statute or Rule: (Check appropriate line) ✓
Flood Control Act, IC 14-28-1;
Lake Preservation Act, IC 14-26-2;
"Ditch Act", IC-14-26-5;
Channels Act, IC 14-29-4;
Removal of Sand or Gravel, IC 14-29-3
You may request an informal hearing (pre-AAA hearing) on this application by filing a petition with the Director, Division of Water. The petition must conform to administrative rule 316 IAC 0.6-3-2.3 as follows: (a) This section establishes the requirements for a petition to request a public hearing under IC 14-3-18-11(a)(2). (b) The petition shall include the signatures of at least twenty-five (25) individuals who are at least eighteen (18) years of age and who reside in the county where the licensed activity would take place or own real property within one (1) mile of the site of the proposed or existing licensed activity. (c) The complete mailing addresses of the petitioners shall be typed or printed legibly on the peti-

and effect for twelve months from the date of acceptance of the work.
The Owner reserves the right to accept or reject any bids, or waive any irregularities in bidding for a period of thirty (30) days from bid date.
Bids are to be submitted on the bid form provided herein.
Before submitting a bid, each bidder shall examine the Drawings carefully, shall read the Specifications and all other proposed Contact Documents, and shall visit the site of the work. Each bidder shall fully inform himself prior to bidding as to existing conditions and limitations under which the Work is to be performed, and shall include in his bid a sum to cover the cost of items necessary to perform the work as set forth in the proposed Contract Documents. No allowance will be made to a bidder because of lack of such examination or knowledge. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination. Contractors must check with superintendent of grounds to schedule a field visit and must sign in at his office.
If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies in or omissions from any part of the proposed Contract Documents, he may submit to the Architect a written request for interpretation thereof not later than seven days before bids will be opened. The person submitting the request shall be responsible for its prompt delivery.
A pre-bid conference will be held at the office of the Superintendent of Buildings and Grounds, 1202 East 38th Street, Indianapolis, Indiana at 10:00 local time on Tuesday, May 14, 1996. A visit to the West Pavilion for physical inspection will be made at this time.
Indiana State Fair Commission
By: WILLIAM H. STINSON
Executive Director
(S&N 5-2, 7)

LEGAL NOTICE OF
PUBLIC HEARING
STATE IMPLEMENTATION
PLAN (SIP) SUBMITTAL
326 IAC 8-1; 8-5-5
ARTICLE 8 GENERAL
PROVISIONS/GRAPHICS ARTS
Notice is hereby given under 40 CFR 51.102 that the Indiana Department of Environmental Management (IDEM) Air Pollution Control Board will hold a public hearing at its regularly scheduled meeting on Wednesday, June 5, 1996. The purpose of this hearing is to receive public comment on amendments to 326 IAC 8-1 the Article 8 General Provisions rule, and 326 IAC 8-5-5 the Graphic Arts rule, prior to the board considering the rule amendments for preliminary adoption. The meeting will convene at 1:00 p.m. in the Conference Center, Rooms 4 & 5, at the Indiana Government Center South, 402 West Washington, Indianapolis, Indiana. All interested persons are invited and will be given reasonable opportunity to express

Public Notices

NOTICE TO THE TAXPAYERS OF THE CITY OF INDIANAPOLIS, INDIANA AND MARION COUNTY, INDIANA OF HEARING ON ADDITIONAL APPROPRIATION

Notice is hereby given to the taxpayers of the City of Indianapolis, Indiana (the "City") and Marion County, Indiana (the "County") that the City-County Council of the City and County will meet in the Public Assembly Room, located on the second floor of the City-County Building at 200 East Washington Street, Indianapolis, Indiana, at the hour of 7:00 p.m. (Indianapolis time), on Monday, May 20, 1996, to consider Proposal No. 269, 1996, which is an additional appropriation which has been determined to be necessary and which is in addition to all appropriations provided for in the existing budget and levy:

An appropriation of the proceeds of the City of Indianapolis Transportation Revenue Bonds, Series 1996, in an amount not to exceed Eighteen Million Dollars ($18,000,000), together with any investment earnings thereon, to provide for road improvements as encompassed by the 96th Street/Castleton Economic Development Area Plan adopted by the Metropolitan Development Commission of Marion County, acting as the Redevelopment Commission of the City of Indianapolis, Indiana, located within the City's jurisdiction, including where necessary the cost of acquiring land or rights of way for such purposes, together with all expenses necessary and incidental thereto, including expenses incurred in connection with or on account of the issuance of such bonds (the "Project").

Taxpayers may appear at such meeting and have the right to be heard on the necessity of such additional appropriation.

SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 317, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: State and Federal Grants Fund. Agency: Prosecuting Attorney. Amounts: 1. Personal Services, 10,000; 3. Other Services and Charges, 52,000.

Agency: County Auditor; Amounts: 1. Personal Services - fringes, 2,500. Total Increase: 64,500.

The said additional appropriations are funded by the following reductions:

Fund: State and Federal Grant Fund. Amounts: Unappropriated and Unencumbered State and Federal Grant Fund, 64,500. Total Reduction, 64,500.

Public Notices

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 310, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: Information Services Internal Services Fund. Agency: Information Services Agency, 3. Other Services and Charges, 7,702,935. Total Increase: 7,702,935.

The said additional appropriations are funded by the following reductions:

Fund: Information Services Internal Services Fund. Agency: Information Services Agency. 1. Personal Services, 2,149,788; 2. Supplies, 69,000; 4. Capital Outlay, 940,097.

Agency: County auditor. 1. Personal Services - fringes, 555,006. Unappropriated and Unencumbered Information Services Internal Services Fund, 3,989,054. Total Reduction, 7,702,935.

Taxpayers appearing at such meeting shall have a right to be heard thereon.

SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 257, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: County General Fund. Agency: County Sheriff. Amounts: 3. Other Services and Charges, 3,650. 4. Capital Outlay, 51,851. Total Increase: 55,501.

The said additional appropriations are funded by the following reductions:

Fund: County General Fund. Amounts: Unappropriated and Unencumbered County General Fund, 55,501. Total Reduction, 55,501.

Taxpayers appearing at such meeting shall have a right to be heard thereon.

SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 312, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: State Grants Fund. Agency: Department of Parks

Public Notices

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, Second Floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 249, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: Federal Grants Fund. Agency: Department of Metropolitan Development Planning Division. Amounts: 3. Other Services and Charges, 106,951. Total Increase: 106,951.

Fund: Transportation General Fund. Agency: Department of Metropolitan Development Planning Division. Amounts: 3. Other Charges and Services, 26,738. Total Increase: 26,738.

The said additional appropriations are funded by the following reductions:

Fund: Federal Grants Fund. Amounts: Unappropriated and Unencumbered Federal Grants Fund, 106,951. Total Reduction, 106,951.

Fund: Transportation General Fund. Amounts: Unappropriated and Unencumbered Transportation General Fund, 26,738. Total Reduction, 26,738.

Taxpayers appearing at such meeting shall have a right to be heard thereon.

SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE
DATE OF NOTICE:
May 2nd, 1996
DATE COMMENTS DUE:
June 1st, 1996

The Office of Water Management proposes the following permit(s) actions listed below:

Public Water System Construction Permit

The Indiana Department of Environmental Management (IDEM) has received a proposal from the Indianapolis Water Company public water system (PWSID #5249004) to install a new water main on the following Country Club Subdivisions: Heathery Sections 1 & 2, Inverness Section 1, Inverness @ Country Club Place Section 1, Heathery @ Country Club Place Section 1, Heathery @ Country Club Place Section 2, Turnberry @ Country Club Place Section 1, and Turnberry Section 1 all located on West 21st Street east of Country Club Road to serve single family subdivisions. The proposed determination to issue a permit is tentative. Interested persons are invited to submit written comments on the proposed permit. Deliver or mail all requests or comments to: Indiana Department of Environmental Management, Public Water System Permit Section, Office of Water Management, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015.

All comments must be post-

Public Notices

Agency: Marion County Justice Agency, Amounts: 3. Other Service and Charges, 36,600.

Agency: Marion County Superior Court, Amounts: 3. Other Services and Charges, 366,156.

Agency: Marion County Children's Guardian Home, Amounts: 3. Other Services and Charges, 1,960, Total Increase, 785,327.

The said additional appropriations are funded by the following reductions:

Fund: County General Fund, Agency: County Auditor, Amounts: 1. Personal Services—fringes, 16,050.

Agency: County Auditor, Amounts: 3. Other Services and Charges, 280,318.

Agency: County Recorder, Amounts: 3. Other Services and Charges, 1,838.

Agency: County Treasurer, Amounts: 3. Other Services and Charges, 195,489.

Agency: County Assessor, Amounts: 3. Other Services and Charges, 2,064.

Agency: Franklin Township Assessor, Amounts: 3. Other Services and Charges, 10,438.

Agency: Pike Township Assessor, Amounts: 3. Other Services and Charges, 574.

Agency: Warren Township Assessor, Amounts: 3. Other Services and Charges, 2,335.

Agency: Prosecuting Attorney, Amounts: 1. Personal Services, 64,200.

Agency: Prosecutor's Child Support IV-D Agency, Amounts: 3. Other Services and Charges, 3,500, Unappropriated and Unencumbered County General Fund 208,521, Total Reduction 785,327.

Taxpayers appearing at such meeting shall have a right to be heard thereon.

SUELLEN HART
Clerk of the
City-County Council
(S—5-2)

NOTICE TO BIDDERS

Project Estimated Valued by The River State Park Development Commission to be Bids of One Hundred Thousand Dollars or above Minority Business Enterprise Program.

Sealed Proposals For: White River State Park IMAX 3D Theater Garage Indianapolis, Indiana 46204.

Project No.: (WRSP 96-01-C2) will be received at the State Office Building Commission, 402 West Washington Street, Room W466B, Indianapolis, Indiana 46204, from certified contractors, holding a valid Certificate of Qualification with the Certification Board, in accordance with (I.C. 4-13.6-4), until 2:00 p.m. (local time) on May 29, 1996. All bids will be publicly opened and read aloud in the appropriate bid room. The White River State Park Development Commission and/or State Office Building Commission reserves the right to reject any and all bids.

Bids shall be taken from bidders who are qualified for certification by the State Certification Board, Division of Public Works Department of Administration according to I.C. 4-13.6 for the following classifications: 1542.01 General Contractors/Construction.

Questions concerning certification call the Executive Secretary of Certification

Public Notices

Department of Environmental Management in Indianapolis, Indiana (Attention: Pretreatment, Office of Water Management).

GENERAL INFORMATION PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATION

A. Comment Period

The proposed determination to issue a permit is tentative. Interested persons are invited to submit written comments on the proposed permit. Deliver or mail all requests or comments to: Indiana Department of Environmental Management, Permit Section, Office of Water Management, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. All Comments must be postmarked no later than the date above to be considered in the formulation of the final determination.

B. Public Hearing

Any person may request a public hearing within 30 days of the date of the Public Notice. The request must be submitted to the above address. The Department will hold a public hearing if there is a significant degree of public interest in the proposed permit. Public Notice of such a hearing will be circulated in at least one newspaper in the geographical area of the discharge and to those persons submitting comments and/or on the mailing list at least 30 days prior to the hearing.

A written request shall include: the name and address of the person making the request, the interest of the person making the request, persons represented by the person making the request, the reason for the request and the issues proposed for consideration at the hearing.

Availability of Additional Information.

The application, proposed permit and related documents, comments received, and other pertinent information are on file and may be inspected in Room 1101, Indiana Department of Environmental Management, 100 North Senate Avenues Indianapolis, Indiana, at any time between 9:00 a.m., and 4:00 p.m., Monday through Friday. All of these documents may be copied at a cost of 15 cents per page. A copy of the draft permit is also on file with the local health department and is available for public review. Please bring the foregoing to the attention of persons whom you know would be interested in this matter.

(S—5-2)

NOTICE TO TAXPAYERS

Notice is hereby given to the taxpayers of Indianapolis and Marion County, Indiana, that the City-County Council of Indianapolis and Marion County, Indiana, at their regular meeting place, second floor, City-County Building, at 7:00 P.M. on Monday, May 20, 1996, will consider Proposal No. 166, 1996, approving the following additional appropriations in excess of the budget for the current year:

Fund: Sanitation General Fund; Agency: Department of Capital Asset Management; Asset Management Division; Amounts: 3. Other Services and

Public Notices

questing notice shall be given written notice of the action of the Board.

For additional information contact Larry Fedor, of the Indiana Department of Environmental Management, Office of Air Management, 10th floor, Indiana Government Center North, 100 North Senate Avenue, Indianapolis or call (317) 232-8223 or (800) 451-6027.

FELICIA R. GEORGE
Assistant Commissioner
Office of Air Management

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: CARLA POE,
ADA Coordinator
Indiana Department of Environmental Management
100 N. Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015
or call (317) 233-0544 (V), (317) 233-6087 (TT). Please provide a minimum of 72 hours notification.

(S—5-2)

PUBLIC NOTICE

Section 00020 — Invitation to Bid.

Notice is hereby given that M.S.D. of Washington Township, 3801 E. 79th Street, Indianapolis, IN 46240, will receive sealed Bids for the following: North Central High School Track and Field Restructuring.

This project will be constructed under one prime contract which will include the entire scope of work described in the contract documents.

Bids will be received at the following place, date and time:

Place: M.S.D. of Washington Township, Administrative Services, Center -East Conference Room, 3801 East 79th Street, Indianapolis, Indiana 46240; Date: May 21, 1996; Time: 2:00 PM (local time).

All Bids received at such place, date and time will be publicly opened and read aloud. Bids received after such time will be returned to the respective Bidder, unopened. Bidders submitting Bids will be informed of the results (of all the Bid proposals by a tabulated bid form) following award of all contracts.

Complete and detailed Bidding Documents are now on file and may be examined by prospective Bidders at the following locations: Office of the Architect/Engineer, Schenkel Shultz, 9100 Keystone Crossing, Suite 700, Indianapolis, Indiana 46240, Phone: (317) 574-6975, Fax: (317) 574-6979, Project Manager: Fredrick Green; Office of the Owner, MSD of Washington Township, 3801 E. 79th Street, Indianapolis, Indiana 46240, Phone: (317) 845-9400, Fax: (317) 578-6998.

Plan Rooms: Dodge/Scan, 6666 E. 75th Street, Suite 199, Indianapolis, IN 46250; Construction League of Indianapolis, 3965 N. Meridian St., 1st Floor, Indianapolis, IN 46208; MACIF, 2426 Mishawaka Ave., South Bend, IN 46615; Builders Exchange of St. Joseph Valley, 215 Maycrest Building, 2015 Western Avenue, South Bend, IN 46619; F. W. Dodge Corpora-

Public Notices

BROAD AGENCY ANNOUNCEMENT 96-91

Indiana Department of Administration and FSSA—Division of Aging and Rehabilitation for Development and Implementation of Local Area Networks

The Indiana Department of Administration is soliciting expressions of interest from all offerors who wish to be considered to provide Development and Implementation of Local Area Networks for FSSA—Division of Aging and Rehabilitation.

Broad Agency Announcement 96-91 has been issued to describe this opportunity and the procedure for submitting proposals. Proposals must be received in the Department of Administration by June 6, 1996, 2:00 p.m., legal time. Further information concerning this announcement or proposal procedure may be obtained from the Department of Administration by calling (317) 233-3105.

KEITH E. STOUDER,
Procurement Analysis
Procurement Division
Indiana Department of Administration
Room W468
402 W. Washington Street
Indianapolis, Indiana 46204

Note: State solicitation information is now available on the Procurement Division's Electronic Solicitation Posting (ESP) on the Internet under the Indiana Department of Administration's (IDOA) Homepage address: http://www.state.in.us/acin/idoa

(S—5-2)

LEGAL NOTICE OF PUBLIC HEARING
STATE IMPLEMENTATION PLAN (SIP) SUBMITTAL
326 IAC 2-1 & 2-7
PERMIT BY RULE

Notice is hereby given under 40 CFR 51.102 that the Indiana Department of Environmental Management Air Pollution Control Board will hold a public hearing at its regularly scheduled meeting on Wednesday, June 5, 1996. The purpose of this hearing is to receive public comment on amendments to 326 IAC 2-1 & 2-7 Permit By Rule, prior to the board considering the rule amendments for final adoption. The meeting will convene at 1:00 p.m. in the Conference Center, Rooms 4 & 5, at the Indiana Government Center South, 402 West Washington, Indianapolis, Indiana. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed rules.

The purpose of this rulemaking is to develop an enforceable mechanism that can be used by sources with very small actual air emissions to limit their potential air emissions, and thus, eliminate the need for a Title V permit. In Indiana, there are hundreds of small sources that may be eligible to use the mechanism developed under this rulemaking. This rulemaking is designed to relieve small sources from the financial and administrative burden of Title V in cases where their participation in the program will not

Public Notices

tion; (d) Each individual who signs the petition shall affirm that the individual qualifies under subsection (b). (e) The petition shall identify the application for which a public hearing is sought, either by division docket number or by the name of the applicant and the location of the permit."

A pre-AAA hearing on the application will be limited to the Department's authority under the permitting statutes.

The Department's jurisdiction under the Flood Control Act is confined to the floodway of the stream and its review limited to the following criteria:

To be approvable a project must demonstrate that it will: (a) not adversely affect the efficiency or unduly restrict the capacity of the floodway; defined as, the project will not result in an increase in flood stages of ore than 0.14 feet above the base 100-year regulatory flood elevation; (b) not constitute an unreasonable hazard to the safety of life or property; defined as, the property will not result in either of the following during the regulatory flood; (1) the loss of human life, (2) damage to public or private property to which the applicant has neither ownership nor a flood easement; (c) not result in unreasonably detrimental effects upon fish, wildlife or botanical resources. Additionally, the Department must consider the cumulative effects of the above items.

The Department's jurisdiction under the lakes Preservation Act is confined to the shoreline or bed of the lake and any impact which the property may have on: (a) the natural resources and/or scenic beauty of the lake; (b) water level or contour of the lake below the waterline; (c) fish, wildlife or botanical resources.

Additionally, the Department must consider the cumulative effects of the above items.

Only the above issues relevant to the appropriate Act directly related to this application for construction will be addressed. Under permitting statutes, the Department has no authority in zoning, local drainage, burning, etc.; therefore, topics beyond the Department's jurisdiction will not be discussed during the hearing.

You may also request that the Department notify you in writing when an initial determination is made to issue or deny the permit. Following the receipt of this post action notice, you may request administrative review of the determination by the Natural Resources Commission under IC 4-21.5 and 310 IAC 0.6.

Questions relating to the project should be directed to: Bruce Hagen, PE, Paul I. Cripe, Inc., 7172 Graham Road, Indianapolis, IN46250, Telephone: (317) 842-6777

A request for a pre-AAA hearing or notice of initial determination should be addressed as follows: John N. Simpson, PE, Director, Division of Water, Department of Natural Resources, 402 West Washington Street, Room W264, Indianapolis, IN 46204-2748,

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor
Kathy Prosser
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

MARCH 28, 1996

Total Cyanide Deletion

VIA CERTIFIED MAIL Z 411 842 987

Mr. Greg Henneke
City of Indianapolis
Department of Public works
Environmental Resources Management Division
Water and Land Protection Section
Indianapolis, Indiana 46221

Dear Mr. Henneke:

Re: Pretreatment Modification NPDES Permit
No. IN 0023183 and IN 0031950

The Indiana Department of Environmental Management on behalf of the U.S. Environmental Protection Agency, Region 5, is public noticing the proposed approval of a modification to the City of Indianapolis' Pretreatment Program. Public Notice is a requirement of the General Pretreatment Regulations [40 CFR 403].

The U.S. EPA is required to public notice for a period of 30 days this intent to approve the program and to notify you and all interested parties. Should you have any questions or comments, please contact Matt Gluckman of the U.S. EPA at (312) 886-6089 or myself at (317) 233-0437.

Sincerely,

Reggie Baker Jr.

Reggie Baker, Jr. Supervisor
NPDES Special Projects Group
Office of Water Management

RB:web
cc: Mr. Matt Gluckman, U.S. EPA
Mr. Timothy Heider, Indianapolis WWTP
Marion County Health Department

RECEIVED
APR 02 1996

PUBLIC NOTICE
of
Proposed Approval of Publicly Owned Treatment Works (POTW)
Pretreatment Program Modification

Public Notice Issued By:

Public Notice Issued On:

U.S. Environmental Protection Agency
Region 5, Water Division
Water Quality Branch, Permits Section
77 West Jackson Blvd.
Chicago, IL 60604-2105
(312) 353-2105

Name and Address of POTW:

NPDES Permit No. IN 0023183
IN 0031950

Indianapolis Wastewater Treatment Plant
2700 South Belmont Avenue
Indianapolis, Indiana 46221

POTW PRETREATMENT PROGRAM

The City of Indianapolis has requested approval of a modification to its Industrial Pretreatment Program. The modification revises the City's industrial pretreatment ordinance.

On the basis of staff review and application of pertinent regulations, the U.S. EPA, Region 5, proposes to approve the pretreatment program modification. The proposed determination is tentative.

Interested persons are invited to submit written comments on the proposed program modification. Copies of the relevant POTW documents are available for inspection and copying at the U.S. EPA and at the Indiana Department of Environmental Management in Indianapolis, Indiana. Comments should be submitted in person or mailed no later than 30 days from the date of this Public Notice. Deliver or mail all requests or comments to the U.S. EPA at the address listed in this Public Notice (Attention: Matt Gluckman).

CITY OF INDIANAPOLIS
STEPHEN GOLDSMITH
MAYOR

January 23, 1996

Mr. Reggie Baker, Pretreatment Coordinator
Indiana Department of Environmental Management
Office of Water Management
P.O. Box 6015
Indianapolis, IN 46206-6015

RE: Pretreatment Program Modification

Dear Mr. Baker:

This letter is a request for approval of a substantial modification to the Indianapolis Pretreatment Program as defined by 40 CFR 403.18 (c) (1) (ii). This requirement specifically identifies changes to local limits, which result in less stringent standards, as a substantial modification. The modification request includes the deletion of the total cyanide limitation from Chapter 671 of the City of Indianapolis and Marion County Code (hereinafter "the Code").

Section 671-4(e) of the Code contains the noncategorical discharge limits for industries discharging to the Indianapolis sewer system. These limits were developed in 1984 as a requirement for approval of the Indianapolis Pretreatment Program. A total cyanide limitation of 8.0 mg/l was included in the original program approval and remains in the current ordinance.

The City of Indianapolis is proposing to delete the total cyanide limitation for the following reasons:

1) The City's NPDES permit regulates only the amenable form of cyanide;

2) The most toxic form, the amenable or free cyanide, is limited in the Code at 0.4 mg/l;

3) A total of twelve facilities in Indianapolis use cyanide in their processes and are already regulated for total cyanide at a level more stringent than the local limitation. These facilities are regulated by federal categorical standards for total cyanide ranging from 0.04 to 1.9 mg/l. Two additional facilities with cyanide bearing wastestreams are regulated by the amenable cyanide limitation;

DEPARTMENT OF PUBLIC WORKS • ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
WATER AND LAND PROTECTION SECTION
2700 SOUTH BELMONT AVENUE • INDIANAPOLIS, INDIANA 46221
(317) 327-2234 • FAX: (317) 327-2274 • TDD FOR HEARING IMPAIRED: (317) 327-5186

4) The City has not experienced any problems at the wastewater treatment plants associated with total cyanide; and,

5) A continued diligent enforcement of the local amenable cyanide standard and the more stringent federal total cyanide limitation (where applicable) will be protective of the plant, its processes, and the receiving stream.

The requested modification will not increase the contribution of cyanide compounds to the POTW. It is the City's intention to eliminate those requirements which are unnecessary and/or redundant. Regulation of the toxic form through local requirements and applicable federal standards will ensure the continued control of cyanide to the POTW.

Based on the aforementioned, the City respectfully requests approval of this modification to its pretreatment program.

If you have any questions, please contact Ms. Cheryl Carlson at (317) 327-2281.

Sincerely,

Greg Henneke
Acting Director

GH\TH;bgp
96TH009

cc: Matt Gluckman, Pretreatment Coordinator, U.S.EPA Region V
Cheryl Carlson, Enforcement Program Manager, ERMD
Sheila O'Bryan, Assistant Corporation Counsel
Rick Farnham, Assistant Project Manager, WREP
Jeff Dieterlen, Technical Services Manager, WREP
Tim Heider, Pretreatment Coordinator, WREP
Robert F. Holm, Ph. D., Administrator, ERMD

APPENDIX

A-4

TPH Substitution for O&G

Documentation for Change

in SUO Local Limits

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

cc
S. OBRYAN
T. HEIDER
R. FRANKHAM
M. MAXWELL
TO → R. FRAYE

MAR 03 1994

REPLY TO THE ATTENTION OF:

WQP-16J

Robert F. Holm, Ph.D.
Administrator, Indianapolis Department
of Public Works
Environmental Resources Management Division
2700 South Belmont Avenue
Indianapolis, Indiana 46211

Dear Mr. Holm:

In accordance with Section 403.18(b)(1)(ii) of the General Pretreatment Regulations, I am very pleased to inform you and your staff that your Pretreatment Program Modification, which was recently public noticed, is hereby approved. Your National Pollutant Discharge Elimination System permit will be modified in the near future to incorporate the conditions of the revised Program.

We believe that implementation of this modification, increasing the upper pH limit from 10 to 12, to revise the oil and grease limit, and to otherwise revise the sewer use ordinance, is consistent with Federal requirements and your responsibilities with regard to pretreatment.

The United States Environmental Protection Agency and Indiana Department of Environmental Management request the submittal of a signed copy of the final version of your revised Sewer Use Ordinance for our records. Within 90 days, the City should also revise its Industrial User permits where necessary to reflect the Program modification.

Sincerely yours,

Dale S. Bryson
Director, Water Division

cc: Philip Preston, IDEM
Mr. Tim Heider, Pretreatment Coordinator, Indianapolis

cc
B. FARNHAM
TO → T. HEIDER

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Evan Bayh
Governor

Kathy Prosser
Commissioner

105 South Meridian Street
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

AUG 1993
Received
Div. Water & Land
Protection

August 30, 1993

VIA CERTIFIED MAIL P 352 040 024

Robert F. Holme, Ph.D., Administrator
Department of Public Works
Environmental Resources Management Division
2700 Belmont Avenue
Indianapolis, Indiana 46221

Dear Dr. Holme:

Re: Proposed Pretreatment Program Modification
NPDES Permit No. IN 0023183
NPDES Permit No. IN 0031950

The Indiana Department of Environmental Management on behalf of the U.S. Environmental Protection Agency, Region 5, is public noticing the proposed approval of a modification to the City of Indianapolis Pretreatment Program. Public Notice is a requirement of the General Pretreatment Regulations [40 CFR 403].

The U.S. EPA is required to public notice for a period of 30 days this intent to approve the program modification and to notify you and all interested parties. Should you have any questions or comments, please contact Matt Gluckman of U.S. EPA at (312) 886-6089 or myself at (317) 232-8728.

Very truly yours,

Philip Preston

Philip Preston, Pretreatment Coordinator
Permits Section
Office of Water Management

PGP:pgp

cc: Mr. Matt Gluckman, U.S. EPA, Region 5
Certified Operator, Indianapolis STPs
Marion County Health Department

Indpls/081193/PPN/PTPRGM/CHNG

PUBLIC NOTICE
of
Proposed Approval of Publicly Owned Treatment Works (POTW)
Pretreatment Program Modification

Public Notice Issued By:

U.S. Environmental Protection Agency
Region 5, Water Division
Water Quality Branch, Permits Section
77 West Jackson Blvd.
Chicago, IL 60604-3590
(312) 353-2105

Public Notice Issued On:

September 7, 1993

Public Notice No.:
93-9-A-RD-P

Name and Address of POTW:

NPDES Permit No. IN 0023183
NPDES Permit No. IN 0031950

Department of Public Works
Environmental Resources Management Division
2700 Belmont Avenue
Indianapolis, Indiana 46221

POTW PRETREATMENT PROGRAM

The City of Indianapolis has requested approval of a modification to its Industrial Pretreatment Program. The modification revises the City's sewer use ordinance to raise the upper pH limit from 10.0 to 12.0 s.u. and revises the Oil and Grease (O&G) limit.

On the basis of staff review and application of pertinent regulations, the U.S. EPA, Region 5, proposes to approve the pretreatment program modification. The proposed determination is tentative.

Interested persons are invited to submit written comments on the proposed program modification. Copies of the relevant POTW documents are available for inspection and copying at the U.S. EPA and at the Indiana Department of Environmental Management in Indianapolis, Indiana. Comments should be submitted in person or mailed no later than 30 days from the date of this Public Notice. Deliver or mail all requests or comments to the U.S. EPA at the address listed in this Public Notice (Attention: Matt Gluckman).

Any person may request a public hearing within 30 days of the date of the Public Notice by submitting a request to the U.S. EPA. The request shall indicate the interest of the person filing such request and the reasons why a hearing is warranted. A public hearing will be held if there is a significant degree of public interest in the program modification. Public notice of such a hearing will be circulated in the newspaper and to the parties requesting the hearing.

cc
S. OBRYAN
M. STAYTON
RR
R FARNHAM
G. HENNEKE
TO → TH file

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

AUG 09 1993

AUG 1993
Received
Div. Water & Land Protection

REPLY TO THE ATTENTION OF:

WQP-16J

Lonnie Brumfield, Chief
Permits Section
Office of Water Management
Indiana Department of Environmental Management
105 South Meridian Street
Indianapolis, Indiana 46206-6015

Re: Pretreatment Program Modification

Dear Mr. Brumfield:

We have reviewed the City of Indianapolis' February 1991 and March 11, 1993, requests to modify its pretreatment program. Specifically, the City has proposed modification to its Sewer Use Ordinance to be consistent with 40 CFR 403, to increase the upper pH limit from 10 to 12, and to revise its oil and grease limit. The U.S. Environmental Protection Agency (U.S. EPA) finds the modifications to be consistent with Federal requirements and requests that you public notice our intent to approve the amendments.

U.S. EPA will make its final decision whether to approve or deny the modification after taking into consideration comments received during the comment period and any public hearing, if held.

If you have any questions, please call Matt Gluckman at (312) 886-6089.

Sincerely yours,

Irvin J. Dzikowski

Irvin J. Dzikowski, Chief
Permits Section, Unit I

cc: Philip Preston, IDEM
Robert F. Holm, Ph.D, Administrator, Indianapolis Department of Public Works, Environmental Resources Management Division, 2700 So, Belmont Ave., Indianapolis, IN 46211

CITY OF INDIANAPOLIS
STEPHEN GOLDSMITH
MAYOR

June 23, 1993

Mr. Matt Gluckman
U.S. EPA Region V
77 West Jackson Street
Chicago, IL 60604
WQP-16J

RE: Program Modifications

Dear Mr. Gluckman:

This letter is a follow-up to your May 25, 1993 telephone conversation with Mr. Tim Heider of this office concerning pending pretreatment program modifications and ordinance revisions. The following explanation will attempt to expand on the justification for revising current pH and oil and grease requirements. The majority of the evidence presented is based on direct observation of the sewer system serving the affected industries as well as a historical review of any problems encountered.

The first request involves raising the current pH limit from 10.0 S.U. to as high as 12.0 S.U. The City evaluated the compliance record of ten industries that have experienced chronic difficulty with achieving the current pH limit. These ten industries utilize caustic cleaners or alkaline detergents which exhibit a discharge pH between 10.0 and 12.0 S.U. prior to treatment.

These facilites generate only wastestreams with a high pH characteristic. In order to comply with the pH limit, the industry must install and operate an acid delivery system to neutralize the pH to within the 5.0 - 10.0 range. The inherent dangers to industry and City personnel and the collection system is obvious when handling strong acids.

A site visit was conducted at each industry to evaluate the condition of the sewer system at the point of discharge. All of the industries evaluated have discharged wastewater at their current location for at least ten years. Observation of the sewer system revealed no apparent degradation of sewer materials due to high pH wastewater. Therefore, the implementation of a pH limit greater than 10.0 S.U. should not result in any corrosive effect to the sewer system. If approved, the City would continue to evaluate the system for any adverse impact. Section 27-4(c)(2) of the City's code would also be enforced to prevent the discharge of any wastewater causing corrosive structural damage.

The second modification request concerns revising the oil and grease requirement to a total petroleum hydrocarbons parameter while maintaining the 200 mg/l limitations. This revision will eliminate the chronic noncompliance from industries discharging high emulsified oil and grease concentrations from food preparation operations and launderers of restaurant and hospital linens. The oil and grease discharged from these facilities has no detrimental impact on the treatment plants and, in fact, is biodegradable within the plant.

The issue of potential obstruction in the sewer system due to excessive grease discharges will be strictly enforced through Section 27-4(c)(3) and Section 27-4(d)(6) of the local code. These provisions prohibit the discharge of any wastewater causing obstruction to the flow in the sewer and specifically prohibits grease in excessive quantity. The City will further cross-reference these provisions in Section 27-4(d)(11) which will limit the TPH concentration.

A historical review and a site visit was conducted on thirteen industries which have experienced difficulty with complying with the total oil and grease requirement. No reports or evidence exists concerning sewer blockages or obstructions in the sewer system near these facilities.

A list of the industries evaluated for pH and oil and grease is attached.

If you have any questions or need additional information, please contact Mr. Tim Heider, Enforcement Engineer at (317)327-2247.

Sincerely,

Robert Holm

Robert F. Holm, Ph.D.
Administrator

RFH/klt
Attachment
cc: Mike Stayton, Acting Director, Department of Public Works
Robert K. Rawlings, P.E., Assistant Administrator
ERMD-Water and Land Protection Section
Tim Heider, Enforcement Engineer
ERMD-Water and Land Protection Section
Sheila O'Bryan, Assistant Corporation Counsel, City Legal Division
Phil Preston, Pretreatment Coordinator, IDEM
Jay Kress, Chairman, IDAC

pH

A-1 Compressor
Amtrak
Eastern Electric Apparatus
Erbrich Products
Indianapolis Drum Service
Industrial Laundry
Lilly Industries
Mechanics Laundry
Morgan Services
Progress Laundry

Oil and Grease

Continental Baking
Hebrew National
John Sexton & Company
Kroger Meat Packing
Mechanics Laundry
Merico Dough
Merico Oil
Mexican Foods
Morgan Services
Nabisco Brands
National By-Products
Progress Laundry
Roselyn Bakery

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Governor
Kathy Prosser
Commissioner

105 South Meridian Street
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

March 11, 1993

Mr. Matt Gluckman
Water Permits Section
U.S. EPA Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3590

5WQP-16J

Dear Mr. Gluckman:

Re: Indianapolis Pretreatment Program
Request for Modification

Indianapolis proposes to: (i) relax its upper pretreatment pH limit from 10.0 to 12.0 s.u. and (ii) subdivide the existing Oil and Grease (O&G) parameter into two parameters to be regulated separately- total petroleum hydrocarbons (polar O&G) and biodegradable oil and grease (polar O&G from animal and plant sources). Under proposal (ii), Indianapolis would:
(iia) retain the existing O&G limit for nonpolar O&G (200 Mg/L),
(iib) surcharge the biochemical oxygen demand (BOD) of polar O&G and
(iic) surcharge polar O&G above 200 Mg/L to recover the costs of separating and disposing O&G at the POTW (in lieu of imposing a limit). Proposals (iia) and (iib) are acceptable. However, Indianapolis needs to support proposals (i) and (iic) more fully (copy of letter enclosed).

The proposed limit of pH 12.0 may not sufficiently protect the POTW or the environment. Particular concerns are: (i) lift station structures near the outfall to the municipal sewer and (ii) high-pH discharges from combined sewer overflows (CSOs). The highest approved limit to date appears to be pH 11.0. Indianapolis needs to provide solid documentation to support the claims that pH 12.0 will not adversely affect sewer structures or degrade the environment. If Indianapolis can adequately support these claims, I will not object to an upper limit of pH 12.0 because of the collateral benefits (improved biological treatment; reduced use of corrosive acids to lower pH).

The proposal to surcharge polar O&G above 200 Mg/L does not protect the POTW against accumulations of polar O&G in the collection system (i.e., it does not prevent interference by obstructive deposits). The proposal only addresses the recovery of the costs for removing the deposits. Indianapolis needs to resolve the obstruction issue or withdraw this proposal.

Mr. Matt Gluckman
Page 2

Obstructive deposits are not a problem for polar O&G that is "homogenized" (emulsified to remain dispersed throughout the POTW). This form of O&G could be surcharged and limited as BOD alone. However, I know of no approved analytical method that distinguishes between "homogenized" and "unhomogenized" polar O&G. If Indianapolis could find (or develop) an approvable method for separating and quantifying the two forms of polar O&G, the "homogenized" form could be surcharged as proposed and the "unhomogenized" form could be limited to 200 Mg/L.

Please reply to this request. If you have any questions, contact me at this address or call me at 317/232-8728.

Very truly yours,

Philip Preston

Philip Preston, Pretreatment Coordinator
Permits Section
Office of Water Management

PGP/pgp

Enclosure: Copy of Letter Dated February 12, 1993

cc: Mr. Tim Heider

EPA/Indpls/030893

CITY OF INDIANAPOLIS
STEPHEN GOLDSMITH
MAYOR

TH

February 12, 1993

Mr. Philip G. Preston
Pretreatment Coordinator
Permits Section
Indiana Department of Environmental Management
P.O. Box 6015
Indianapolis, Indiana 46206-6015

RE: Pretreatment Program Modification

Dear Mr. Preston:

This letter is a request for approval of a substantial modification to the Indianapolis Pretreatment Program as defined by 40 CFR 403.18(c)(1)(ii). This section specifically identifies changes to local limits, which result in less stringent local limits as a substantial modification. The modification request includes changes to the regulation and enforcement of pH and oil and grease limitations.

Revision to pH Requirements

Section 27-4(c)(2) contained in the Indianapolis and Marion County Code requires the pH of wastewater discharged to the city sewer system to be within the range of 5.0 to 10.0 S.U. This requirement applies to the point of discharge to the sewer system.

The federal requirement contained in 40 CFR 403.5(b)(2) states that pollutants which will cause corrosive structural damage shall not be introduced to the POTW and in no case discharges with pH lower than 5.0 S.U.

The city is requesting to revise its upper pH limit of 10.0 to 12.0 S.U. This request is based on the following:

1) Discharges of wastewater from industrial users at a pH up to 12.0 S.U. will not adversely impact the integrity of sewer pipe materials;

2) The influent pH to the POTW could benefit from a slightly higher alkaline level to the loss of alkalinity which occurs during the nitrification process;

3) Numerous industries which demonstrate noncompliance with the upper pH limit are required to handle, store, and use a hazardous material (a corrosive acid to lower

effluent pH). This situation presents a much greater potential for an adverse impact to the sewer, city workers, and industrial employees;

4) No environmental degradation would occur as a result of this change.

<u>Revision to Oil and Grease Requirements</u>

Section 27-4(d)(11) of the Indianapolis and Marion County Code prohibits the discharge of any wastewater containing an oil and grease concentration in excess of 200 mg/l. Currently, the city regulates this parameter as total oil and grease, which includes all material which is freon extractable from a wastewater sample. This analytical procedure identifies all polar and nonpolar forms of oil and grease. The city is requesting approval to revise its method of oil and grease regulation as follows:

1) Retain the 200 mg/l limit in the city's legal authority, but change its application to total petroleum hydrocarbons. This form of oil and grease exhibits a detrimental effect on POTW operations through inhibition of bacterial organisms, fouling of trickling filter media, and formation of a surface sheen in the effluent;

2) Biodegradable forms of oil and grease, mainly of animal and vegetable origin, will be surcharged through the biochemical oxygen demand analysis, as well as the imposition of a separate surcharge on concentrations over 200 mg/l to recover the costs of grease separation and disposal at the POTW.

The changes outlined above will not increase the amount of oil and grease currently received at the treatment plants and therefore, will not pose an adverse environmental impact on the plant, its processes, or the receiving stream. In fact, the POTW achieves over 99% removal of the oil and grease found in the influent. Neither plant has ever experienced an NPDES violation of its oil and grease standard.

Based on the aforementioned, the city respectfully requests approval of this modification to its pretreatment program.

If you have any questions, please contact Mr. Tim Heider at 327-2247.

Sincerely,

Robert Holm

Robert F. Holm, Ph.D.
Administrator

RFH/TH/sea

cc: Barry Baer, Director, Department of Public Works
Sheila O'Bryan, Assistant Corporation Counsel
Dennis Gehlhausen, Chairman, IDAC
Robert K. Rawlings, P.E., Asst. Administrator, Water and Land Protection Section
Tim Heider, Enforcement Engineer, Water and Land Protection Section

APPENDIX

B

Technical Memorandum

2/21/12

Initial Review of Guidance Documents and Scope of Local Limits Study

Reichlin Consulting, LLC

TECHNICAL MEMORANDUM

To: Cheryl Carlson
Ann McIver

From: Douglas B. Reichlin- Reichlin Consulting, LLC
Christopher B. Cain- MWH Americas

Subject: Program Management Project No. 9099- Industrial Pretreatment Program Local Limits Evaluation

Task 1: Review 2004 EPA Guidance Documents and Determine Scope of Review

Date: February 21, 2012

Introduction and Overview

The current National Pollutant Discharge Elimination System (NPDES) Permit for the Belmont and Southport Advanced Wastewater Treatment (AWT) facilities requires that the Permittee maintain and update the Indianapolis Industrial Pretreatment Program (IPP) Local Limits, and perform a technical review of the Local Limits during the Permit Term. Specifically, Part III- A- 1 of the Permit, is cited below. The Control Authority (CA) is defined in the Permit as the permittee.

> "LEGAL AUTHORITY - The CA shall develop, enforce and maintain adequate legal authority in its Sewer Use Ordinance (SUO) to fully implement the pretreatment program in compliance with State and local law. As part of this requirement, the CA shall develop and maintain local limits as necessary to implement the prohibitions and standards in 327 IAC 5-18. The Control Authority shall perform a technical re-evaluation of local limits at least once during the term of this permit. The local limit re-evaluation shall be in accordance with EPA Guidance document Local Limits Development Guidance (EPA 833-R-04-002A), July 2004."

The current NPDES permit was issued to the City of Indianapolis (City) on December 27, 2007, with an effective date of February 1, 2008, and expires on January 31, 2013, by the Indiana Department of Environmental Management. On August 26, 2011, the NPDES permit was modified and became effective to reflect the transfer of ownership from the City of Indianapolis to CWA Authority, Inc.

This Technical Memorandum provides a review of the current Local Limits along with the initial evaluation of the requirements for the scope and magnitude of the re-evaluation to be performed, as required in the Permit, and as outlined in the 2004 EPA Guidance document, referenced above.

Local Limits Background

The current Local Limits included in the SUO were originally developed by the City in 1982 - 1983, and, after review and minor modification, were incorporated in the IPP Program approved by IDEM and USEPA in January 1985. At that time a comprehensive review of pollutants and the various treatment pass-through, inhibition and sludge disposal requirements was conducted in accordance with then applicable EPA Guidance Documents. The Maximum Allowable Headworks Loading (MAHL), Maximum Allowable Industrial Loadings (MAIL), and Local Limits were developed based on allocation to those industries in operation at that time that were reasonably expected to discharge each Pollutant of Concern (POC) at levels significantly above background domestic/ commercial concentrations.

EPA Guidance documents available at that time required that a minimum of ten (10)- heavy metal POCs be evaluated for the Local Limits development. This review culminated in the original Local Limits as listed in Table 1, below, along with the original criteria governing each Local Limit. The minimum 10-POCs are underlined in Table 1. The City also screened for other POCs and added several to the initial Local Limits based on their potential to cause issues with pass-through and/or inhibition. Over the years, two of the original Local Limits were modified or eliminated as noted in Table 1, as conditions changed and the City's IPP regulatory approach evolved. These changes were done with review and approval of IDEM and the USEPA, and are explained below.

While the EPA Guidance does not distinguish between Total Cyanide (CN(T)) and Amenable or Free Cyanide (CN(A)), the City initially adopted Local Limits for both forms of these POCs. At the time, there was concern that a known routine discharge of iron cyanide (measurable as CN(T) but not as CN(A)) from a specific large industrial discharger might cause release of CN(A) due to photo-degradation in the receiving water. This discharger (Citizens Gas and Coke Utility) is no longer in operation, and no evidence has been found indicating that a CN(A) limit would not fully protect against cyanide discharge. Therefore, the Local Limit for CN(T) was eliminated from the SUO in 1996, because the significant source was eliminated, and there is no longer a Water Quality or NPDES Permit basis for this Local Limit. In addition, CN(T) discharges are limited by National Categorical standards, and the Local Limit was redundant to these permit limits.

The Local Limit for O&G was eliminated and replaced with a Local Limit for total petroleum hydrocarbons (TPH) in 1994, as shown in Table 1. This change essentially substituted a more practical analytical procedure for monitoring and regulating the kind of petroleum oil and grease discharges that need to be excluded from the sewers. Over the past decades, the Oil and Grease Analysis has been revised several times to avoid detrimental solvents (e.g. benzene, Freon), so it is difficult to make accurate comparisons of data from different sources and time periods. At the same time, the TPH analysis has become widely used and trusted.

However, the majority of the Local Limits have remained unchanged since the initial program adoption and approval in 1985. Since that time, substantial changes have occurred in the system that may require that these Local Limits be modified to meet the intent of the program; namely, to prevent pass-through, inhibition or sludge contamination.

TABLE 1

Original and Current Local Limits

Pollutant	Original Local Limit (mg/L)	Criterion Basis of Original Local Limit	Current Local Limit (mg/L)	Reason for Change from Original to Current Limit
Arsenic (As)	4.0	Pass-through (Chronic Toxicity)	4.0	No Change
Cadmium (Cd)	1.2	Inhibition (Trickling Filter)	1.2	No Change
Chromium- total (Cr(T))	24.0	Pass-through (Chronic Toxicity)	24.0	No Change
Chromium- hex (Cr(VI))	3.4	Pass-through (Acute Toxicity)	3.4	No Change
Copper (Cu)	2.2	Pass-through (Acute Toxicity)	2.2	No Change
Cyanide-total		Pass-through (Acute Toxicity)	--	Eliminated (1996) due to loss of major discharger, and redundancy with Categorical Limits.
Cyanide- amenable	0.4	Pass-through (Acute Toxicity)	0.4	No Change
Lead (Pb)	4.7	Inhibition (Trickling Filter)	4.7	No Change
Mercury (Hg)	0.025	Pass-through (Chronic Toxicity)	0.025	No Change
Nickel (Ni)	7.3	Inhibition (Trickling Filter)	7.3	No Change
Phenol	46.0	Inhibition (Nitrification)	46.0	No Change
Pentachlorophenol (PCP)	0.012	Inhibition (Nitrification)	0.012	No Change
Silver (Ag)	4.2	Pass-through (Chronic Toxicity)	4.2	No Change
Zinc (Zn)	38.0	Inhibition (Trickling Filter)	38.0	No Change
Oil & Grease (O&G)	200	Inhibition (Activated Sludge)	---	Eliminated (1994) and replaced with limit for TPH, below.
Total Petroleum Hydrocarbons (TPH)	---	Not included in Original Local Limits.	200	Replaced O&G (1994) Local Limit with more practical analysis method.

2004 EPA Guidance Document Review

The EPA 2004 Guidance provides the latest detailed guidance on the requirements and methodology to develop and re-evaluate Local Limits. EPA has also added five (5)- additional POCs to the minimum list to be reviewed for Local Limits. These include;

- Two (2)- additional heavy metals: Selenium (Se) and Molybdenum (Mo), due to the potential to contaminate sludge for land application in accordance with Part 503 land application regulations adopted in the 1990's. Selenium was initially screened in the 1982 analysis, but because it was not found to be present in any significant quantities, limiting headworks criteria and Local Limits were not recommended or adopted at that time.
- Three (3)- conventional pollutants: Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS) and Ammonia (NH3), to ensure that overloading of Publicly Owned Treatment Works (POTWs) do not experience overloading conditions from excess industrial discharges of these treatable pollutants.

The 2004 EPA Guidance provides for evaluation for both the initial development of Local Limits as well as for the regular, ongoing re-evaluation of existing Local Limits. In addition, the re-evaluation of existing Local Limits may be done on a simple "review" basis, or on a more comprehensive "detailed re-evaluation" basis, as further defined in the 2004 EPA Guidance document. Figure 1 shows the decision tree diagram (Figure 2-1 from the 2004 EPA Guidance) which illustrates the methodology to determine which approach needs to be taken in each situation.

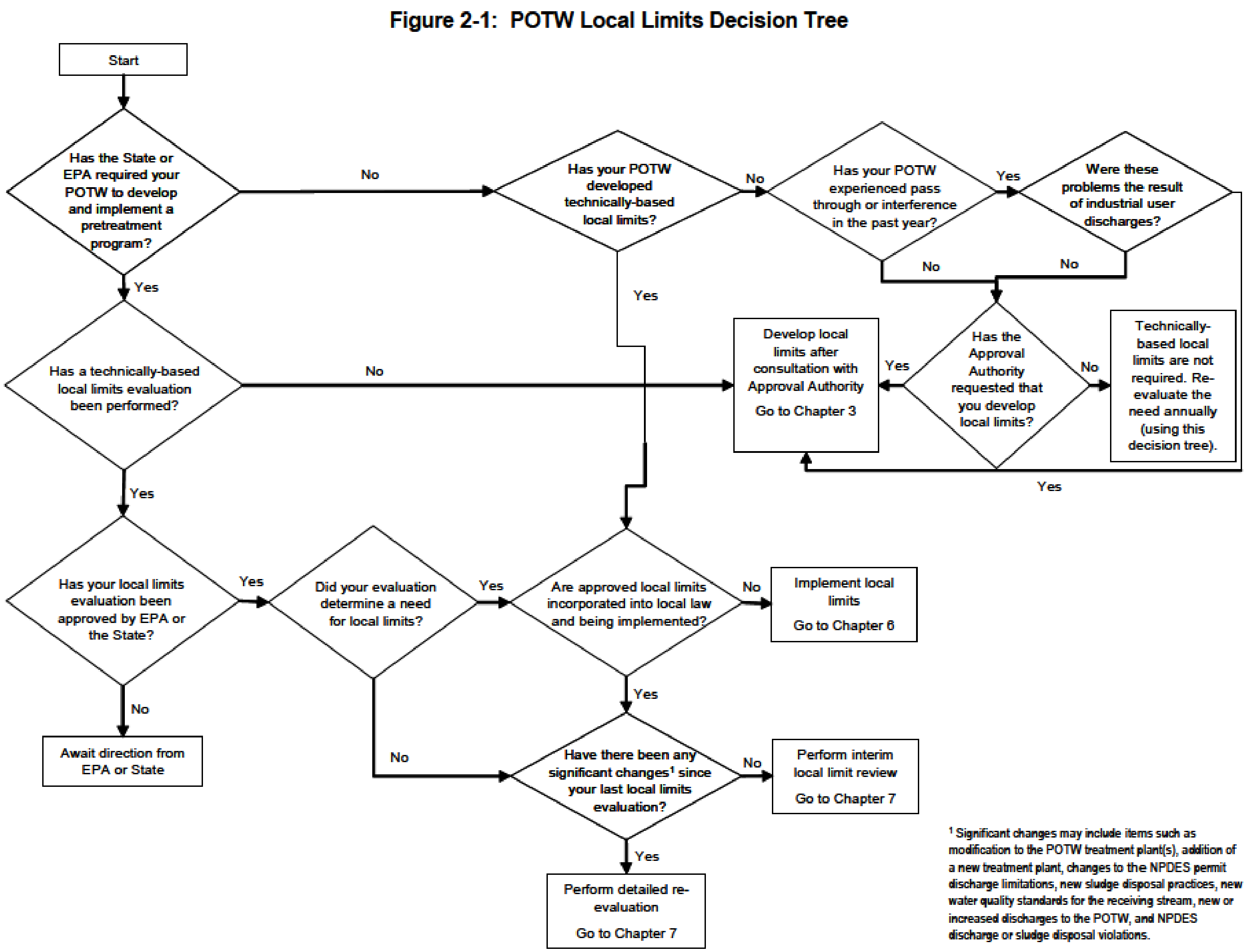
Obviously, for those POCs which have not previously been required to have a Local Limits review, the approach requires that the initial Local Limits review methodology be followed. These will include Se, Mo, BOD, TSS and NH3. In addition, any other POCs which arise during the review will be evaluated under the new limit methodology. In particular, Beryllium (Be) will be evaluated using this approach, because there is now a Be limit in the Belmont sludge incinerator air permit, and Be was not evaluated in the original 1982 study.

Where Local Limits are already in place, the decision to conduct a "review" vs. a "detailed re-evaluation is based on whether or not significant changes have occurred since the original development of the Local Limits which would likely justify a more rigorous analysis. A review of the significant factors influencing the Local Limits has been completed in order to make this determination. The significant factors reviewed for changes since the original Local Limits development include:

- Water Quality Standards
- Sludge Incinerator Air Quality Regulations
- Landfill Disposal Regulations
- NPDES Permit Limits
- Industrial Flows and Pollutant Contributions
- Domestic and Commercial Concentrations of Pollutants
- Upstream River Water Concentrations of Pollutants

Figure 1

EPA Guidance: Local Limits Decision Tree



[1] Significant changes may include items such as modification to the POTW treatment plant(s), addition of a new treatment plant, changes to the NPDES permit discharge limitations, new sludge disposal practices, new water quality standards for the receiving stream, new or increased discharges to the POTW, and NPDES discharge or sludge disposal violations.

Table 2 provides a summary of the major changes to these variables that have occurred since the 1982 study. Evaluation of the changed conditions will apply to all of the POCs in Table 1 for which an initial Local Limit was developed, except CN(T) and O&G, because the original Local Limits for these POCs were eliminated from the SUO. The new Local Limit for TPH is justifiable based upon consideration of the potential impact of petroleum hydrocarbons on sewers and sewer workers, upstream of the point at which wastewater treatment plant impacts and pass-through become a concern. This limit was not determined based on headworks loading calculations or regulatory factors that are subject to change and need not be re-evaluated at this time

Several significant changes have occurred since 1982 which would tend to drive down the MAHL and/or the Local Limits. Specifically, these include:

- Water Quality standards have generally been reduced significantly, in some cases by over an order of magnitude, with the exception of Cr(T), Ag and pentachlorophenol , for which the applicable river water quality standards increased substantially;
- Additional Air Permit rules, including those from Clean Water Act Part 503, and the most recent, and more stringent, Clean Air Act Part 129 have been added to regulate stack emissions of certain additional heavy metals;
- Landfill disposal regulations for Toxicity Characteristics Leachate Procedure (TCLP) have been added for certain heavy metals;
- Certain POCs have been added to the current NPDES Permit, namely CN(A).

However, significant changes have also occurred that would tend to increase the MAHL, and/or the Local Limits. Specifically, these include:

- Industrial flows contributing each POC are down significantly, in some cases by over an order of magnitude, with no known significant industrial contributors remaining for pentachlorophenol, potentially rendering this Local Limit moot.
- Domestic/Commercial background concentrations are down significantly for many POCs, in some cases by over an order of magnitude;
- Upstream Water Quality has improved significantly for some POCs, in some cases by over an order of magnitude, with the exception of Zn which has gotten worse;

Table 2

Summary of Changed Conditions for Local Limit POCs Since 1982 Review

POCs With Current Local Limits for Review	WQ Limits Concentration % Change (See Attachment 1)	Air Permit Regulations	Landfill Disposal Regulations	NPDES Permit Limits	Industrial Flow % Change (See Att. 2)	Dom/Com Background % Change (See Att. 3)	Upstream Water Quality % Change (See Att 4)
As	No Change (Preliminary)	503 Rules Added	TCLP Limits Added		<90.3%>	<90%>	No Change (data pending)
Cd	<94%>	503 & 129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<77.6%>	<92%>	<93%>
Cr(T)	1138%	503 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<88.6%>	<64%>	No change
Cr(VI)	<48%>				<99.8%>		No Data 1982. (data pending)
Cu	<38%>			Eliminated in 2008 Permit	<80.1%>	<38%>	<35%>
CN(A)	<54%>			Reduced in 2008 Permit	<90.7%>	<54%>	No Change
Pb	<45%>	503 & 129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<79.7%>	<61%>	<80%>
Hg	<94%>	129 Rules Added	TCLP Limits Added	Eliminated in 2008 Permit	<97.1%>	<90%>	<88%>
Ni	<84%>	503 Rules Added		Eliminated in 2008 Permit	<88.1%>	No Change	<74%>
Ag	76%		TCLP Limits Added		<55.4%>	No Change	<90%>
Zn	<81%>			Eliminated in 2008 Permit	<75.1%>	No Change	42%
Phenol					<99.8>	<20%>	<90%>
Penta-chlorophenol	300%				<100%> None		

Attachments 1 -4 provide additional details supporting the numerical percentage changes in Table 2, above. These Tables provide preliminary determination of these variables and are subject to revision in the final local limits review and report. Additional data is pending for several of the variables. The initial comparison of Water Quality Limits includes on Acute Aquatic Criteria (AAC) and Chronic Aquatic Criteria (CAC) toxicity standards, and inclusion of other applicable Water Quality standards is ongoing.

Summary and Scope of Review

Overall, several conditions have changed significantly since 1982 for every POC with a current Local Limit. These will all require a “detailed re-evaluation” level of review, per the 2004 EPA Guidance and Decision Tree in Attachment 1. In addition, several new POCs will be reviewed on a first time review basis including the three (3)- heavy metals, Be, Mo and Se, and the three (3)- conventional pollutants, BOD, TSS and NH3.

Other Priority Pollutants were screened using AWT influent, effluent and sludge data from 2010 and 2011, and it was determined that no other POCs were present at concentrations sufficient to warrant a Local Limits review at this time. More details re: the POC data and the screening and selection process will be incorporated in the final Local Limits Report, under Task 6 of the project.

ATTACHMENT 1

		Water Quality Limits												
Parameter		As	Cd	Cr (t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Phenol	Pentachlorophenol
1983 Used	ug/L	**2.00**	**46.00**	**44.00**	**21.00**	**52.30**	**11.25**	**26.00**	**0.20**	**2,700.00**	**8.80**	**1,500.00**	**300.00**	**3.20**
IDEM Chronic TRC Limit	ug/L	190	2.9	545	11.0	32.5	5.2	14.3	0.012	428		288		12.8
IDEM Acute TRC Limit	ug/L	360	14.9	4571	16.0	54.0	22	367.5	2.4	3854	15.5	319		20.3
2011 Used	ug/L	**2.00**	**2.87**	**544.83**	**11.00**	**32.46**	**5.20**	**14.32**	**0.01**	**428.47**	**15.49**	**288.48**	**n/a**	**12.79**
Basis			**CAC**	**CAC**	**CAC**	**CAC**	**CAC**	**CAC**	**CAC**	**CAC**	**AAC**	**CAC**	**n/a**	**CAC**
Percentage Change Sinc	%	0%	-94%	1138%	-48%	-38%	-54%	-45%	-94%	-84%	76%	-81%	n/a	300%

Arsenic assume 1983 Limit for Preliminary assement

pH	7.8	downstream of AWT's
Hardness (mg/L)	326	From IDEM 2007 WLA RPE Report- Median Value

Governing Water Quality Limit

ATTACHMENT 2

		Industrial Flow Contribution												
Parameter		As	Cd	Cr(t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Phenol	Pentachlorophenol
1982 Ind Flows	MGD	4.24	10.60	12.60	12.60	12.20	11.50	11.40	7.80	10.40	2.10	10.70	14.40	14.40
2011 Ind Flows	MGD	0.4101	2.3735	1.4425	0.0220	2.4335	1.0740	2.3130	0.2296	1.2405	0.9365	2.6595	0.0300	-
% Change in Industrial Flow Contribution		-90.3%	-77.6%	-88.6%	-99.8%	-80.1%	-90.7%	-79.7%	-97.1%	-88.1%	-55.4%	-75.1%	-99.8%	-100.0%

ATTACHMENT 3

		Background Domestic & Commercial Pollutant Concentrations												
Parameter		As	Cd	Cr(t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Phenol	Pentachlor phenol
1983 Used	ug/L	10	5	20	1	100	25	20	0.2	10	5	260	10	0
1992 Indianapolis Survey Data	ug/L		30	20		100		20		10		260		
EPA (Ave)	ug/L	7	8	34		140	82	58	2	47	19	231	4	
EPA Min	ug/L	0.4	0.76	1		5	10	1	0.1	1	0.7	10		
EPA Max	ug/L	88	110	1200		740	370	2004	54	1600	1052	1280		
2010 AWT Influent Data Review Statistical MAX (75th percentile)	ug/L	3	0.4125	7.20	10	62.05	11.5	7.7625	0.021	12.2	10	421.75	62.25	20
FINAL 2011 Selected	ug/L	1	0.4125	7.20	1	62.05	11.5	7.7625	0.021	10	5	260	4	0
Percentage Change	%	-90%	-92%	-64%	0%	-38%	-54%	-61%	-90%	0%	0%	0%	-60%	n/c

Need As Background data to lower detection limit!

Cr (VI)1982 data showed <10 ug/L detection limit in domestic sewage and <1 ug/L detection limit in tap water. All AWT Influent <10 LOD. Use 1 ug/L

Arsenic All AWT influent <3 ug/L detection Limit. Not reviewed as POC in 2007 IDEM WLA Report as RPE pollutant. Mass balance with sludge implies 1 ug/L or less. Use 1 u

Berryllium, Silver & Selenium 75th percentile AWT influent concentrations below 10 ug/L detection limit. Use 1/2 LOD.

Pentachlorophenol all AWT influent data <20ug/L detection limit. Use 0 ug/L for Dom/Com. No industries known to discharge anymore.

ATTACHMENT 4

		White River Background Concentrations												
Parameter		As	Cd	Cr(t)	Cr(VI)	Cu	CN(a)	Pb	Hg	Ni	Ag	Zn	Phenol	Pentachlorophenol
1983 Data	ug/L	2	3	2		6	1	10	0.100	10	5	10	25	
2011 Data	ug/L	5	0.22	2.24		3.9	5	2	0.500	2.6	1	14.2	5	
2011 Use	ug/L	2	0.22	2.00		3.9	1	2	0.012	2.6	0.5	14.2	2.5	10
Percentage Change	%	0%	-93%	0%		-35%	0%	-80%	-88%	-74%	-90%	42%	-90%	
2011 Det Limit		5	0.20	1		2	5	1	0.5		1		5	
<detection		ALL	Most	Half		Few	All	Half	All	None	All	None	All	

Arsenic & Cyanide data < LOD, use 1983 data with lower LOD.
Mercury all < LOD. Assume at Lowest Water Quality (WQ) Limit, worst case
Silver, Phenol Set at 1/2 Detection Limit Since all data <LOD
Pentachlorophenol set at 1/2 LOD. No recent data, but all historic data <LOD.
Cr(VI) Data Pending

APPENDIX

C

Significant Industrial User

Data

Plant	Permit Numbe	Industry Name	Process Flow	Sanitary Flow	Cooling Flow	Total Flow	IPP Permit Flow	POC Likely	
Belmont	34712401	All America Threaded Products, Inc.	12000	1000	0	13000	12000	Zn, Cr-T	
Belmont	72180201	Aramark Uniform Services	50000	1500	1500	53000	50000	TPH	
Belmont	72180901	Cintas Corporation- Georgetown Road	70000	1000	0	71000	70000	Cu,TPH	
Belmont	34710201	Colors, Inc.	120000	1000	5000	126000	120000	Ni	
Belmont	49530101	Covanta Indianapolis, Inc.	485000	2000	0	487000	485000	Zn	
Belmont	28300101	Eli Lilly & Company	800000	200000	20000	1020000	1020000	None	CN(T) for only portion of Q = 10,000 gpd
Belmont	33980101	Indiana Metal Treating, Inc.	14000	500	0	14500	14000	None	Under 10,000 gpd optional CN(a)
Belmont	34711001	Industrial Anodizing Company, Inc.	145000	500	100	145600	145000	Ni,Cr-T	
Belmont	34790601	KECO Engineered Coatings, Inc.	2000	1000	0	3000	3000	Zn	
Belmont	34990101	MidAmerica Extrusions	33000	1000	2000	36000	36000	None	
Belmont	20460201	National Starch LLC	2400000	15000	500000	2915000	2915000	None	
Belmont	20860101	Pepsi Cola General Bottlers of Indiana	125000	3500	7500	136000	136000	None	
Belmont	34711201	Progressive Plating Company	2000	100	0	2100	2000	Zn,Ni,Cu,Cr-T	
Belmont	34711401	R & S Plating, Inc.	5000	500	0	5500	5000	Zn,Ni,Cu,Cr-T,CN-A	
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8	400000	200000	10000	610000	400000	Cu,Cr-T,Ni,Ag	
Belmont	34714001	Seleco, Inc.	1500	200	100	1800	1500	Cu,Ni	
Belmont	35890301	Siemens Industry, Inc.	315000	500	0	315500	315000	None	
Belmont	28300701	Sigma-Tau PharmaSource	1500	2000	20000	23500	1500	None	
Belmont	34290101	Stanley Security Solutions, Inc.	15000	7000	10000	32000	15000	Cu,Ni,Cr-T	
Belmont	72181001	UniFirst Corporation	52000	1000	0	53000	53000	Zn,TPH	
Belmont	28590101	Vertellus Agriculture & Nutrition LLC	425000	5000	150000	580000	425000	CN-A	
Belmont	34711101	Williamson Polishing & Plating Company	22000	500	500	23000	22000	d,Cr-T,Cu,Ni,Ag,Zn,CN-A	
Southport	34790401	Arrow Powder Coating, LLC	4500	500	0	5000	4500	None	
Southport	37140501	Automotive Components Holdings, LLC	80000	8000	70000	158000	80000	None	
Southport	72180701	Cintas Corporation- Park Davis	54000	5000	3000	62000	54000	Cu,Zn,TPH	
Southport	36230101	CMW, Inc.	100	5000	25000	30100	100	Fluoride	
Southport	34713301	Commercial Finishing Corp.-Brookside Ave.	5000	500	0	5500	5000	None	
Southport	20260101	Crossroad Farms Dairy	150000	1500	13000	164500	164500	None	
Southport	29520101	Firestone Building Products Company	3000	2000	0	5000	3000	None	
Southport	72180801	G&K Services, Inc.	35000	1000	500	36500	35000	TPH	
Southport	34710401	General Devices Company, Inc.	6000	100	0	6100	6000	Zn	
Southport	39950101	Genesis Casket Company, LLC	4500	0	1500	6000	4500	None	
Southport	73990101	Heritage Environmental Services, LLC	65000	2000	500	67500	65000	Cu,Cr-T,CN-A,Hg,Ni,Zr	CN(a) at facility outfall total Q. Metals all tested @ Metal Treatmnet Q = 30,000. CN(T) at CN Treatment Q = 4,000 Intermittent LL only??
Southport	34714701	Imagineering Solutions LLC	10000	500	100	10600	10000	Ni	
Southport	45810701	Indianapolis Airport Authority- IMC	60000	20000	0	80000	60000	TPH	
Southport	50850101	Indianapolis Drum Service	30000	2000	1000	31000	30000	Ni,Zn,TPH,Phenols	
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds	500000	0	0	500000	500000	None	
Southport	34711601	Magnode Corporation	140000	2000	0	142000	140000	Ni	
Southport	29920101	Metalworking Lubricants Company	170000	1000	4000	175000	170000	Zn,TPH	
Southport	28190101	Micronutrients, LLC	4000	1000	40000	45000	4000	Cu	Metals all tested @ Batch Processing Q = 4,000 gpd
Southport	34460101	Procoat, Inc.	1500	250	0	1750	1750	None	
Southport	33410101	Quemetco, Inc.	250000	7000	3000	260000	250000	Sb,Pb,Se	
Southport	35620101	Rexnord Industries	22000	5000	2000	29000	29000	TPH	
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operations	14000	1000	2000	17000	14000	Cr-T,Ni	
Southport	20890101	Sensient Technologies Corporation	130000	5000	5000	140000	140000	None	
Southport	95110101	South Side Landfill	130000	500	0	130500	130000	None	
Southport	34712601	Sumco, Inc.	57000	2000	0	59000	57000	Cu,CN-A,Ni,Ag	CN(a) at CN treatment intermittent Q= 5,000. All others at process discharge
Southport	34710601	Superior Metal Technologies, LLC	40000	2000	2000	44000	40000	Cr-T,Ni	
Southport	20330301	SVC Manufacturing, Inc.	700000	10000	10000	720000	720000	None	
Southport	37280201	Tube Processing Corporation- AeroFab Division	14000	3000	2000	19000	19000	Cr-T,Ni	
Southport	28300801	Vesta Pharmaceuticals, Inc.	1000	0	500	1500	1000	None	
Southport	34420101	Von Duprin, Inc.	40000	5000	5000	50000	40000	Cr-T,Zn	
Southport	27410201	World Media Group	100	0	500	600	100	Ni	
		sum	8,215,700	537,650	917,300	9,668,650	9,023,450		

			All SIU Flow															
			FLOW (Gal/day)															
Plant	Permit Numbe	Industry Name	Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenol
Belmont	34712401	All America Threaded Products, Inc.	0	12000	12000	0	12000	12000	0	12000	0	12000	12000	12000	0	0	0	0
Belmont	72180201	Aramark Uniform Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	72180901	Cintas Corporation- Georgetown Road	0	0	0	0	70000	0	0	70000	0	0	0	0	0	0	0	0
Belmont	34710201	Colors, Inc.	0	120000	120000	0	120000	120000	0	120000	0	120000	0	120000	0	0	0	0
Belmont	49530101	Covanta Indianapolis, Inc.	0	485000	0	0	485000	0	0	485000	0	0	0	485000	0	0	0	0
Belmont	28300101	Eli Lilly & Company	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0
Belmont	33980101	Indiana Metal Treating, Inc.	0	14000	0	0	0	0	14000	14000	0	0	0	0	0	0	0	0
Belmont	34711001	Industrial Anodizing Company, Inc.	0	145000	145000	0	145000	145000	0	145000	0	145000	0	145000	0	0	0	0
Belmont	34790601	KECO Engineered Coatings, Inc.	0	3000	3000	0	3000	3000	0	3000	0	3000	3000	3000	0	0	0	0
Belmont	34990101	MidAmerica Extrusions	0	0	36000	0	0	36000	0	0	0	0	0	36000	0	0	0	0
Belmont	20460201	National Starch LLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	20860101	Pepsi Cola General Bottlers of Indiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34711201	Progressive Plating Company	0	2000	2000	0	2000	2000	0	2000	0	2000	2000	2000	0	0	0	0
Belmont	34711401	R & S Plating, Inc.	0	5000	5000	0	5000	0	5000	5000	0	5000	0	5000	0	0	0	0
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8	0	400000	400000	0	400000	0	400000	400000	0	400000	400000	400000	0	0	0	0
Belmont	34714001	Seleco, Inc.	0	1500	1500	0	1500	1500	0	1500	0	1500	1500	1500	0	0	0	0
Belmont	35890301	Siemens Industry, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28300701	Sigma-Tau PharmaSource	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34290101	Stanley Security Solutions, Inc.	0	15000	15000	0	15000	15000	0	15000	0	15000	15000	15000	0	0	0	0
Belmont	72181001	UniFirst Corporation	0	53000	0	0	53000	0	0	53000	0	0	0	53000	0	0	0	0
Belmont	28590101	Vertellus Agriculture & Nutrition LLC	0	0	0	0	0	0	425000	0	0	0	0	425000	0	0	0	0
Belmont	34711101	Williamson Polishing & Plating Company	0	22000	22000	22000	22000	22000	0	22000	0	22000	22000	22000	0	0	0	0
Southport	34790401	Arrow Powder Coating, LLC	0	4500	4500	0	4500	4500	0	4500	0	4500	4500	4500	0	0	0	0
Southport	37140501	Automotive Components Holdings, LLC	0	80000	80000	0	80000	80000	0	80000	0	80000	80000	80000	0	0	0	0
Southport	72180701	Cintas Corporation- Park Davis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	36230101	CMW, Inc.	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0
Southport	34713301	Commercial Finishing Corp.-Brookside Ave	0	5000	5000	0	5000	5000	0	5000	0	5000	5000	5000	0	0	0	0
Southport	20260101	Crossroad Farms Dairy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	29520101	Firestone Building Products Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	72180801	G&K Services, Inc.	0	35000	0	0	35000	0	0	35000	0	0	0	0	0	0	0	0
Southport	34710401	General Devices Company, Inc.	0	6000	6000	0	6000	6000	0	6000	0	6000	6000	6000	0	0	0	0
Southport	39950101	Genesis Casket Company, LLC	0	4500	4500	0	4500	4500	0	4500	0	4500	4500	4500	0	0	0	0
Southport	73990101	Heritage Environmental Services, LLC	30000	30000	30000	0	30000	4000	65000	30000	30000	30000	30000	30000	0	0	0	0
Southport	34714701	Imagineering Solutions LLC	0	10000	10000	0	10000	10000	0	10000	0	10000	10000	10000	0	0	0	0
Southport	45810701	Indianapolis Airport Authority- IMC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	50850101	Indianapolis Drum Service	0	30000	30000	0	30000	0	30000	30000	30000	30000	0	30000	0	0	30000	0
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34711601	Magnode Corporation	0	140000	140000	0	140000	140000	0	140000	0	140000	140000	140000	0	0	0	0
Southport	29920101	Metalworking Lubricants Company	0	170000	170000	0	170000	0	0	170000	170000	0	0	170000	0	0	0	0
Southport	28190101	Micronutrients, LLC	0	0	0	0	4000	0	0	0	0	4000	0	4000	4000	0	0	0
Southport	34460101	Procoat, Inc.	0	1750	1750	0	1750	1750	0	1750	0	1750	1750	1750	0	0	0	0
Southport	33410101	Quemetco, Inc.	250000	250000	0	0	250000	0	0	250000	0	0	0	250000	250000	0	0	0
Southport	35620101	Rexnord Industries	0	29000	29000	0	29000	29000	0	29000	0	29000	29000	29000	0	0	0	0
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operation	0	14000	14000	0	14000	14000	0	14000	0	14000	14000	14000	0	0	0	0
Southport	20890101	Sensient Technologies Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	95110101	South Side Landfill	130000	130000	0	0	130000	0	130000	130000	130000	0	0	0	0	0	0	0
Southport	34712601	Sumco, Inc.	0	57000	57000	0	57000	0	5000	57000	0	57000	57000	57000	0	0	0	0
Southport	34710601	Superior Metal Technologies, LLC	0	40000	40000	0	40000	40000	0	40000	0	40000	40000	40000	0	0	0	0
Southport	20330301	SVC Manufacturing, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	37280201	Tube Processing Corporation- AeroFab Div	0	19000	19000	0	19000	19000	0	19000	0	19000	19000	19000	0	0	0	0
Southport	28300801	Vesta Pharmaceuticals, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34420101	Von Duprin, Inc.	0	40000	40000	0	40000	40000	0	40000	0	40000	40000	40000	0	0	0	0
Southport	27410201	World Media Group	0	100	100	0	100	100	0	100	0	100	100	100	0	0	0	0
			Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenol
			410100	2373450	1442450	22000	2433450	764450	1074000	2443450	360100	1240450	936450	2659450	254000	0	30000	0

			Permit Limit (mg/L)		Categorical		Local Supersedes CAT											
							2.2		0.4									
Plant	Permit Numbe	Industry Name	Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenc
Belmont	34712401	All America Threaded Products, Inc.		0.69	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Belmont	72180201	Aramark Uniform Services																
Belmont	72180901	Cintas Corporation- Georgetown Road					2.2			4.7								
Belmont	34710201	Colors, Inc.		1.2	6.9		2.2	1.9		0.6		4.1		4.2				
Belmont	49530101	Covanta Indianapolis, Inc.		1.2			2.2			4.7				38				
Belmont	28300101	Eli Lilly & Company						1.13										
Belmont	33980101	Indiana Metal Treating, Inc.		1.2					5	0.6								
Belmont	34711001	Industrial Anodizing Company, Inc.		1.2	7		2.2	1.9		0.6		4.1		4.2				
Belmont	34790601	KECO Engineered Coatings, Inc.		0.08	1.94		2.2	0.84		0.48		2.79	0.3	1.83				
Belmont	34990101	MidAmerica Extrusions			0.4			0.27						1.33				
Belmont	20460201	National Starch LLC																
Belmont	20860101	Pepsi Cola General Bottlers of Indiana																
Belmont	34711201	Progressive Plating Company		0.11	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Belmont	34711401	R & S Plating, Inc.		1.2	24		2.2		5	0.6		7.3		38				
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8		0.67	2.71		2.2		0.08	0.67		3.89	0.42	2.55				
Belmont	34714001	Seleco, Inc.		0.11	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Belmont	35890301	Siemens Industry, Inc.																
Belmont	28300701	Sigma-Tau PharmaSource																
Belmont	34290101	Stanley Security Solutions, Inc.		0.69	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Belmont	72181001	UniFirst Corporation		1.2			2.2			4.7				38				
Belmont	28590101	Vertellus Agriculture & Nutrition LLC							0.41					1.29				
Belmont	34711101	Williamson Polishing & Plating Company		1.2	6.9	3.4	2.2	1.9		0.6		4	1.2	4.1				
Southport	34790401	Arrow Powder Coating, LLC		0.11	2.77		2.2	1.2		0.69		3.989	0.43	2.61				
Southport	37140501	Automotive Components Holdings, LLC		0.33	1.33		1.69	0.57		0.33		1.91	0.21	1.25				
Southport	72180701	Cintas Corporation- Park Davis																
Southport	36230101	CMW, Inc.	4	0.08	0.18		2.2	0.07		0.06	0.025	5.23	0.1	0.62				
Southport	34713301	Commercial Finishing Corp.-Brookside Ave		0.11	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Southport	20260101	Crossroad Farms Dairy																
Southport	29520101	Firestone Building Products Company																
Southport	72180801	G&K Services, Inc.		1.2			2.2			4.7								
Southport	34710401	General Devices Company, Inc.		0.69	2.77		2.2	1.2		0.69		3.98	0.43	2.61				
Southport	39950101	Genesis Casket Company, LLC		0.08	2.08		2.2	0.9		0.52		2.99	0.32	1.96				
Southport	73990101	Heritage Environmental Services, LLC	0.162	0.474	15.5		2.6	500	0.4	1.32	0.00234	3.95	0.12	2.87				
Southport	34714701	Imagineering Solutions LLC		0.11	2.74		2.2	1.19		0.68		3.93	0.42	2.58				
Southport	45810701	Indianapolis Airport Authority- IMC																
Southport	50850101	Indianapolis Drum Service		1.2	24		2.2		0.4	4.7	0.025	7.3		38			46	
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds																
Southport	34711601	Magnode Corporation		0.26	2.73		2.2	1.18		0.68		3.93	0.42	2.58				
Southport	29920101	Metalworking Lubricants Company		1.2	0.923		0.395			0.216	0.025			6.78				
Southport	28190101	Micronutrients, LLC					3.2					6.4		38	1.6			
Southport	34460101	Procoat, Inc.		0.1	2.41		2.2	1.05		0.6		3.47	0.37	2.27				
Southport	33410101	Quemetco, Inc.	2.31	1.2			2.2			0.46				1.69	1			
Southport	35620101	Rexnord Industries		0.35	1.42		1.73	0.61		0.35		2.03	0.22	1.33				
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operation		0.1	2.49		2.2	1.08		0.62		3.58	0.39	2.35				
Southport	20890101	Sensient Technologies Corporation																
Southport	95110101	South Side Landfill	4	1.2			2.2		0.4	4.7	0.025							
Southport	34712601	Sumco, Inc.		0.11	2.7		2.2		0.86	0.67		3.89	0.42	2.55				
Southport	34710601	Superior Metal Technologies, LLC		0.11	2.72		2.2	1.18		0.68		3.9	0.42	2.56				
Southport	20330301	SVC Manufacturing, Inc.																
Southport	37280201	Tube Processing Corporation- AeroFab Div		0.009	2.33		2.2	1.01		0.58		3.35	0.36	2.2				
Southport	28300801	Vesta Pharmaceuticals, Inc.																
Southport	34420101	Von Duprin, Inc.		0.09	2.29		2.79	0.99		0.57		3.28	0.35	2.15				
Southport	27410201	World Media Group		0.08	1.94		2.37	0.84		0.48		2.79	0.3	1.83				
																		NON CAT

Categorical ONLY Flow

Plant	Permit Numbe	Industry Name	Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenc
Belmont	34712401	All America Threaded Products, Inc.	0	12000	12000	0	12000	12000	0	12000	0	12000	12000	12000	0	0	0	0
Belmont	72180201	Aramark Uniform Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	72180901	Cintas Corporation- Georgetown Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34710201	Colors, Inc.	0	120000	120000	0	120000	120000	0	120000	0	120000	0	120000	0	0	0	0
Belmont	49530101	Covanta Indianapolis, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28300101	Eli Lilly & Company	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0
Belmont	33980101	Indiana Metal Treating, Inc.	0	14000	0	0	0	0	14000	14000	0	0	0	0	0	0	0	0
Belmont	34711001	Industrial Anodizing Company, Inc.	0	145000	145000	0	145000	145000	0	145000	0	145000	0	145000	0	0	0	0
Belmont	34790601	KECO Engineered Coatings, Inc.	0	3000	3000	0	3000	3000	0	3000	0	3000	3000	3000	0	0	0	0
Belmont	34990101	MidAmerica Extrusions	0	0	36000	0	0	36000	0	0	0	0	0	36000	0	0	0	0
Belmont	20460201	National Starch LLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	20860101	Pepsi Cola General Bottlers of Indiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34711201	Progressive Plating Company	0	2000	2000	0	2000	2000	0	2000	0	2000	2000	2000	0	0	0	0
Belmont	34711401	R & S Plating, Inc.	0	5000	0	0	5000	0	5000	5000	0	0	0	0	0	0	0	0
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8	0	400000	400000	0	400000	0	400000	400000	0	400000	400000	400000	0	0	0	0
Belmont	34714001	Seleco, Inc.	0	1500	1500	0	1500	1500	0	1500	0	1500	1500	1500	0	0	0	0
Belmont	35890301	Siemens Industry, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28300701	Sigma-Tau PharmaSource	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34290101	Stanley Security Solutions, Inc.	0	15000	15000	0	15000	15000	0	15000	0	15000	15000	15000	0	0	0	0
Belmont	72181001	UniFirst Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28590101	Vertellus Agriculture & Nutrition LLC	0	0	0	0	0	0	425000	0	0	0	0	425000	0	0	0	0
Belmont	34711101	Williamson Polishing & Plating Company	0	22000	22000	0	22000	22000	0	22000	0	22000	22000	22000	0	0	0	0
Southport	34790401	Arrow Powder Coating, LLC	0	4500	4500	0	4500	4500	0	4500	0	4500	4500	4500	0	0	0	0
Southport	37140501	Automotive Components Holdings, LLC	0	80000	80000	0	80000	80000	0	80000	0	80000	80000	80000	0	0	0	0
Southport	72180701	Cintas Corporation- Park Davis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	36230101	CMW, Inc.	0	100	100	0	100	100	0	100	0	100	100	100	0	0	0	0
Southport	34713301	Commercial Finishing Corp.-Brookside Ave	0	5000	5000	0	5000	5000	0	5000	0	5000	5000	5000	0	0	0	0
Southport	20260101	Crossroad Farms Dairy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	29520101	Firestone Building Products Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	72180801	G&K Services, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34710401	General Devices Company, Inc.	0	6000	6000	0	6000	6000	0	6000	0	6000	6000	6000	0	0	0	0
Southport	39950101	Genesis Casket Company, LLC	0	4500	4500	0	4500	4500	0	4500	0	4500	4500	4500	0	0	0	0
Southport	73990101	Heritage Environmental Services, LLC	30000	30000	30000	0	30000	4000	0	30000	30000	30000	30000	30000	0	0	0	0
Southport	34714701	Imagineering Solutions LLC	0	10000	10000	0	10000	10000	0	10000	0	10000	10000	10000	0	0	0	0
Southport	45810701	Indianapolis Airport Authority- IMC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	50850101	Indianapolis Drum Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34711601	Magnode Corporation	0	140000	140000	0	140000	140000	0	140000	0	140000	140000	140000	0	0	0	0
Southport	29920101	Metalworking Lubricants Company	0	0	170000	0	170000	0	0	170000	0	0	0	170000	0	0	0	0
Southport	28190101	Micronutrients, LLC	0	0	0	0	4000	0	0	0	0	4000	0	0	4000	0	0	0
Southport	34460101	Procoat, Inc.	0	1750	1750	0	1750	1750	0	1750	0	1750	1750	1750	0	0	0	0
Southport	33410101	Quemetco, Inc.	250000	0	0	0	0	0	0	250000	0	0	0	250000	0	0	0	0
Southport	35620101	Rexnord Industries	0	29000	29000	0	29000	29000	0	29000	0	29000	29000	29000	0	0	0	0
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operation	0	14000	14000	0	14000	14000	0	14000	0	14000	14000	14000	0	0	0	0
Southport	20890101	Sensient Technologies Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	95110101	South Side Landfill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34712601	Sumco, Inc.	0	57000	57000	0	57000	0	5000	57000	0	57000	57000	57000	0	0	0	0
Southport	34710601	Superior Metal Technologies, LLC	0	40000	40000	0	40000	40000	0	40000	0	40000	40000	40000	0	0	0	0
Southport	20330301	SVC Manufacturing, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	37280201	Tube Processing Corporation- AeroFab Div	0	19000	19000	0	19000	19000	0	19000	0	19000	19000	19000	0	0	0	0
Southport	28300801	Vesta Pharmaceuticals, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34420101	Von Duprin, Inc.	0	40000	40000	0	40000	40000	0	40000	0	40000	40000	40000	0	0	0	0
Southport	27410201	World Media Group	0	100	100	0	100	100	0	100	0	100	100	100	0	0	0	0
			Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenc
			280000	1220450	1407450	0	1380450	764450	849000	1640450	30000	1205450	936450	2082450	4000	0	0	0
			130100	1153000	35000	22000	1053000	0	225000	803000	330100	35000	0	577000	250000	0	30000	0

			Permit Limit (mg/L)															
							Use CAT		Use LOCAL									
			Categorical ONLY				2.2		0.4									
Plant	Permit Numbe	Industry Name	Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPheno
Belmont	34712401	All America Threaded Products, Inc.		0.69	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Belmont	72180201	Aramark Uniform Services																
Belmont	72180901	Cintas Corporation- Georgetown Road																
Belmont	34710201	Colors, Inc.		1.2	6.9		4.5	1.9		0.6		4.1		4.2				
Belmont	49530101	Covanta Indianapolis, Inc.																
Belmont	28300101	Eli Lilly & Company						1.13										
Belmont	33980101	Indiana Metal Treating, Inc.		1.2					0.4	0.6								
Belmont	34711001	Industrial Anodizing Company, Inc.		1.2	7		4.5	1.9		0.6		4.1		4.2				
Belmont	34790601	KECO Engineered Coatings, Inc.		0.08	1.94		2.37	0.84		0.48		2.79	0.3	1.83				
Belmont	34990101	MidAmerica Extrusions			0.4			0.27						1.33				
Belmont	20460201	National Starch LLC																
Belmont	20860101	Pepsi Cola General Bottlers of Indiana																
Belmont	34711201	Progressive Plating Company		0.11	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Belmont	34711401	R & S Plating, Inc.		1.2			4.5		0.4	0.6								
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8		0.67	2.71		3.31		0.08	0.67		3.89	0.42	2.55				
Belmont	34714001	Seleco, Inc.		0.11	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Belmont	35890301	Siemens Industry, Inc.																
Belmont	28300701	Sigma-Tau PharmaSource																
Belmont	34290101	Stanley Security Solutions, Inc.		0.69	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Belmont	72181001	UniFirst Corporation																
Belmont	28590101	Vertellus Agriculture & Nutrition LLC							0.4					1.29				
Belmont	34711101	Williamson Polishing & Plating Company		1.2	6.9		4.5	1.9		0.6		4	1.2	4.1				
Southport	34790401	Arrow Powder Coating, LLC		0.11	2.77		3.38	1.2		0.69		3.989	0.43	2.61				
Southport	37140501	Automotive Components Holdings, LLC		0.33	1.33		1.69	0.57		0.33		1.91	0.21	1.25				
Southport	72180701	Cintas Corporation- Park Davis																
Southport	36230101	CMW, Inc.		0.08	0.18		5.65	0.07		0.06		5.23	0.1	0.62				
Southport	34713301	Commercial Finishing Corp.-Brookside Ave		0.11	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Southport	20260101	Crossroad Farms Dairy																
Southport	29520101	Firestone Building Products Company																
Southport	72180801	G&K Services, Inc.																
Southport	34710401	General Devices Company, Inc.		0.69	2.77		3.38	1.2		0.69		3.98	0.43	2.61				
Southport	39950101	Genesis Casket Company, LLC		0.08	2.08		2.54	0.9		0.52		2.99	0.32	1.96				
Southport	73990101	Heritage Environmental Services, LLC	0.162	0.474	15.5		2.6	500		1.32	0.00234	3.95	0.12	2.87				
Southport	34714701	Imagineering Solutions LLC		0.11	2.74		3.34	1.19		0.68		3.93	0.42	2.58				
Southport	45810701	Indianapolis Airport Authority- IMC																
Southport	50850101	Indianapolis Drum Service																
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds																
Southport	34711601	Magnode Corporation		0.26	2.73		3.33	1.18		0.68		3.93	0.42	2.58				
Southport	29920101	Metalworking Lubricants Company			0.923		0.395			0.216				6.78				
Southport	28190101	Micronutrients, LLC					3.2					6.4			1.6			
Southport	34460101	Procoat, Inc.		0.1	2.41		2.94	1.05		0.6		3.47	0.37	2.27				
Southport	33410101	Quemetco, Inc.	2.31							0.46				1.69				
Southport	35620101	Rexnord Industries		0.35	1.42		1.73	0.61		0.35		2.03	0.22	1.33				
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operation		0.1	2.49		3.04	1.08		0.62		3.58	0.39	2.35				
Southport	20890101	Sensient Technologies Corporation																
Southport	95110101	South Side Landfill																
Southport	34712601	Sumco, Inc.		0.11	2.7		3.38	1.2	0.86	0.67		3.89	0.42	2.55				
Southport	34710601	Superior Metal Technologies, LLC		0.11	2.72		3.32	1.18		0.68		3.9	0.42	2.56				
Southport	20330301	SVC Manufacturing, Inc.																
Southport	37280201	Tube Processing Corporation- AeroFab Div		0.009	2.33		2.84	1.01		0.58		3.35	0.36	2.2				
Southport	28300801	Vesta Pharmaceuticals, Inc.																
Southport	34420101	Von Duprin, Inc.		0.09	2.29		2.79	0.99		0.57		3.28	0.35	2.15				
Southport	27410201	World Media Group		0.08	1.94		2.37	0.84		0.48		2.79	0.3	1.83				

Categorical Loading (lbs/day)

Categorical Loading (lbs/day)

Plant	Permit Numbe	Industry Name	Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenol
Belmont	34712401	All America Threaded Products, Inc.	0	0.069055	0.277222	0	0.33827	0.120096	0	0.069055	0	0.398318	0.043034	0.261209	0	0	0	0
Belmont	72180201	Aramark Uniform Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	72180901	Cintas Corporation- Georgetown Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34710201	Colors, Inc.	0	1.20096	6.90552	0	4.5036	1.90152	0	0.60048	0	4.10328	0	4.20336	0	0	0	0
Belmont	49530101	Covanta Indianapolis, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28300101	Eli Lilly & Company	0	0	0	0	0	0.094242	0	0	0	0	0	0	0	0	0	0
Belmont	33980101	Indiana Metal Treating, Inc.	0	0.140112	0	0	0	0	0.046704	0.070056	0	0	0	0	0	0	0	0
Belmont	34711001	Industrial Anodizing Company, Inc.	0	1.45116	8.4651	0	5.44185	2.29767	0	0.72558	0	4.95813	0	5.07906	0	0	0	0
Belmont	34790601	KECO Engineered Coatings, Inc.	0	0.002002	0.048539	0	0.059297	0.021017	0	0.01201	0	0.069806	0.007506	0.045787	0	0	0	0
Belmont	34990101	MidAmerica Extrusions	0	0	0.120096	0	0	0.081065	0	0	0	0	0	0.399319	0	0	0	0
Belmont	20460201	National Starch LLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	20860101	Pepsi Cola General Bottlers of Indiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34711201	Progressive Plating Company	0	0.001835	0.046204	0	0.056378	0.020016	0	0.011509	0	0.066386	0.007172	0.043535	0	0	0	0
Belmont	34711401	R & S Plating, Inc.	0	0.05004	0	0	0.18765	0	0.01668	0.02502	0	0	0	0	0	0	0	0
Belmont	37240401	Rolls-Royce Corporation- Plant 5 & 8	0	2.23512	9.04056	0	11.04216	0	0.26688	2.23512	0	12.97704	1.40112	8.5068	0	0	0	0
Belmont	34714001	Seleco, Inc.	0	0.001376	0.034653	0	0.042284	0.015012	0	0.008632	0	0.04979	0.005379	0.032651	0	0	0	0
Belmont	35890301	Siemens Industry, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28300701	Sigma-Tau PharmaSource	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	34290101	Stanley Security Solutions, Inc.	0	0.086319	0.346527	0	0.422838	0.15012	0	0.086319	0	0.497898	0.053793	0.326511	0	0	0	0
Belmont	72181001	UniFirst Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont	28590101	Vertellus Agriculture & Nutrition LLC	0	0	0	0	0	0	1.4178	0	0	0	0	4.572405	0	0	0	0
Belmont	34711101	Williamson Polishing & Plating Company	0	0.220176	1.266012	0	0.82566	0.348612	0	0.110088	0	0.73392	0.220176	0.752268	0	0	0	0
Southport	34790401	Arrow Powder Coating, LLC	0	0.004128	0.103958	0	0.126851	0.045036	0	0.025896	0	0.149707	0.016138	0.097953	0	0	0	0
Southport	37140501	Automotive Components Holdings, LLC	0	0.220176	0.887376	0	1.127568	0.380304	0	0.220176	0	1.274352	0.140112	0.834	0	0	0	0
Southport	72180701	Cintas Corporation- Park Davis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	36230101	CMW, Inc.	0	6.67E-05	0.00015	0	0.004712	5.84E-05	0	5E-05	0	0.004362	8.34E-05	0.000517	0	0	0	0
Southport	34713301	Commercial Finishing Corp.-Brookside Ave	0	0.004587	0.115509	0	0.140946	0.05004	0	0.028773	0	0.165966	0.017931	0.108837	0	0	0	0
Southport	20260101	Crossroad Farms Dairy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	29520101	Firestone Building Products Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	72180801	G&K Services, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34710401	General Devices Company, Inc.	0	0.034528	0.138611	0	0.169135	0.060048	0	0.034528	0	0.199159	0.021517	0.130604	0	0	0	0
Southport	39950101	Genesis Casket Company, LLC	0	0.003002	0.078062	0	0.095326	0.033777	0	0.019516	0	0.112215	0.01201	0.073559	0	0	0	0
Southport	73990101	Heritage Environmental Services, LLC	0.040532	0.118595	3.8781	0	0.65052	16.68	0	0.330264	0.000585	0.98829	0.030024	0.718074	0	0	0	0
Southport	34714701	Imagineering Solutions LLC	0	0.009174	0.228516	0	0.278556	0.099246	0	0.056712	0	0.327762	0.035028	0.215172	0	0	0	0
Southport	45810701	Indianapolis Airport Authority- IMC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	50850101	Indianapolis Drum Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	45810201	Indianapolis Int'l Airport- Stormwater Ponds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34711601	Magnode Corporation	0	0.303576	3.187548	0	3.888108	1.377768	0	0.793968	0	4.588668	0.490392	3.012408	0	0	0	0
Southport	29920101	Metalworking Lubricants Company	0	0	1.308629	0	0.560031	0	0	0.306245	0	0	0	9.612684	0	0	0	0
Southport	28190101	Micronutrients, LLC	0	0	0	0	0.106752	0	0	0	0	0.213504	0	0	0.053376	0	0	0
Southport	34460101	Procoat, Inc.	0	0.00146	0.035174	0	0.042909	0.015325	0	0.008757	0	0.050645	0.0054	0.033131	0	0	0	0
Southport	33410101	Quemetco, Inc.	4.81635	0	0	0	0	0	0	0.9591	0	0	0	3.52365	0	0	0	0
Southport	35620101	Rexnord Industries	0	0.084651	0.343441	0	0.418418	0.147535	0	0.084651	0	0.490976	0.053209	0.321674	0	0	0	0
Southport	37240101	Rolls-Royce Corp.-Single Crystal Operation	0	0.011676	0.290732	0	0.35495	0.126101	0	0.072391	0	0.418001	0.045536	0.274386	0	0	0	0
Southport	20890101	Sensient Technologies Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	95110101	South Side Landfill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34712601	Sumco, Inc.	0	0.052292	1.283526	0	1.606784	0	0.035862	0.318505	0	1.849228	0.19966	1.212219	0	0	0	0
Southport	34710601	Superior Metal Technologies, LLC	0	0.036696	0.907392	0	1.107552	0.393648	0	0.226848	0	1.30104	0.140112	0.854016	0	0	0	0
Southport	20330301	SVC Manufacturing, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	37280201	Tube Processing Corporation- AeroFab Div	0	0.001426	0.369212	0	0.450026	0.160045	0	0.091907	0	0.530841	0.057046	0.348612	0	0	0	0
Southport	28300801	Vesta Pharmaceuticals, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southport	34420101	Von Duprin, Inc.	0	0.030024	0.763944	0	0.930744	0.330264	0	0.190152	0	1.094208	0.11676	0.71724	0	0	0	0
Southport	27410201	World Media Group	0	6.67E-05	0.001618	0	0.001977	0.000701	0	0.0004	0	0.002327	0.00025	0.001526	0	0	0	0
			Arsenic	Cadmium	Chromium T	Chromium VI	Copper	Cyanide (T)	Cyanide (a)	Lead	Mercury	Nickel	Silver	Zinc	Selenium	Beryllium	Phenol	PentaClPhenol
			4.856882	6.374279	40.47193	0	34.98185	24.94926	1.783926	7.722707	0.000585	37.61582	3.119389	46.31317	0.053376	0	0	0

APPENDIX

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2010 AWT Influent and Effluent Data

MAHC	56.23	58.23	0.02	530.11	384.37	0.08	983.14	69.28	1,551.72
	BE In								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
	ug/l	ug/l	mg/L	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
01/07/10	3	0.3	0.02	6	100		11.5	10.3	2050
01/13/10	3	0.3	0.022	6.8	112		6.6	3	174
01/22/10			0.012						
01/26/10			0.013						
02/02/10	3	1.1	0.022	6	111		18.4	9.9	334
02/08/10						0.0302			
02/12/10	3	0.4	0.021	6	101		15.2	17.3	2260
02/18/10			0.021						
02/25/10			0.022						
03/02/10	3	0.3	0.018	6	112		8.9	3	168
03/12/10	3	1.1	0.015	22.2	170		22.8	49.4	1770
03/17/10			0.021						
03/25/10			0.007						
03/29/10			0.017						
04/07/10	3	0.9	0.02	6	135		14.8	13.8	473
04/16/10	3	2.3	0.015	53.9	345		71.1	60	2590
04/20/10			0.013						
04/26/10			0.009						
05/04/10	3	0.5	0.014	41.8	73.9		12.9	6	173
05/13/10	3	0.5	0.01	6	60		7.3	5.7	543
05/18/10						0.0509			
05/19/10			0.024						
05/24/10			0.009						
06/04/10	3	0.4	0.023	8.1	57.2		8.4	20.6	135
06/08/10	3	0.3	0.006	6	65		12.6	3	150
06/17/10			0.009						
06/23/10			0.003						
06/28/10			0.012						
07/06/10	3	0.3	0.007	6	72.9		12.1	3	306
07/15/10	3	0.3	0.007	7	71.4		13.9	12.1	506
07/21/10			0.007						
07/27/10			0.009						
08/04/10	3	0.3	0.007	6	35.1		16.5	4.4	162
08/11/10	3	0.5	0.016	6	67.2		9.9	4.6	285
08/16/10						0.0283			
08/19/10			0.01						
08/23/10			0.01						
09/02/10	3	0.3	0.022	11.1	30.8		28.4	5	992
09/08/10	3	0.3	0.013	6	18.6		23.7	3	567
09/17/10			0.014						
09/23/10			0.012						
09/28/10			0.01						
10/05/10	3	0.6	0.022	6.5	82.6		16.8	6.8	196
10/14/10	3	0.6	0.011	7.7	121		13.4	16.9	652
10/22/10			0.012						
10/27/10			0.01						
11/02/10	3	0.3	0.009	6	119		5.8	3	128
11/10/10	3	0.3	0.013	9.3	78		17.4	3	186
11/18/10			0.006						
11/22/10			0.009						
12/01/10	3	0.3	0.026	6.1	72.3		11.4	9.2	239
12/09/10	3	0.4	0.01	15.9	95.8		10.5	4	1880
12/17/10			0.012						
12/21/10			0.016						
12/27/10			0.014						
Average	3	0.5375	0.013692	11.18333	96.11667	0.036467	16.2625	11.54167	704.95833
LOD adj Av	1.5	0.26875	0.013692	5.591667	96.11667	0.036467	16.2625	11.54167	
%<LOD	100%	50%	0%	50%	0%	0%	0%	29%	0%

	56.23	58.23	0.02	530.11	384.37	0.08	983.14	69.28	1,551.72
	Sp In								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
	ug/l	ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
01/07/10	3	0.3	0.004	6	44.5		7.2	3	272
01/13/10	3	0.3	0.003	6	78.1		3.3	3	232
01/22/10			0.02						
01/26/10			0.007						
02/02/10	3	0.3	0.001	6	79.6		11.4	3	234
02/08/10						0.0119			
02/12/10	3	0.3	0.003	6	114		9.2	3	572
02/18/10			0.009						
02/25/10			0.024						
03/02/10	3	0.3	0.006	6	83.1		9.7	3	405
03/12/10	3	0.4	0.004	6	71.9		8.4	3	645
03/17/10			0.019						
03/25/10			0.03						
03/29/10			0.027						
04/07/10	3	0.4	0.034	6	131		9.2	3	304
04/16/10	3	0.3	0.009	6	107		7	3	248
04/20/10			0.004						
04/26/10			0.019						
05/04/10	3	0.3	0.033	6	79.8		5.1	3	224
05/13/10	3	0.3	0.019	6	41.1		6.9	3	208
05/18/10						0.0202			
05/19/10			0.064						
05/24/10			0.003						
06/04/10	3	0.3	0.016	6	67.9		7	3	142
06/08/10	3	0.3	0.009	6	91.1		13.3	3	262
06/17/10			0.023						
06/23/10			0.001						
06/28/10			0.013						
07/06/10	3	0.5	0.006	6	91.2		9	3	369
07/15/10	3	0.6	0.022	6	83.8		11.9	3	480
07/21/10			0.027						
07/27/10			0.006						
08/04/10	3	0.3	0.007	6	114		9.4	4.8	528
08/11/10	3	0.3	0.004	6	57.8		7.6	3	398
08/16/10						0.0856			
08/19/10			0.009						
08/23/10			0.005						
09/02/10	3	0.5	0.005	6	77.5		11.5	3	1640
09/08/10	3	0.3	0.006	6	111		18.2	3	577
09/17/10			0.009						
09/23/10			0.006						
09/28/10			0.001						
10/05/10	3	0.3	0.012	6	120		20.1	4.2	743
10/14/10	3	0.3	0.009	6	110		9.2	7	828
10/22/10			0.004						
10/27/10			0.006						
11/02/10	3	0.4	0.015	6	119		10.7	3	724
11/10/10	3	0.7	0.005	7.2	101		12.1	3	418
11/18/10			0.005						
11/22/10			0.004						
12/01/10	3	0.3	0.023	6	44.6		10.9	3	309
12/09/10	3	0.3	0.013	6	134		9.1	4	789
12/17/10			0.002						
12/21/10			0.014						
12/27/10			0.007						
Average	3	0.36087	0.012392	6.052174	91.67391	0.039233	10.0087	3.347826	490.391304
Ave both P	3.00	0.449185	0.013042	8.617754	93.89529	0.03785	13.1356	7.444746	597.674819
	100%	71%	6%	96%	0%	0%	0%	83%	0%

MaxEFF	190.00	2.87	0.0110	544.83	32.46	0.01	428.47	14.32091	288
	BE Ef								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
		ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
01/07/10		0.3	0.011	6	15.7		6.4	3	15.7
01/13/10		0.3	0.015	6	15.5		6.7	3	13.3
01/22/10			0.008						
01/26/10			0.008						
02/02/10		0.3	0.011	6	16.9		7.7	3	123
02/08/10						0.0016			
02/12/10		0.3	0.011	6	15.9		9.1	3	450
02/18/10			0.011						
02/25/10			0.01						
03/02/10		0.3	0.012	6	14.8		5.8	3	114
03/12/10		0.3	0.018	6	15.7		8.4	3	199
03/17/10			0.011						
03/25/10			0.01						
03/29/10			0.007						
04/07/10		0.3	0.012	6	11.1		6.8	3	108
04/16/10		0.3	0.011	6	12.4		3	3	95.4
04/20/10			0.011						
04/26/10			0.005						
05/04/10		0.3	0.007	6	16		4.8	3	61
05/13/10		0.3	0.008	6	6.6		5.6	3	84.2
05/18/10						0.001			
05/19/10			0.009						
05/24/10			0.009						
06/04/10		0.3	0.011	6	9.7		5.5	3	77.7
06/08/10		0.3	0.007	6	5.8		8.9	3	80.3
06/17/10			0.008						
06/23/10			0.005						
06/28/10			0.006						
07/06/10		0.3	0.006	6	10.4		4.4	3	176
07/15/10		0.3	0.006	6	13.9		14.4	3	262
07/21/10			0.003						
07/27/10			0.006						
08/04/10		0.3	0.001	6	12.8		7.7	3	217
08/11/10		0.3	0.006	6	13.1		7	3	155
08/16/10						0.001			
08/19/10			0.003						
08/23/10			0.008						
09/02/10		0.3	0.008	6	11.2		14.8	3	237
09/08/10		0.3	0.009	6	7.9		12.1	3	198
09/17/10			0.006						
09/23/10			0.007						
09/28/10			0.007						
10/05/10		0.3	0.008	6	12.8		7.6	3	218
10/14/10		0.3	0.008	6	11.6		7	3	169
10/22/10			0.007						
10/27/10			0.007						
11/02/10		0.3	0.007	6	15.3		6.3	3	186
11/10/10		0.3	0.012	6	9.1		8.5	3	330
11/18/10			0.004						
11/22/10			0.006						
12/01/10		0.3	0.007	6	11.7		7	3	175
12/09/10		0.3	0.006	6	13.2		7.8	3	202
12/17/10			0.006						
12/21/10			0.006						
12/27/10			0.006						
Average		0.3	0.008157	6	12.32174	0.0012	7.691304	3	170.9087
	%<LOD	100%	1.9%	100%	0%	67%	4%	100%	0%

	190.00	2.87	0.0110	544.83	32.46	0.01	428.47	14.32	288.48
	SP Ef								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
		ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
01/07/10		0.3	0.003	6	13.4		5.3	3	99.5
01/13/10		0.3	0.003	6	12.4		3	3	77.4
01/22/10			0.003						
01/26/10			0.001						
02/02/10		0.3	0.004	6	10.1		5.6	3	69.8
02/08/10						0.001			
02/12/10		0.3	0.005	6	14.1		5.7	3	89.5
02/18/10			0.002						
02/25/10			0.008						
03/02/10		0.3	0.003	6	12		4.5	3	70.3
03/12/10		0.3	0.003	6	6.7		6.3	3	69.1
03/17/10			0.006						
03/25/10			0.004						
03/29/10			0.006						
04/07/10		0.3	0.008	6	10.4		6.8	3	71.8
04/16/10		0.3	0.007	6	13.1		5.7	3	85.9
04/20/10			0.004						
04/26/10			0.004						
05/04/10		0.3	0.006	6	8.4		3.9	3	52.9
05/13/10		0.3	0.008	6	5.8		4.7	3	61.4
05/18/10						0.001			
05/19/10			0.011						
05/24/10			0.005						
06/04/10		0.3	0.007	6	9.4		5.7	3	104
06/08/10		0.3	0.006	6	8.9		7.9	3	114
06/17/10			0.005						
06/23/10			0.003						
06/28/10			0.004						
07/06/10		0.3	0.002	6	5.9		8	3	76.1
07/15/10		0.3	0.009	6	7.4		9.7	3	232
07/21/10			0.003						
07/27/10			0.002						
08/04/10		0.3	0.002	6	10.1		7.4	3	347
08/11/10		0.3	0.002	6	7.2		9.3	3	348
08/16/10						0.001			
08/19/10			0.001						
08/23/10			0.005						
09/02/10		0.3	0.003	6	8.1		6.9	3	102
09/08/10		0.3	0.004	6	10.4		9.6	3	99.4
09/17/10			0.004						
09/23/10			0.003						
09/28/10			0.001						
10/05/10		0.3	0.004	6	8.3		9.5	3	104
10/14/10		0.3	0.005	6	7.7		7	3	108
10/22/10			0.004						
10/27/10			0.001						
11/02/10		0.3	0.001	6	8.9		8.2	3	88.7
11/10/10		0.3	0.004	6	8.4		8.2	3	113
11/18/10			0.001						
11/22/10			0.003						
12/01/10		0.3	0.003	6	8.1		6.9	3	80.2
12/09/10		0.3	0.003	6	13.7		5.9	3	86.3
12/17/10			0.001						
12/21/10			0.001						
12/27/10			0.001						
Average		0.3	0.003902	6	9.369565	0.001	6.8	3	115.2522
Ave both plants		0.300	0.006029	6	10.84565	0.0011	7.245652	3	143.0804
		100%	17%	100%	0%	100%	4%	100%	0%
									Bothe

	BE Removal							
	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
		45%		84%		44%	85%	99%
		32%	56%	86%				92%
		33%						
		38%						
	86%	50%		85%		58%	85%	63%
					95%			
	63%	48%		84%		40%	91%	80%
		48%						
		55%						
		33%		87%		35%		32%
	86%		86%	91%		63%	97%	89%
		48%						
		59%						
	83%	40%		92%		54%	89%	77%
	93%	27%	94%	96%		98%	98%	96%
		15%						
		44%						
	70%	50%	93%	78%		63%	75%	65%
	70%	20%		89%		23%	74%	84%
					99%			
		63%						
		0%						
	63%	52%	63%	83%		35%	93%	42%
				91%		29%		46%
		11%						
		50%						
		14%		86%		64%		42%
		14%	57%	81%			88%	48%
		57%						
		33%						
		86%		64%		53%	66%	
	70%	63%		81%		29%	67%	46%
					98%			
		70%						
		20%						
		64%	73%	64%		48%	70%	76%
		31%		58%		49%		65%
		57%						
		42%						
		30%						
	75%	64%	54%	85%		55%	78%	
	75%	27%	61%	90%		48%	91%	74%
		42%						
		30%						
		22%		87%				
		8%	68%	88%		51%		
		33%						
		33%						
		73%	51%	84%		39%	84%	27%
	63%	40%	81%	86%		26%	63%	89%
		50%						
		63%						
		57%						
ave	75%	41%	70%	83%	97%	48%	82%	67%
med	73%	42%	65%	85%	98%	48%	85%	70%
25th%	68%	30%	57%	82%	96%	35%	74%	46%
75th%	84%	55%	82%	89%	99%	55%	91%	86%
					97%			
AWT ADRE	70%	50%	65%	87%	98%	38%	79%	74%

Drop set if Influent < detection Limit

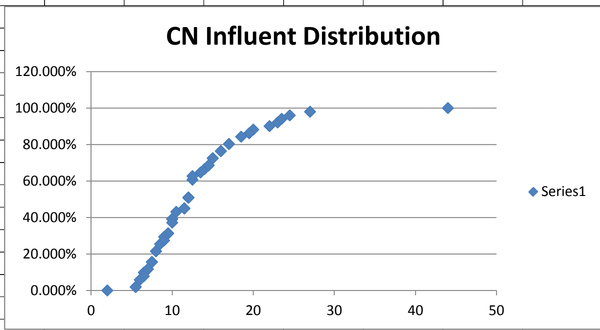
Use 1/2 detection Limit for effluent value if < detection limit

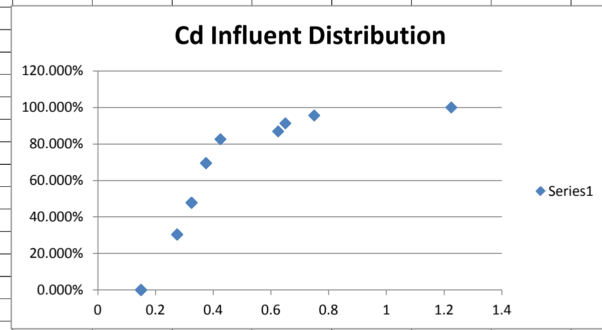
	SP Removal							
	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
		25%		70%		26%		63%
		0%		84%		55%		67%
		85%						
		88%						
				87%		51%		70%
					96%			
				88%		38%		84%
		78%						
		67%						
		50%		86%		54%		83%
	63%	25%		91%		25%		89%
		68%						
		87%						
		78%						
	63%	76%		92%		26%		76%
		22%		88%		19%		65%
		79%						
		82%		89%		24%		76%
		58%		86%		32%		70%
					98%			
		83%						
		56%		86%		19%		27%
		33%		90%		41%		56%
		78%						
		69%						
	70%	67%		94%		11%		79%
	75%	59%		91%		18%		52%
		89%						
		67%						
		71%		91%		21%	69%	34%
		50%		88%		-22%		13%
					99%			
		91%						
	70%	40%		90%		40%		94%
		33%		91%		47%		83%
		56%						
		50%						
		17%						
		67%		93%		53%	64%	86%
		44%		93%		24%	79%	87%
		86%						
	63%	94%		93%		23%		88%
	79%	20%		92%		32%		73%
		83%						
		25%						
		87%		82%		37%		74%
		77%		90%		35%	63%	89%
		59%						
		94%						
		88%						
ave	69%	62%		88%	98%	30%	69%	70%
med	70%	67%		90%	98%	29%	67%	75%
25th%	63%	50%		87%	97%	23%	64%	65%
75th%	73%	83%		91%	98%	40%	71%	85%

	56.23	58.23	21.87	530.11	384.37	0.08	983.14	69.28	1,551.72
	Influent Average Both Plants w/ adj for LOD								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
	As	Cd	CN-A ug/L	Cr	Cu	Hg	Ni	Pb	Zn
	1.5	0.15	12	3	72.25		9.35	5.9	1161
	1.5	0.15	12.5	4.9	95.05		4.95	1.815	203
			16						
			10						
	1.5	0.625	11.5	3	95.3		14.9	5.7	284
						0.02105			
	1.5	0.275	12	3	107.5		12.2	9.4	1416
			15						
			23						
	1.5	0.15	12	3	97.55		9.3	1.815	286.5
	1.5	0.75	9.5	12.6	120.95		15.6	25.45	1207.5
			20						
			18.5						
			22						
	1.5	0.65	27	3	133		12	7.65	388.5
	1.5	1.225	12	28.45	226		39.05	30.75	1419
			8.5						
			14						
	1.5	0.325	23.5	22.4	76.85		9	3.75	198.5
	1.5	0.325	14.5	3	50.55		7.1	3.6	375.5
						0.03555			
			44						
			6						
	1.5	0.275	19.5	5.55	62.55		7.7	11.05	138.5
	1.5	0.15	7.5	3	78.05		12.95	1.815	206
			16						
			2						
			12.5						
	1.5	0.325	6.5	3	82.05		10.55	1.815	337.5
	1.5	0.375	14.5	5	77.6		12.9	6.8	493
			17						
			7.5						
	1.5	0.15	7	3	74.55		12.95	4.6	345
	1.5	0.325	10	3	62.5		8.75	3.05	341.5
						0.05695			
			9.5						
			7.5						
	1.5	0.325	13.5	7.05	54.15		19.95	3.25	1316
	1.5	0.15	9.5	3	64.8		20.95	1.815	572
			11.5						
			9						
			5.5						
	1.5	0.375	17	4.75	101.3		18.45	5.5	469.5
	1.5	0.375	10	5.35	115.5		11.3	11.95	740
			8						
			8						
	1.5	0.275	12	3	119		8.25	1.815	426
	1.5	0.425	9	8.25	89.5		14.75	1.815	302
			5.5						
			6.5						
	1.5	0.15	24.5	4.55	58.45		11.15	5.35	274
	1.5	0.275	11.5	9.45	114.9		9.8	4	1334.5
			7						
			15						
			10.5						
Ave	1.5	0.36	13.0	6.4	92.9	0.038	13.1	6.7	593.1
Median	1.5	0.33	12.0	4.6	89.5	0.037	12.0	4.6	388.5
25th%	1.5	0.15	8.4	3.0	70.4	0.028	9.2	1.8	285.9
75th%	1.5	0.38	15.3	5.9	109.4	0.0463	14.8	7.0	845.3
60th%									460.8000
MAX Dom	1.5	0.38	15.3	5.9	109.4	0.030	14.8	7.0	460.8
MAX Day	1.5000	1.2250	44.0000	28.4500	226.0000	0.0570	39.0500	30.7500	1,419.0000
Hg: Use individual plant data due to low # samples. Use 60th%, as below								either plant	
Zn: Use 60th peecentile due to sharp break at above 60th%							Hg influent	percentile	
							0.0302	60%	
							0.0509	80%	
							0.0283	40%	
							0.0119	0%	
							0.0202	20%	
							0.0856	100%	
						75th%	0.045725		
						60th%	0.0302		

	190.00	2.87	11.00	544.83	32.46	0.01	428.47	14.32	288.48
	Effluent Average Both Plants w/ adj for LOD								
	As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
	As	Cd	CN-A ug/L	Cr	Cu	Hg	Ni	Pb	Zn
		0.15	7.0	3.00	14.6		5.9	1.50	57.6
		0.15	9.0	3.00	14.0		4.9	1.50	45.4
			5.5						
			4.4						
		0.15	7.5	3.00	13.5		6.7	1.50	96.4
						0.0011			
		0.15	8.0	3.00	15.0		7.4	1.50	269.8
			6.5						
			9.0						
		0.15	7.5	3.00	13.4		5.2	1.50	92.2
		0.15	10.5	3.00	11.2		7.4	1.50	134.1
			8.5						
			7.0						
			6.5						
		0.15	10.0	3.00	10.8		6.8	1.50	89.9
		0.15	9.0	3.00	12.8		4.4	1.50	90.7
			7.5						
			4.5						
		0.15	6.5	3.00	12.2		4.4	1.50	57.0
		0.15	8.0	3.00	6.2		5.2	1.50	72.8
						0.0005			
			10.0						
		0.15	9.0	3.00	9.6		5.6	1.50	90.9
		0.15	6.5	3.00	7.4		8.4	1.50	97.2
			6.5						
			4.0						
			5.0						
		0.15	4.0	3.00	8.2		6.2	1.50	126.1
		0.15	7.5	3.00	10.7		12.1	1.50	247.0
			3.0						
			4.0						
		0.15	1.5	3.00	11.5		7.6	1.50	282.0
		0.15	4.0	3.00	10.2		8.2	1.50	251.5
			1.9						
			6.5						
		0.15	5.5	3.00	9.7		10.9	1.50	169.5
		0.15	6.5	3.00	9.2		10.9	1.50	148.7
			5.0						
			5.0						
			3.9						
		0.15	6.0	3.00	10.6		8.6	1.50	161.0
		0.15	6.5	3.00	9.7		7.0	1.50	138.5
			5.5						
			3.9						
		0.15	3.9	3.00	12.1		7.3	1.50	137.4
		0.15	8.0	3.00	8.8		8.4	1.50	221.5
			2.4						
			4.5						
		0.15	5.0	3.00	9.9		7.0	1.50	127.6
		0.15	4.5	3.00	13.5		6.9	1.50	144.2
			3.4						
			3.4						
			3.4						
		0.15	5.9	3.0	11.0	0.001	7.2	1.5	139.5
		0.15	6.0	3.0	10.8	0.001	7.0	1.5	134.1
		0.15	4.0	3.0	9.6	0.001	5.8	1.5	90.8
		0.15	7.5	3.0	12.9	0.001	8.2	1.5	163.1
		0.15	7.5	3.0	12.9	0.001	8.2	1.5	163.1
			10.5			0.0011			
	MRE	58.0%	54.3%	53.3%	88.2%	98.0%	45.0%	77.6%	76.5%

Both Plants Influent Percentiles								
As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
As	Cd	CN-A	Cr	Cu	Hg	Ni	Pb	Zn
0.000%	0.000%	50.900%	0.000%	26.000%		30.400%	69.500%	78.200%
0.000%	0.000%	60.700%	60.800%	56.500%		0.000%	0.000%	8.600%
		76.400%						
		39.200%						
0.000%	86.900%	45.000%	0.000%	60.800%		78.200%	65.200%	21.700%
					0.000%			
0.000%	30.400%	50.900%	0.000%	73.900%		56.500%	82.600%	95.600%
		72.500%						
		92.100%						
0.000%	0.000%	50.900%	0.000%	65.200%		26.000%	0.000%	26.000%
0.000%	95.600%	31.300%	91.300%	91.300%		82.600%	95.600%	82.600%
		88.200%						
		84.300%						
		90.100%						
0.000%	91.300%	98.000%	0.000%	95.600%		52.100%	78.200%	52.100%
0.000%	100.000%	50.900%	100.000%	100.000%		100.000%	100.000%	100.000%
		25.400%						
		66.600%						
0.000%	47.800%	94.100%	95.600%	34.700%		21.700%	43.400%	4.300%
0.000%	47.800%	68.600%	0.000%	0.000%		4.300%	39.100%	47.800%
					50.000%			
		100.000%						
		5.800%						
0.000%	30.400%	86.200%	73.900%	17.300%		8.600%	86.900%	0.000%
0.000%	0.000%	15.600%	0.000%	43.400%		65.200%	0.000%	13.000%
		76.400%						
		0.000%						
		62.700%						
0.000%	47.800%	9.800%	0.000%	47.800%		39.100%	0.000%	34.700%
0.000%	69.500%	68.600%	65.200%	39.100%		60.800%	73.900%	65.200%
		80.300%						
		15.600%						
0.000%	0.000%	11.700%	0.000%	30.400%		65.200%	52.100%	43.400%
0.000%	47.800%	39.200%	0.000%	13.000%		17.300%	30.400%	39.100%
					100.000%			
		31.300%						
		15.600%						
0.000%	47.800%	64.700%	78.200%	4.300%		91.300%	34.700%	86.900%
0.000%	0.000%	31.300%	0.000%	21.700%		95.600%	0.000%	69.500%
		45.000%						
		29.400%						
		1.900%						
0.000%	69.500%	80.300%	56.500%	69.500%		86.900%	60.800%	60.800%
0.000%	69.500%	37.200%	69.500%	82.600%		47.800%	91.300%	73.900%
		21.500%						
		21.500%						
0.000%	30.400%	50.900%	0.000%	86.900%		13.000%	0.000%	56.500%
0.000%	82.600%	27.400%	82.600%	52.100%		73.900%	0.000%	30.400%
		1.900%						
		7.800%						
0.000%	0.000%	96.000%	52.100%	8.600%		43.400%	56.500%	17.300%
0.000%	30.400%	45.000%	86.900%	78.200%		34.700%	47.800%	91.300%
		11.700%						
		72.500%						
		43.100%						


CN Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
10
20
30
40
50
Series1


Cd Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
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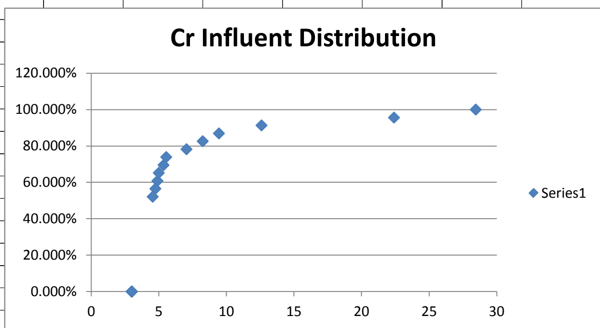
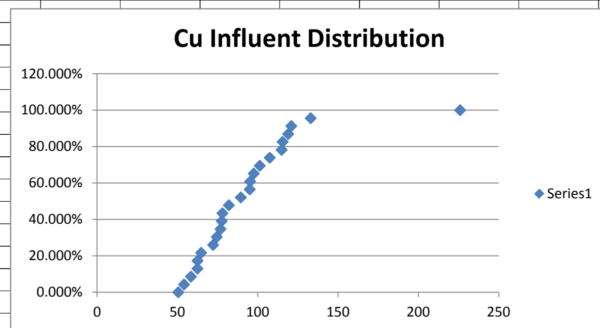
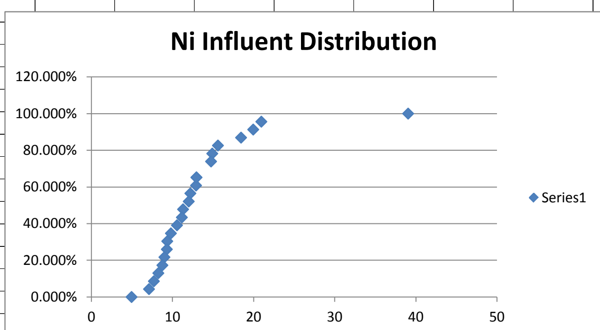
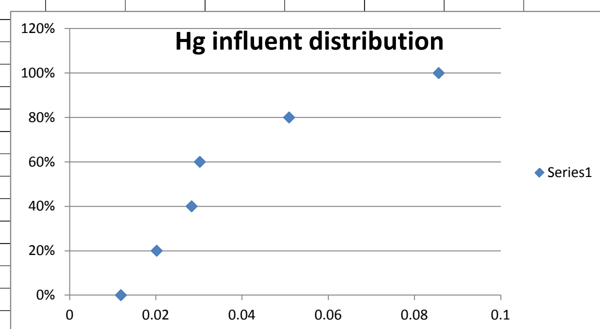
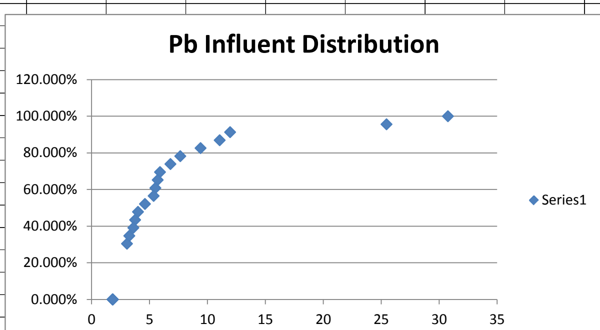
0.2
0.4
0.6
0.8
1
1.2
1.4
Series1

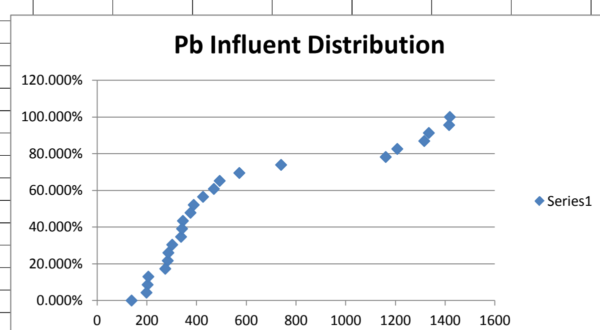

Cr Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
5
10
15
20
25
30
Series1

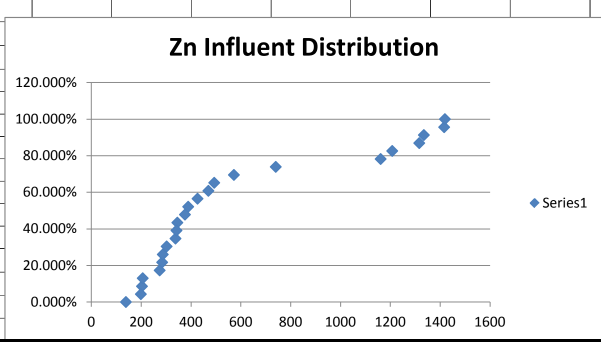

Cu Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
50
100
150
200
250
Series1


Ni Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
10
20
30
40
50
Series1


Hg influent distribution
120%
100%
80%
60%
40%
20%
0%
0
0.02
0.04
0.06
0.08
0.1
Series1


Pb Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
5
10
15
20
25
30
35
Series1


Pb Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
200
400
600
800
1000
1200
1400
1600
Series1


Zn Influent Distribution
120.000%
100.000%
80.000%
60.000%
40.000%
20.000%
0.000%
0
200
400
600
800
1000
1200
1400
1600
Series1

APPENDIX

D-2

2012 AWT Influent & Effluent Data

Be, Se, Ag

Local Limits Study

Belmont Raw

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	<0.010
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

Belmont Primary Effluent

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	<0.010
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

Belmont Final Effluent

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	<0.010
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

Southport Raw

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	<0.010
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

Southport Primary Effluent

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	<0.010
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

Southport Final Effluent

Date	Be	Ag	Cr^{+6}
01/29/12	<0.0040	<0.0100	0.016
01/30/12	<0.0040	<0.0100	<0.010
01/31/12	<0.0040	<0.0100	<0.010
02/01/12	<0.0040	<0.0100	<0.010
02/02/12	<0.0040	<0.0100	<0.010

APPENDIX

D-3

2010 Influent Effluent Data

Selenium

AWT Baseline Influent Metals (mg/l)

Belmont		1/13/10	2/2/10	2/12/10	3/2/10	3/12/10	4/7/10	4/16/10	5/4/10	5/13/10	6/4/10	6/8/10	7/6/10	7/15/10	8/4/10	8/11/2010	9/2/2010	9/8/2010	10/5/2010	10/14/2010	11/2/2010	11/10/2010	12/1/2010	12/9/2010		
	Selenium	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100		
All Se Eff <.01																										
Southport		1/13/10	2/2/10	2/12/10	3/2/10	3/12/10	4/7/10	4/16/10	5/4/10	5/13/10	6/4/10	6/8/10	7/6/10	7/15/10	8/4/10	8/11/10	9/2/10	9/8/10	10/5/10	10/14/10	11/2/10	11/10/10	12/1/10	12/9/10		
	Selenium	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0323	0.0200	0.0144	0.0100		
	Removals																				-0.8452	-0.7500	-0.6528			
																									Ave Influer	Ave Effluent
																		Southport INF			0.0323	0.0200	0.0144		0.0222	
																		Southporgt EFF			0.005	0.005	0.005		0.0050	
																								MRE	77.5%	N/A due to most <LOD

APPENDIX

D-4

Summary 2009 & 2010

Phenol & Pentachlorophenol Data

		Phenol		Pentachlorophenol	
		Inf	Eff	Inf	Eff
BELMONT	12/23/2009	61	5	**10**	10
BELMONT	9/15/2010	58	5	**10**	10
SPORT	12/23/2009	22	5	**10**	10
SPORT	9/15/2010	66	5	**10**	10
	Ave	51.75	5	10	10
	MRE		90%		
	75th % Inf	62.25		10	
All Effluent	<LOD		<10	<20	us 1/2 LOD

APPENDIX

D-5

AWT Influent Loading Data

BOD, TSS & NH3

		Bel Q total mgd	Bel TSS load total lb/month	Bel BOD load total lb/month	Bel NH3 load total lb/month	Bel TSS mg/ average	Bel BOD mg average
1/1/1996	1/31/1996	3,910.23	10598678.42	9913840.733	470444.3541	325	304
2/1/1996	2/29/1996	2,719.48	7665996.562	8301049.531	421623.0067	338	366
3/1/1996	3/31/1996	3,412.75	9648731.565	9136409.535	485052.2668	339	321
4/1/1996	4/30/1996	3,776.74	8094988.981	6961060.564	368737.7724	257	221
5/1/1996	5/31/1996	5,260.73	8072905.829	6932169.136	333305.712	184	158
6/1/1996	6/30/1996	3,568.71	6131186.528	6309764.777	350310.9973	206	212
7/1/1996	7/31/1996	3,220.16	8083696.454	8056840.32	354847.4182	301	300
8/1/1996	8/31/1996	2,811.65	9285867.756	7902367.257	346820.1259	396	337
9/1/1996	9/30/1996	2,953.94	5247438.095	4951807.78	344574.3775	213	201
10/1/1996	10/31/1996	2,722.22	5630422.07	5675828.7	368744.9687	248	250
11/1/1996	11/30/1996	3,076.59	5670586.093	6927865.362	368203.2146	221	270
12/1/1996	12/31/1996	3,408.10	7162735.608	7049041.392	360336.7635	252	248
1/1/1997	1/31/1997	3,891.05	7918131.108	7171749.897	367956.2016	244	221
2/1/1997	2/28/1997	3,598.46	7112644.067	7142655.223	365923.0289	237	238
3/1/1997	3/31/1997	4,496.19	7837128.941	7424648.471	370144.975	209	198
4/1/1997	4/30/1997	3,335.84	7762032.662	8179346.246	379847.1704	279	294
5/1/1997	5/31/1997	3,392.27	7525547.459	7949920.436	426107.2479	266	281
6/1/1997	6/30/1997	3,563.37	6983848.863	6746100.817	363852.5821	235	227
7/1/1997	7/31/1997	3,001.13	7884268.623	7558886.108	376572.693	315	302
8/1/1997	8/31/1997	3,015.87	7646316.163	8451191.549	409902.912	304	336
9/1/1997	9/30/1997	2,748.71	6143696.695	6991893.627	380313.1648	268	305
10/1/1997	10/31/1997	2,716.55	7567113.018	8790538.476	478846.4587	334	388
11/1/1997	11/30/1997	2,654.96	6908418.317	8303387.4	451998.768	312	375
12/1/1997	12/31/1997	2,662.98	6840449.986	7595564.594	405927.4044	308	342
1/1/1998	1/31/1998	2,942.51	7828430.155	8368321.889	441174.9851	319	341
2/1/1998	2/28/1998	2,491.86	6587929.631	7232175.115	446221.0482	317	348
3/1/1998	3/31/1998	3,260.62	8565974.802	7967716.244	412640.682	315	293
4/1/1998	4/30/1998	3,530.71	9864450.669	7332084.229	347661.5215	335	249
5/1/1998	5/31/1998	3,935.92	7943788.618	6827719.142	345728.7804	242	208
6/1/1998	6/30/1998	4,985.27	10435865.1	7483887.324	293118.9202	251	180
7/1/1998	7/31/1998	3,212.32	10716299.52	7019176.186	322785.6578	400	262
8/1/1998	8/31/1998	2,974.36	10071301.93	7714716.506	347606.2731	406	311
9/1/1998	9/30/1998	2,365.20	7357711.464	7910032.968	343031.1055	373	401
10/1/1998	10/31/1998	2,800.57	8525215.137	8128150.322	351556.5155	365	348
11/1/1998	11/30/1998	2,600.90	8372921.316	8156006.256	348003.3382	386	376
12/1/1998	12/31/1998	2,680.74	9054735.498	9993745.105	388946.7223	405	447
1/1/1999	1/31/1999	4,020.14	9723110.604	9354302.96	455873.0699	290	279
2/1/1999	2/28/1999	3,258.66	6441002.183	7120432.793	315255.803	237	262
3/1/1999	3/31/1999	3,080.05	6498967.101	6807218.505	332777.9407	253	265
4/1/1999	4/30/1999	3,238.36	9128677.771	7589226.194	347232.7559	338	281
5/1/1999	5/31/1999	3,020.61	10706552.15	8716393.04	395187.6568	425	346
6/1/1999	6/30/1999	2,755.72	6986742.259	6090416.772	392084.9439	304	265
7/1/1999	7/31/1999	2,997.53	8099805.665	6699839.254	402327.8471	324	268
8/1/1999	8/31/1999	2,752.06	6908606.3	6105279.986	352648.7758	301	266
9/1/1999	9/30/1999	2,331.63	6669907.411	5736509.289	329475.9249	343	295
10/1/1999	10/31/1999	2,407.65	7148409.156	7048010.151	349906.5963	356	351
11/1/1999	11/30/1999	2,183.40	6719326.164	6391554.156	413963.2994	369	351
12/1/1999	12/31/1999	2,305.95	7769575.692	6981079.149	456720.2757	404	363

		Bel Q total mgd	Bel TSS load total lb/month	Bel BOD load total lb/month	Bel NH3 load total lb/month	Bel TSS mg/ average	Bel BOD mg average
1/1/2000	1/31/2000	2,533.83	8,495,490.56	8,073,161.50	504,446.93	396	383
2/1/2000	2/29/2000	2,786.47	10,035,274.35	8,832,893.79	504,863.41	439	386
3/1/2000	3/31/2000	2,932.32	9,791,253.21	8,885,543.17	440,613.40	402	366
4/1/2000	4/30/2000	2,955.95	7,992,399.26	7,501,735.14	378,740.49	323	313
5/1/2000	5/31/2000	3,231.31	7,437,722.69	7,031,147.58	409,023.99	275	260
6/1/2000	6/30/2000	3,296.12	8,012,597.22	8,071,539.00	411,740.78	298	306
7/1/2000	7/31/2000	2,906.80	7,977,551.01	7,617,024.19	345,403.59	330	320
8/1/2000	8/31/2000	2,951.60	8,478,339.25	6,743,401.55	431,363.33	347	278
9/1/2000	9/30/2000	2,904.43	10,794,021.38	6,363,089.90	459,547.16	462	272
10/1/2000	10/31/2000	2,694.25	7,623,369.43	6,964,596.50	435,255.33	346	320
11/1/2000	11/30/2000	2,584.01	6,594,774.40	6,842,939.05	447,771.02	304	323
12/1/2000	12/31/2000	2,936.81	7,310,234.92	7,159,899.22	437,584.90	301	303
1/1/2001	1/31/2001	2,774.38	10,450,065.03	8,398,232.90	499,669.37	443	366
2/1/2001	2/28/2001	2,881.51	11,248,562.88	7,072,371.37	383,963.00	459	298
3/1/2001	3/31/2001	2,796.55	9,577,772.38	7,827,420.52	403,094.45	409	335
4/1/2001	4/30/2001	2,793.52	9,788,479.90	7,145,281.70	380,201.51	413	305
5/1/2001	5/31/2001	3,019.09	11,890,831.38	7,430,362.79	428,188.53	471	307
6/1/2001	6/30/2001	3,085.51	8,265,974.24	6,523,949.01	435,917.67	320	261
7/1/2001	7/31/2001	3,478.95	10,846,285.38	6,612,158.41	391,971.62	372	231
8/1/2001	8/31/2001	3,040.54	8,161,225.97	6,706,544.00	383,659.80	321	267
9/1/2001	9/30/2001	3,055.75	8,125,620.76	6,331,996.97	414,689.57	321	252
10/1/2001	10/31/2001	4,009.17	8,746,888.34	5,677,350.94	429,894.28	278	186
11/1/2001	11/30/2001	3,095.99	7,409,602.18	5,857,016.46	460,511.83	295	236
12/1/2001	12/31/2001	3,705.16	7,559,582.75	5,433,655.61	376,897.33	256	186
1/1/2002	1/31/2002	3,057.02	8,263,905.96	6,703,730.96	478,238.09	327	268
2/1/2002	2/28/2002	3,172.89	7,740,149.07	5,509,192.48	377,492.85	301	218
3/1/2002	3/31/2002	3,992.85	8,746,545.82	6,550,774.30	381,924.87	256	204
4/1/2002	4/30/2002	4,061.20	9,017,239.38	6,913,928.46	359,105.71	274	213
5/1/2002	5/31/2002	4,695.99	11,204,183.54	6,512,821.01	325,331.94	304	182
6/1/2002	6/30/2002	3,363.57	8,148,728.58	7,238,750.49	354,312.15	291	265
7/1/2002	7/31/2002	3,008.18	7,224,906.69	6,608,298.52	344,121.28	289	265
8/1/2002	8/31/2002	2,960.34	8,169,050.94	7,748,943.20	451,441.65	329	314
9/1/2002	9/30/2002	2,933.40	6,868,385.65	6,882,750.50	421,706.58	282	290
10/1/2002	10/31/2002	2,968.45	7,511,657.35	7,921,712.26	423,410.98	292	325
11/1/2002	11/30/2002	2,998.56	8,069,452.11	9,310,285.86	433,386.47	321	379
12/1/2002	12/31/2002	3,181.16	7,567,203.91	8,924,693.46	445,608.32	279	345
1/1/2003	1/31/2003	3,176.66	5,824,863.26	8,273,824.84	453,428.01	224	314
2/1/2003	2/28/2003	3,150.85	7,910,497.65	8,984,988.40	485,512.48	295	348
3/1/2003	3/31/2003	4,103.25	8,699,233.36	9,068,712.07	425,179.55	261	272
4/1/2003	4/30/2003	2,995.23	9,393,220.21	9,915,712.19	414,040.25	370	395
5/1/2003	5/31/2003	3,804.34	8,145,338.60	8,825,693.28	401,508.15	261	290
6/1/2003	6/30/2003	2,847.14	6,012,824.72	7,655,298.39	429,043.56	250	328
7/1/2003	7/31/2003	4,024.63	7,563,463.18	7,933,072.68	394,354.98	227	263
8/1/2003	8/31/2003	3,008.13	6,268,662.76	8,040,611.00	393,132.28	248	327
9/1/2003	9/30/2003	3,842.44	6,560,083.06	7,881,669.62	377,527.58	224	286
10/1/2003	10/31/2003	3,044.13	6,534,962.01	8,070,445.32	397,643.91	256	322
11/1/2003	11/30/2003	3,421.77	5,697,447.72	7,613,254.83	428,674.66	202	277
12/1/2003	12/31/2003	3,675.62	6,510,679.66	7,762,928.32	448,910.94	217	263

		Bel Q total mgd	Bel TSS load total lb/month	Bel BOD load total lb/month	Bel NH3 load total lb/month	Bel TSS mg/ average	Bel BOD mg average
1/1/2004	1/31/2004	3,954.08	7,096,851.65	8,903,983.00	558,738.08	220	286
2/1/2004	2/29/2004	3,170.64	5,219,473.34	7,598,627.04	469,085.69	195	286
3/1/2004	3/31/2004	3,752.61	6,589,137.60	8,040,016.33	475,868.83	212	269
4/1/2004	4/30/2004	3,266.50	5,931,685.43	8,375,457.69	450,690.13	221	312
5/1/2004	5/31/2004	3,464.96	6,115,232.25	8,088,014.38	426,206.19	214	291
6/1/2004	6/30/2004	3,564.37	5,284,051.81	6,637,791.89	388,978.17	183	244
7/1/2004	7/31/2004	3,302.24	5,874,563.81	8,648,008.86	454,885.85	211	320
8/1/2004	8/31/2004	2,971.90	5,378,949.52	8,972,992.19	463,628.84	213	372
9/1/2004	9/30/2004	2,487.93	4,720,335.30	7,962,407.29	410,074.10	227	384
10/1/2004	10/31/2004	2,644.49	5,756,922.28	7,635,316.29	428,869.98	255	350
11/1/2004	11/30/2004	2,723.63	4,800,135.76	6,970,271.80	366,965.64	221	330
12/1/2004	12/31/2004	2,661.44	6,445,415.71	7,624,999.54	391,087.66	302	365
1/1/2005	1/31/2005	4,854.69	7,416,146.54	7,340,845.23	324,431.65	216	215
2/1/2005	2/28/2005	2,978.16	6,266,394.64	7,213,146.45	351,025.76	249	297
3/1/2005	3/31/2005	2,581.60	5,352,634.87	7,364,987.93	439,655.45	245	343
4/1/2005	4/30/2005	3,038.07	6,721,012.99	7,013,034.58	387,493.24	241	298
5/1/2005	5/31/2005	2,997.41	6,507,424.64	7,368,184.16	447,182.90	255	298
6/1/2005	6/30/2005	2,567.92	5,176,473.70	6,463,839.34	342,806.13	234	314
7/1/2005	7/31/2005	3,040.67	5,416,718.51	7,363,555.57	392,882.30	219	306
8/1/2005	8/31/2005	2,946.76	4,989,047.35	7,406,378.65	435,745.38	202	307
9/1/2005	9/30/2005	2,720.96	4,978,220.04	6,082,069.28	335,264.76	219	279
10/1/2005	10/31/2005	2,359.30	4,581,080.65	6,285,583.08	409,184.66	232	322
11/1/2005	11/30/2005	2,550.98	4,874,797.18	6,569,446.26	418,652.06	232	318
12/1/2005	12/31/2005	2,865.06	4,908,948.89	6,335,918.75	396,412.25	211	284
1/1/2006	1/31/2006	3,504.18	7,314,757.14	7,029,991.07	374,932.83	245	245
2/1/2006	2/28/2006	2,729.91	5,348,704.97	5,958,306.25	366,706.48	234	269
3/1/2006	3/31/2006	3,725.01	6,549,833.93	6,319,295.32	380,702.52	224	237
4/1/2006	4/30/2006	3,792.26	5,949,097.02	6,434,259.44	350,020.76	189	215
5/1/2006	5/31/2006	3,502.94	6,834,233.92	6,799,706.35	374,529.75	235	243
6/1/2006	6/30/2006	3,185.73	6,538,508.70	6,389,170.77	342,883.68	244	249
7/1/2006	7/31/2006	2,863.26	6,089,364.75	6,753,310.35	384,153.69	253	289
8/1/2006	8/31/2006	2,702.50	5,627,051.98	6,757,745.84	400,610.29	248	302
9/1/2006	9/30/2006	2,519.37	6,049,747.14	7,131,742.67	365,670.25	282	340
10/1/2006	10/31/2006	2,822.69	6,190,692.63	6,730,315.92	348,540.46	263	302
11/1/2006	11/30/2006	2,806.98	5,904,016.23	6,946,423.79	326,229.48	252	307
12/1/2006	12/31/2006	3,746.11	6,210,243.77	6,453,496.80	352,145.58	208	227
1/1/2007	1/31/2007	4,054.92	6,360,450.81	6,131,197.60	361,081.04	195	197
2/1/2007	2/28/2007	2,741.04	6,268,024.14	5,789,689.47	327,711.15	259	261
3/1/2007	3/31/2007	4,118.01	7,727,989.45	6,279,487.14	298,745.29	226	197
4/1/2007	4/30/2007	3,493.36	6,341,081.78	6,195,977.36	304,817.37	217	217
5/1/2007	5/31/2007	2,957.90	7,985,901.71	7,199,307.48	369,696.74	318	294
6/1/2007	6/30/2007	2,503.87	5,165,198.81	5,902,932.84	363,135.90	247	285
7/1/2007	7/31/2007	2,331.05	4,513,883.79	6,093,204.46	361,923.98	229	315

		Bel Q total mgd	Bel TSS load total lb/month	Bel BOD load total lb/month	Bel NH3 load total lb/month	Bel TSS mg/ average	Bel BOD mg average
8/1/2007	8/31/2007	2,478.55	5,137,251.86	6,816,372.61	372,506.87	238	336
9/1/2007	9/30/2007	2,195.81	4,295,167.32	5,740,502.98	347,699.03	229	317
10/1/2007	10/31/2007	2,466.85	4,684,983.44	7,407,800.50	400,714.36	233	376
11/1/2007	11/30/2007	2,333.60	4,471,360.85	6,597,192.24	397,602.90	228	345
12/1/2007	12/31/2007	3,030.78	5,095,170.93	6,613,708.06	366,865.20	203	271
1/1/2008	1/31/2008	2,874.98	5,571,860.19	7,146,003.26	384,615.53	230	308
2/1/2008	2/29/2008	3,422.19	7,795,282.91	7,621,226.59	373,250.10	254	281
3/1/2008	3/31/2008	4,227.78	6,301,589.40	7,484,058.32	376,559.78	186	228
4/1/2008	4/30/2008	3,450.61	5,791,034.57	7,498,344.33	365,663.27	200	265
5/1/2008	5/31/2008	3,216.46	5,941,095.43	7,733,367.16	323,646.23	227	299
6/1/2008	6/30/2008	4,201.64	6,684,646.80	7,976,225.11	272,437.86	205	260
7/1/2008	7/31/2008	3,515.57	7,044,562.73	7,398,069.64	307,455.21	240	272
8/1/2008	8/31/2008	2,556.85	6,985,245.48	8,136,813.58	363,651.46	339	402
9/1/2008	9/30/2008	2,522.67	7,809,466.50	9,602,767.82	368,374.95	362	458
10/1/2008	10/31/2008	2,456.21	5,996,122.31	8,251,826.52	376,982.59	284	405
11/1/2008	11/30/2008	2,570.23	5,648,805.18	8,225,642.50	396,013.07	266	394
12/1/2008	12/31/2008	3,463.26	6,637,680.90	8,381,153.23	376,709.59	223	315
1/1/2009	1/31/2009	2,554.97	5,039,475.19	6,836,575.14	359,391.35	236	322
2/1/2009	2/28/2009	3,098.98	5,777,577.95	6,026,367.82	313,676.33	219	252
3/1/2009	3/31/2009	2,698.87	6,380,814.07	7,311,665.41	353,876.46	283	327
4/1/2009	4/30/2009	4,081.60	6,683,676.25	6,025,220.32	282,000.11	204	195
5/1/2009	5/31/2009	4,151.84	6,476,848.42	6,132,331.61	296,999.18	186	188
6/1/2009	6/30/2009	3,744.18	7,498,019.45	6,286,517.61	278,601.41	249	212
7/1/2009	7/31/2009	2,727.67	5,632,877.87	6,150,476.20	287,845.81	245	273
8/1/2009	8/31/2009	2,788.43	5,728,345.60	6,914,520.78	308,422.47	240	307
9/1/2009	9/30/2009	2,386.12	5,217,447.62	6,627,055.91	314,474.59	264	340
10/1/2009	10/31/2009	3,125.93	7,041,449.24	7,956,956.81	339,400.86	271	323
11/1/2009	11/30/2009	2,468.90	5,749,047.81	6,607,569.58	348,637.20	277	324
12/1/2009	12/31/2009	3,090.52	7,255,104.94	7,914,183.70	369,855.07	277	316
1/1/2010	1/31/2010	2,814.49	5,525,927.71	6,872,950.97	371,969.54	235	296
2/1/2010	2/28/2010	2,611.73	5,854,959.72	6,987,451.91	333,417.99	268	326
3/1/2010	3/31/2010	3,534.71	9,757,367.24	8,359,847.03	318,674.87	296	276
4/1/2010	4/30/2010	2,838.99	6,634,626.21	6,821,298.34	274,155.40	286	308
5/1/2010	5/31/2010	3,154.70	6,800,534.08	6,587,609.37	260,524.95	257	263
6/1/2010	6/30/2010	4,413.60	8,858,372.70	6,292,248.53	217,480.35	242	189
7/1/2010	7/31/2010	3,235.57	7,075,179.70	7,060,555.18	261,957.47	266	270
8/1/2010	8/31/2010	2,557.97	3,738,405.25	6,564,018.52	334,350.57	172	307
9/1/2010	9/30/2010	2,287.54	4,489,046.28	6,246,525.39	358,455.98	235	328
10/1/2010	10/31/2010	2,310.88	4,931,438.50	6,278,380.36	366,278.05	253	326
11/1/2010	11/30/2010	2,570.75	5,968,897.97	5,966,676.44	336,574.29	274	303
12/1/2010	12/31/2010	2,310.61	4,882,616.47	5,988,939.15	356,949.61	252	312
1/1/2011	1/31/2011	2,486.12	4,868,304.45	6,408,876.09	369,017.26	240	320
2/1/2011	2/28/2011	3,405.99	6,369,969.99	5,953,860.95	328,101.20	235	233
3/1/2011	3/31/2011	4,282.16	6,295,922.38	5,896,815.35	331,028.41	187	185
4/1/2011	4/30/2011	4,463.94	7,138,767.37	6,398,226.74	314,590.18	202	198
	max	5,261	11,890,831	9,993,745	558,738	471	458
	ave	3,134	7,091,019	7,243,579	381,521	276	292

	Bel NH3 mg average	SP Q total mgd	SP TSS load total lb/month	SP BOD load total lb/month	SP NH3 load total lb/month	SP TSS mg/ average	SP BOD mg average
1/31/1996	14.4258	2,618.44	5485434.37	4990371.679	222527.076	251.19	228.52
2/29/1996	18.5897	2,222.03	5868257.685	4944821.569	242950.9829	316.66	266.83
3/31/1996	17.0419	2,083.84	4538237.181	3917625.035	197775.5873	261.13	225.42
4/30/1996	11.7067	3,524.52	8087601.85	5618464.118	238389.369	275.14	191.14
5/31/1996	7.5968	4,352.64	7428277.231	4685009.331	200744.6273	204.63	129.06
6/30/1996	11.77	3,333.51	7129965.868	4883050.788	224913.9198	256.46	175.64
7/31/1996	13.2129	2,701.36	7500018.085	5804685.069	233178.6938	332.9	257.65
8/31/1996	14.7903	2,161.87	6122085.074	4962395.744	230423.3463	339.55	275.23
9/30/1996	13.9867	1,977.94	4084414.453	3047969.541	205540.4042	247.6	184.77
10/31/1996	16.2419	1,805.02	3868843.768	3193075.687	207592.8232	257	212.11
11/30/1996	14.35	2,680.70	5351827.756	4381979.448	231842.4841	239.38	196
12/31/1996	12.6774	2,978.60	4611828.931	3643754.74	202458.4206	185.65	146.68
1/31/1997	11.3387	2,983.17	4607460.124	3498325.871	201276.2698	185.19	140.61
2/28/1997	12.1929	2,664.76	4901969.384	3432067.516	190016.0413	220.57	154.43
3/31/1997	9.871	3,442.08	6731204.979	4410822.437	192623.6157	234.48	153.65
4/30/1997	13.6533	2,593.64	5787795.325	4750158.289	238373.1528	267.57	219.6
5/31/1997	15.0613	2,221.23	4732226.117	3676853.552	238788.0002	255.45	198.48
6/30/1997	12.2433	2,655.38	5791809.172	4096321.426	223451.8202	261.53	184.97
7/31/1997	15.0452	2,190.37	5253969.113	4196818.136	240768.0988	287.61	229.74
8/31/1997	16.2968	1,702.81	3618099.697	3164221.821	232761.5262	254.77	222.81
9/30/1997	16.59	1,420.79	3036998.298	2701660.601	199069.7285	256.3	228
10/31/1997	21.1355	1,378.33	2768176.498	2804846.417	227261.5314	240.81	244
11/30/1997	20.4133	1,266.87	2571373.387	2570633.788	206348.039	243.37	243.3
12/31/1997	18.2774	1,389.49	2768456.003	2509108.806	199783.0954	238.9	216.52
1/31/1998	17.9774	1,763.77	3185857.537	3166881.841	209026.852	216.58	215.29
2/28/1998	21.4714	1,509.04	2898290.292	2623173.588	190417.0052	230.29	208.43
3/31/1998	15.1742	3,056.07	6592373.896	4613259.908	276030.9658	258.65	181
4/30/1998	11.8067	2,853.99	4740699.43	2961003.209	218504.8992	199.17	124.4
5/31/1998	10.5323	2,829.46	4125113.308	2961038.944	202940.189	174.81	125.48
6/30/1998	7.05	3,418.35	4969125.498	3094941.274	195572.0075	174.3	108.56
7/31/1998	12.0484	2,318.91	4824290.51	3476119.368	206161.3022	249.45	179.74
8/31/1998	14.0129	1,949.88	3912311.768	3055629.65	213682.6695	240.58	187.9
9/30/1998	17.39	1,747.82	3212730.864	3613156.076	234686.7827	220.4	247.87
10/31/1998	15.0516	1,844.84	4114514.921	3531848.403	242328.9582	267.42	229.55
11/30/1998	16.0433	1,624.19	3031537.641	3081250.524	211178.1583	223.8	227.47
12/31/1998	17.3968	1,694.91	3388008.48	3655170.364	231540.2992	239.68	258.58
1/31/1999	13.5968	2,743.72	3893707.436	4268753.656	294499.3812	170.16	186.55
2/28/1999	11.6	2,549.94	3513438.399	3360106.937	182466.5666	165.21	158
3/31/1999	12.9548	2,739.19	4306710.104	4145197.053	219767.4051	188.52	181.45
4/30/1999	12.8567	2,339.97	4125544.948	3324049.531	199642.0285	211.4	170.33
5/31/1999	15.6871	1,969.73	3179551.954	2557440.704	224893.1349	193.55	155.68
6/30/1999	17.06	1,865.06	3645998.334	2972017.498	251828.9805	234.4	191.07
7/31/1999	16.0935	1,823.03	3541636.112	2818682.574	259077.3562	232.94	185.39
8/31/1999	15.3645	1,630.03	3323571.185	2748254.052	214112.5907	244.48	202.16
9/30/1999	16.9433	1,607.51	3512537.951	3126024.71	242391.9319	262	233.17
10/31/1999	17.4258	1,648.84	3965744.79	3354910.907	257287.302	288.39	243.97
11/30/1999	22.7333	1,641.14	3639812.524	2811742.514	280585.7058	265.93	205.43
12/31/1999	23.7484	1,687.34	3384134.503	2854448.78	247815.2387	240.48	202.84

	Bel NH3 mg	SP Q	SP TSS load	SP BOD load	SP NH3 load	SP TSS mg/	SP BOD mg
	average	total mgd	total lb/month	total lb/month	total lb/month	average	average
1/31/2000	24.0871	1,713.05	4,131,466.46	2,816,489.75	242,839.60	287.29	196.26
2/29/2000	22.5931	2,150.98	4,522,443.51	3,703,427.09	222,520.30	256.31	214.86
3/31/2000	18.3742	2,348.98	5,199,025.65	3,620,262.49	240,246.10	269.26	188.16
4/30/2000	15.7767	2,260.54	3,839,220.86	3,012,493.18	194,831.50	207.07	167.7
5/31/2000	15.4032	2,201.57	4,318,005.24	3,217,748.54	214,219.00	228.19	172.55
6/30/2000	15.66	2,294.48	3,546,424.90	3,127,466.22	207,765.50	192.43	173.7
7/31/2000	14.5484	1,991.90	3,963,683.88	3,354,049.39	211,548.40	236.58	205.71
8/31/2000	17.9516	2,003.72	3,806,021.53	2,957,098.79	209,324.20	227.26	178.84
9/30/2000	19.8267	2,119.16	4,163,253.26	3,090,247.46	207,302.20	238.83	180.87
10/31/2000	19.9194	2,228.16	3,637,420.13	3,099,001.61	212,066.20	196	173.29
11/30/2000	21.3867	2,077.59	3,821,185.01	3,070,779.94	235,328.20	221.27	179.4
12/31/2000	18.9129	2,479.28	4,021,484.02	3,436,660.84	221,517.70	196.71	171.19
1/31/2001	21.8	2,159.48	3,908,681.95	3,384,715.87	230,445.40	215.81	188.35
2/28/2001	16.3536	2,264.23	3,616,266.49	2,592,505.13	168,619.50	185.29	138.93
3/31/2001	17.3581	1,981.76	4,203,619.69	2,516,496.70	193,734.50	251.81	151.77
4/30/2001	16.65	1,981.55	4,592,466.87	2,774,445.52	197,430.50	279.17	169.03
5/31/2001	17.4645	2,180.28	4,093,771.41	2,967,124.65	234,866.50	225.77	166.13
6/30/2001	17.6233	2,174.62	4,189,168.01	2,651,165.50	205,343.60	234.37	147.27
7/31/2001	13.8097	2,505.20	4,673,390.16	2,340,111.39	199,884.10	221.39	113.26
8/31/2001	15.2935	1,969.14	4,324,669.76	2,478,397.31	209,911.20	263.45	151.16
9/30/2001	16.84	2,204.43	5,153,428.25	2,237,332.75	198,823.80	286.4	125.1
10/31/2001	14.0806	3,075.49	4,807,511.09	2,231,146.55	247,784.90	199.71	99.65
11/30/2001	18.4467	2,109.46	3,236,845.27	2,167,721.49	266,365.00	186.67	127.5
12/31/2001	13.1387	2,852.64	3,535,270.53	2,001,764.86	205,612.40	156.03	90.16
1/31/2002	19.1419	1,973.03	3,165,305.77	2,215,656.37	210,745.40	193.29	137.81
2/28/2002	15.0036	2,408.76	3,380,126.26	2,069,111.62	192,240.70	175.21	105.64
3/31/2002	12.0548	3,148.05	4,330,950.42	2,478,527.37	201,772.50	170.32	96.9
4/30/2002	11.1133	3,257.61	4,754,213.27	2,438,900.58	189,269.30	179.47	93.13
5/31/2002	9.4903	3,556.13	4,952,126.16	2,637,375.39	194,690.00	178.65	96.77
6/30/2002	13.0367	2,372.72	4,744,165.48	3,490,137.04	226,050.00	239.6	179.7
7/31/2002	13.7806	2,182.60	4,774,749.48	3,642,027.76	246,463.80	262.23	199.81
8/31/2002	18.3355	2,126.51	5,434,614.09	4,411,131.89	277,944.60	307.29	248.06
9/30/2002	17.9967	2,324.00	6,784,359.69	4,792,820.91	284,507.00	346.2	249.4
10/31/2002	18.1867	2,239.13	5,370,424.25	4,159,243.85	272,084.30	285.71	222.87
11/30/2002	17.7333	2,252.82	5,008,181.06	4,166,892.30	234,855.00	268.7	228.03
12/31/2002	17.6226	2,413.86	5,410,233.73	4,690,491.28	241,029.50	276.58	243
1/31/2003	17.5065	2,684.61	5,164,993.32	5,252,781.27	294,897.00	233.39	238.1
2/28/2003	18.7929	2,489.01	4,577,574.22	4,795,730.13	257,557.20	227.21	237.61
3/31/2003	12.7806	3,483.24	4,730,878.32	3,788,596.42	252,734.30	164.55	132.97
4/30/2003	16.8667	2,539.91	4,380,969.95	3,433,268.25	254,366.10	208.53	161.97
5/31/2003	13.471	3,225.46	5,587,835.14	3,990,864.20	300,936.90	207.71	151.81
6/30/2003	18.5067	2,353.85	4,367,243.13	3,544,825.05	270,976.50	219.17	183.8
7/31/2003	13.3903	2,996.59	4,209,855.18	3,391,097.58	270,703.10	176.16	149.45
8/31/2003	15.8903	2,216.44	4,553,806.03	3,920,508.43	281,252.50	246.81	212.81
9/30/2003	13.9133	2,597.87	4,058,165.41	3,138,180.47	230,314.60	203.13	162
10/31/2003	16.1097	2,356.50	3,942,573.52	3,635,245.66	252,643.80	196.42	184.45
11/30/2003	15.6967	2,401.31	3,517,809.93	3,243,566.92	235,273.00	185.63	170.23
12/31/2003	15.2194	3,040.54	4,283,700.51	3,517,337.60	233,849.20	169.97	141.23

	Bel NH3 mg average	SP Q total mgd	SP TSS load total lb/month	SP BOD load total lb/month	SP NH3 load total lb/month	SP TSS mg/ average	SP BOD mg average
1/31/2004	18.729	3,228.00	4,145,378.11	3,907,047.52	284,058.70	157.71	154.94
2/29/2004	17.8586	2,343.46	3,158,994.75	3,290,739.84	297,950.80	160.97	167.97
3/31/2004	16.0935	2,808.08	4,159,642.03	3,512,930.03	345,876.60	177.52	155.16
4/30/2004	16.8733	2,456.23	3,925,908.45	3,492,764.17	317,369.00	195.1	174.87
5/31/2004	15.4613	2,616.91	4,121,880.01	3,669,111.95	339,538.20	186.19	172.87
6/30/2004	14.54	2,816.56	3,426,633.17	2,606,188.40	271,423.10	148.57	116.43
7/31/2004	17.0484	2,403.13	3,467,601.12	3,012,958.79	292,379.20	172.52	153.97
8/31/2004	19.429	2,244.85	3,774,894.03	3,185,919.48	294,975.00	199	172.9
9/30/2004	19.78	1,818.12	3,367,399.54	2,912,720.73	288,350.40	221.4	193.78
10/31/2004	20	1,825.41	3,563,802.58	3,010,781.18	316,034.80	233.06	198.45
11/30/2004	17.58	2,349.17	4,696,508.83	3,549,272.64	273,166.90	236.3	182.87
12/31/2004	18.5484	2,666.67	4,724,303.40	3,748,072.27	278,956.60	206.58	171.35
1/31/2005	9.7968	3,947.21	3,895,517.70	3,389,425.83	244,006.40	129.19	116.55
2/28/2005	14.6107	2,689.62	3,886,583.75	3,394,442.54	263,176.10	175.39	155.46
3/31/2005	20.5742	2,323.36	3,825,883.58	3,497,730.61	305,829.10	198.39	180.29
4/30/2005	17.01	2,669.50	4,533,604.39	3,370,805.25	291,419.80	207.53	160.73
5/31/2005	18.3548	2,455.08	4,416,872.97	3,227,180.80	314,109.40	211.16	158.13
6/30/2005	16.8567	2,024.20	4,125,608.92	2,952,149.22	258,377.10	243.07	179.9
7/31/2005	16.3032	1,976.07	3,892,552.22	2,988,161.80	250,128.30	231.65	185.74
8/31/2005	18.2548	1,831.75	3,473,850.51	2,988,696.62	273,789.20	223.03	198.52
9/30/2005	15.6033	2,451.08	4,279,085.42	3,402,099.51	285,143.80	211.7	171.5
10/31/2005	21.0097	2,242.29	4,245,761.52	3,550,902.17	323,011.40	226.06	191.55
11/30/2005	20.3567	2,437.94	4,214,552.10	3,692,917.93	306,598.10	210.43	183.37
12/31/2005	17.8323	2,650.77	4,280,256.72	4,203,265.90	324,256.90	202.81	197.68
1/31/2006	13.2806	3,503.60	5,371,141.01	4,191,138.55	316,209.90	184.48	143.97
2/28/2006	16.6714	2,741.82	3,756,528.63	3,194,890.19	290,487.00	166.54	145.55
3/31/2006	14.5032	3,446.14	4,745,675.49	3,808,645.55	318,968.70	173.1	144.81
4/30/2006	11.8933	3,553.36	4,516,574.95	3,366,108.10	274,630.60	157.03	119.9
5/31/2006	13.6516	3,251.07	4,442,333.98	3,154,667.02	300,086.60	166.65	120.65
6/30/2006	13.5133	2,871.06	4,575,213.65	3,440,212.84	290,011.00	191.8	148.67
7/31/2006	16.5419	2,508.54	4,763,314.70	3,409,663.37	290,351.60	229.68	167.61
8/31/2006	18.0032	2,269.88	4,135,541.80	3,529,267.37	301,970.30	216.42	186.81
9/30/2006	17.8	2,129.67	3,683,057.28	3,156,742.39	300,869.20	208.97	179.73
10/31/2006	16.0387	2,500.98	4,049,801.79	3,304,042.55	301,203.20	199.84	164
11/30/2006	14.5733	2,843.90	3,862,206.73	3,237,338.56	284,494.00	160.8	136.9
12/31/2006	12.4387	3,792.19	4,617,866.67	3,224,373.34	277,633.30	148.19	104.55
1/31/2007	11.7484	4,076.09	4,569,802.98	3,417,844.23	325,441.00	135.61	106.79
2/28/2007	15.3036	2,776.07	4,085,143.80	3,821,220.11	297,435.40	181.89	172.5
3/31/2007	9.5258	3,961.64	4,736,747.15	3,650,890.24	259,866.10	147.45	118.42
4/30/2007	10.8567	3,415.16	4,571,734.58	3,015,946.00	247,411.90	160	109.93
5/31/2007	15.1742	2,219.11	3,774,535.39	2,782,604.68	248,601.60	205.03	152.13
6/30/2007	17.4967	1,797.33	3,755,784.96	2,818,286.71	252,103.40	251.2	188.33
7/31/2007	18.9355	1,776.72	3,390,368.82	2,929,729.09	265,932.90	223.84	196.26

	Bel NH3 mg average	SP Q total mgd	SP TSS load total lb/month	SP BOD load total lb/month	SP NH3 load total lb/month	SP TSS mg/ average	SP BOD mg average
8/31/2007	18.5419	1,757.85	3,505,505.72	2,918,142.24	268,681.60	238	201.81
9/30/2007	19.36	1,584.83	3,076,499.51	2,551,173.85	257,208.30	235.2	195.53
10/31/2007	20.2419	1,614.12	2,895,361.05	2,487,900.91	276,835.90	217.97	189.68
11/30/2007	20.9733	1,609.43	2,954,549.69	2,304,550.74	288,187.70	220.5	174.07
12/31/2007	15.1935	2,743.02	3,876,345.02	3,881,833.32	262,124.30	174.23	174.26
1/31/2008	16.6613	2,478.51	3,838,123.97	3,032,853.65	277,280.90	193.61	153.16
2/29/2008	14.1414	2,937.32	4,092,958.45	3,512,841.61	285,070.90	172.24	154.93
3/31/2008	11.7806	3,862.83	4,450,134.84	3,482,011.95	273,920.30	145.74	115.69
4/30/2008	13.0967	2,914.37	3,606,831.54	2,910,325.08	245,439.50	148.2	123.8
5/31/2008	12.8226	2,685.37	3,802,091.63	2,957,452.89	274,546.80	171.94	135.68
6/30/2008	9.3233	3,442.23	4,825,686.61	3,315,454.47	235,067.00	176.13	128.57
7/31/2008	11.5742	2,886.86	4,290,669.33	3,108,063.03	247,719.80	180.39	131.81
8/31/2008	18.0355	2,136.80	3,543,941.52	2,892,679.94	273,202.30	201.61	165.58
9/30/2008	17.82	1,788.74	3,236,290.74	2,953,541.72	270,920.00	219	200.17
10/31/2008	18.8419	1,673.00	3,259,896.88	2,739,135.31	263,184.40	233.13	196.74
11/30/2008	19.11	1,831.32	3,134,795.39	2,937,488.31	300,626.90	207.27	193.67
12/31/2008	14.8806	2,464.89	3,493,677.83	3,171,139.80	248,979.10	176.23	166.71
1/31/2009	16.9097	1,891.17	2,981,804.86	2,865,027.66	254,351.90	191.94	183.42
2/28/2009	13.4571	2,363.81	3,362,253.19	3,140,838.88	238,097.30	174.71	165.07
3/31/2009	15.9935	2,128.96	3,688,917.97	3,015,886.56	246,043.80	205.65	169.26
4/30/2009	9.1633	3,536.90	4,049,815.16	2,799,069.31	246,572.10	137.83	98.13
5/31/2009	9.4	3,765.86	4,124,945.39	3,141,993.24	276,207.80	135.71	104.23
6/30/2009	9.5367	3,246.72	3,990,207.63	2,810,855.78	264,354.80	151.6	108.67
7/31/2009	12.9548	2,210.23	3,599,942.52	3,004,047.67	266,093.30	197.23	163.1
8/31/2009	14.0742	2,271.26	3,491,638.20	2,732,976.08	255,031.20	192.52	151.77
9/30/2009	16.0967	1,477.28	2,403,904.62	2,149,246.77	244,555.20	196.47	176.6
10/31/2009	14.0452	2,118.04	2,921,071.30	2,750,753.76	270,724.40	169.19	159.84
11/30/2009	17.09	1,756.21	2,668,860.21	2,347,838.84	254,653.90	183.57	161.87
12/31/2009	15.0226	2,395.71	3,176,672.00	2,874,265.33	273,629.40	162.58	147.61
1/31/2010	16.0568	2,125.32	3,074,830.03	3,143,465.78	277,023.20	177.55	181.61
2/28/2010	15.7107	2,006.62	2,783,529.13	3,064,085.02	252,643.10	174.54	189.14
3/31/2010	11.4274	2,881.15	3,343,930.12	3,162,173.17	262,528.20	145.29	138.29
4/30/2010	12.3	2,373.30	3,431,931.97	2,669,785.62	259,305.60	177.5	137.8
5/31/2010	10.429	2,666.15	4,246,405.50	3,136,367.68	276,625.40	195.03	141.9
6/30/2010	6.7193	3,458.03	4,466,408.45	3,006,284.40	260,456.40	164.37	114.57
7/31/2010	10.0484	2,458.07	2,917,576.05	2,641,640.57	277,996.60	146.81	131.45
8/31/2010	15.7516	1,774.65	2,358,234.82	2,445,923.67	276,073.10	161.58	167.55
9/30/2010	18.8167	1,445.20	2,428,050.91	2,368,799.67	257,400.10	202.4	196.87
10/31/2010	19.0677	1,426.64	2,429,350.63	2,463,995.47	268,842.90	202.71	206.45
11/30/2010	17.5667	1,645.66	2,891,506.29	2,406,288.10	275,702.70	230.6	190.07
12/31/2010	18.6226	1,735.38	3,081,978.34	2,660,846.76	287,899.30	213.97	184.81
1/31/2011	18.4581	1,907.19	2,765,143.26	3,049,802.81	267,037.10	179.26	200.87
2/28/2011	13.2321	2,638.34	2,436,395.14	2,308,582.47	263,942.90	136.43	119.57
3/31/2011	10.9129	3,708.94	3,273,196.71	2,645,840.27	261,772.20	112.13	96.63
4/30/2011	10.2133	3,903.62	3,107,867.39	2,347,993.39	253,658.00	104.37	79.52
max	24	4,353	8,087,602	5,804,685	345,877	346	275
ave	16	2,433	4,102,442	3,272,143	251,210	210	172

	SP NH3 mg/l average	days	Date	BEL Q	Bel BOD (lbs/	Bel BOD 6mo	Bel BOD annu
1/31/1996	10.19	30	01/96	130	330,461		
2/29/1996	13.11	28	02/96	97	296,466		
3/31/1996	11.38	30	03/96	114	304,547		
4/30/1996	8.11	29	04/96	130	240,037		
5/31/1996	5.53	30	05/96	175	231,072		
6/30/1996	8.09	29	06/96	123	217,578	270,027	
7/31/1996	10.35	30	07/96	107	268,561	259,710	
8/31/1996	12.78	30	08/96	94	263,412	254,201	
9/30/1996	12.46	29	09/96	102	170,752	231,902	
10/31/1996	13.79	30	10/96	91	189,194	223,428	
11/30/1996	10.37	29	11/96	106	238,892	224,732	
12/31/1996	8.15	30	12/96	114	234,968	227,630	248,828
1/31/1997	8.09	30	01/97	130	239,058	222,713	241,212
2/28/1997	8.55	27	02/97	133	264,543	222,901	238,551
3/31/1997	6.71	30	03/97	150	247,488	235,691	233,796
4/30/1997	11.02	29	04/97	115	282,046	251,166	237,297
5/31/1997	12.89	30	05/97	113	264,997	255,517	240,124
6/30/1997	10.09	29	06/97	123	232,624	255,126	241,378
7/31/1997	13.18	30	07/97	100	251,963	257,277	239,995
8/31/1997	16.39	30	08/97	101	281,706	260,138	241,519
9/30/1997	16.8	29	09/97	95	241,100	259,073	247,382
10/31/1997	19.77	30	10/97	91	293,018	260,901	256,034
11/30/1997	19.53	29	11/97	92	286,324	264,456	259,986
12/31/1997	17.24	30	12/97	89	253,185	267,883	261,504
1/31/1998	14.21	30	01/98	98	278,944	272,380	264,828
2/28/1998	15.13	27	02/98	92	267,858	270,072	265,105
3/31/1998	10.83	30	03/98	109	265,591	274,153	266,613
4/30/1998	9.18	29	04/98	122	252,830	267,455	264,178
5/31/1998	8.6	30	05/98	131	227,591	257,667	261,061
6/30/1998	6.86	29	06/98	172	258,065	258,480	263,181
7/31/1998	10.66	30	07/98	107	233,973	250,985	261,682
8/31/1998	13.14	30	08/98	99	257,157	249,201	259,636
9/30/1998	16.1	29	09/98	82	272,760	250,396	262,275
10/31/1998	15.75	30	10/98	93	270,938	253,414	260,435
11/30/1998	15.59	29	11/98	90	281,242	262,356	260,011
12/31/1998	16.38	30	12/98	89	333,125	274,866	266,673
1/31/1999	12.87	30	01/99	134	311,810	287,839	269,412
2/28/1999	8.58	27	02/99	121	263,720	288,932	269,067
3/31/1999	9.62	30	03/99	103	226,907	281,290	265,843
4/30/1999	10.23	29	04/99	112	261,697	279,750	266,582
5/31/1999	13.69	30	05/99	101	290,546	281,301	271,828
6/30/1999	16.19	29	06/99	95	210,014	260,783	267,824
7/31/1999	17.04	30	07/99	100	223,328	246,036	266,937
8/31/1999	15.75	30	08/99	92	203,509	236,000	262,466
9/30/1999	18.08	29	09/99	80	197,811	231,151	256,221
10/31/1999	18.71	30	10/99	80	234,934	226,690	253,220
11/30/1999	20.5	29	11/99	75	220,398	214,999	248,150
12/31/1999	17.61	30	12/99	77	232,703	218,780	239,782

	SP NH3 mg/l average	days	Date	BEL Q	Bel BOD (lbs/	Bel BOD 6mo	Bel BOD annu
1/31/2000	17.08	30	01/00	84	269,105	226,410	236,223
2/29/2000	12.98	28	02/00	100	315,460	245,069	240,535
3/31/2000	12.36	30	03/00	98	296,185	261,464	246,308
4/30/2000	10.92	29	04/00	102	258,681	265,422	246,056
5/31/2000	11.76	30	05/00	108	234,372	267,751	241,375
6/30/2000	11.61	29	06/00	114	278,329	275,355	247,068
7/31/2000	13.05	30	07/00	97	253,901	272,821	249,616
8/31/2000	12.72	30	08/00	98	224,780	257,708	251,388
9/30/2000	12.09	29	09/00	100	219,417	244,913	253,189
10/31/2000	11.97	30	10/00	90	232,153	240,492	252,957
11/30/2000	13.71	29	11/00	89	235,963	240,757	254,254
12/31/2000	11.16	30	12/00	98	238,663	234,146	254,751
1/31/2001	12.96	30	01/01	92	279,941	238,486	255,654
2/28/2001	9.06	27	02/01	107	261,940	244,680	251,194
3/31/2001	11.78	30	03/01	93	260,914	251,596	248,254
4/30/2001	12.19	29	04/01	96	246,389	253,968	247,230
5/31/2001	13.15	30	05/01	101	247,679	255,921	248,339
6/30/2001	11.72	29	06/01	106	224,964	253,638	243,892
7/31/2001	9.85	30	07/01	116	220,405	243,715	241,101
8/31/2001	12.78	30	08/01	101	223,551	237,317	240,998
9/30/2001	11.2	29	09/01	105	218,345	230,222	240,909
10/31/2001	10.51	30	10/01	134	189,245	220,698	237,333
11/30/2001	15.77	29	11/01	107	201,966	213,079	234,500
12/31/2001	9.22	30	12/01	124	181,122	205,772	229,705
1/31/2002	13.15	30	01/02	102	223,458	206,281	224,998
2/28/2002	10.12	27	02/02	118	204,044	203,030	220,173
3/31/2002	8.03	30	03/02	133	218,359	203,032	216,627
4/30/2002	7.19	29	04/02	140	238,411	211,227	215,962
5/31/2002	7.24	30	05/02	157	217,094	213,748	213,414
6/30/2002	11.64	29	06/02	116	249,612	225,163	215,468
7/31/2002	13.6	30	07/02	100	220,277	224,633	215,457
8/31/2002	15.67	30	08/02	99	258,298	233,675	218,353
9/30/2002	14.86	29	09/02	101	237,336	236,838	219,935
10/31/2002	15.13	30	10/02	99	264,057	241,112	226,170
11/30/2002	12.89	29	11/02	103	321,044	258,437	236,093
12/31/2002	12.55	30	12/02	106	297,490	266,417	245,790
1/31/2003	13.85	30	01/03	106	275,794	275,670	250,151
2/28/2003	12.8	27	02/03	117	332,777	288,083	260,879
3/31/2003	8.94	30	03/03	137	302,290	298,909	267,873
4/30/2003	12.21	29	04/03	103	341,921	311,886	276,499
5/31/2003	12.12	30	05/03	127	294,190	307,410	282,924
6/30/2003	14.14	29	06/03	98	263,976	301,825	284,121
7/31/2003	11.93	30	07/03	134	264,436	299,932	287,801
8/31/2003	15.25	30	08/03	100	268,020	289,139	288,611
9/30/2003	11.94	29	09/03	132	271,782	284,054	291,481
10/31/2003	13.09	30	10/03	101	269,015	271,903	291,895
11/30/2003	12.59	29	11/03	118	262,526	266,626	287,018
12/31/2003	9.57	30	12/03	123	258,764	265,757	283,791

	SP NH3 mg/l average	days	Date	BEL Q	Bel BOD (lbs/	Bel BOD 6mo	Bel BOD annu
1/31/2004	11.4	30	01/04	132	296,799	271,151	285,541
2/29/2004	15.38	28	02/04	113	271,380	271,711	280,425
3/31/2004	15.4	30	03/04	125	268,001	271,081	277,567
4/30/2004	16.12	29	04/04	113	288,809	274,380	273,141
5/31/2004	16.37	30	05/04	115	269,600	275,559	271,092
6/30/2004	12.25	29	06/04	123	228,889	270,580	268,168
7/31/2004	15	30	07/04	110	288,267	269,158	270,154
8/31/2004	16.25	30	08/04	99	299,100	273,778	272,744
9/30/2004	19.45	29	09/04	86	274,566	274,872	272,976
10/31/2004	20.94	30	10/04	88	254,511	269,155	271,768
11/30/2004	14.5	29	11/04	94	240,354	264,281	269,920
12/31/2004	13.18	30	12/04	89	254,167	268,494	269,537
1/31/2005	8.62	30	01/05	162	244,695	261,232	265,195
2/28/2005	12.56	27	02/05	110	267,154	255,908	264,843
3/31/2005	15.91	30	03/05	86	245,500	251,063	262,968
4/30/2005	14.23	29	04/05	105	241,829	248,950	259,053
5/31/2005	15.67	30	05/05	100	245,606	249,825	257,053
6/30/2005	15.86	29	06/05	89	222,891	244,612	256,553
7/31/2005	15.97	30	07/05	101	245,452	244,738	252,985
8/31/2005	18.48	30	08/05	98	246,879	241,359	248,634
9/30/2005	14.56	29	09/05	94	209,727	235,397	243,230
10/31/2005	17.56	30	10/05	79	209,519	230,012	239,481
11/30/2005	15.62	29	11/05	88	226,533	226,833	238,329
12/31/2005	15.73	30	12/05	96	211,197	224,885	234,748
1/31/2006	11.16	30	01/06	117	234,333	223,031	233,885
2/28/2006	13.2	27	02/06	101	220,678	218,664	230,012
3/31/2006	12.31	30	03/06	124	210,643	218,817	227,107
4/30/2006	9.78	29	04/06	131	221,871	220,876	225,444
5/31/2006	11.67	30	05/06	117	226,657	220,897	223,865
6/30/2006	12.76	29	06/06	110	220,316	222,416	223,650
7/31/2006	14.28	30	07/06	95	225,110	220,879	221,955
8/31/2006	16.1	30	08/06	90	225,258	221,643	220,154
9/30/2006	17.17	29	09/06	87	245,922	227,522	223,170
10/31/2006	15.39	30	10/06	94	224,344	227,935	224,405
11/30/2006	12.46	29	11/06	97	239,532	230,080	225,489
12/31/2006	9.52	30	12/06	125	215,117	229,214	225,815
1/31/2007	10.16	30	01/07	135	204,373	225,758	223,318
2/28/2007	13.64	27	02/07	102	214,433	223,953	222,798
3/31/2007	8.38	30	03/07	137	209,316	217,852	222,687
4/30/2007	9.01	29	04/07	120	213,654	216,071	222,003
5/31/2007	13.51	30	05/07	99	239,977	216,145	223,113
6/30/2007	16.89	29	06/07	86	203,549	214,217	221,716
7/31/2007	18.02	30	07/07	78	203,107	214,006	219,882

	SP NH3 mg/l average	days	Date	BEL Q	Bel BOD (lbs/(	Bel BOD 6mo	Bel BOD annu
8/31/2007	18.61	30	08/07	83	227,212	216,136	220,045
9/30/2007	19.6	29	09/07	76	197,948	214,241	216,047
10/31/2007	20.94	30	10/07	82	246,927	219,787	217,929
11/30/2007	21.7	29	11/07	80	227,489	217,706	216,925
12/31/2007	12.12	30	12/07	101	220,457	220,523	217,370
1/31/2008	14.36	30	01/08	96	238,200	226,372	220,189
2/29/2008	12.5	28	02/08	122	272,187	233,868	225,002
3/31/2008	9.1	30	03/08	141	249,469	242,455	228,348
4/30/2008	10.82	29	04/08	119	258,564	244,394	232,090
5/31/2008	13.14	30	05/08	107	257,779	249,442	233,574
6/30/2008	9.44	29	06/08	145	275,042	258,540	239,532
7/31/2008	10.85	30	07/08	117	246,602	259,940	243,156
8/31/2008	15.65	30	08/08	85	271,227	259,780	246,824
9/30/2008	18.24	29	09/08	87	331,130	273,391	257,923
10/31/2008	18.98	30	10/08	82	275,061	276,140	260,267
11/30/2008	19.96	29	11/08	89	283,643	280,451	264,947
12/31/2008	13.75	30	12/08	115	279,372	281,172	269,856
1/31/2009	16.35	30	01/09	85	227,886	278,053	268,997
2/28/2009	13.1	27	02/09	115	223,199	270,048	264,914
3/31/2009	14.13	30	03/09	90	243,722	255,480	264,436
4/30/2009	8.91	29	04/09	141	207,766	244,265	260,202
5/31/2009	9.16	30	05/09	138	204,411	231,059	255,755
6/30/2009	10.46	29	06/09	129	216,776	220,627	250,900
7/31/2009	14.65	30	07/09	91	205,016	216,815	247,434
8/31/2009	14.55	30	08/09	93	230,484	218,029	244,039
9/30/2009	20.01	29	09/09	82	228,519	215,495	235,488
10/31/2009	15.99	30	10/09	104	265,232	225,073	234,669
11/30/2009	17.56	29	11/09	85	227,847	228,979	230,019
12/31/2009	14.25	30	12/09	103	263,806	236,817	228,722
1/31/2010	16.02	30	01/10	94	229,098	240,831	228,823
2/28/2010	15.72	27	02/10	97	258,795	245,550	231,789
3/31/2010	11.51	30	03/10	118	278,662	253,907	234,701
4/30/2010	13.67	29	04/10	98	235,217	248,904	236,989
5/31/2010	12.73	30	05/10	105	219,587	247,527	238,253
6/30/2010	9.92	29	06/10	152	216,974	239,722	238,270
7/31/2010	13.8	30	07/10	108	235,352	240,764	240,798
8/31/2010	18.74	30	08/10	85	218,801	234,099	239,824
9/30/2010	21.41	29	09/10	79	215,397	223,555	238,731
10/31/2010	22.57	30	10/10	77	209,279	219,232	234,068
11/30/2010	21.59	29	11/10	89	205,747	216,925	232,226
12/31/2010	19.97	30	12/10	77	199,631	214,035	226,878
1/31/2011	17.11	30	01/11	83	213,629	210,414	225,589
2/28/2011	13.54	27	02/11	126	220,513	210,700	222,399
3/31/2011	9.33	30	03/11	143	196,561	207,560	215,557
4/30/2011	8.8	29	04/11	154	220,629	209,452	214,342
max	23	30	max	175	341,921	311,886	291,895
ave	14	29	ave	107	246,176	245,938	246,568

	Bel TSS (lbs/d	Bel TSS 6mon	Bel TSS annua	Bel NH3 (lbs	Bel NH3 6m	Bel NH3 annu	SP Q
1/31/1996	353,289			15,681			87
2/29/1996	273,786			15,058			79
3/31/1996	321,624			16,168			69
4/30/1996	279,138			12,715			122
5/31/1996	269,097			11,110			145
6/30/1996	211,420	284,726		12,080	13,802		115
7/31/1996	269,457	270,754		11,828	13,160		90
8/31/1996	309,529	276,711		11,561	12,577		72
9/30/1996	180,946	253,264		11,882	11,863		68
10/31/1996	187,681	238,022		12,291	11,792		60
11/30/1996	195,537	225,762		12,697	12,056		92
12/31/1996	238,758	230,318	257,522	12,011	12,045	12,924	99
1/31/1997	263,938	229,398	250,076	12,265	12,118	12,639	99
2/28/1997	263,431	221,715	249,213	13,553	12,450	12,513	99
3/31/1997	261,238	235,097	244,181	12,338	12,526	12,194	115
4/30/1997	267,656	248,426	243,224	13,098	12,660	12,226	89
5/31/1997	250,852	257,645	241,704	14,204	12,912	12,484	74
6/30/1997	240,822	257,989	244,154	12,547	13,001	12,523	92
7/31/1997	262,809	257,801	243,600	12,552	13,049	12,583	73
8/31/1997	254,877	256,376	239,045	13,663	13,067	12,758	57
9/30/1997	211,852	248,145	241,621	13,114	13,196	12,861	49
10/31/1997	252,237	245,575	247,001	15,962	13,674	13,167	46
11/30/1997	238,221	243,470	250,558	15,586	13,904	13,408	44
12/31/1997	228,015	241,335	249,662	13,531	14,068	13,534	46
1/31/1998	260,948	241,025	249,413	14,706	14,427	13,738	59
2/28/1998	243,997	239,212	247,794	16,527	14,904	13,986	56
3/31/1998	285,532	251,492	249,818	13,755	15,011	14,104	102
4/30/1998	340,153	266,145	255,860	11,988	14,349	14,011	98
5/31/1998	264,793	270,573	257,021	11,524	13,672	13,788	94
6/30/1998	359,857	292,547	266,941	10,108	13,101	13,585	118
7/31/1998	357,210	308,591	274,808	10,760	12,444	13,435	77
8/31/1998	335,710	323,876	281,544	11,587	11,620	13,262	65
9/30/1998	253,714	318,573	285,032	11,829	11,299	13,155	60
10/31/1998	284,174	309,243	287,694	11,719	11,254	12,802	61
11/30/1998	288,721	313,231	291,902	12,000	11,334	12,503	56
12/31/1998	301,825	303,559	298,053	12,965	11,810	12,456	56
1/31/1999	324,104	298,041	303,316	15,196	12,549	12,496	91
2/28/1999	238,556	281,849	302,862	11,676	12,564	12,092	94
3/31/1999	216,632	275,669	297,121	11,093	12,441	11,870	91
4/30/1999	314,782	280,770	295,006	11,974	12,484	11,869	81
5/31/1999	356,885	292,131	302,681	13,173	12,679	12,006	66
6/30/1999	240,922	281,980	292,770	13,520	12,772	12,291	64
7/31/1999	269,994	272,962	285,502	13,411	12,474	12,512	61
8/31/1999	230,287	271,584	276,716	11,755	12,488	12,526	54
9/30/1999	229,997	273,811	274,740	11,361	12,532	12,487	55
10/31/1999	238,280	261,061	270,915	11,664	12,481	12,482	55
11/30/1999	231,701	240,197	266,164	14,275	12,664	12,672	57
12/31/1999	258,986	243,207	262,594	15,224	12,948	12,860	56

	Bel TSS (lbs/d	Bel TSS 6mon	Bel TSS annua	Bel NH3 (lbs	Bel NH3 6m	Bel NH3 annu	SP Q
1/31/2000	283,183	245,406	259,184	16,815	13,516	12,995	57
2/29/2000	358,403	266,758	269,171	18,031	14,562	13,525	77
3/31/2000	326,375	282,821	278,316	14,687	15,116	13,824	78
4/30/2000	275,600	289,041	275,051	13,060	15,349	13,915	78
5/31/2000	247,924	291,745	265,971	13,634	15,242	13,953	73
6/30/2000	276,296	294,630	268,919	14,198	15,071	14,010	79
7/31/2000	265,918	291,753	268,579	11,513	14,187	13,851	66
8/31/2000	282,611	279,121	272,940	14,379	13,579	14,070	67
9/30/2000	372,208	286,760	284,790	15,846	13,772	14,444	73
10/31/2000	254,112	283,178	286,110	14,509	14,013	14,681	74
11/30/2000	227,406	279,759	285,752	15,440	14,314	14,778	72
12/31/2000	243,674	274,322	284,476	14,586	14,379	14,725	83
1/31/2001	348,336	288,058	289,905	16,656	15,236	14,712	72
2/28/2001	416,613	310,392	294,756	14,221	15,210	14,394	84
3/31/2001	319,259	301,567	294,163	13,436	14,808	14,290	66
4/30/2001	337,534	315,470	299,324	13,110	14,575	14,294	68
5/31/2001	396,361	343,630	311,694	14,273	14,380	14,347	73
6/30/2001	285,034	350,523	312,422	15,032	14,455	14,417	75
7/31/2001	361,543	352,724	320,391	13,066	13,856	14,546	84
8/31/2001	272,041	328,629	319,510	12,789	13,618	14,414	66
9/30/2001	280,194	322,118	311,842	14,300	13,762	14,285	76
10/31/2001	291,563	314,456	314,963	14,330	13,965	14,270	103
11/30/2001	255,504	290,980	317,305	15,880	14,233	14,306	73
12/31/2001	251,986	285,472	317,997	12,563	13,821	14,138	95
1/31/2002	275,464	271,125	311,925	15,941	14,300	14,078	66
2/28/2002	286,672	273,564	301,096	13,981	14,499	14,058	89
3/31/2002	291,552	275,457	298,787	12,731	14,238	14,000	105
4/30/2002	310,939	278,686	296,571	12,383	13,913	13,939	112
5/31/2002	373,473	298,348	294,664	10,844	13,074	13,653	119
6/30/2002	280,991	303,182	294,327	12,218	13,016	13,419	82
7/31/2002	240,830	297,409	284,267	11,471	12,271	13,286	73
8/31/2002	272,302	295,014	284,289	15,048	12,449	13,474	71
9/30/2002	236,841	285,896	280,676	14,542	12,751	13,494	80
10/31/2002	250,389	275,804	277,245	14,114	13,039	13,476	75
11/30/2002	278,257	259,935	279,141	14,944	13,723	13,398	78
12/31/2002	252,240	255,143	279,162	14,854	14,162	13,589	80
1/31/2003	194,162	247,365	272,387	15,114	14,769	13,520	89
2/28/2003	292,981	250,812	272,913	17,982	15,258	13,854	92
3/31/2003	289,974	259,667	272,782	14,173	15,197	13,974	116
4/30/2003	323,904	271,920	273,862	14,277	15,224	14,132	88
5/31/2003	271,511	270,796	265,365	13,384	14,964	14,343	108
6/30/2003	207,339	263,312	259,228	14,795	14,954	14,558	81
7/31/2003	252,115	272,971	260,168	13,145	14,626	14,698	100
8/31/2003	208,955	258,967	254,889	13,104	13,813	14,536	74
9/30/2003	226,210	248,339	254,003	13,018	13,621	14,409	90
10/31/2003	217,832	230,660	251,290	13,255	13,450	14,337	79
11/30/2003	196,464	218,153	244,474	14,782	13,683	14,324	83
12/31/2003	217,023	219,767	241,539	14,964	13,711	14,333	101

	Bel TSS (lbs/d	Bel TSS 6mon	Bel TSS annua	Bel NH3 (lbs	Bel NH3 6m	Bel NH3 annu	SP Q
1/31/2004	236,562	217,174	245,073	18,625	14,625	14,625	108
2/29/2004	186,410	213,417	236,192	16,753	15,233	14,523	84
3/31/2004	219,638	212,321	230,330	15,862	15,707	14,664	94
4/30/2004	204,541	210,106	220,383	15,541	16,088	14,769	85
5/31/2004	203,841	211,336	214,744	14,207	15,992	14,838	87
6/30/2004	182,209	205,533	212,650	13,413	15,733	14,722	97
7/31/2004	195,819	198,743	207,959	15,163	15,157	14,891	80
8/31/2004	179,298	197,558	205,487	15,454	14,940	15,086	75
9/30/2004	162,770	188,080	200,200	14,140	14,653	15,180	63
10/31/2004	191,897	185,972	198,039	14,296	14,446	15,267	61
11/30/2004	165,522	179,586	195,461	12,654	14,187	15,089	81
12/31/2004	214,847	185,026	195,279	13,036	14,124	14,929	89
1/31/2005	247,205	193,590	196,166	10,814	13,399	14,278	132
2/28/2005	232,089	202,388	199,973	13,001	12,990	13,965	100
3/31/2005	178,421	204,997	196,538	14,655	13,076	13,865	77
4/30/2005	231,759	211,640	198,806	13,362	12,920	13,683	92
5/31/2005	216,914	220,206	199,896	14,906	13,296	13,741	82
6/30/2005	178,499	214,148	199,587	11,821	13,093	13,609	70
7/31/2005	180,557	203,040	198,315	13,096	13,474	13,436	66
8/31/2005	166,302	192,075	197,232	14,525	13,727	13,359	61
9/30/2005	171,663	190,949	197,973	11,561	13,212	13,144	85
10/31/2005	152,703	177,773	194,707	13,639	13,258	13,089	75
11/30/2005	168,096	169,637	194,921	14,436	13,180	13,238	84
12/31/2005	163,632	167,159	190,653	13,214	13,412	13,253	88
1/31/2006	243,825	177,703	190,372	12,498	13,312	13,393	117
2/28/2006	198,100	183,003	187,539	13,582	13,155	13,441	102
3/31/2006	218,328	190,781	190,865	12,690	13,343	13,277	115
4/30/2006	205,141	199,520	188,647	12,070	13,082	13,170	123
5/31/2006	227,808	209,472	189,554	12,484	12,756	12,968	108
6/30/2006	225,466	219,778	193,468	11,824	12,525	12,968	99
7/31/2006	202,979	212,970	195,337	12,805	12,576	12,944	84
8/31/2006	187,568	211,215	197,109	13,354	12,538	12,846	76
9/30/2006	208,612	209,596	200,188	12,609	12,524	12,934	73
10/31/2006	206,356	209,798	204,659	11,618	12,449	12,765	83
11/30/2006	203,587	205,761	207,617	11,249	12,243	12,500	98
12/31/2006	207,008	202,685	211,232	11,738	12,229	12,377	126
1/31/2007	212,015	204,191	208,581	12,036	12,101	12,338	136
2/28/2007	232,149	211,621	211,418	12,137	11,898	12,218	103
3/31/2007	257,600	219,786	214,691	9,958	11,456	11,990	132
4/30/2007	218,658	221,836	215,817	10,511	11,272	11,860	118
5/31/2007	266,197	232,271	219,016	12,323	11,451	11,847	74
6/30/2007	178,110	227,455	215,070	12,522	11,581	11,905	62
7/31/2007	150,463	217,196	210,694	12,064	11,586	11,843	59

	Bel TSS (lbs/d	Bel TSS 6mon	Bel TSS annua	Bel NH3 (lbs	Bel NH3 6m	Bel NH3 annu	SP Q
8/31/2007	171,242	207,045	209,333	12,417	11,633	11,765	59
9/30/2007	148,109	188,796	204,291	11,990	11,971	11,714	55
10/31/2007	156,166	178,381	200,109	13,357	12,445	11,859	54
11/30/2007	154,185	159,713	195,992	13,710	12,677	12,064	55
12/31/2007	169,839	158,334	192,894	12,229	12,628	12,105	91
1/31/2008	185,729	164,212	190,704	12,821	12,754	12,170	83
2/29/2008	278,403	182,072	194,558	13,330	12,906	12,269	105
3/31/2008	210,053	192,396	190,596	12,552	13,000	12,486	129
4/30/2008	199,691	199,650	189,016	12,609	12,875	12,660	100
5/31/2008	198,037	206,959	183,336	10,788	12,388	12,532	90
6/30/2008	230,505	217,070	187,702	9,394	11,916	12,272	119
7/31/2008	234,819	225,251	194,731	10,249	11,487	12,121	96
8/31/2008	232,842	217,658	199,865	12,122	11,286	12,096	71
9/30/2008	269,292	227,531	209,963	12,703	11,311	12,155	62
10/31/2008	199,871	227,561	213,605	12,566	11,304	12,089	56
11/30/2008	194,786	227,019	216,989	13,656	11,781	12,085	63
12/31/2008	221,256	225,478	221,274	12,557	12,309	12,112	82
1/31/2009	167,983	214,338	219,795	11,980	12,597	12,042	63
2/28/2009	213,984	211,195	214,426	11,618	12,513	11,899	88
3/31/2009	212,694	201,762	214,647	11,796	12,362	11,836	71
4/30/2009	230,472	206,862	217,212	9,724	11,888	11,596	122
5/31/2009	215,895	210,381	218,700	9,900	11,262	11,522	126
6/30/2009	258,552	216,597	221,037	9,607	10,771	11,540	112
7/31/2009	187,763	219,893	217,116	9,595	10,373	11,485	74
8/31/2009	190,945	216,053	213,624	10,281	10,150	11,332	76
9/30/2009	179,912	210,590	206,176	10,844	9,992	11,177	51
10/31/2009	234,715	211,297	209,080	11,313	10,257	11,072	71
11/30/2009	198,243	208,355	209,368	12,022	10,610	10,936	61
12/31/2009	241,837	205,569	211,083	12,329	11,064	10,917	80
1/31/2010	184,198	204,975	212,434	12,399	11,531	10,952	71
2/28/2010	216,850	209,292	212,673	12,349	11,876	11,013	74
3/31/2010	325,246	233,515	222,052	10,622	11,839	10,915	96
4/30/2010	228,780	232,526	221,911	9,454	11,529	10,893	82
5/31/2010	226,684	237,266	222,810	8,684	10,973	10,792	89
6/30/2010	305,461	247,870	226,719	7,499	10,168	10,616	119
7/31/2010	235,839	256,477	230,726	8,732	9,557	10,544	82
8/31/2010	124,614	241,104	225,198	11,145	9,356	10,616	59
9/30/2010	154,795	212,696	223,105	12,361	9,646	10,742	50
10/31/2010	164,381	201,962	217,244	12,209	10,105	10,817	48
11/30/2010	205,824	198,486	217,876	11,606	10,592	10,782	57
12/31/2010	162,754	174,701	211,286	11,898	11,325	10,747	58
1/31/2011	162,277	162,441	209,459	12,301	11,920	10,738	64
2/28/2011	235,925	180,993	211,048	12,152	12,088	10,722	98
3/31/2011	209,864	190,171	201,433	11,034	11,867	10,756	124
4/30/2011	246,164	203,801	202,882	10,848	11,640	10,872	135
max	416,613	352,724	320,391	18,625	16,088	15,267	145
ave	241,036	240,396	241,046	12,969	12,963	12,995	83

	SP BOD (lbs/c	SP BOD 6mor	SP BOD annu	SP TSS (lbs/da	SP TSS 6mont	SP TSS annua	SWP NH3 (
1/31/1996	166,346			182,848			7,418
2/29/1996	176,601			209,581			8,677
3/31/1996	130,588			151,275			6,593
4/30/1996	193,740			278,883			8,220
5/31/1996	156,167			247,609			6,691
6/30/1996	168,381	165,304		245,861	219,343		7,756
7/31/1996	193,490	169,828		250,001	230,535		7,773
8/31/1996	165,413	167,963		204,070	229,616		7,681
9/30/1996	105,102	163,716		140,842	227,877		7,088
10/31/1996	106,436	149,165		128,961	202,891		6,920
11/30/1996	151,103	148,321		184,546	192,380		7,995
12/31/1996	121,458	140,500	152,902	153,728	177,024	198,184	6,749
1/31/1997	116,611	127,687	148,757	153,582	160,955	195,745	6,709
2/28/1997	127,114	121,304	144,634	181,554	157,202	193,409	7,038
3/31/1997	147,027	128,291	146,004	224,373	171,124	199,501	6,421
4/30/1997	163,799	137,852	143,508	199,579	182,894	192,892	8,220
5/31/1997	122,562	133,095	140,708	157,741	178,426	185,403	7,960
6/30/1997	141,252	136,394	138,447	199,718	186,091	181,558	7,705
7/31/1997	139,894	140,275	133,981	175,132	189,683	175,319	8,026
8/31/1997	105,474	136,668	128,986	120,603	179,524	168,363	7,759
9/30/1997	93,161	127,690	127,991	104,724	159,583	165,354	6,864
10/31/1997	93,495	115,973	126,912	92,273	141,698	162,296	7,575
11/30/1997	88,643	110,320	121,707	88,668	130,186	154,306	7,115
12/31/1997	83,637	100,717	118,556	92,282	112,280	149,186	6,659
1/31/1998	105,563	94,995	117,635	106,195	100,791	145,237	6,968
2/28/1998	97,155	93,609	115,138	107,344	98,581	139,053	7,052
3/31/1998	153,775	103,711	115,701	219,746	117,751	138,667	9,201
4/30/1998	102,104	105,146	110,559	163,472	129,618	135,658	7,535
5/31/1998	98,701	106,822	108,571	137,504	137,757	133,972	6,765
6/30/1998	106,722	110,670	105,694	171,349	150,935	131,608	6,744
7/31/1998	115,871	112,388	103,692	160,810	160,037	130,414	6,872
8/31/1998	101,854	113,171	103,390	130,410	163,882	131,231	7,123
9/30/1998	124,592	108,307	106,009	110,784	145,722	131,736	8,093
10/31/1998	117,728	110,911	108,029	137,150	141,335	135,476	8,078
11/30/1998	106,250	112,169	109,496	104,536	135,840	136,799	7,282
12/31/1998	121,839	114,689	112,679	112,934	126,104	138,520	7,718
1/31/1999	142,292	119,093	115,740	129,790	120,934	140,486	9,817
2/28/1999	124,448	122,858	118,015	130,127	120,887	142,384	6,758
3/31/1999	138,173	125,122	116,715	143,557	126,349	136,035	7,326
4/30/1999	114,622	124,604	117,758	142,260	127,201	134,268	6,884
5/31/1999	85,248	121,104	116,637	105,985	127,442	131,641	7,496
6/30/1999	102,483	117,878	116,283	125,724	129,574	127,839	8,684
7/31/1999	93,956	109,822	114,457	118,055	127,618	124,276	8,636
8/31/1999	91,608	104,349	113,603	110,786	124,394	122,641	7,137
9/30/1999	107,794	99,285	112,204	121,122	120,655	123,502	8,358
10/31/1999	111,830	98,820	111,712	132,191	118,977	123,089	8,576
11/30/1999	96,957	100,771	110,938	125,511	122,231	124,837	9,675
12/31/1999	95,148	99,549	108,713	112,804	120,078	124,826	8,261

	SP BOD (lbs/c	SP BOD 6mor	SP BOD annu:	SP TSS (lbs/da	SP TSS 6mont	SP TSS annua	SWP NH3 (
1/31/2000	93,883	99,537	104,679	137,716	123,355	125,487	8,095
2/29/2000	132,265	106,313	105,331	161,516	131,810	128,102	7,947
3/31/2000	120,675	108,460	103,873	173,301	140,506	130,581	8,008
4/30/2000	103,879	107,135	102,977	132,387	140,539	129,758	6,718
5/31/2000	107,258	108,852	104,812	143,934	143,610	132,920	7,141
6/30/2000	107,844	110,967	105,258	122,291	145,191	132,634	7,164
7/31/2000	111,802	113,954	106,745	132,123	144,258	133,807	7,052
8/31/2000	98,570	108,338	107,325	126,867	138,484	135,147	6,977
9/30/2000	106,560	105,985	107,223	143,560	133,527	137,017	7,148
10/31/2000	103,300	105,889	106,512	121,247	131,670	136,105	7,069
11/30/2000	105,889	105,661	107,256	131,765	129,642	136,626	8,115
12/31/2000	114,555	106,779	108,873	134,049	131,602	138,396	7,384
1/31/2001	112,824	106,950	110,452	130,289	131,297	137,777	7,682
2/28/2001	96,019	106,525	107,431	133,936	132,475	135,479	6,245
3/31/2001	83,883	102,745	104,365	140,121	131,901	132,714	6,458
4/30/2001	95,671	101,473	103,681	158,361	138,087	134,879	6,808
5/31/2001	98,904	100,309	102,985	136,459	138,869	134,256	7,829
6/30/2001	91,420	96,453	101,616	144,454	140,603	136,103	7,081
7/31/2001	78,004	90,650	98,800	155,780	144,852	138,074	6,663
8/31/2001	82,613	88,416	97,470	144,156	146,555	139,515	6,997
9/30/2001	77,149	87,293	95,019	177,704	152,819	142,360	6,856
10/31/2001	74,372	83,744	92,609	160,250	153,134	145,610	8,259
11/30/2001	74,749	79,718	90,014	111,615	148,993	143,931	9,185
12/31/2001	66,725	75,602	86,028	117,842	144,558	142,581	6,854
1/31/2002	73,855	74,911	82,780	105,510	136,180	140,516	7,025
2/28/2002	76,634	73,914	81,165	125,190	133,019	139,787	7,120
3/31/2002	82,618	74,825	81,059	144,365	127,462	140,141	6,726
4/30/2002	84,100	76,447	80,095	163,938	128,077	140,605	6,527
5/31/2002	87,913	78,641	79,179	165,071	136,986	142,990	6,490
6/30/2002	120,350	87,578	81,590	163,592	144,611	144,585	7,795
7/31/2002	121,401	95,502	85,207	159,158	153,552	144,866	8,215
8/31/2002	147,038	107,236	90,575	181,154	162,880	147,949	9,265
9/30/2002	165,270	121,012	97,919	233,943	177,809	152,636	9,811
10/31/2002	138,641	130,102	103,274	179,014	180,322	154,199	9,069
11/30/2002	143,686	139,398	109,019	172,696	181,593	159,290	8,098
12/31/2002	156,350	145,398	116,488	180,341	184,384	164,498	8,034
1/31/2003	175,093	154,346	124,924	172,166	186,552	170,052	9,830
2/28/2003	177,620	159,443	133,340	169,540	184,617	173,748	9,539
3/31/2003	126,287	152,946	136,979	157,696	171,909	174,859	8,424
4/30/2003	118,389	149,571	139,836	151,068	167,251	173,787	8,771
5/31/2003	133,029	147,794	143,596	186,261	169,512	175,552	10,031
6/30/2003	122,235	142,109	143,753	150,595	164,554	174,469	9,344
7/31/2003	113,037	131,766	143,056	140,329	159,248	172,900	9,023
8/31/2003	130,684	123,943	141,693	151,794	156,290	170,454	9,375
9/30/2003	108,213	120,931	136,939	139,937	153,330	162,620	7,942
10/31/2003	121,175	121,395	135,483	131,419	150,056	158,653	8,421
11/30/2003	111,847	117,865	132,830	121,304	139,229	154,371	8,113
12/31/2003	117,245	117,033	129,571	142,790	137,929	151,241	7,795

	SP BOD (lbs/c	SP BOD 6mor	SP BOD annu	SP TSS (lbs/da	SP TSS 6mont	SP TSS annua	SWP NH3 (
1/31/2004	130,235	119,900	125,833	138,179	137,570	148,409	9,469
2/29/2004	117,526	117,707	120,825	112,821	131,075	143,683	10,641
3/31/2004	117,098	119,188	120,059	138,655	130,861	142,096	11,529
4/30/2004	120,440	119,065	120,230	135,376	131,521	140,788	10,944
5/31/2004	122,304	120,808	119,337	137,396	134,203	136,716	11,318
6/30/2004	89,869	116,245	116,639	118,160	130,098	134,013	9,359
7/31/2004	100,432	111,278	115,589	115,587	126,332	131,951	9,746
8/31/2004	106,197	109,390	113,548	125,830	128,501	129,788	9,833
9/30/2004	100,439	106,613	112,900	116,117	124,744	127,803	9,943
10/31/2004	100,359	103,267	111,166	118,793	121,980	126,751	10,534
11/30/2004	122,389	103,281	112,044	161,949	126,073	130,138	9,420
12/31/2004	124,936	109,125	112,685	157,477	132,625	131,362	9,299
1/31/2005	112,981	111,217	111,247	129,851	135,003	130,668	8,134
2/28/2005	125,720	114,471	111,930	143,948	138,022	133,261	9,747
3/31/2005	116,591	117,163	111,888	127,529	139,924	132,334	10,194
4/30/2005	116,235	119,809	111,538	156,331	146,181	134,081	10,049
5/31/2005	107,573	117,339	110,310	147,229	143,727	134,900	10,470
6/30/2005	101,798	113,483	111,304	142,262	141,192	136,909	8,910
7/31/2005	99,605	111,254	111,235	129,752	141,175	138,089	8,338
8/31/2005	99,623	106,904	110,687	115,795	136,483	137,253	9,126
9/30/2005	117,314	107,025	112,094	147,555	139,821	139,873	9,833
10/31/2005	118,363	107,379	113,594	141,525	137,353	141,767	10,767
11/30/2005	127,342	110,674	114,007	145,329	137,036	140,382	10,572
12/31/2005	140,109	117,059	115,271	142,675	137,105	139,148	10,809
1/31/2006	139,705	123,743	117,498	179,038	145,320	143,247	10,540
2/28/2006	118,329	126,860	116,882	139,131	149,209	142,846	10,759
3/31/2006	126,955	128,467	117,746	158,189	150,981	145,401	10,632
4/30/2006	116,073	128,085	117,732	155,744	153,351	145,352	9,470
5/31/2006	105,156	124,388	117,531	148,078	153,809	145,423	10,003
6/30/2006	118,628	120,808	118,933	157,766	156,324	146,715	10,000
7/31/2006	113,655	116,466	120,104	158,777	152,947	149,134	9,678
8/31/2006	117,642	116,351	121,606	137,851	152,734	150,972	10,066
9/30/2006	108,853	113,335	120,901	127,002	147,536	149,259	10,375
10/31/2006	110,135	112,345	120,215	134,993	144,078	148,715	10,040
11/30/2006	111,632	113,424	118,906	133,180	141,595	147,702	9,810
12/31/2006	107,479	111,566	116,187	153,929	140,955	148,640	9,254
1/31/2007	113,928	111,612	114,039	152,327	139,880	146,414	10,848
2/28/2007	141,527	115,592	115,972	151,302	142,122	147,428	11,016
3/31/2007	121,696	117,733	115,534	157,892	147,270	147,403	8,662
4/30/2007	103,998	116,710	114,527	157,646	151,046	147,562	8,531
5/31/2007	92,753	113,564	113,494	125,818	149,819	145,707	8,287
6/30/2007	97,182	111,848	111,707	129,510	145,749	143,352	8,693
7/31/2007	97,658	109,136	110,374	113,012	139,197	139,538	8,864

	SP BOD (lbs/c	SP BOD 6mor	SP BOD annu	SP TSS (lbs/da	SP TSS 6mont	SP TSS annua	SWP NH3 (
8/31/2007	97,271	101,760	108,676	116,850	133,455	137,788	8,956
9/30/2007	87,972	96,139	106,936	106,086	124,820	136,045	8,869
10/31/2007	82,930	92,628	104,669	96,512	114,631	132,839	9,228
11/30/2007	79,467	90,413	101,989	101,881	110,642	130,230	9,938
12/31/2007	129,394	95,782	103,815	129,212	110,592	128,171	8,737
1/31/2008	101,095	96,355	102,745	127,937	113,080	126,138	9,243
2/29/2008	125,459	101,053	101,406	146,177	117,968	125,711	10,181
3/31/2008	116,067	105,735	100,937	148,338	125,009	124,915	9,131
4/30/2008	100,356	108,640	100,634	124,374	129,653	122,142	8,463
5/31/2008	98,582	111,826	101,119	126,736	133,796	122,219	9,152
6/30/2008	114,326	109,314	102,548	166,403	139,994	125,293	8,106
7/31/2008	103,602	109,732	103,043	143,022	142,508	127,794	8,257
8/31/2008	96,423	104,893	102,973	118,131	137,834	127,901	9,107
9/30/2008	101,846	102,522	104,129	111,596	131,710	128,360	9,342
10/31/2008	91,305	101,014	104,827	108,663	129,092	129,373	8,773
11/30/2008	101,293	101,466	106,646	108,096	125,985	129,891	10,366
12/31/2008	105,705	100,029	104,671	116,456	117,661	128,828	8,299
1/31/2009	95,501	98,679	104,205	99,393	110,389	126,449	8,478
2/28/2009	116,327	101,996	103,444	124,528	111,456	124,645	8,818
3/31/2009	100,530	101,777	102,150	122,964	113,350	122,530	8,201
4/30/2009	96,520	102,646	101,830	139,649	118,514	123,803	8,502
5/31/2009	104,733	103,219	102,342	137,498	123,415	124,700	9,207
6/30/2009	96,926	101,756	100,892	137,593	126,938	122,299	9,116
7/31/2009	100,135	102,528	100,604	119,998	130,372	120,381	8,870
8/31/2009	91,099	98,324	100,160	116,388	129,015	120,235	8,501
9/30/2009	74,112	93,921	97,849	82,893	122,337	117,843	8,433
10/31/2009	91,692	93,116	97,881	97,369	115,290	116,902	9,024
11/30/2009	80,960	89,154	96,187	92,030	107,712	115,563	8,781
12/31/2009	95,809	88,968	95,362	105,889	102,428	114,683	9,121
1/31/2010	104,782	89,742	96,135	102,494	99,511	114,941	9,234
2/28/2010	113,485	93,473	95,898	103,094	97,295	113,155	9,357
3/31/2010	105,406	98,689	96,305	111,464	102,057	112,197	8,751
4/30/2010	92,062	98,750	95,933	118,342	105,552	110,421	8,942
5/31/2010	104,546	102,681	95,918	141,547	113,805	110,759	9,221
6/30/2010	103,665	103,991	96,479	154,014	121,826	112,127	8,981
7/31/2010	88,055	101,203	95,473	97,253	120,952	110,231	9,267
8/31/2010	81,531	95,877	94,675	78,608	116,871	107,083	9,202
9/30/2010	81,683	91,923	95,306	83,726	112,248	107,152	8,876
10/31/2010	82,133	90,269	94,510	80,978	106,021	105,787	8,961
11/30/2010	82,975	86,674	94,678	99,707	99,048	106,426	9,507
12/31/2010	88,695	84,179	94,085	102,733	90,501	106,163	9,597
1/31/2011	101,660	86,446	93,825	92,171	89,654	105,303	8,901
2/28/2011	85,503	87,108	91,493	90,237	91,592	104,232	9,776
3/31/2011	88,195	88,194	90,058	109,107	95,822	104,035	8,726
4/30/2011	80,965	87,999	89,134	107,168	100,187	103,104	8,747
max	193,740	169,828	152,902	278,883	230,535	199,501	11,529
ave	111,233	110,821	110,373	139,412	139,077	138,498	8,538

	SP NH3 6n	SP NH3 annual	CO Q	CO BOD (lt	C BOD 6m	CO BOD ar	CO TSS (lb:	CO TSS 6m
1/31/1996			218	496,807			536,137	
2/29/1996			176	473,067			483,366	
3/31/1996			183	435,134			472,899	
4/30/1996			252	433,777			558,020	
5/31/1996			320	387,239			516,706	
6/30/1996	7,559		238	385,959	435,331		457,281	504,068
7/31/1996	7,618		197	462,051	429,538		519,457	501,288
8/31/1996	7,452		166	428,825	422,164		513,598	506,327
9/30/1996	7,535		170	275,854	395,618		321,788	481,142
10/31/1996	7,318		151	295,630	372,593		316,642	440,912
11/30/1996	7,535		199	389,995	373,052		380,083	418,142
12/31/1996	7,367	7,463	213	356,427	368,130	401,730	392,485	407,342
1/31/1997	7,190	7,404	229	355,669	350,400	389,969	417,520	390,353
2/28/1997	7,083	7,268	232	391,656	344,205	383,185	444,986	378,917
3/31/1997	6,972	7,253	265	394,516	363,982	379,800	485,611	406,221
4/30/1997	7,188	7,253	204	445,845	389,018	380,806	467,235	431,320
5/31/1997	7,183	7,359	187	387,559	388,612	380,832	408,592	436,072
6/30/1997	7,342	7,355	214	373,877	391,520	379,825	440,540	444,081
7/31/1997	7,561	7,376	173	391,857	397,552	373,976	437,941	447,484
8/31/1997	7,682	7,382	157	387,180	396,806	370,505	375,481	435,900
9/30/1997	7,756	7,364	144	334,260	386,763	375,373	316,576	407,728
10/31/1997	7,648	7,418	136	386,513	376,874	382,946	344,510	387,273
11/30/1997	7,507	7,345	135	374,966	374,776	381,694	326,889	373,656
12/31/1997	7,333	7,338	135	336,822	368,600	380,060	320,297	353,616
1/31/1998	7,157	7,359	157	384,507	367,375	382,463	367,143	341,816
2/28/1998	7,039	7,360	148	365,013	363,680	380,243	351,341	337,793
3/31/1998	7,429	7,592	211	419,366	377,865	382,314	505,278	369,243
4/30/1998	7,422	7,535	220	354,934	372,601	374,738	503,626	395,762
5/31/1998	7,363	7,435	226	326,292	364,489	369,632	402,297	408,330
6/30/1998	7,377	7,355	290	364,787	369,150	368,875	531,207	443,482
7/31/1998	7,361	7,259	184	349,843	363,373	365,374	518,020	468,628
8/31/1998	7,373	7,206	164	359,012	362,372	363,026	466,120	487,758
9/30/1998	7,188	7,308	142	397,351	358,703	368,284	364,498	464,295
10/31/1998	7,279	7,350	155	388,667	364,325	368,463	421,324	450,578
11/30/1998	7,365	7,364	146	387,492	374,525	369,507	393,257	449,071
12/31/1998	7,528	7,452	146	454,964	389,555	379,352	414,758	429,663
1/31/1999	8,018	7,690	225	454,102	406,931	385,152	453,894	418,975
2/28/1999	7,957	7,665	215	388,168	411,791	387,081	368,683	402,736
3/31/1999	7,830	7,509	194	365,081	406,412	382,558	360,189	402,018
4/30/1999	7,631	7,455	192	376,320	404,354	384,340	457,042	407,971
5/31/1999	7,666	7,516	166	375,794	402,405	388,465	462,870	419,573
6/30/1999	7,827	7,677	159	312,498	378,660	384,108	366,646	411,554
7/31/1999	7,631	7,824	161	317,284	355,857	381,394	388,048	400,580
8/31/1999	7,694	7,826	146	295,118	340,349	376,070	341,073	395,978
9/30/1999	7,866	7,848	136	305,605	330,436	368,424	351,119	394,466
10/31/1999	8,148	7,889	135	346,764	325,510	364,932	370,472	380,038
11/30/1999	8,511	8,089	132	317,355	315,771	359,088	357,212	362,428
12/31/1999	8,441	8,134	133	327,851	318,329	348,495	371,790	363,286

	SP NH3 6n	SP NH3 annual		CO Q	CO BOD (lt	C BOD 6m	CO BOD ar	CO TSS (lb:	CO TSS 6m
1/31/2000	8,350	7,991		142	362,988	325,947	340,902	420,899	368,761
2/29/2000	8,485	8,090		176	447,726	351,381	345,865	519,918	398,568
3/31/2000	8,427	8,146		176	416,860	369,924	350,180	499,676	423,328
4/30/2000	8,117	8,133		180	362,560	372,557	349,034	407,987	429,580
5/31/2000	7,695	8,103		181	341,630	376,602	346,187	391,858	435,355
6/30/2000	7,512	7,976		193	386,173	386,323	352,326	398,587	439,821
7/31/2000	7,338	7,844		163	365,702	386,775	356,361	398,041	436,011
8/31/2000	7,177	7,831		165	323,350	366,046	358,714	409,479	417,605
9/30/2000	7,033	7,730		173	325,977	350,899	360,411	515,768	420,287
10/31/2000	7,092	7,605		164	335,453	346,381	359,469	375,360	414,849
11/30/2000	7,254	7,475		161	341,852	346,418	361,510	359,171	409,401
12/31/2000	7,291	7,402		181	353,219	340,926	363,624	377,724	405,924
1/31/2001	7,396	7,367		164	392,765	345,436	366,106	478,625	419,354
2/28/2001	7,274	7,225		191	357,958	351,204	358,625	550,549	442,866
3/31/2001	7,159	7,096		159	344,797	354,341	352,620	459,380	433,468
4/30/2001	7,115	7,104		165	342,060	355,442	350,911	495,895	453,557
5/31/2001	7,068	7,161		173	346,583	356,230	351,324	532,820	482,499
6/30/2001	7,017	7,154		181	316,383	350,091	345,508	429,488	491,126
7/31/2001	6,847	7,122		199	298,409	334,365	339,901	517,323	497,576
8/31/2001	6,973	7,123		167	306,165	325,733	338,468	416,197	475,184
9/30/2001	7,039	7,099		181	295,494	317,516	335,928	457,898	474,937
10/31/2001	7,281	7,198		236	263,617	304,442	329,942	451,813	467,590
11/30/2001	7,507	7,287		179	276,715	292,797	324,514	367,119	439,973
12/31/2001	7,469	7,243		219	247,847	281,374	315,733	369,828	430,030
1/31/2002	7,529	7,188		168	297,313	281,192	307,778	380,974	407,305
2/28/2002	7,550	7,261		207	280,678	276,944	301,338	411,862	406,582
3/31/2002	7,528	7,284		238	300,977	277,858	297,687	435,917	402,919
4/30/2002	7,239	7,260		252	322,511	287,674	296,058	474,878	406,763
5/31/2002	6,790	7,148		275	305,007	292,389	292,593	538,544	435,334
6/30/2002	6,947	7,208		198	369,962	312,741	297,058	444,583	447,793
7/31/2002	7,145	7,337		173	341,678	320,135	300,664	399,989	450,962
8/31/2002	7,503	7,526		170	405,336	340,912	308,928	453,456	457,894
9/30/2002	8,017	7,773		181	402,606	357,850	317,854	470,784	463,705
10/31/2002	8,441	7,840		174	402,699	371,214	329,444	429,403	456,126
11/30/2002	8,709	7,750		181	464,730	397,835	345,112	450,953	441,528
12/31/2002	8,749	7,848		187	453,839	411,815	362,278	432,581	439,528
1/31/2003	9,018	8,082		195	450,887	430,016	375,076	366,329	433,918
2/28/2003	9,064	8,283		209	510,397	447,526	394,219	462,521	435,428
3/31/2003	8,833	8,425		253	428,577	451,855	404,852	447,670	431,576
4/30/2003	8,783	8,612		191	460,310	461,457	416,336	474,972	439,171
5/31/2003	9,105	8,907		234	427,219	455,205	426,520	457,772	440,308
6/30/2003	9,323	9,036		179	386,211	443,933	427,874	357,933	427,866
7/31/2003	9,189	9,103		234	377,472	431,698	430,857	392,444	432,219
8/31/2003	9,162	9,113		174	398,704	413,082	430,304	360,749	415,257
9/30/2003	9,081	8,957		222	379,995	404,985	428,420	366,146	401,670
10/31/2003	9,023	8,903		180	390,190	393,298	427,378	349,251	380,716
11/30/2003	8,703	8,904		201	374,373	384,491	419,848	317,768	357,382
12/31/2003	8,445	8,884		224	376,009	382,790	413,362	359,813	357,695

	SP NH3 6n	SP NH3 annual		CO Q	CO BOD (lk	C BOD 6m	CO BOD ar	CO TSS (lb:	CO TSS 6m
1/31/2004	8,519	8,854		239	427,034	391,051	411,374	374,741	354,745
2/29/2004	8,730	8,946		197	388,906	389,418	401,250	299,231	344,492
3/31/2004	9,328	9,205		219	385,098	390,268	397,627	358,293	343,183
4/30/2004	9,748	9,386		197	409,249	393,445	393,372	339,917	341,627
5/31/2004	10,283	9,493		203	391,904	396,367	390,429	341,237	345,539
6/30/2004	10,543	9,494		220	318,758	386,825	384,808	300,368	335,631
7/31/2004	10,590	9,554		190	388,699	380,436	385,743	311,405	325,075
8/31/2004	10,455	9,592		174	405,297	383,168	386,293	305,128	326,058
9/30/2004	10,190	9,759		148	375,004	381,485	385,877	278,887	312,824
10/31/2004	10,122	9,935		149	354,870	372,422	382,934	310,691	307,953
11/30/2004	9,806	10,044		175	362,743	367,562	381,964	327,471	305,658
12/31/2004	9,796	10,170		178	379,102	377,619	382,222	372,324	317,651
1/31/2005	9,527	10,058		293	357,676	372,449	376,442	377,055	328,593
2/28/2005	9,513	9,984		210	392,874	370,378	376,773	376,036	340,411
3/31/2005	9,555	9,873		163	362,091	368,226	374,856	305,951	344,921
4/30/2005	9,474	9,798		197	358,063	368,758	370,590	388,090	357,821
5/31/2005	9,649	9,727		182	353,179	367,164	367,363	364,143	363,933
6/30/2005	9,584	9,690		158	324,689	358,095	367,857	320,761	355,340
7/31/2005	9,618	9,572		167	345,057	355,992	364,220	310,309	344,215
8/31/2005	9,515	9,514		159	346,503	348,264	359,321	282,097	328,559
9/30/2005	9,454	9,504		178	327,040	342,422	355,324	319,217	330,770
10/31/2005	9,574	9,524		153	327,883	337,392	353,075	294,228	315,126
11/30/2005	9,591	9,620		172	353,875	337,508	352,336	313,426	306,673
12/31/2005	9,907	9,746		184	351,306	341,944	350,020	306,307	304,264
1/31/2006	10,275	9,946		234	374,038	346,774	351,383	422,863	323,023
2/28/2006	10,547	10,031		203	339,007	345,525	346,894	337,231	332,212
3/31/2006	10,680	10,067		239	337,598	347,284	344,853	376,517	341,762
4/30/2006	10,464	10,019		253	337,944	348,961	343,177	360,885	352,872
5/31/2006	10,369	9,980		225	331,812	345,284	341,396	375,886	363,281
6/30/2006	10,234	10,071		209	338,944	343,224	342,584	383,232	376,102
7/31/2006	10,090	10,182		179	338,766	337,345	342,060	361,756	365,918
8/31/2006	9,975	10,261		166	342,900	337,994	341,759	325,420	363,949
9/30/2006	9,932	10,306		160	354,775	340,857	344,071	335,614	357,132
10/31/2006	10,027	10,245		177	334,479	340,279	344,620	341,350	353,876
11/30/2006	9,995	10,182		195	351,164	343,505	344,394	336,766	347,356
12/31/2006	9,871	10,052		251	322,596	340,780	342,002	360,937	343,640
1/31/2007	10,066	10,078		271	318,301	337,369	337,357	364,342	344,071
2/28/2007	10,224	10,099		204	355,960	339,546	338,770	383,451	353,743
3/31/2007	9,939	9,935		269	331,013	335,585	338,221	415,491	367,056
4/30/2007	9,687	9,857		238	317,653	332,781	336,530	376,304	372,882
5/31/2007	9,433	9,714		173	332,730	329,709	336,607	392,015	382,090
6/30/2007	9,340	9,605		148	300,732	326,065	333,422	307,620	373,204
7/31/2007	9,009	9,537		137	300,764	323,142	330,256	263,475	356,393

	SP NH3 6n	SP NH3 annual	CO Q	CO BOD (lt	C BOD 6m	CO BOD ar	CO TSS (lb:	CO TSS 6m
8/31/2007	8,666	9,445	141	324,484	317,896	328,721	288,092	340,499
9/30/2007	8,700	9,319	130	285,920	310,380	322,983	254,195	313,617
10/31/2007	8,816	9,252	136	329,857	312,414	322,598	252,678	293,013
11/30/2007	9,091	9,262	136	306,957	308,119	318,914	256,066	270,354
12/31/2007	9,099	9,219	192	349,851	316,305	321,185	299,051	268,926
1/31/2008	9,162	9,085	178	339,295	322,727	322,935	313,666	277,291
2/29/2008	9,366	9,016	227	397,645	334,921	326,408	424,580	300,039
3/31/2008	9,410	9,055	270	365,536	348,190	329,285	358,391	317,405
4/30/2008	9,282	9,049	219	358,920	353,034	332,724	324,064	329,303
5/31/2008	9,151	9,121	197	356,361	361,268	334,693	324,773	340,754
6/30/2008	9,046	9,072	264	389,368	367,854	342,080	396,908	357,064
7/31/2008	8,882	9,022	213	350,204	369,672	346,200	377,841	367,760
8/31/2008	8,703	9,034	156	367,650	364,673	349,797	350,973	355,492
9/30/2008	8,738	9,074	149	432,976	375,913	362,052	380,888	359,241
10/31/2008	8,789	9,036	138	366,365	377,154	365,094	308,534	356,653
11/30/2008	8,992	9,072	152	384,936	381,917	371,592	302,883	353,004
12/31/2008	9,024	9,035	198	385,076	381,201	374,528	337,712	343,138
1/31/2009	9,061	8,971	148	323,387	376,732	373,202	267,376	324,728
2/28/2009	9,013	8,858	202	339,526	372,044	368,359	338,512	322,651
3/31/2009	8,823	8,780	161	344,252	357,257	366,585	335,658	315,112
4/30/2009	8,778	8,784	263	304,286	346,910	362,032	370,120	325,377
5/31/2009	8,584	8,788	264	309,144	334,279	358,098	353,393	333,795
6/30/2009	8,721	8,872	241	313,703	322,383	351,792	396,146	343,534
7/31/2009	8,786	8,923	165	305,151	319,344	348,038	307,761	350,265
8/31/2009	8,733	8,873	169	321,583	316,353	344,199	307,333	345,068
9/30/2009	8,771	8,797	133	302,631	309,416	333,337	262,805	332,926
10/31/2009	8,858	8,818	175	356,924	318,189	332,550	332,084	326,587
11/30/2009	8,787	8,686	146	308,807	318,133	326,206	290,273	316,067
12/31/2009	8,788	8,754	183	359,615	325,785	324,084	347,726	307,997
1/31/2010	8,849	8,817	165	333,881	330,573	324,958	286,692	304,485
2/28/2010	8,992	8,862	171	372,279	339,023	327,688	319,944	306,587
3/31/2010	9,045	8,908	214	384,067	352,595	331,006	436,710	335,571
4/30/2010	9,031	8,945	180	327,279	347,655	332,922	347,123	338,078
5/31/2010	9,104	8,946	194	324,133	350,209	334,171	368,231	351,071
6/30/2010	9,081	8,935	271	320,639	343,713	334,749	459,475	369,696
7/31/2010	9,086	8,968	190	323,407	341,967	336,270	333,092	377,429
8/31/2010	9,061	9,026	144	300,331	329,976	334,499	203,221	357,975
9/30/2010	9,081	9,063	129	297,080	315,478	334,037	238,521	324,944
10/31/2010	9,085	9,058	125	291,413	309,500	328,578	245,360	307,983
11/30/2010	9,132	9,118	145	288,723	303,599	326,904	305,531	297,533
12/31/2010	9,235	9,158	135	288,326	298,213	320,963	265,486	265,202
1/31/2011	9,174	9,130	146	315,289	296,860	319,414	254,448	252,095
2/28/2011	9,270	9,165	224	306,016	297,808	313,892	326,162	272,585
3/31/2011	9,245	9,163	266	284,755	295,754	305,616	318,971	285,993
4/30/2011	9,209	9,147	289	301,594	297,451	303,476	353,332	303,988
max	10,680	10,306	320	510,397	461,457	430,857	558,020	506,327
ave	8,543	8,550	189	357,409	356,759	356,942	380,448	379,473

	CO TSS anı	CO NH3 (lł	CO NH3 6r	CO NH3 ar	CO BOD Capa	CO BOD 80%	CO TSS Ca|	CO TSS 80'
1/31/1996		23,099			660,000		817,000	
2/29/1996		23,735			660,000		817,000	
3/31/1996		22,761			660,000		817,000	
4/30/1996		20,935			660,000		817,000	
5/31/1996		17,802			660,000		817,000	
6/30/1996		19,835	21,361		660,000		817,000	
7/31/1996		19,601	20,778		660,000		817,000	
8/31/1996		19,241	20,029		660,000		817,000	
9/30/1996		18,969	19,397		660,000		817,000	
10/31/1996		19,211	19,110		660,000		817,000	
11/30/1996		20,691	19,592		660,000		817,000	
12/31/1996	455,705	18,760	19,412	20,387	660,000		817,000	
1/31/1997	445,821	18,974	19,308	20,043	660,000		817,000	
2/28/1997	442,622	20,590	19,533	19,781	660,000		817,000	
3/31/1997	443,682	18,759	19,498	19,448	660,000		817,000	
4/30/1997	436,116	21,318	19,849	19,479	660,000		817,000	
5/31/1997	427,107	22,163	20,094	19,843	660,000		817,000	
6/30/1997	425,712	20,252	20,343	19,878	660,000		817,000	
7/31/1997	418,919	20,578	20,610	19,959	660,000		817,000	
8/31/1997	407,409	21,422	20,749	20,141	660,000		817,000	
9/30/1997	406,974	19,979	20,952	20,225	660,000		817,000	
10/31/1997	409,297	23,537	21,322	20,585	660,000		817,000	
11/30/1997	404,864	22,702	21,412	20,753	660,000		817,000	
12/31/1997	398,848	20,190	21,401	20,872	660,000		817,000	
1/31/1998	394,650	21,673	21,584	21,097	660,000		817,000	
2/28/1998	386,846	23,579	21,943	21,346	660,000		817,000	
3/31/1998	388,485	22,956	22,440	21,696	660,000		817,000	
4/30/1998	391,518	19,523	21,771	21,546	660,000		817,000	
5/31/1998	390,993	18,289	21,035	21,223	660,000		817,000	
6/30/1998	398,549	16,851	20,479	20,940	660,000		817,000	
7/31/1998	405,222	17,632	19,805	20,694	660,000		817,000	
8/31/1998	412,775	18,710	18,993	20,468	660,000		817,000	
9/30/1998	416,769	19,921	18,488	20,464	660,000		817,000	
10/31/1998	423,170	19,796	18,533	20,152	660,000		817,000	
11/30/1998	428,701	19,282	18,699	19,867	660,000		817,000	
12/31/1998	436,572	20,683	19,337	19,908	660,000		817,000	
1/31/1999	443,802	25,012	20,567	20,186	660,000		817,000	
2/28/1999	445,247	18,434	20,522	19,757	660,000		817,000	
3/31/1999	433,156	18,418	20,271	19,379	660,000		817,000	
4/30/1999	429,274	18,858	20,115	19,324	660,000		817,000	
5/31/1999	434,322	20,669	20,346	19,522	660,000		817,000	
6/30/1999	420,609	22,204	20,599	19,968	660,000		817,000	
7/31/1999	409,778	22,047	20,105	20,336	660,000		817,000	
8/31/1999	399,357	18,892	20,181	20,351	660,000		817,000	
9/30/1999	398,242	19,720	20,398	20,335	660,000		817,000	
10/31/1999	394,004	20,240	20,629	20,372	660,000		817,000	
11/30/1999	391,000	23,950	21,175	20,761	660,000		817,000	
12/31/1999	387,420	23,485	21,389	20,994	660,000		817,000	

	CO TSS ani	CO NH3 (lk	CO NH3 6r	CO NH3 ar	CO BOD Capa	CO BOD 80%	CO TSS Ca|	CO TSS 80'
1/31/2000	384,670	24,910	21,866	20,985	660,000		817,000	
2/29/2000	397,273	25,978	23,047	21,614	660,000		817,000	
3/31/2000	408,897	22,695	23,543	21,971	660,000		817,000	
4/30/2000	404,809	19,778	23,466	22,047	660,000		817,000	
5/31/2000	398,891	20,775	22,937	22,056	660,000		817,000	
6/30/2000	401,553	21,362	22,583	21,986	660,000		817,000	
7/31/2000	402,386	18,565	21,526	21,696	660,000		817,000	
8/31/2000	408,086	21,356	20,755	21,901	660,000		817,000	
9/30/2000	421,807	22,995	20,805	22,174	660,000		817,000	
10/31/2000	422,215	21,577	21,105	22,286	660,000		817,000	
11/30/2000	422,378	23,555	21,568	22,253	660,000		817,000	
12/31/2000	422,872	21,970	21,670	22,126	660,000		817,000	
1/31/2001	427,683	24,337	22,632	22,079	660,000		817,000	
2/28/2001	430,235	20,466	22,483	21,619	660,000		817,000	
3/31/2001	426,877	19,894	21,967	21,386	660,000		817,000	
4/30/2001	434,203	19,918	21,690	21,398	660,000		817,000	
5/31/2001	445,950	22,102	21,448	21,508	660,000		817,000	
6/30/2001	448,525	22,112	21,472	21,571	660,000		817,000	
7/31/2001	458,465	19,729	20,704	21,668	660,000		817,000	
8/31/2001	459,025	19,786	20,590	21,537	660,000		817,000	
9/30/2001	454,202	21,156	20,800	21,384	660,000		817,000	
10/31/2001	460,573	22,589	21,246	21,468	660,000		817,000	
11/30/2001	461,236	25,065	21,739	21,594	660,000		817,000	
12/31/2001	460,578	19,417	21,290	21,381	660,000		817,000	
1/31/2002	452,440	22,966	21,830	21,267	660,000		817,000	
2/28/2002	440,883	21,101	22,049	21,320	660,000		817,000	
3/31/2002	438,928	19,457	21,766	21,283	660,000		817,000	
4/30/2002	437,176	18,909	21,153	21,199	660,000		817,000	
5/31/2002	437,653	17,334	19,864	20,802	660,000		817,000	
6/30/2002	438,911	20,012	19,963	20,627	660,000		817,000	
7/31/2002	429,133	19,686	19,417	20,623	660,000		817,000	
8/31/2002	432,238	24,313	19,952	21,000	660,000		817,000	
9/30/2002	433,312	24,352	20,768	21,267	660,000		817,000	
10/31/2002	431,445	23,183	21,480	21,316	660,000		817,000	
11/30/2002	438,431	23,043	22,432	21,148	660,000		817,000	
12/31/2002	443,660	22,888	22,911	21,437	660,000		817,000	
1/31/2003	442,440	24,944	23,787	21,602	660,000		817,000	
2/28/2003	446,661	27,521	24,322	22,137	660,000		817,000	
3/31/2003	447,641	22,597	24,029	22,399	660,000		817,000	
4/30/2003	447,649	23,048	24,007	22,744	660,000		817,000	
5/31/2003	440,918	23,415	24,069	23,250	660,000		817,000	
6/30/2003	433,697	24,139	24,277	23,594	660,000		817,000	
7/31/2003	433,068	22,169	23,815	23,801	660,000		817,000	
8/31/2003	425,343	22,479	22,975	23,648	660,000		817,000	
9/30/2003	416,623	20,960	22,702	23,366	660,000		817,000	
10/31/2003	409,944	21,676	22,473	23,240	660,000		817,000	
11/30/2003	398,845	22,895	22,386	23,228	660,000		817,000	
12/31/2003	392,781	22,759	22,156	23,217	660,000		817,000	

	CO TSS an	CO NH3 (lk	CO NH3 6r	CO NH3 ar	CO BOD Capa	CO BOD 80%	CO TSS Ca	CO TSS 80'
1/31/2004	393,482	28,093	23,144	23,479	660,000		817,000	
2/29/2004	379,874	27,394	23,963	23,469	660,000		817,000	
3/31/2004	372,426	27,392	25,035	23,868	660,000		817,000	
4/30/2004	361,172	26,485	25,836	24,155	660,000		817,000	
5/31/2004	351,460	25,525	26,275	24,330	660,000		817,000	
6/30/2004	346,663	22,772	26,277	24,217	660,000		817,000	
7/31/2004	339,910	24,909	25,746	24,445	660,000	528,000	817,000	653,600
8/31/2004	335,275	25,287	25,395	24,679	660,000	528,000	817,000	653,600
9/30/2004	328,003	24,084	24,844	24,939	660,000	528,000	817,000	653,600
10/31/2004	324,790	24,830	24,568	25,202	660,000	528,000	817,000	653,600
11/30/2004	325,599	22,074	23,993	25,134	660,000	528,000	817,000	653,600
12/31/2004	326,641	22,335	23,920	25,098	660,000	528,000	817,000	653,600
1/31/2005	326,834	18,948	22,926	24,336	660,000	528,000	817,000	653,600
2/28/2005	333,234	22,748	22,503	23,949	660,000	528,000	817,000	653,600
3/31/2005	328,873	24,849	22,631	23,737	660,000	528,000	817,000	653,600
4/30/2005	332,887	23,411	22,394	23,481	660,000	528,000	817,000	653,600
5/31/2005	334,796	25,376	22,945	23,469	660,000	528,000	817,000	653,600
6/30/2005	336,495	20,730	22,677	23,298	660,000	528,000	817,000	653,600
7/31/2005	336,404	21,434	23,092	23,009	660,000	528,000	817,000	653,600
8/31/2005	334,485	23,651	23,242	22,873	660,000	528,000	817,000	653,600
9/30/2005	337,845	21,393	22,666	22,648	660,000	528,000	817,000	653,600
10/31/2005	336,474	24,407	22,832	22,613	660,000	528,000	817,000	653,600
11/30/2005	335,303	25,009	22,771	22,858	660,000	528,000	817,000	653,600
12/31/2005	329,802	24,022	23,319	22,998	660,000	528,000	817,000	653,600
1/31/2006	333,619	23,038	23,587	23,339	660,000	528,000	817,000	653,600
2/28/2006	330,385	24,340	23,702	23,472	660,000	528,000	817,000	653,600
3/31/2006	336,266	23,322	24,023	23,345	660,000	528,000	817,000	653,600
4/30/2006	333,999	21,540	23,545	23,189	660,000	528,000	817,000	653,600
5/31/2006	334,977	22,487	23,125	22,948	660,000	528,000	817,000	653,600
6/30/2006	340,183	21,824	22,759	23,039	660,000	528,000	817,000	653,600
7/31/2006	344,470	22,484	22,666	23,126	660,000	528,000	817,000	653,600
8/31/2006	348,081	23,419	22,513	23,107	660,000	528,000	817,000	653,600
9/30/2006	349,447	22,984	22,456	23,240	660,000	528,000	817,000	653,600
10/31/2006	353,374	21,658	22,476	23,011	660,000	528,000	817,000	653,600
11/30/2006	355,319	21,059	22,238	22,682	660,000	528,000	817,000	653,600
12/31/2006	359,871	20,993	22,100	22,429	660,000	528,000	817,000	653,600
1/31/2007	354,995	22,884	22,166	22,416	660,000	528,000	817,000	653,600
2/28/2007	358,846	23,154	22,122	22,317	660,000	528,000	817,000	653,600
3/31/2007	362,094	18,620	21,395	21,926	660,000	528,000	817,000	653,600
4/30/2007	363,379	19,042	20,959	21,717	660,000	528,000	817,000	653,600
5/31/2007	364,723	20,610	20,884	21,561	660,000	528,000	817,000	653,600
6/30/2007	358,422	21,215	20,921	21,510	660,000	528,000	817,000	653,600
7/31/2007	350,232	20,929	20,595	21,381	660,000	528,000	817,000	653,600

	CO TSS ani	CO NH3 (lk	CO NH3 6r	CO NH3 ar	CO BOD Capa	CO BOD 80%	CO TSS Ca|	CO TSS 80!
8/31/2007	347,121	21,373	20,298	21,210	660,000	528,000	817,000	653,600
9/30/2007	340,336	20,859	20,671	21,033	660,000	528,000	817,000	653,600
10/31/2007	332,947	22,585	21,262	21,110	660,000	528,000	817,000	653,600
11/30/2007	326,222	23,648	21,768	21,326	660,000	528,000	817,000	653,600
12/31/2007	321,065	20,966	21,727	21,324	660,000	528,000	817,000	653,600
1/31/2008	316,842	22,063	21,916	21,255	660,000	528,000	817,000	653,600
2/29/2008	320,269	23,511	22,272	21,285	660,000	528,000	817,000	653,600
3/31/2008	315,511	21,683	22,409	21,540	660,000	528,000	817,000	653,600
4/30/2008	311,158	21,073	22,157	21,710	660,000	528,000	817,000	653,600
5/31/2008	305,554	19,940	21,539	21,654	660,000	528,000	817,000	653,600
6/30/2008	312,995	17,500	20,962	21,344	660,000	528,000	817,000	653,600
7/31/2008	322,525	18,506	20,369	21,142	660,000	528,000	817,000	653,600
8/31/2008	327,766	21,228	19,988	21,130	660,000	528,000	817,000	653,600
9/30/2008	338,323	22,045	20,049	21,229	660,000	528,000	817,000	653,600
10/31/2008	342,978	21,339	20,093	21,125	660,000	528,000	817,000	653,600
11/30/2008	346,879	24,022	20,773	21,156	660,000	528,000	817,000	653,600
12/31/2008	350,101	20,856	21,333	21,147	660,000	528,000	817,000	653,600
1/31/2009	346,244	20,458	21,658	21,013	660,000	528,000	817,000	653,600
2/28/2009	339,071	20,436	21,526	20,757	660,000	528,000	817,000	653,600
3/31/2009	337,177	19,997	21,185	20,617	660,000	528,000	817,000	653,600
4/30/2009	341,015	18,227	20,666	20,380	660,000	528,000	817,000	653,600
5/31/2009	343,400	19,107	19,847	20,310	660,000	528,000	817,000	653,600
6/30/2009	343,336	18,723	19,491	20,412	660,000	528,000	817,000	653,600
7/31/2009	337,496	18,465	19,159	20,409	660,000	528,000	817,000	653,600
8/31/2009	333,860	18,782	18,883	20,205	660,000	528,000	817,000	653,600
9/30/2009	324,019	19,277	18,763	19,974	660,000	528,000	817,000	653,600
10/31/2009	325,982	20,338	19,115	19,891	660,000	528,000	817,000	653,600
11/30/2009	324,931	20,803	19,398	19,622	660,000	528,000	817,000	653,600
12/31/2009	325,766	21,449	19,852	19,672	660,000	528,000	817,000	653,600
1/31/2010	327,375	21,633	20,380	19,770	660,000	528,000	817,000	653,600
2/28/2010	325,828	21,706	20,868	19,876	660,000	528,000	817,000	653,600
3/31/2010	334,249	19,373	20,884	19,824	660,000	528,000	817,000	653,600
4/30/2010	332,332	18,395	20,560	19,838	660,000	528,000	817,000	653,600
5/31/2010	333,569	17,905	20,077	19,737	660,000	528,000	817,000	653,600
6/30/2010	338,846	16,481	19,249	19,551	660,000	528,000	817,000	653,600
7/31/2010	340,957	17,998	18,643	19,512	660,000	528,000	817,000	653,600
8/31/2010	332,281	20,347	18,417	19,642	660,000	528,000	817,000	653,600
9/30/2010	330,258	21,236	18,727	19,805	660,000	528,000	817,000	653,600
10/31/2010	323,031	21,171	19,190	19,875	660,000	528,000	817,000	653,600
11/30/2010	324,302	21,113	19,724	19,901	660,000	528,000	817,000	653,600
12/31/2010	317,449	21,495	20,560	19,905	660,000	528,000	817,000	653,600
1/31/2011	314,762	21,202	21,094	19,869	660,000	528,000	817,000	653,600
2/28/2011	315,280	21,928	21,357	19,887	660,000	528,000	817,000	653,600
3/31/2011	305,468	19,760	21,111	19,919	660,000	528,000	817,000	653,600
4/30/2011	305,986	19,595	20,849	20,019	660,000	528,000	817,000	653,600
max	461,236	28,093	26,277	25,202	660,000	528,000	817,000	653,600
ave	379,543	21,507	21,507	21,545	660,000	528,000	817,000	653,600

	CO NH3 Ca	CO NH3 80% Capacity		CO BOD%(	COTSS%CA	CONH3%CAP
1/31/1996	46,000		01/96	75%	66%	50%
2/29/1996	46,000		02/96	72%	59%	52%
3/31/1996	46,000		03/96	66%	58%	49%
4/30/1996	46,000		04/96	66%	68%	46%
5/31/1996	46,000		05/96	59%	63%	39%
6/30/1996	46,000		06/96	58%	56%	43%
7/31/1996	46,000		07/96	70%	64%	43%
8/31/1996	46,000		08/96	65%	63%	42%
9/30/1996	46,000		09/96	42%	39%	41%
10/31/1996	46,000		10/96	45%	39%	42%
11/30/1996	46,000		11/96	59%	47%	45%
12/31/1996	46,000		12/96	54%	48%	41%
1/31/1997	46,000		01/97	54%	51%	41%
2/28/1997	46,000		02/97	59%	54%	45%
3/31/1997	46,000		03/97	60%	59%	41%
4/30/1997	46,000		04/97	68%	57%	46%
5/31/1997	46,000		05/97	59%	50%	48%
6/30/1997	46,000		06/97	57%	54%	44%
7/31/1997	46,000		07/97	59%	54%	45%
8/31/1997	46,000		08/97	59%	46%	47%
9/30/1997	46,000		09/97	51%	39%	43%
10/31/1997	46,000		10/97	59%	42%	51%
11/30/1997	46,000		11/97	57%	40%	49%
12/31/1997	46,000		12/97	51%	39%	44%
1/31/1998	46,000		01/98	58%	45%	47%
2/28/1998	46,000		02/98	55%	43%	51%
3/31/1998	46,000		03/98	64%	62%	50%
4/30/1998	46,000		04/98	54%	62%	42%
5/31/1998	46,000		05/98	49%	49%	40%
6/30/1998	46,000		06/98	55%	65%	37%
7/31/1998	46,000		07/98	53%	63%	38%
8/31/1998	46,000		08/98	54%	57%	41%
9/30/1998	46,000		09/98	60%	45%	43%
10/31/1998	46,000		10/98	59%	52%	43%
11/30/1998	46,000		11/98	59%	48%	42%
12/31/1998	46,000		12/98	69%	51%	45%
1/31/1999	46,000		01/99	69%	56%	54%
2/28/1999	46,000		02/99	59%	45%	40%
3/31/1999	46,000		03/99	55%	44%	40%
4/30/1999	46,000		04/99	57%	56%	41%
5/31/1999	46,000		05/99	57%	57%	45%
6/30/1999	46,000		06/99	47%	45%	48%
7/31/1999	46,000		07/99	48%	47%	48%
8/31/1999	46,000		08/99	45%	42%	41%
9/30/1999	46,000		09/99	46%	43%	43%
10/31/1999	46,000		10/99	53%	45%	44%
11/30/1999	46,000		11/99	48%	44%	52%
12/31/1999	46,000		12/99	50%	46%	51%

	CO NH3 Ca	CO NH3 80% Capacity		CO BOD%(	COTSS%CA	CONH3%CAP
1/31/2000	46,000		01/00	55%	52%	54%
2/29/2000	46,000		02/00	68%	64%	56%
3/31/2000	46,000		03/00	63%	61%	49%
4/30/2000	46,000		04/00	55%	50%	43%
5/31/2000	46,000		05/00	52%	48%	45%
6/30/2000	46,000		06/00	59%	49%	46%
7/31/2000	46,000		07/00	55%	49%	40%
8/31/2000	46,000		08/00	49%	50%	46%
9/30/2000	46,000		09/00	49%	63%	50%
10/31/2000	46,000		10/00	51%	46%	47%
11/30/2000	46,000		11/00	52%	44%	51%
12/31/2000	46,000		12/00	54%	46%	48%
1/31/2001	46,000		01/01	60%	59%	53%
2/28/2001	46,000		02/01	54%	67%	44%
3/31/2001	46,000		03/01	52%	56%	43%
4/30/2001	46,000		04/01	52%	61%	43%
5/31/2001	46,000		05/01	53%	65%	48%
6/30/2001	46,000		06/01	48%	53%	48%
7/31/2001	46,000		07/01	45%	63%	43%
8/31/2001	46,000		08/01	46%	51%	43%
9/30/2001	46,000		09/01	45%	56%	46%
10/31/2001	46,000		10/01	40%	55%	49%
11/30/2001	46,000		11/01	42%	45%	54%
12/31/2001	46,000		12/01	38%	45%	42%
1/31/2002	46,000		01/02	45%	47%	50%
2/28/2002	46,000		02/02	43%	50%	46%
3/31/2002	46,000		03/02	46%	53%	42%
4/30/2002	46,000		04/02	49%	58%	41%
5/31/2002	46,000		05/02	46%	66%	38%
6/30/2002	46,000		06/02	56%	54%	44%
7/31/2002	46,000		07/02	52%	49%	43%
8/31/2002	46,000		08/02	61%	56%	53%
9/30/2002	46,000		09/02	61%	58%	53%
10/31/2002	46,000		10/02	61%	53%	50%
11/30/2002	46,000		11/02	70%	55%	50%
12/31/2002	46,000		12/02	69%	53%	50%
1/31/2003	46,000		01/03	68%	45%	54%
2/28/2003	46,000		02/03	77%	57%	60%
3/31/2003	46,000		03/03	65%	55%	49%
4/30/2003	46,000		04/03	70%	58%	50%
5/31/2003	46,000		05/03	65%	56%	51%
6/30/2003	46,000		06/03	59%	44%	52%
7/31/2003	46,000		07/03	57%	48%	48%
8/31/2003	46,000		08/03	60%	44%	49%
9/30/2003	46,000		09/03	58%	45%	46%
10/31/2003	46,000		10/03	59%	43%	47%
11/30/2003	46,000		11/03	57%	39%	50%
12/31/2003	46,000		12/03	57%	44%	49%

	CO NH3 Ca	CO NH3 80% Capacity		CO BOD%(	COTSS%CA	CONH3%CAP
1/31/2004	46,000		01/04	65%	46%	61%
2/29/2004	46,000		02/04	59%	37%	60%
3/31/2004	46,000		03/04	58%	44%	60%
4/30/2004	46,000		04/04	62%	42%	58%
5/31/2004	46,000		05/04	59%	42%	55%
6/30/2004	46,000		06/04	48%	37%	50%
7/31/2004	46,000	36,800	07/04	59%	38%	54%
8/31/2004	46,000	36,800	08/04	61%	37%	55%
9/30/2004	46,000	36,800	09/04	57%	34%	52%
10/31/2004	46,000	36,800	10/04	54%	38%	54%
11/30/2004	46,000	36,800	11/04	55%	40%	48%
12/31/2004	46,000	36,800	12/04	57%	46%	49%
1/31/2005	46,000	36,800	01/05	54%	46%	41%
2/28/2005	46,000	36,800	02/05	60%	46%	49%
3/31/2005	46,000	36,800	03/05	55%	37%	54%
4/30/2005	46,000	36,800	04/05	54%	48%	51%
5/31/2005	46,000	36,800	05/05	54%	45%	55%
6/30/2005	46,000	36,800	06/05	49%	39%	45%
7/31/2005	46,000	36,800	07/05	52%	38%	47%
8/31/2005	46,000	36,800	08/05	53%	35%	51%
9/30/2005	46,000	36,800	09/05	50%	39%	47%
10/31/2005	46,000	36,800	10/05	50%	36%	53%
11/30/2005	46,000	36,800	11/05	54%	38%	54%
12/31/2005	46,000	36,800	12/05	53%	37%	52%
1/31/2006	46,000	36,800	01/06	57%	52%	50%
2/28/2006	46,000	36,800	02/06	51%	41%	53%
3/31/2006	46,000	36,800	03/06	51%	46%	51%
4/30/2006	46,000	36,800	04/06	51%	44%	47%
5/31/2006	46,000	36,800	05/06	50%	46%	49%
6/30/2006	46,000	36,800	06/06	51%	47%	47%
7/31/2006	46,000	36,800	07/06	51%	44%	49%
8/31/2006	46,000	36,800	08/06	52%	40%	51%
9/30/2006	46,000	36,800	09/06	54%	41%	50%
10/31/2006	46,000	36,800	10/06	51%	42%	47%
11/30/2006	46,000	36,800	11/06	53%	41%	46%
12/31/2006	46,000	36,800	12/06	49%	44%	46%
1/31/2007	46,000	36,800	01/07	48%	45%	50%
2/28/2007	46,000	36,800	02/07	54%	47%	50%
3/31/2007	46,000	36,800	03/07	50%	51%	40%
4/30/2007	46,000	36,800	04/07	48%	46%	41%
5/31/2007	46,000	36,800	05/07	50%	48%	45%
6/30/2007	46,000	36,800	06/07	46%	38%	46%
7/31/2007	46,000	36,800	07/07	46%	32%	45%

	CO NH3 Ca	CO NH3 80% Capacity			CO BOD%(	COTSS%CA	CONH3%CAP
8/31/2007	46,000	36,800		08/07	49%	35%	46%
9/30/2007	46,000	36,800		09/07	43%	31%	45%
10/31/2007	46,000	36,800		10/07	50%	31%	49%
11/30/2007	46,000	36,800		11/07	47%	31%	51%
12/31/2007	46,000	36,800		12/07	53%	37%	46%
1/31/2008	46,000	36,800		01/08	51%	38%	48%
2/29/2008	46,000	36,800		02/08	60%	52%	51%
3/31/2008	46,000	36,800		03/08	55%	44%	47%
4/30/2008	46,000	36,800		04/08	54%	40%	46%
5/31/2008	46,000	36,800		05/08	54%	40%	43%
6/30/2008	46,000	36,800		06/08	59%	49%	38%
7/31/2008	46,000	36,800		07/08	53%	46%	40%
8/31/2008	46,000	36,800		08/08	56%	43%	46%
9/30/2008	46,000	36,800		09/08	66%	47%	48%
10/31/2008	46,000	36,800		10/08	56%	38%	46%
11/30/2008	46,000	36,800		11/08	58%	37%	52%
12/31/2008	46,000	36,800		12/08	58%	41%	45%
1/31/2009	46,000	36,800		01/09	49%	33%	44%
2/28/2009	46,000	36,800		02/09	51%	41%	44%
3/31/2009	46,000	36,800		03/09	52%	41%	43%
4/30/2009	46,000	36,800		04/09	46%	45%	40%
5/31/2009	46,000	36,800		05/09	47%	43%	42%
6/30/2009	46,000	36,800		06/09	48%	48%	41%
7/31/2009	46,000	36,800		07/09	46%	38%	40%
8/31/2009	46,000	36,800		08/09	49%	38%	41%
9/30/2009	46,000	36,800		09/09	46%	32%	42%
10/31/2009	46,000	36,800		10/09	54%	41%	44%
11/30/2009	46,000	36,800		11/09	47%	36%	45%
12/31/2009	46,000	36,800		12/09	54%	43%	47%
1/31/2010	46,000	36,800		01/10	51%	35%	47%
2/28/2010	46,000	36,800		02/10	56%	39%	47%
3/31/2010	46,000	36,800		03/10	58%	53%	42%
4/30/2010	46,000	36,800		04/10	50%	42%	40%
5/31/2010	46,000	36,800		05/10	49%	45%	39%
6/30/2010	46,000	36,800		06/10	49%	56%	36%
7/31/2010	46,000	36,800		07/10	49%	41%	39%
8/31/2010	46,000	36,800		08/10	46%	25%	44%
9/30/2010	46,000	36,800		09/10	45%	29%	46%
10/31/2010	46,000	36,800		10/10	44%	30%	46%
11/30/2010	46,000	36,800		11/10	44%	37%	46%
12/31/2010	46,000	36,800		12/10	44%	32%	47%
1/31/2011	46,000	36,800		01/11	48%	31%	46%
2/28/2011	46,000	36,800		02/11	46%	40%	48%
3/31/2011	46,000	36,800		03/11	43%	39%	43%
4/30/2011	46,000	36,800		04/11	46%	43%	43%
max	46,000	36,800	-	40,634	77%	68%	61%
ave	46,000	36,800	#DIV/0!	37,850	54%	47%	47%

APPENDIX

E

Total Metals Data

&

Conservative Pollutant Removal Calculation

AWT Incinerator
Baseline Cake

Wet weight	1/5/10	2/9/10	3/4/10	4/6/10	5/5/10	6/8/10	7/7/10	8/11/10	9/8/10	10/6/10	11/3/10	12/14/10	1/11/11	2/8/11	3/8/11	4/6/11	5/4/11	6/7/11
Arsenic	0.95	0.85	0.65	1.29	1.72	0.65	1.10	0.56	0.80	1.30	0.51	2.00	0.72	1.00	1.04	0.50	1.17	1.00
Beryllium	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.05	0.05	0.08	0.05	0.04	0.06	0.13	0.05	0.05	0.05	0.05
Cadmium	1.77	2.12	1.65	1.49	2.91	1.43	1.62	1.52	0.95	1.72	1.27	1.61	1.44	1.70	1.46	2.00	1.75	2.29
Chromium	5.51	4.63	3.62	7.01	12.50	4.56	4.20	4.53	4.56	5.98	4.44	4.34	3.58	4.04	6.73	7.89	5.42	11.60
Copper	121.0	104.0	97.7	108.0	127.0	106.0	107.0	120.0	126.0	165.0	113.0	114.0	106.0	112.0	95.9	110.0	93.7	253.0
Mercury (*µg/kg*)	13.6	10.0	113.2	10.0	29.5	10.0	19.8	16.2	18.0	34.6	20.8	25.0	19.2	56.0	25.0	25.0	23.0	12.0
Molybdenum	2.64	2.18	2.25	2.76	2.80	3.00	3.61	3.90	4.66	6.08	3.39	2.34	2.15	1.71	2.62	3.27	2.28	4.96
Nickel	4.83	4.54	4.40	5.66	5.42	4.14	4.08	8.43	5.97	7.84	4.60	4.98	4.47	6.09	5.78	8.34	6.04	16.10
Lead	8.9	9.2	7.9	19.5	20.8	8.6	11.2	12.2	10.3	14.5	9.4	10.8	8.6	10.4	13.6	15.8	14.2	25.7
Selenium	8.44	7.37	6.48	6.12	4.80	4.62	5.28	4.61	5.70	6.02	6.73	7.72	8.16	7.28	7.39	10.20	5.28	10.10
Zinc	573	335	471	459	521	178	651	582	674	633	508	740	845	572	675	520	542	804
Cyanide, T.	1.502	0.790	0.887	0.873	0.734	0.520	0.857	0.673	0.889	0.633	0.444	0.881	0.830	0.879	0.799	0.449	0.571	0.769
Cyanide, W&D.	0.634	0.748	0.596	0.810	0.602	0.625	0.510	0.350	0.360	0.307	0.207	0.467	0.635	0.761	0.717	0.337	0.490	0.569
Total Solids %	19.94	20.22	19.81	24.24	21.61	20.91	19.30	19.87	17.72	22.92	21.22	20.76	20.63	22.10	20.60	22.72	20.75	23.71

Dry Weight	1/5/10	2/9/10	3/4/10	4/6/10	5/5/10	6/8/10	7/7/10	8/11/10	9/8/10	10/6/10	11/3/10	12/14/10	1/11/11	2/8/11	3/8/11	4/6/11	5/4/11	6/7/11	12 mo Ave 7/10 - 6/11	12 mo lbs/day	Concurrent 12 mo IN lb/dy	Rem %	
Arsenic	4.76	4.19	3.29	5.32	7.96	3.12	5.70	2.84	4.49	5.67	2.40	9.63	3.48	4.52	5.05	2.20	5.64	4.22	4.65	1.35	2.35	57.4%	all inf < det use 1/2 LOD
Beryllium	0.25	0.25	0.25	0.21	0.23	0.24	0.11	0.25	0.28	0.35	0.24	0.19	0.28	0.61	0.24	0.22	0.24	0.21	0.27	0.08	0.16	49.5%	all inf < det Use 1/2 LOD
Cadmium	8.88	10.48	8.33	6.15	13.47	6.84	8.40	7.65	5.35	7.51	5.98	7.76	6.98	7.69	7.09	8.80	8.43	9.66	7.61	2.21	0.60	367.1%	many/most Inf< det
Chromium	27.63	22.90	18.28	28.92	57.84	21.81	21.77	22.80	25.74	26.10	20.92	20.91	17.35	18.28	32.67	34.73	26.11	48.93	26.36	7.64	10.55	72.4%	many/most Inf< det
Copper	606.8	514.3	493.3	445.5	587.7	507.0	554.5	604.0	711.2	720.0	532.5	549.2	513.8	506.7	465.6	484.2	451.5	1067.1	596.68	173.04	131.94	131.2%	
Mercury (*µg/kg*)	68.2	49.5	571.5	41.3	136.5	47.8	102.6	81.5	101.6	151.0	98.0	120.4	93.1	253.4	121.4	110.0	110.8	50.6	130.83	0.038	0.060	63.7%	2010 data
Molybdenum	13.24	10.78	11.36	11.39	12.96	14.35	18.71	19.63	26.30	26.53	15.97	11.27	10.42	7.74	12.72	14.39	10.99	20.92	16.30	4.73			
Nickel	24.22	22.45	22.21	23.35	25.08	19.80	21.14	42.43	33.70	34.21	21.68	23.99	21.67	27.55	28.06	36.71	29.10	67.91	32.35	9.38	19.36	48.5%	
Lead	44.8	45.7	39.9	80.4	96.2	41.2	58.0	61.4	58.1	63.3	44.1	52.0	41.5	47.1	66.0	69.5	68.4	108.4	61.49	17.83	7.7	232.3%	many/most Inf< det
Selenium	42.33	36.45	32.72	25.25	22.21	22.10	27.36	23.20	32.17	26.27	31.71	37.19	39.55	32.94	35.88	44.90	25.44	42.60	33.27	9.65	17.56	54.9%	many/most Inf< det
Zinc	2874	1657	2378	1894	2411	851	3374	2929	3804	2762	2394	3565	4096	2588	3277	2289	2611	3391	3090.03	896.11	633	141.5%	
Cyanide, T.	7.53	3.91	4.48	3.60	3.40	2.49	4.44	3.39	5.02	2.76	2.09	4.24	4.02	3.98	3.88	1.98	2.75	3.24	3.48	1.01			
Cyanide, W&D.	3.180	3.699	3.009	3.342	2.786	2.989	2.643	1.762	2.032	1.340	0.975	2.250	3.078	3.443	3.481	1.483	2.361	2.400	2.27	0.66			

Red-shaded cells = Maximum

AWT Baseline Influent Metals (mg/l)

Belmont		6/4/10	6/8/10	7/6/10	7/15/10	8/4/10	8/11/2010	9/2/2010	9/8/2010	10/5/2010	10/14/2010
	Arsenic	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
	Cadmium	0.0004	0.0003	0.0003	0.0003	0.0003	0.0005	0.0003	0.0003	0.0006	0.0006
	Chromium	0.0081	0.0060	0.0060	0.0070	0.0060	0.0060	0.0111	0.0060	0.0065	0.0077
	Copper	0.0572	0.0650	0.0729	0.0714	0.0351	0.0672	0.0308	0.0186	0.0826	0.1210
	Lead	0.0206	0.0030	0.0030	0.0121	0.0044	0.0046	0.0050	0.0030	0.0068	0.0169
	Nickel	0.0084	0.0126	0.0121	0.0139	0.0165	0.0099	0.0284	0.0237	0.0168	0.0134
	Selenium	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
	Zinc	0.1350	0.1500	0.3060	0.5060	0.1620	0.2850	0.9920	0.5670	0.1960	0.6520
All Se Eff <.01											

Southport		6/4/10	6/8/10	7/6/10	7/15/10	8/4/10	8/11/10	9/2/10	9/8/10	10/5/10	10/14/10
	Arsenic	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
	Cadmium	0.0003	0.0003	0.0005	0.0006	0.0003	0.0003	0.0005	0.0003	0.0003	0.0003
	Chromium	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
	Copper	0.0679	0.0911	0.0912	0.0838	0.1140	0.0578	0.0078	0.1110	0.1200	0.1100
	Lead	0.0030	0.0030	0.0030	0.0030	0.0048	0.0030	0.0030	0.0030	0.0042	0.0070
	Nickel	0.0070	0.0133	0.0090	0.0199	0.0094	0.0076	0.0115	0.0182	0.0201	0.0092
	Selenium	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
	Zinc	0.1420	0.2620	0.3690	0.4800	0.5280	0.3980	1.6400	0.5770	0.7430	0.8280
All Se Eff <.01											

6/4/10	6/8/10	7/6/10	7/15/10	8/4/10	8/11/2010	9/2/2010	9/8/2010	10/5/2010	10/14/2010
0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
0.0004	0.0003	0.0004	0.0005	0.0003	0.0004	0.0004	0.0003	0.0005	0.0005
0.0071	0.0060	0.0060	0.0065	0.0060	0.0060	0.0086	0.0060	0.0063	0.0069
0.0626	0.0781	0.0821	0.0776	0.0746	0.0625	0.0193	0.0648	0.1013	0.1155
0.0118	0.0030	0.0030	0.0076	0.0046	0.0038	0.0040	0.0030	0.0055	0.0120
0.0077	0.0130	0.0106	0.0169	0.0130	0.0088	0.0200	0.0210	0.0185	0.0113
0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
0.1385	0.2060	0.3375	0.4930	0.3450	0.3415	1.3160	0.5720	0.4695	0.7400

11/2/2010	11/10/2010	12/1/2010	12/9/2010	1/7/2011	1/10/2011	2/2/2011	2/11/2011	3/1/2011	3/9/2011	4/4/2011	4/15/2011
0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
0.0003	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
0.0060	0.0093	0.0061	0.0159	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0131	0.0060
0.1190	0.0780	0.0723	0.0958	0.0930	0.0937	0.0860	0.1140	0.0407	0.1110	0.1140	0.0966
0.0030	0.0030	0.0092	0.0040	0.0063	0.0030	0.0030	0.0045	0.0043	0.0122	0.0227	0.0059
0.0058	0.0174	0.0114	0.0105	0.0085	0.0079	0.0103	0.0093	0.0153	0.0131	0.0140	0.0180
0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
0.1280	0.1860	0.2390	1.8800	0.1400	0.1160	0.1210	0.1550	0.0987	0.1650	0.2420	0.2860

11/2/10	11/10/10	12/1/10	12/9/10	1/7/2011	1/10/2011	2/2/2011	2/11/2011	3/1/2011	3/9/2011	4/4/2011	4/15/2011
0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
0.0004	0.0007	0.0003	0.0003	0.0003	0.0003	0.0007	0.0011	0.0003	0.0003	0.0003	0.0008
0.0060	0.0072	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
0.1190	0.1010	0.0446	0.1340	0.0686	0.0842	0.1590	0.1170	0.0437	0.0575	0.0457	0.0750
0.0030	0.0030	0.0030	0.0040	0.0030	0.0030	0.0030	0.0030	0.0030	0.0036	0.0030	0.0030
0.0107	0.0121	0.0109	0.0091	0.0088	0.0093	0.0113	0.0122	0.0107	0.0051	0.0126	0.0132
0.0323	0.0200	0.0144	0.0100	0.0168	0.0100	0.0242	0.0100	0.0100	0.0100	0.0100	0.0100
0.7240	0.4180	0.3090	0.7890	0.3920	0.9150	0.5950	0.2930	0.0773	0.1010	0.0786	0.1610
-0.8452	-0.7500	-0.6528		-0.7024		-0.7934					

11/2/2010	11/10/2010	12/1/2010	12/9/2010	1/7/2011	1/10/2011	2/2/2011	2/11/2011	3/1/2011	3/9/2011	4/4/2011	4/15/2011
0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030
0.0004	0.0005	0.0003	0.0004	0.0003	0.0003	0.0005	0.0007	0.0003	0.0003	0.0003	0.0006
0.0060	0.0083	0.0061	0.0110	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0096	0.0060
0.1190	0.0895	0.0585	0.1149	0.0808	0.0890	0.1225	0.1155	0.0422	0.0843	0.0799	0.0858
0.0030	0.0030	0.0061	0.0040	0.0047	0.0030	0.0030	0.0038	0.0037	0.0079	0.0129	0.0045
0.0083	0.0148	0.0112	0.0098	0.0087	0.0086	0.0108	0.0108	0.0130	0.0091	0.0133	0.0156
0.0212	0.0150	0.0122	0.0100	0.0134	0.0100	0.0171	0.0100	0.0100	0.0100	0.0100	0.0100
0.4260	0.3020	0.2740	1.3345	0.2660	0.5155	0.3580	0.2240	0.0880	0.1330	0.1603	0.2235

5/4/2011	5/13/2011	6/1/2011	6/9/2011
0.0030	0.0030	0.0030	0.0030
0.0003	0.0003	0.0003	0.0003
0.0060	0.0060	0.0111	0.0060
0.1140	0.1160	0.0926	0.0651
0.0030	0.0042	0.0073	0.0030
0.0058	0.0081	0.0218	0.0090
0.0100	0.0100	0.0100	0.0100
0.1610	0.1700	0.2280	0.2060

5/4/2011	5/13/2011	6/1/2011	6/9/2011
0.0030	0.0030	0.0030	0.0030
0.0004	0.0003	0.0004	0.0003
0.0060	0.0060	0.0060	0.0060
0.0684	0.0705	0.0755	0.0784
0.0030	0.0030	0.0030	0.0030
0.0060	0.0098	0.0129	0.0122
0.0100	0.0100	0.0500	0.0100
0.1410	0.2500	0.1520	0.2470
		-0.9000	

				12 month	12 minth	
5/4/2011	5/13/2011	6/1/2011	6/9/2011	ave	lbs/day	
0.0030	0.0030	0.0030	0.0030	0.0030	4.704	all but 1 below detection likmit
0.0004	0.0003	0.0004	0.0003	0.0004	0.601	many below detection limit
0.0060	0.0060	0.0086	0.0060	0.0067	10.551	many below detection limit
0.0912	0.0933	0.0841	0.0718	0.0841	131.936	
0.0030	0.0036	0.0052	0.0030	0.0049	7.676	many below detection limit
0.0059	0.0090	0.0174	0.0106	0.0123	19.361	
0.0100	0.0100	0.0100	0.0100	0.0112	17.564	many below detection limit
0.1510	0.2100	0.1900	0.2265	0.4040	633.492	

APPENDIX

F

TCLP Data

Paint Filter Test

Analytical Method	Prep Method	Prep Date	By
SW846 9095A			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Paint Filter Test	pass	pass/fail				4/3/06	mflaherty

Total Metals in TCLP Extract, ICP-AES

Analytical Method	Prep Method	Prep Date	By
SW846 6010B	SW846 3010A	4/4/06	ameal

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Arsenic, As	< 0.0500	mg/L		0.0500	7440-38-2	4/5/06	kfoltz
Barium, Ba	0.774	mg/L		0.250	7440-39-3	4/5/06	kfoltz
Cadmium, Cd	< 0.0500	mg/L		0.0500	7440-43-9	4/5/06	kfoltz
Chromium, Cr	< 0.100	mg/L		0.100	7440-47-3	4/5/06	kfoltz
Lead, Pb	< 0.200	mg/L		0.200	7439-92-1	4/5/06	kfoltz
Selenium, Se	< 0.0500	mg/L		0.0500	7782-49-2	4/5/06	kfoltz
Silver, Ag	< 0.0500	mg/L		0.0500	7440-22-4	4/5/06	kfoltz

Mercury in TCLP Extract, CVAA

Analytical Method	Prep Method	Prep Date	By
SW846 7470A	SW846 7470A	4/5/06	ameal

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Mercury, Hg	< 2.50	ug/L		2.50	7439-97-6	4/5/06	ameal

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
A Member of THE ASTBURY GROUP

PHONE (317) 290-1471
FAX (317) 290-1670

Quality Assurance Report Package # 57196

UNITED WATER - WREP

PAM WOLSIEFER
2700 S. BELMONT STREET
INDIANAPOLIS, IN 46221

Project : WREP - UNITED WATER

Sampled : 24-JUL-08

Sample Range : A818871, A818872, A818873, A818874, A818875, A818876, A818877

Kurt J Maines

Approved by: KURT MAINES - Project Manager

Heritage Environmental Services, LLC
Commercial Laboratory Operations
7901 West Morris Street
Indianapolis, Indiana 46231
Phone: (317) 243-8304
Fax : (317) 486-5095

01034316

HERITAGE ENVIRONMENTAL SERVICES, LLC.

COMMERCIAL LABORATORY OPERATIONS

7901 West Morris Street Indianapolis IN 46231
www.heritage-enviro.com (800)827-4374 Fax: (317) 486-5095

I-62163

Customer name/number: United Water
Submitter #
Project Name: Ash Testing
Z Quote No: Z151693 (Given to you by your contact)
PO No. or Project/Activity ID: Ash Testing

PRINT HERITAGE TSR NAME:

CUSTOMER STATUS: New / Existing

If no previous credit has been established with Heritage, **prepayment** (check,VISA,etc) is required at the time of sample submittal to the laboratory.

Sampled By: Morgan Disney (CEC, Inc.)

Send Report To:
Co: United Water
Add: 2700 S. Belmont Ave.
Indianapolis, IN 46221
Attn: Ms. Pam Wolsiefer
Phone: (317) 639-7035
Fax: ( )
E-mail:

Sample Turn Around Time
Standard: X Rush Date / / (Mo Day Yr)
(Accelerated TAT subject to Additional Charge)
(Date must be Accepted and Approved by Lab)

Analyses Requested (Note special detection limits or methods)

Date Sampled	Time sampled	Comp	Grab	Sample ID and/or Location where your sample was taken	Sample type (Matrix): DW, GW, WW, Soil, Oil, Sludge, Swipe, Other: ASH	Number of Containers	TCLP Metals	Neutral Leachate	Remarks	Lab use only Sample No.
7/24/08	1035 AM PM	X		ASH 0708-1 (grid #71)	Other	1	X	X		A818641
7/24/08	1039 AM PM	X		ASH 0708-2 (grid #58)	Other	1	X	X		642
7/24/08	1048 AM PM	X		ASH 0708-3 (grid #51)	Other	1	X	X		643
7/24/08	1056 AM PM	X		ASH 0708-4 (grid #48)	Other	1	X	X		644
7/24/08	1103 AM PM	X		ASH 0708-5 (grid #39)	Other	1	X	X		645
7/24/08	1106 AM PM	X		ASH 0708-6 (grid #26)	Other	1	X	X		646
7/24/08	0855 AM PM	X		Equipment Blank	Other	1	X	X		647
	AM PM									
	AM PM									
	AM PM									

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/24/08 / 1230	
Relinquished by: (Signature)	Date/Time /	Received by: (Signature)
Relinquished by: (Signature)	Date/Time /	Received by: (Signature)
Received for Lab by: (Signature) [signature]	Date 7.24.08 Time 1236	Temp. 12.6 °C ROI: Yes / No

Laboratory use only	Yes	No
Custody seals present/intact?	✓	
Broken containers?		✓
COC agree with sample labels?	✓	
Correct containers for testing?	✓	
Headspace issues acceptable?	✓	
Holding time(s) acceptable?	✓	
Preservative pH's acceptable?	✓	
Was pH left unadjusted?	✓	

Comments: Type IV Waste Classification

57106

ORIGINAL

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818871
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 10:35	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-1 (GRID#71)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL Analysis Date: 30-JUL-08 Instrument: PREP Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	8.7		Std. Units
ADJUSTED PH	2.4		Std. Units
BUFFER SOLUTION PH	4.90		Std. Units
FINAL PH	5.6		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.4		Degrees C
INITIAL TIME	3814.4		Hours
FINAL TIME	3832.1		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818871 ASH 0708-1 (GRID#71)**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA | Analysis Date: 31-JUL-08 08:00 | Instrument: PREP | Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 31-JUL-08 21:46 | Instrument: ICP | Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 31-JUL-08 21:46 | Instrument: ICP | Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.42	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 31-JUL-08 21:46 | Instrument: ICP | Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 31-JUL-08 21:46 | Instrument: ICP | Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 31-JUL-08 21:46 | Instrument: ICP | Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 21:46 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.25	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 21:46 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:05 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818871 ASH 0708-1 (GRID#71)**

Sample Comments

accreditation number 100401.

Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818872
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 10:39	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-2 (GRID#58)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL   Analysis Date: 30-JUL-08   Instrument: PREP   Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	8.6		Std. Units
ADJUSTED PH	4.5		Std. Units
BUFFER SOLUTION PH	4.90		Std. Units
FINAL PH	5.5		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.4		Degrees C
INITIAL TIME	3814.4		Hours
FINAL TIME	3832.1		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818872 ASH 0708-2 (GRID#58)**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.58	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A818872 ASH 0708-2 (GRID#58)

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.23	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:03 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:09 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818872 ASH 0708-2 (GRID#58)**

Sample Comments

accreditation number 100401.

Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818873
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 10:48	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-3 (GRID#51)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL | Analysis Date: 30-JUL-08 | Instrument: PREP | Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	8.6		Std. Units
ADJUSTED PH	3.1		Std. Units
BUFFER SOLUTION PH	4.90		Std. Units
FINAL PH	5.7		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.4		Degrees C
INITIAL TIME	3814.4		Hours
FINAL TIME	3832.1		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818873 ASH 0708-3 (GRID#51)**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.65	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A818873 ASH 0708-3 (GRID#51)

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.17	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:19 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:12 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818873 ASH 0708-3 (GRID#51)**

Sample Comments

accreditation number 100401.

Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818874
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 10:56	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-4 (GRID#48)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL Analysis Date: 29-JUL-08 Instrument: PREP Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	8.9		Std. Units
ADJUSTED PH	5.7		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	4.5		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.8		Degrees C
INITIAL TIME	20005.1		Hours
FINAL TIME	20022.2		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A818874 ASH 0708-4 (GRID#48)

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.090	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.89	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	0.026	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.24	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:22 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:14 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818874 ASH 0708-4 (GRID#48)**

Sample Comments
accreditation number 100401.
Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818875
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 11:03	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-5 (GRID#39)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL   Analysis Date: 29-JUL-08   Instrument: PREP   Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	8.8		Std. Units
ADJUSTED PH	3.8		Std. Units
BUFFER SOLUTION PH	4.94		Std. Units
FINAL PH	5.2		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.8		Degrees C
INITIAL TIME	20005.1		Hours
FINAL TIME	20022.2		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818875 ASH 0708-5 (GRID#39)**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.099	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.39	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A818875 ASH 0708-5 (GRID#39)

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.23	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:26 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:15 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818875 ASH 0708-5 (GRID#39)**

Sample Comments

accreditation number 100401.

Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818876
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 11:08	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: ASH 0708-6 (GRID#26)
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL   Analysis Date: 29-JUL-08   Instrument: PREP   Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	9.0		Std. Units
ADJUSTED PH	5.2		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	4.5		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.8		Degrees C
INITIAL TIME	20005.1		Hours
FINAL TIME	20022.2		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818876 ASH 0708-6 (GRID#26)**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.080	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	0.90	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A818876 ASH 0708-6 (GRID#26)

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.17	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:29 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 12:16 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818876 ASH 0708-6 (GRID#26)**

Sample Comments
accreditation number 100401.
Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	24-JUL-08		A818877
	Completed	**PO Number**	
	01-AUG-08	....	
	Printed	**Sampled**	
	05-AUG-08	24-JUL-08 08:55	

Report To	Bill To
PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221	ACCOUNTS PAYABLE UNITED WATER SERVICES INDIANA 2700 SOUTH BELMONT AVENUE INDIANAPOLIS, IN 46221

Sample Description

CLIENT ID: EQUIPMENT BLANK
MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT
SUBMITTER CODE: 6642
DESCRIPTION: TCLP WASTE CLASSIFICATION

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311

Analyst: V. PATEL   Analysis Date: 31-JUL-08   Instrument: PREP   Test: P106.1.0

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	463.2		Grams
LIQUID FRACTION (GRAMS)	463.0		Grams
EXTRACTED SAMPLE	NA		Grams
SOLIDS	< 0.5		Percent
9.5 MM SIEVE TEST	NA		Passed
INITIAL PH	NA		Std. Units
ADJUSTED PH	NA		Std. Units
BUFFER SOLUTION PH	NA		Std. Units
FINAL PH	9.9		Std. Units
VOLUME BUFFERED SOLUTION	NA		mL
VOLUME EXTRACT FILTERED	NA		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	NA		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	NA		Hours
FINAL TIME	NA		Hours
PHASE 0 VOLUME (REP 0)	463.0		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818877 EQUIPMENT BLANK**

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

Analyst: P. MATAKA Analysis Date: 31-JUL-08 08:00 Instrument: PREP Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

TCLP ARSENIC ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M603.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

1:5 Dilution.

TCLP BARIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M604.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP CADMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M608.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

1:5 Dilution.

TCLP CHROMIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M610.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP LEAD ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M616.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

1:5 Dilution.

TCLP SELENIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M628.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.050	mg/L

1:5 Dilution.

TCLP SILVER ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 31-JUL-08 22:32 Instrument: ICP Test: M630.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

1:5 Dilution.

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. O'NEAL Analysis Date: 31-JUL-08 14:00 Instrument: PREP Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A NELAC:Y

Analyst: S. O'NEAL Analysis Date: 01-AUG-08 11:59 Instrument: CVAA Test: M620.4.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

Sample Comments

< Less Than

BDL Below Detection Limit

NA Not Applicable

Sample was received on ice at temperature 12.6 C.
Sample chain of custody number 62163.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC

HERITAGE ENVIRONMENTAL SERVICES, LLC **Sample ID: A818877 EQUIPMENT BLANK**

Sample Comments

accreditation number 100401.
Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 04-AUG-08

Quality Assurance Report

JBJ57196

05-AUG-08

Service Location	Submitter
Heritage Environmental Services, LLC Commercial Laboratory Operations 7901 West Morris Street Indianapolis, IN 46231 (317) 243-8304	PAM WOLSIEFER UNITED WATER - WREP 2700 S. BELMONT STREET INDIANAPOLIS, IN 46221

Sample ID	Client ID	Date/Time Sampled	Date Received	Date Complete
A818871	ASH 0708-1 (GRID#71)	24-Jul-08 10:35	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818872	ASH 0708-2 (GRID#58)	24-Jul-08 10:39	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818873	ASH 0708-3 (GRID#51)	24-Jul-08 10:48	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818874	ASH 0708-4 (GRID#48)	24-Jul-08 10:56	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818875	ASH 0708-5 (GRID#39)	24-Jul-08 11:03	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818876	ASH 0708-6 (GRID#26)	24-Jul-08 11:08	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		
A818877	EQUIPMENT BLANK.....	24-Jul-08 08:55	24-Jul-08	01-Aug-08
	DESCRIPTION :	TCLP WASTE CLASSIFICATION		

JBJ57196

TCLP SILVER ICP SW846-6010B M630.8
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep — Analyst: P MATAKA — Reviewer: S ENDERSEN — Run Date: 31-Jul-08 — Review Date: 31-Jul-08 — Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical — Analyst: J KRAMER — Reviewer: S ENDERSEN — Run Date: 31-Jul-08 — Review Date: 01-Aug-08 — Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	SILVER	0.5			0.507	mg/L	101.4	
CDL01	Q2102882	INORGANIC	SILVER	2			1.98	mg/L	99.0	
ICS-AB	Q2102870	PERKIN ELM	SILVER	0.2			0.216	mg/L	108.0	
CCV	Q2102874	INORGANIC	SILVER	1.00			1.03	mg/L	103.0	
BLA01	Q2102866	NA	SILVER			<	0.000800	mg/L		
BLA02	Q2102518	NA	SILVER			<	0.000800	mg/L		
LCS	Q2102519	SPEX	SILVER	0.1			0.107	mg/L	107.0	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	SILVER	0	0.1		0.104	mg/L	104.0	
DPS02	Q2102521	A818871	SILVER	0	0.1		0.107	mg/L	107.0	2.8
SPI03	Q2102522	A818871	SILVER	0	0.2		0.199	mg/L	99.5	
DPS03	Q2102523	A818871	SILVER	0	0.2		0.196	mg/L	98.0	1.5
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	SILVER	0	0.2		0.201	mg/L	100.5	
DPS03	Q2102525	A818872	SILVER	0	0.2		0.198	mg/L	99.0	1.5
CCV	Q2102875	INORGANIC	SILVER	1.00			1.02	mg/L	102.0	
BLA01	Q2102867	NA	SILVER			<	0.000800	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	SILVER	1.00			1.00	mg/L	100.0	
BLA01	Q2102868	NA	SILVER			<	0.000800	mg/L		
CDL01	Q2102881	INORGANIC	SILVER	0.0100			0.00988	mg/L	98.8	
ICS-AB	Q2102871	PERKIN ELM	SILVER	0.2			0.213	mg/L	106.5	

HERITAGE

JBJ57196

TCLP SILVER ICP SW846-6010B **M630.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08

Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SER01	Q2102923	A819040	SILVER	0		BDL		mg/L		

TCLP LEAD ICP SW846-6010B **M616.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	LEAD	1			1.01	mg/L	101.0	
CDL01	Q2102882	INORGANIC	LEAD	10			10.1	mg/L	101.0	
ICS-AB	Q2102870	PERKIN ELM	LEAD	1.00			0.944	mg/L	94.4	
CCV	Q2102874	INORGANIC	LEAD	5.00			5.00	mg/L	100.0	
BLA01	Q2102866	NA	LEAD			<	0.00200	mg/L		
BLA02	Q2102518	NA	LEAD			<	0.00200	mg/L		
LCS	Q2102519	SPEX	LEAD	1			0.989	mg/L	98.9	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	LEAD	0	1		0.964	mg/L	96.4	
DPS02	Q2102521	A818871	LEAD	0	1		0.984	mg/L	98.4	2.0
SPI03	Q2102522	A818871	LEAD	0	2		1.91	mg/L	95.5	
DPS03	Q2102523	A818871	LEAD	0	2		1.90	mg/L	95.0	0.5
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	LEAD	0	2		1.91	mg/L	95.5	
DPS03	Q2102525	A818872	LEAD	0	2		1.89	mg/L	94.5	1.0
CCV	Q2102875	INORGANIC	LEAD	5.00			4.95	mg/L	99.0	
BLA01	Q2102867	NA	LEAD			<	0.00200	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							

TCLP LEAD ICP SW846-6010B M616.8
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	LEAD	5.00			4.88	mg/L	97.6	
BLA01	Q2102868	NA	LEAD			<	0.00200	mg/L		
CDL01	Q2102881	INORGANIC	LEAD	0.01			0.00921	mg/L	92.1	
ICS-AB	Q2102871	PERKIN ELM	LEAD	1.00			0.930	mg/L	93.0	
SER01	Q2102923	A819040	LEAD	0		BDL		mg/L		

TCLP CHROMIUM ICP SW846-6010B M610.8
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	CHROMIUM	1			0.999	mg/L	99.9	
CDL01	Q2102882	INORGANIC	CHROMIUM	10			10.1	mg/L	101.0	
ICS-AB	Q2102870	PERKIN ELM	CHROMIUM	0.500			0.481	mg/L	96.2	
CCV	Q2102874	INORGANIC	CHROMIUM	5.00			5.01	mg/L	100.2	
BLA01	Q2102866	NA	CHROMIUM			<	0.000800	mg/L		
BLA02	Q2102518	NA	CHROMIUM			<	0.000800	mg/L		
LCS	Q2102519	SPEX	CHROMIUM	0.4			0.402	mg/L	100.5	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	CHROMIUM	0	0.4		0.399	mg/L	99.8	
DPS02	Q2102521	A818871	CHROMIUM	0	0.4		0.406	mg/L	101.5	1.7
SPI03	Q2102522	A818871	CHROMIUM	0	1		0.976	mg/L	97.6	

TCLP CHROMIUM ICP SW846-6010B M610.8
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
DPS03	Q2102523	A818871	CHROMIUM	0	1		0.962	mg/L	96.2	1.4
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	CHROMIUM	0	1		0.963	mg/L	96.3	
DPS03	Q2102525	A818872	CHROMIUM	0	1		0.959	mg/L	95.9	0.4
CCV	Q2102875	INORGANIC	CHROMIUM	5.00			4.95	mg/L	99.0	
BLA01	Q2102867	NA	CHROMIUM			<	0.000800	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	CHROMIUM	5.00			4.87	mg/L	97.4	
BLA01	Q2102868	NA	CHROMIUM			<	0.000800	mg/L		
CDL01	Q2102881	INORGANIC	CHROMIUM	0.0100			0.0112	mg/L	112.0	
ICS-AB	Q2102871	PERKIN ELM	CHROMIUM	0.500			0.473	mg/L	94.6	
SER01	Q2102923	A819040	CHROMIUM	0		BDL		mg/L		

TCLP CADMIUM ICP SW846-6010B M608.8
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	CADMIUM	1			1.01	mg/L	101.0	
CDL01	Q2102882	INORGANIC	CADMIUM	10			10.1	mg/L	101.0	
ICS-AB	Q2102870	PERKIN ELM	CADMIUM	1.00			1.04	mg/L	104.0	
CCV	Q2102874	INORGANIC	CADMIUM	5.00			5.17	mg/L	103.4	

TCLP CADMIUM ICP SW846-6010B **M608.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2102866	NA	CADMIUM			<	0.000400	mg/L		
BLA02	Q2102518	NA	CADMIUM			<	0.000400	mg/L		
LCS	Q2102519	SPEX	CADMIUM	0.1			0.107	mg/L	107.0	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	CADMIUM	0.00747	0.1		0.111	mg/L	103.5	
DPS02	Q2102521	A818871	CADMIUM	0.00747	0.1		0.112	mg/L	104.5	1.0
SPI03	Q2102522	A818871	CADMIUM	0.00747	0.2		0.211	mg/L	101.8	
DPS03	Q2102523	A818871	CADMIUM	0.00747	0.2		0.208	mg/L	100.3	1.5
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	CADMIUM	0.00851	0.2		0.213	mg/L	102.2	
DPS03	Q2102525	A818872	CADMIUM	0.00851	0.2		0.209	mg/L	100.2	2.0
CCV	Q2102875	INORGANIC	CADMIUM	5.00			5.12	mg/L	102.4	
BLA01	Q2102867	NA	CADMIUM			<	0.000400	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	CADMIUM	5.00			5.04	mg/L	100.8	
BLA01	Q2102868	NA	CADMIUM			<	0.000400	mg/L		
CDL01	Q2102881	INORGANIC	CADMIUM	0.0050			0.00490	mg/L	98.0	
ICS-AB	Q2102871	PERKIN ELM	CADMIUM	1.00			1.02	mg/L	102.0	
SER01	Q2102923	A819040	CADMIUM	0		BDL		mg/L		

TCLP SELENIUM ICP SW846-6010B **M628.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Instrument: ICP

JBJ57196

TCLP SELENIUM ICP SW846-6010B **M628.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	SELENIUM	1			1.00	mg/L	100.0	
CDL01	Q2102882	INORGANIC	SELENIUM	10			10.1	mg/L	101.0	
ICS-AB	Q2102870	PERKIN ELM	SELENIUM	0.05			0.0445	mg/L	89.0	
CCV	Q2102874	INORGANIC	SELENIUM	2			2.08	mg/L	104.0	
BLA01	Q2102866	NA	SELENIUM			<	0.00400	mg/L		
BLA02	Q2102518	NA	SELENIUM			<	0.00400	mg/L		
LCS	Q2102519	SPEX	SELENIUM	4			4.34	mg/L	108.5	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	SELENIUM	0.250	4		4.45	mg/L	105.0	
DPS02	Q2102521	A818871	SELENIUM	0.250	4		4.51	mg/L	106.5	1.4
SPI03	Q2102522	A818871	SELENIUM	0.250	1		1.32	mg/L	107.0	
DPS03	Q2102523	A818871	SELENIUM	0.250	1		1.27	mg/L	102.0	4.8
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	SELENIUM	0.227	1		1.20	mg/L	97.3	
DPS03	Q2102525	A818872	SELENIUM	0.227	1		1.24	mg/L	101.3	4.0
CCV	Q2102875	INORGANIC	SELENIUM	2			2.06	mg/L	103.0	
BLA01	Q2102867	NA	SELENIUM			<	0.00400	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	SELENIUM	2			2.04	mg/L	102.0	
BLA01	Q2102868	NA	SELENIUM			<	0.00400	mg/L		
CDL01	Q2102881	INORGANIC	SELENIUM	0.01			0.0105	mg/L	105.0	
ICS-AB	Q2102871	PERKIN ELM	SELENIUM	0.05			0.0495	mg/L	99.0	
SER01	Q2102923	A819040	SELENIUM	0		CNA	0.0180	mg/L		

TCLP ARSENIC ICP SW846-6010B **M603.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							

TCLP ARSENIC ICP SW846-6010B **M603.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analytical | Analyst: J KRAMER | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-08 | Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	ARSENIC	1			1.02	mg/L	102.0	
CDL01	Q2102882	INORGANIC	ARSENIC	10			10.2	mg/L	102.0	
ICS-AB	Q2102870	PERKIN ELM	ARSENIC	0.1			0.101	mg/L	101.0	
CCV	Q2102874	INORGANIC	ARSENIC	2			2.06	mg/L	103.0	
BLA01	Q2102866	NA	ARSENIC				0.00420	mg/L		
BLA02	Q2102518	NA	ARSENIC			<	0.00400	mg/L		
LCS	Q2102519	SPEX	ARSENIC	4			4.32	mg/L	108.0	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	ARSENIC	0	4		4.17	mg/L	104.2	
DPS02	Q2102521	A818871	ARSENIC	0	4		4.26	mg/L	106.5	2.2
SPI03	Q2102522	A818871	ARSENIC	0	4		3.99	mg/L	99.8	
DPS03	Q2102523	A818871	ARSENIC	0	4		4.00	mg/L	100.0	0.2
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	ARSENIC	0	4		3.97	mg/L	99.2	
DPS03	Q2102525	A818872	ARSENIC	0	4		3.94	mg/L	98.5	0.7
CCV	Q2102875	INORGANIC	ARSENIC	2			2.05	mg/L	102.5	
BLA01	Q2102867	NA	ARSENIC			<	0.00400	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	ARSENIC	2			2.02	mg/L	101.0	
BLA01	Q2102868	NA	ARSENIC				0.00523	mg/L		
CDL01	Q2102881	INORGANIC	ARSENIC	0.01			0.0140	mg/L	140.0	
ICS-AB	Q2102871	PERKIN ELM	ARSENIC	0.1			0.0996	mg/L	99.6	
SER01	Q2102923	A819040	ARSENIC	0.0186		CNA	0.0321	mg/L		

TCLP BARIUM ICP SW846-6010B **M604.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Prep | Analyst: P MATAKA | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 31-Jul-08 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2102518	NA	Analytical Run: R538882							
LCS	Q2102519	SPEX	Analytical Run: R538882							
SPI02	Q2102520	A818871	Analytical Run: R538882							
DPS02	Q2102521	A818871	Analytical Run: R538882							
SAMPLE	A818871	Rep: 0	Analytical Run: R538882							

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TCLP BARIUM ICP SW846-6010B **M604.8**
Prep : FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A

R538808 Analyst: P MATAKA Run Date: 31-Jul-08
Prep Reviewer: S ENDERSEN Review Date: 31-Jul-08 Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SPI03	Q2102522	A818871	Analytical Run: R538882							
DPS03	Q2102523	A818871	Analytical Run: R538882							
SAMPLE	A818872	Rep: 0	Analytical Run: R538882							
SPI03	Q2102524	A818872	Analytical Run: R538882							
DPS03	Q2102525	A818872	Analytical Run: R538882							
SAMPLE	A818873	Rep: 0	Analytical Run: R538882							
SAMPLE	A818874	Rep: 0	Analytical Run: R538882							
SAMPLE	A818875	Rep: 0	Analytical Run: R538882							
SAMPLE	A818876	Rep: 0	Analytical Run: R538882							
SAMPLE	A818877	Rep: 0	Analytical Run: R538882							

R538882 Analyst: J KRAMER Run Date: 31-Jul-08 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 01-Aug-08

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102886	PERKIN ELM	BARIUM	1			1.02	mg/L	102.0	
CDL01	Q2102882	INORGANIC	BARIUM	10			10.1	mg/L	101.0	
ICS-AB	Q2102870	PERKIN ELM	BARIUM	0.500			0.499	mg/L	99.8	
CCV	Q2102874	INORGANIC	BARIUM	5.00			5.11	mg/L	102.2	
BLA01	Q2102866	NA	BARIUM			<	0.00400	mg/L		
BLA02	Q2102518	NA	BARIUM			<	0.00400	mg/L		
LCS	Q2102519	SPEX	BARIUM	4			4.05	mg/L	101.2	
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI02	Q2102520	A818871	BARIUM	0.423	4		4.41	mg/L	99.7	
DPS02	Q2102521	A818871	BARIUM	0.423	4		4.46	mg/L	100.9	1.2
SPI03	Q2102522	A818871	BARIUM	0.423	1		1.42	mg/L	99.7	
DPS03	Q2102523	A818871	BARIUM	0.423	1		1.40	mg/L	97.7	2.0
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102524	A818872	BARIUM	0.584	1		1.53	mg/L	94.6	
DPS03	Q2102525	A818872	BARIUM	0.584	1		1.53	mg/L	94.6	0
CCV	Q2102875	INORGANIC	BARIUM	5.00			5.04	mg/L	100.8	
BLA01	Q2102867	NA	BARIUM			<	0.00400	mg/L		
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
CCV	Q2102876	INORGANIC	BARIUM	5.00			4.97	mg/L	99.4	
BLA01	Q2102868	NA	BARIUM			<	0.00400	mg/L		
CDL01	Q2102881	INORGANIC	BARIUM	0.0100			0.00989	mg/L	98.9	
ICS-AB	Q2102871	PERKIN ELM	BARIUM	0.500			0.488	mg/L	97.6	
SER01	Q2102923	A819040	BARIUM	0.182			0.176	mg/L		3.4

JBJ57196

TCLP MERCURY CVAA SW846-7470A **M620.4**
Prep : MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

R538850 Prep | Analyst: S O'NEAL | Reviewer: S ENDERSEN | Run Date: 31-Jul-08 | Review Date: 01-Aug-07 | Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
LCS	Q2102671	LEEMAN	Analytical Run: R538891							
BLA02	Q2102672	NA	Analytical Run: R538891							
SAMPLE	A818877	Rep: 0	Analytical Run: R538891							
SPI02	Q2102673	A818877	Analytical Run: R538891							
DPS02	Q2102674	A818877	Analytical Run: R538891							
SAMPLE	A818871	Rep: 0	Analytical Run: R538891							
SPI03	Q2102659	A818871	Analytical Run: R538891							
DPS03	Q2102660	A818871	Analytical Run: R538891							
SAMPLE	A818872	Rep: 0	Analytical Run: R538891							
SPI03	Q2102661	A818872	Analytical Run: R538891							
DPS03	Q2102662	A818872	Analytical Run: R538891							
SAMPLE	A818873	Rep: 0	Analytical Run: R538891							
SAMPLE	A818874	Rep: 0	Analytical Run: R538891							
SAMPLE	A818875	Rep: 0	Analytical Run: R538891							
SAMPLE	A818876	Rep: 0	Analytical Run: R538891							

R538891 Analytical | Analyst: S O'NEAL | Reviewer: S ENDERSEN | Run Date: 01-Aug-08 | Review Date: 01-Aug-08 | Instrument: CVAA

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2102930	LEEMAN	MERCURY	0.002			0.00183	mg/L	91.5	
CDL01	Q2102948	SPEX	MERCURY	0.0002			0.000234	mg/L	117.0	
CCV	Q2102932	SPEX	MERCURY	0.003			0.00294	mg/L	98.0	
BLA01	Q2102941	NA	MERCURY			<	0.000080	mg/L		
LCS	Q2102671	LEEMAN	MERCURY	0.002			0.00221	mg/L	110.5	
BLA02	Q2102672	NA	MERCURY			<	0.000080	mg/L		
SAMPLE	A818877		See Certificate of Analysis, Rep: 0							
SPI02	Q2102673	A818877	MERCURY	0	0.01		0.00935	mg/L	93.5	
DPS02	Q2102674	A818877	MERCURY	0	0.01		0.00924	mg/L	92.4	1.2
CCV	Q2102933	SPEX	MERCURY	0.003			0.00292	mg/L	97.3	
BLA01	Q2102942	NA	MERCURY			<	0.000080	mg/L		
SAMPLE	A818871		See Certificate of Analysis, Rep: 0							
SPI03	Q2102659	A818871	MERCURY	0	0.02		0.0163	mg/L	81.5	
DPS03	Q2102660	A818871	MERCURY	0	0.02		0.0153	mg/L	76.5	6.3
SAMPLE	A818872		See Certificate of Analysis, Rep: 0							
SPI03	Q2102661	A818872	MERCURY	0	0.02		0.0144	mg/L	72.0	
DPS03	Q2102662	A818872	MERCURY	0	0.02		0.0144	mg/L	72.0	0
SAMPLE	A818873		See Certificate of Analysis, Rep: 0							
SAMPLE	A818874		See Certificate of Analysis, Rep: 0							
SAMPLE	A818875		See Certificate of Analysis, Rep: 0							
SAMPLE	A818876		See Certificate of Analysis, Rep: 0							
CCV	Q2102934	SPEX	MERCURY	0.003			0.00296	mg/L	98.7	
BLA01	Q2102943	NA	MERCURY			<	0.000080	mg/L		
CDL01	Q2102949	SPEX	MERCURY	0.0002			0.000233	mg/L	116.5	

RQL	Result Qualifier Definition
<	Less Than
BDL	Below Detection Limit

JBJ57196

	Result Qualifier Definition
CNA	RPD Calculation Not Applicable < DL

QC Type	**Definition**
ICS-AB	INTERFERENCE CHECK SAMPLE AB
SER01	ICP SERIAL DILUTION
LCS	LABORATORY CONTROL SAMPLE PREPPED
BLA01	CALIBRATION (INSTRUMENT) BLANK
CCV	CONTINUING CALIBRATION VERIFICATION
ICV01	INITIAL CALIBRATION VERIFICATION DIFFERENT SOURCE
SPI03	TCLP MATRIX SPIKE
CDL01	DETECTION LIMIT STANDARD
SPI02	PREPPED MATRIX SPIKE
DPS02	PREPPED DUPLICATE MATRIX SPIKE
BLA02	PREPPED (CALIBRATION) BLANK OR METHOD BLANK
DPS03	DUPLICATE TCLP MATRIX SPIKE

Scott A Bryan

Approved By : SCOTT BRYAN

M 131

m 181

August 1, 2008

U. S. EPA -CLP

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Lab Name : HES - Commercial Laboratory

Contract : WREP - RCRA

Lab Code: Metals

Case No. : ______

SAS No. : ______

SDG No.: 57196

Instrument ID Number : ______

Method : ______

EPA Sample No.	Lab Sample No.	
	A818871	TCLP
	A818872	
	A818873	
	A818874	
	A818875	
	A818876	
	A818877	

Were ICP interelement corrections applied? Yes/No __ yes

Were ICP background corrections applied? Yes/No __ yes

If yes-were raw data generated before application of background corrections? Yes/No __ no

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature : ______ Name : ______

Date : ______ Title : ______

HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
METALS SECTION

CASE NARRATIVE

SAMPLE # A818871-877

These samples were analyzed using normal procedures with no modifications.

Steven J. Endersen

Steven J. Endersen, Metals Supervisor

ACCREDITED IN ACCORDANCE WITH nelac

U. S. EPA -CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found 204446	% R (1)	Found 211407	% R (1)		M
Arsenic	1000	1020	102	2000	2050	102.5	2060	103.0		P
Barium	1000	1020	102	5000	5070	101.4	5080	101.6		P
Cadmium	1000	1010	101	5000	5130	102.6	5140	102.8		P
Chromium	1000	999	99.9	5000	4960	99.2	4970	99.4		P
Lead	1000	1010	101	5000	4950	99.0	4960	99.2		P
Mercury	2.00	1.83	91.5	3.00	2.96	98.7	2.94	98.0		CV
Selenium	1000	1000	100	2000	2060	103.0	2060	103.0		P
Silver	500	507	101.4	1000	1020	102.0	1020	102.0		P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.
FORM II (Part 1) - IN

U. S. EPA -CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : ________

Lab Code: ________ Case No. : ________ SAS No. : ________ SDG No.: ________

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration % R (1)	Continuing Calibration Found	Continuing Calibration % R (1)		M
					213345		221258			
Arsenic				2000	2060	103.0	2050	102.5		P
Barium				5000	5110	102.2	5040	100.8		P
Cadmium				5000	5170	103.4	5120	102.4		P
Chromium				5000	5010	100.2	4950	99.0		P
Lead				5000	5000	100.0	4950	99.0		P
Mercury				3.00	2.92	97.3	2.96	98.3		CV
Selenium				2000	2080	104.0	2060	103.0		P
Silver				1000	1030	103.0	1020	102.0		P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.
FORM II (Part 1) - IN

U. S. EPA -CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : ________

Lab Code: ________ Case No. : ________ SAS No. : ________ SDG No.: ________

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found 223553	% R (1)	Found 231438	% R (1)	M
Arsenic				2000	2020	101.0	2020	101.0	P
Barium				5000	4970	99.4	5010	100.2	P
Cadmium				5000	5040	100.8	5070	101.4	P
Chromium				5000	4870	97.4	4910	98.2	P
Lead				5000	4880	97.6	4910	98.2	P
Mercury				3.00					CV
Selenium				2000	2040	102.0	2040	102.0	P
Silver				1000	1000	100.0	1010	101.0	P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.
FORM II (Part 1) - IN

U. S. EPA -CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Heritage   Contract :

Lab Code: Case No. :   SAS No. :   SDG No.:

AA CRDL Calibration Source : Inorganic Ventures

ICP CRDL Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	CRDL Standard for AA True	CRDL Standard for AA Found	CRDL Standard for AA % R	CRDL Standard for ICP True	Initial Found 210106	% R	Final Found 230451	% R		M
Arsenic				20	22.9	114.5	25.9	129.5		P
Barium				NA						
Cadmium				10	9.4	94.0	9.57	95.7		P
Chromium				20	19.3	96.5	20	100.0		P
Lead				100	96.5	96.5	94.2	94.2		P
Mercury	0.200	0.234	117.0							CV
Selenium				10	12.2	122.0	10.4	104.0		P
Silver				20	20	100.0	19.6	98.0		P

FORM II (Part 2) - IN

U. S. EPA -CLP

3

BLANKS

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Preparation Blank Matrix : TCLP

Preparation Blank Concentration Units (uG/L or mG/kG) : uG/L

Analyte	Initial Calibration Blank (uG/L)	C	Continuing Calibration Blank (uG/L) 1	C	2	C	3	C	Preparation Blank	C	M
	204802		*205434*		*211724*		*213701*		*214017*		
Arsenic	5.91	B	3.85	B	2.8	U	4.2	B	2.8	U	P
Barium	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	P
Cadmium	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	P
Chromium	0.3	U	-0.314	B	0.3	U	0.3	U	0.3	U	P
Lead	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	P
Mercury	0.039	B	0.047	B	0.020	B	0.030	B	0.011	U	CV
Selenium	6	U	6	U	6	U	6	U	6	U	P
Silver	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	P

ICP Analytical Run Time

FORM III -IN

U. S. EPA -CLP

3

BLANKS

Lab Name: HES - Commercial Laboratories Contract : __________

Lab Code: __________ Case No. : ___ SAS No. : ___ SDG No.: __________

Preparation Blank Matrix : __________

Preparation Blank Concentration Units (uG/L or mG/kG) : __________

Analyte	Initial Calibration Blank (uG/L)	C	Continuing Calibration Blank (uG/L) 4	C	5	C	6	C	Preparation Blank	C	M
			221614		223909		231755				
Arsenic			2.8	U	5.23	B	2.8	U			P
Barium			0.12	U	0.12	U	0.12	U			P
Cadmium			0.37	U	0.37	U	0.37	U			P
Chromium			0.3	U	0.3	U	0.742	B			P
Lead			1.6	U	1.6	U	1.6	U			P
Mercury			0.011	B	[illegible]						CV
Selenium			6	U	6	U	6	U			P
Silver			0.24	U	0.24	U	0.24	U			P

ICP Analytical Run Time

FORM III -IN

U. S. EPA -CLP

4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: Heritage   Contract : ____________

Lab Code: ________   Case No. : ________   SAS No. : ________   SDG No.: ___

ICP ID Number : 334   ICS Source : Perkin-Elmer

Date of Analysis : 31-Jul-08

Concentration Units: uG/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found % R	Final Found Sol. A	Final Found Sol. AB	Final Found % R
Aluminum		500,000		508,000	101.6		506,000	101.2
Antimony		600		614	102.3		605	100.8
Arsenic		100		101	101.0		100	99.6
Barium		500		499	99.8		488	97.6
Beryllium		500		526	105.2		509	101.8
Cadmium		1,000		1,040	104.0		1,020	102.0
Calcium		500,000		464,000	92.8		455,000	91.0
Chromium		500		481	96.2		473	94.6
Cobalt		500		467	93.4		459	91.8
Copper		500		521	104.2		513	102.6
Iron		200,000		188,000	94.0		184,000	92.0
Lead		1,000		944	94.4		930	93.0
Magnesium		500,000		488,000	97.6		477,000	95.4
Manganese		500		473	94.6		462	92.4
Mercury								
Nickel		1,000		927	92.7		907	90.7
Potassium								
Selenium		50		45	89.0		50	99.0
Silver		200		217	108.5		213	106.5
Sodium								
Thallium		100		106	106.0		100	99.6
Vanadium		500		481	96.2		469	93.8
Zinc		1,000		934	93.4		920	92.0

FORM IV - IN

U. S. EPA -CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A818871

Lab Name: Heritage   Contract : ____

Lab Code: ____   Case No. : ____   SAS No. : ____   SDG No.: ____

Matrix (soil/water) : TCLP   Level (low/med): ____

Initial Wt/Vol : 50 mL

% Solids for Sample : ____   Final Volume : 50 mL

Dilution : 5

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	Q2102520 Spiked Sample (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75 - 125	4170		34	B	4,000	103.4		P
Barium	75 - 125	4410		423		4,000	99.7		P
Cadmium	75 - 125	111		7.47	B	100	103.5		P
Chromium	75 - 125	399		1.5	U	400	99.8		P
Lead	75 - 125	964		8	U	1,000	96.4		P
Mercury	75 - 125	9.35		0.19	B	10.0	91.6		CV †
Selenium	75 - 125	4450		251		4,000	105.0		P
Silver	75 - 125	104		1.2	U	100	104.0		P

FORM V (Part 1) - IN   † A818877

U. S. EPA -CLP

5A

MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

EPA SAMPLE NO.

A818871

Lab Name: HES - Commercial Laboratories   Contract :

Lab Code: Case No. :   SAS No. :   SDG No.:

Matrix (soil/water) : TCLP   Level (low/med):

Initial Wt/Vol : 50 mL

% Solids for Sample :   Final Volume : 50 mL

Dilution : 5

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	A792200 Spiked Dup Sample (SDS)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75 - 125	4270		34	B	4,000	105.9		P
Barium	75 - 125	4460		423		4,000	100.9		P
Cadmium	75 - 125	112		7.47	B	100	104.5		P
Chromium	75 - 125	406		1.5	U	400	101.5		P
Lead	75 - 125	984		8	U	1,000	98.4		P
Mercury	75 - 125	9.24		0.19	B	10.0	90.5		CV +
Selenium	75 - 125	4510		251		4,000	106.5		P
Silver	75 - 125	107		1.2	U	100	107.0		P

FORM V (Part 1) - IN   + A818877

U. S. EPA -CLP

5A

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

EPA SAMPLE NO.

A818871

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Matrix (soil/water) : TCLP Level (low/med):

Initial Wt/Vol : 50 mL

% Solids for Sample : Final Volume : 50 mL

Dilution : 5

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Sample Result (SR)	Q2102520 Spiked Sample (SSR)	C	A792200 Spiked Duplicate Sample (SDS)	C	Spike Added (SA)	% RPD	Q	M
Arsenic	34	103.4		105.9		4,000	2.4		P
Barium	420	99.7		100.9		4,000	1.2		P
Cadmium	7.5	103.5		104.5		100	1.0		P
Chromium	1.5	99.8		101.5		400	1.7		P
Lead	8	96.4		98.4		1,000	2.1		P
Mercury	0.19	91.6		90.5		10.0	1.2		CV +
Selenium	250	105.0		106.5		4,000	1.4		P
Silver	1.2	104.0		107.0		100	2.8		P

FORM V (Part 1) - IN + A818871

U. S. EPA -CLP
7
LABORATORY CONTROL SAMPLE

Q2102519

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Solid LCS Source :

Aqueous LCS Source : SPEX

Analyte	Aqueous (uG/L) True	Found	%R	True	Found	C	Limits		%R
Arsenic	4000	4,320	108.0						
Barium	4000	4,050	101.3						
Cadmium	100	107	107.0						
Chromium	400	402	100.5						
Lead	1000	989	98.9						
Mercury	2.00	2.21	110.5						
Selenium	4000	4,340	108.5						
Silver	100	107	107.0						

FORM VII - IN

U. S. EPA - CLP
17
STANDARD SOLUTIONS SOURCES

Lab Name: Heritage Environmental Services, LLC Contract__________________

Analyte	CALIBRATION STANDARD	ICV	CCV	CRDL	MATRIX SPIKE	ICS	Method
Aluminum	INV	PE	INV		SPEX	PE	P
Antimony	INV	PE	INV	INV	INV	PE	P
Arsenic	INV	PE	INV	INV	SPEX	PE	P
Barium	INV	PE	INV		SPEX	PE	P
Beryllium	INV	PE	INV	INV	SPEX	PE	P
Cadmium	INV	PE	INV	INV	SPEX	PE	P
Calcium	INV	SPEX	INV		SPEX	PE	P
Chromium	INV	PE	INV	INV	SPEX	PE	P
Cobalt	INV	PE	INV	INV	SPEX	PE	P
Copper	INV	PE	INV	INV	SPEX	PE	P
Iron	INV	PE	INV		SPEX	PE	P
Lead	INV	PE	INV	INV	SPEX	PE	P
Magnesium	INV	SPEX	INV		SPEX	PE	P
Manganese	INV	PE	INV	INV	SPEX	PE	P
Mercury	INV	NIST	FISHER	FISHER	FISHER		CV
Nickel	INV	PE	INV	INV	SPEX	PE	P
Potassium	INV	SPEX	INV		SPEX		P
Selenium	INV	PE	INV	INV	SPEX	PE	P
Silver	INV	PE	INV	INV	SPEX	PE	P
Sodium	INV	SPEX	INV		SPEX		P
Thallium	INV	PE	INV	INV	SPEX	PE	P
Vanadium	INV	PE	INV	INV	SPEX	PE	P
Zinc	INV	PE	INV	INV	SPEX	PE	P
Titanium	INV	PE	INV		SPEX		P
Strontium	INV	PE	INV		SPEX		P
Molybdenum	INV	PE	INV		SPEX		P
Boron	INV	PE	INV		SPEX		P
Tin	INV	PE	INV		INV		P
Zirconium	INV	PE	INV		SPEX		P
Lithium	INV	PE	INV		SPEX		P
Silicon	INV	PE	INV		INV		P

PE = Perkin Elmer Pure
INV = Inorganic Ventures

57196

WATER METHOD DETECTION LIMITS, uG/L   Hotblock / Clean

Element	ICP-MS	ICP-MS	ICP-MS	Vista	Vista	Vista	Vista	Vista	CVAA	CVAA	
	#401/402	#401/402	#401/402	#334/387	#334/387	#370/411	#370	#370	FIMS	FIMS	
	AAS	AAS		JPK	JPK	JJL	VAP	VAP	WJW	SON	
	Clean	Hotblock		Clean	Hotblock	Microwave	Clean	Hotblock	Hotblock	Hotblock	
Method						HF prep	Trace	Trace			
Complete	11/5/07	11/4/07		10/19/07	7/18/08	7/2/07	2/25/08	2/27/08	7/17/07	7/12/07	
Al	0.22	NA		7.7	6.1	18	4.2	2.7			
B	0.11	0.11		11	4.0	9.1	4.7	4.7			
Sb	0.019	0.017		3.1	5.1	4.6	2.8	2.6			
As	0.17/0.084	0.064/0.19		2.8	4.5	2.6	1.8	2.2			
Ba	0.022	0.038		0.12	0.14	0.25	0.097	0.12			
Be	0.012	0.016		0.088	0.11	0.22	0.038	0.034			
Cd	0.0034	0.0034		0.37	0.36	0.25	0.14	0.16			
Ca				7.5	6.9	19	6.8	5.0			
Cr	0.082	0.29		0.30	0.15	0.63	0.26	0.15			
Co	0.0045	0.015		0.47	0.52	0.91	0.56	0.58			
Cu	0.059	0.059		0.40	0.34	1.1	0.35	0.30			
Fe				1.7	2.8		1.0	2.4			
Pb	0.0022	0.013		1.6	1.9	2.7	0.98	1.1			
Mg				4.0	3.8	9.2	1.5	2.2			
Mn	0.081	0.26		0.49	0.43	0.41	0.29	0.25			
Hg									0.014	0.016	
Mo	0.057	0.017		0.55	0.81	1.2	0.48	0.38			
Ni	0.032	0.22		0.98	0.99	1.5	0.82	0.29			
K				1.3	1.2	18	1.1	1.2			
Li				1.5	1.7	2.2	2.4	1.1			
P									Method	1631-E	1631-E
Se	0.14/0.53	0.20/0.42		6.0	5.8	4.4	2.8	2.3	Instrument	373	373
Si				2.2	3.6		1.1	2.7	Analyst	WJW	SON
Sr	0.013	0.017		0.58	0.48	0.68	0.16	0.30	Units	ng/L	ng/L
Sn	0.022	0.016		1.2	2.1	1.8	1.0	1.1	Complete	10/9/2007	
Ag	0.0033	0.0026		0.24	0.16	0.21	0.25	0.20	Hg	0.15	
Na				1.1	1.9	11	2.0	2.2			
Th	0.014	0.0049									
Ti	0.16	NA		0.64	0.63	2.1	0.61	0.64			
Tl	0.012	0.018		2.7	3.6	3.3	1.7	1.3			
U	0.00083	0.014									
V	0.013	NA		1.1	0.80	1.0	0.54	0.66			
Zn	0.23	1.3		1.4	2.5	1.7	1.0	1.3			
Zr	NA	NA		0.87	0.57	1.5	0.53	1.1			

U. S. EPA -CLP

10
INSTRUMENT DETECTION LIMITS (ANNUAL)

Lab Name: Heritage Environmental Service, LLC Contract :

Lab Code: Case No. : SAS No. : SDG No.

ICP ID Number : Vista ICP #334 Date: Oct 19, 2007
Flame AA ID Number : PE FIMS-CVAA

Analyte	Wave-length (nm)	Back-ground	USEPA CRDL (uG/L)	Laboratory Reporting Limits	High Calibration Standard	IDL (uG/L)	M
Aluminum	237.312		200	50	10,000	7.7	P
Antimony	217.582		60	10	2,000	3.1	P
Arsenic	188.980		10	10	10,000	2.8	P
Barium	233.527		200	10	10,000	0.12	P
Beryllium	234.861		5	4	10,000	0.088	P
Boron	249.772			50	10,000	11	P
Cadmium	228.802		5	5	10,000	0.37	P
Calcium	315.887		5000	100	100,000	7.5	P
Chromium	267.716		10	10	10,000	0.30	P
Cobalt	231.160		50	10	10,000	0.47	P
Copper	324.754		25	10	10,000	0.40	P
Iron	261.382		100	20	10,000	1.7	P
Lead	220.353		3	10	10,000	1.6	P
Lithium	610.365			10	10,000	1.5	P
Magnesium	279.078		5000	100	100,000	4.0	P
Manganese	293.305		15	10	10,000	0.49	P
Mercury **	253.7		0.20	0.20	5.0	0.011	CV
Molybdenum	202.032			10	2,000	0.55	P
Nickel	221.648		40	5	10,000	0.98	P
Palladium	340.458			1	10,000	0.84	P
Potassium	766.5		5000	100	100,000	1.3	P
Selenium	196.026		5	10	10,000	6.0	P
Silicon	251.611			100	10,000	2.2	P
Silver	328.068		10	10	2,000	0.24	P
Sodium	589.592		5000	100	100,000	1.1	P
Sodium	568.821		5000		100,000	93	P
Strontium	216.596			10	10,000	0.58	P
Thallium	190.794		10	10	10,000	2.7	P
Tin	189.927			10	10,000	1.2	P
Titanium	322.284			10	10,000	0.64	P
Uranium							P
Vanadium	289.164		50	10	10,000	1.1	P
Zinc	206.200		20	20	10,000	1.4	P
Zirconium	257.147			10	10,000	0.87	P

Comments: **Mercury on 8/1/08 (Hotblock)

U. S. EPA -CLP

12
ICP LINEAR RANGES (BI-ANNUAL)

Lab Name: Heritage Environmental Services, LLC Contract : ____________

Lab Code: ________ Case No. : ________ SAS No. : ________

ICP ID Number : ICP#334 Date Jan 22, 2008

Analyte	Integ. Time (Sec.)	Concentration (uG/L)	M
Aluminum	20	450,000	P
Antimony	20	45,000	P
Arsenic	20	90,000	P
Barium	20	36,000	P
Beryllium	20	18,000	P
Boron	20	90,000	P
Cadmium	20	18,000	P
Calcium	20	450,000	P
Chromium	20	90,000	P
Cobalt	20	90,000	P
Copper	20	90,000	P
Iron	20	270,000	P
Lead	20	90,000	P
Lithium	20	18,000	P
Magnesium	20	900,000	P
Manganese	20	180,000	P
Mercury			P
Molybdenum	20	22,500	P
Nickel	20	72,000	P
Phosphorus			P
Potassium	20	90,000	P
Selenium	20	90,000	P
Silicon	20	36,000	P
Silver	20	4,500	P
Sodium - L	20	90,000	P
Sodium - H	20	450,000	P
Strontium	20	90,000	P
Thallium	20	90,000	P
Tin	20	45,000	P
Titanium	20	90,000	P
Uranium			P
Vanadium	20	90,000	P
Zinc	20	72,000	P
Zirconium	20	45,000	P

Comments: ____________

FORM XII - IN

57196

U. S. EPA-CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

ICP ID #	ICP 334	10/5/2007

IEC Factors	Al	As	Ba	Be	Ca	Cd	Co	Cr
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Al 237.312	1.00000000	0.00000000	0.00460228	-0.00050128	0.00000000	0.00000000	0.00144203	-0.00032407
As 188.980	0.00000000	1.00000000	0.00002607	0.00000000	0.00000000	0.00000000	0.00000000	0.00024382
B 249.772	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00019273
Ba 233.527	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Be 234.861	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00019991	0.00027801	0.00024386	0.00070977	1.00000000	0.00033953	0.00318562	-0.00180889
Cd 228.802	0.00000000	0.00155907	0.00000000	0.00000000	0.00000000	1.00000000	0.00011926	0.00000000
Co 231.160	0.00000000	0.00000000	0.00000000	-0.00297030	0.00000000	0.00000000	1.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000
Cu 324.754	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00040720	-0.00013544
Fe 261.382	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00083058	0.00055980
K 766.491	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	-0.00037174	0.00000000	0.00000000	0.00000000
Mg 279.078	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00007420
Mo 202.032	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00003372
Na 568.821	0.00000000	0.00000000	0.00560344	0.02607723	0.01336619	0.06287300	0.00338583	-0.00058373
Na 589.592	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00001853
Ni 221.648	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00032247	-0.00055846
Pb 220.353	0.00014541	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00019047	0.00000000
Sb 217.582	0.00000000	0.00000000	0.00000000	0.00113405	0.00000000	0.00000000	0.00000000	0.00000000
Se 196.026	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Si 251.611	0.00000000	0.00000000	0.00000000	0.00015628	0.00000000	0.00000000	0.00000000	0.00000000
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00011175
Sr 216.596	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ti 322.284	0.00000000	0.00000000	0.00000000	-0.00017052	0.00000000	-0.00014502	0.00000000	0.00000000
Tl 190.794	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00271298	0.00271298	0.00000000
V 289.164	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00206282
Zn 206.200	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00186232
Zr 257.147	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000

U. S. EPA-CLP
11A
ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)
Lab Name: Heritage Environmental Services, LLC

ICP ID #	ICP 334

10/5/2007

IEC Factors	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	Pb
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00008402	0.00000000	0.00000000	0.00000000	0.00000000
Al 237.312	0.00000000	-0.00224353	0.00000000	0.00000000	-0.00279833	0.00000000	0.00000000	0.00000000	0.00000000
As 188.980	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00064003	0.00000000	0.00000000	0.00000000
B 249.772	0.00000000	0.00033454	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Be 234.861	0.00000000	-0.00024256	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00043729	0.00000000	0.00000000	0.00000000
Cd 228.802	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00005725	0.00000000
Co 231.160	0.00000000	0.00008362	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00028689	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00020258	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	1.00000000	-0.00012764	0.00000000	0.00000000	0.00000000	0.00034242	0.00000000	0.00000000	0.00000000
Fe 261.382	0.00000000	1.00000000	0.00000000	0.00000000	-0.00005408	-0.00025240	0.00000000	0.00000000	-0.00698950
K 766.491	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	-0.00005970	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mg 279.078	0.00000000	0.00016902	0.00000000	1.00000000	-0.00049218	0.00000000	0.00000000	0.00000000	0.00000000
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mo 202.032	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000
Na 568.821	0.00000000	0.00017250	0.00000000	0.00000000	0.00000000	-0.06981217	1.00000000	0.00981650	0.00063011
Na 589.592	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00039866	1.00000000	0.00000000	0.00000000
Ni 221.648	0.00019872	0.00000000	0.00000000	0.00000000	0.00000000	0.00008957	0.00000000	1.00000000	0.00000000
Pb 220.353	0.00000000	0.00019404	0.00000000	0.00000000	0.00000000	-0.00275362	0.00000000	0.00000000	1.00000000
Sb 217.582	0.00000000	-0.00021091	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00040556
Se 196.026	0.00000000	0.00008548	0.00000000	0.00000000	0.00096156	0.00000000	0.00000000	0.00000000	0.00000000
Si 251.611	0.00000000	-0.00010001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sr 216.596	0.00004097	0.00011410	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ti 322.284	0.00000000	0.00000000	0.00000000	0.00000000	-0.00018202	0.00148204	0.00000000	0.00000000	0.00000000
Tl 190.794	0.00000000	-0.00019453	0.00000000	0.00000000	0.00036245	-0.00174090	0.00000000	0.00000000	0.00000000
V 289.164	0.00000000	0.00005327	0.00000000	0.00000000	0.00300360	-0.00075416	0.00000000	0.00000000	0.00000000
Zn 206.200	0.00000000	-0.00004925	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Zr 257.147	0.00000000	0.00002590	0.00000000	0.00000000	0.00000000	0.00125106	0.00000000	0.00000000	0.00000000

U. S. EPA-CLP
11A
ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)
Lab Name: Heritage Environmental Services, LLC

ICP ID #	ICP 334		10/5/2007

IEC Factors	Sb	Si	Sn	Sr	Ti	V	Zn	Zr
Ag 328.068	0.00000000	0.00000000	0.00000000	-0.00053185	-0.00004319	0.00000000	0.00000000	0.00397924
Al 237.312	0.00010192	0.00000000	0.00000000	0.00000000	-0.00012802	0.00000000	-0.00004372	0.00444773
As 188.980	0.00000000	0.00000000	0.00000000	0.00000000	-0.00008832	0.00000000	0.00000000	0.00000000
B 249.772	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00018508	0.00000000	0.00000000
Be 234.861	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00017581	0.00033665	0.00000000	0.00000000	-0.00018598	0.00135623	0.00000000	-0.00772487
Cd 228.802	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Co 231.160	0.00439101	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	0.00000000	0.00000000	0.00000000	0.00000000	0.00020070	0.00000000	0.00000000	0.00000000
Fe 261.382	0.00000000	0.00000000	0.00000000	0.00000000	-0.00195463	0.00120732	0.00000000	0.00000000
K 766491	0.00000000	0.00000000	0.00000000	0.00000000	0.00027079	0.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mg 279.078	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00015000	0.00000000	0.00000000
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mo 202.032	0.00000000	0.00000000	0.00000000	0.00000000	-0.00000086	0.00000000	0.00000000	0.00000000
Na 568.821	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Na 589.592	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ni 221.648	0.00000000	0.00197594	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Pb 220.353	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00008064	0.00000000
Sb 217.582	1.00000000	0.00062157	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Se 196.026	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00012724
Si 251.611	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00025518	0.00000000
Sn 189.927	0.00000000	0.00000000	1.00000000	0.00000000	0.00047894	0.00000000	0.00000000	0.00035568
Sr 216.596	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ti 322.284	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00029986
Tl 190.794	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00183402	0.00000000	0.00000000
V 289.164	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00189696
Zn 206.200	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000
Zr 257.147	0.00000000	0.00000000	0.00065473	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000

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Blank (Blk) 7/31/08, 8:28:18 PM Rack 1, Tube 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-22.114	-20.427	-23.364
Al	237.312	-2.8494	-0.89796	0.88078
As	188.980	-1.9228	-1.2254	-1.0041
B	249.772	1.7122	-0.42728	4.3529
Ba	233.527	14.354	12.193	15.692
Be	234.861	-3.2163	-8.7655	-7.9190
Ca	315.887	2427.6	2420.6	2421.4
Cd	228.802	-3.1560	-3.2741	0.79399
Co	231.160	15.235	17.964	16.525
Cr	267.716	24.204	16.742	16.320
Cu	324.754	52.882	64.494	51.876
Fe	261.382	10.497	11.440	5.5796
K	766.491	-486.11	-467.26	-474.62
Li	610.365	1326.3	1306.7	1319.5
Mg	279.078	6.8662	11.674	9.2207
Mn	293.305	29.397	24.562	9.6704
Mo	202.032	-0.21691	-1.3387	-0.92587
Na	589.592	1334.8	1319.4	1343.0
Na	568.821	-554.06	-554.55	-514.28
Ni	221.648	-4.0552	-5.5198	-7.3427
Pb	220.353	3.2655	3.0279	-1.5986
Sb	217.582	-2.0879	-1.1667	-5.5749
Se	196.026	-0.70663	0.63711	1.9719
Si	251.611	5.5938	6.8083	13.711
Sn	189.927	-0.77269	1.7979	0.80858
Sr	216.596	2.8411	1.3067	1.3489
Ti	322.284	125.94	126.65	126.62
Tl	190.794	-2.1668	-3.5208	-1.3858
V	289.164	-1.5893	2.7514	6.7694
Y	361.104	265341	264085	263695
Zn	206.200	10.556	5.0301	7.4841
Zr	257.147	16.672	19.428	27.566

ICP #334

7/31/08

CCV=S15481
DLS=S15484
CDL01=S15485
HMCS=STD2
ICS-A=S15486
ICS-AB=S15487
ICV01-30=S15447

STD2=S15480
MADE 07-17-08

STD3=S15463
MADE 06-25-08

JPK #3506

STD3X=S15469
MADE 06-29-08

STD4=S15464
MADE 06-25-08

COPY

080731JPK334

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ag	328.068	0.000000	ppm	1.474	6.7	-21.968
Al	237.312	0.000000	ppm	1.866	195.3	-0.95552
As	188.980	0.000000	ppm	0.479	34.6	-1.3841
B	249.772	0.000000	ppm	2.394	127.4	1.8792

A818537 TCLP-Se

A818840 K (dil)

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ba	233.527	0.000000	ppm	1.765	12.5	14.079
Be	234.861	0.000000	ppm	2.990	45.1	-6.6336
Ca	315.887	0.000000	ppm	3.853	0.2	2423.2
Cd	228.802	0.000000	ppm	2.315	123.2	-1.8787
Co	231.160	0.000000	ppm	1.365	8.2	16.575
Cr	267.716	0.000000	ppm	4.435	23.2	19.089
Cu	324.754	0.000000	ppm	7.012	12.4	56.417
Fe	261.382	0.000000	ppm	3.147	34.3	9.1720
K	766.491	0.000000	ppm	9.504	2.0	-476.00
Li	610.365	0.000000	ppm	9.926	0.8	1317.5
Mg	279.078	0.000000	ppm	2.404	26.0	9.2536
Mn	293.305	0.000000	ppm	10.282	48.5	21.210
Mo	202.032	0.000000	ppm	0.567	68.6	-0.82717
Na	589.592	0.000000	ppm	11.949	0.9	1332.4
Na	568.821	0.000000	ppm	23.113	4.3	-540.96
Ni	221.648	0.000000	ppm	1.647	29.2	-5.6392
Pb	220.353	0.000000	ppm	2.742	175.2	1.5649
Sb	217.582	0.000000	ppm	2.325	79.0	-2.9431
Se	196.026	0.000000	ppm	1.339	211.2	0.63413
Si	251.611	0.000000	ppm	4.378	50.3	8.7045
Sn	189.927	0.000000	ppm	1.297	212.1	0.61128
Sr	216.596	0.000000	ppm	0.874	47.7	1.8322
Ti	322.284	0.000000	ppm	0.402	0.3	126.41
Tl	190.794	0.000000	ppm	1.080	45.8	-2.3578
V	289.164	0.000000	ppm	4.180	158.1	2.6439
Zn	206.200	0.000000	ppm	2.768	36.0	7.6899
Zr	257.147	0.000000	ppm	5.664	26.7	21.222

A818871-877 TCLP
Ag As Ba Cd Cr Pb Se

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.000000	264374	860.598	0.3

Standard 2 (Std) 7/31/08, 8:31:36 PM Rack 1, Tube 2

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	88612	89184	89324
Al	237.312	6686.4	6759.1	6772.6
As	188.980	3879.6	3954.6	3946.8
B	249.772	122085	124146	121330
Ba	233.527	530599	536977	537436
Be	234.861	529049	536852	536178

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	93350	94405	94041
Co	231.160	77933	78658	78896
Cr	267.716	451450	457085	458148
Cu	324.754	465332	470731	471697
Fe	261.382	23416	23728	23746
Li	610.365	535687	537489	540062
Mn	293.305	182843	184940	185123
Ni	221.648	20375	20617	20646
Pb	220.353	21617	21812	21840
Se	196.026	2812.9	2836.4	2830.4
Sr	216.596	76926	78683	77646
Tl	190.794	5555.2	5634.5	5643.7
V	289.164	103961	105089	105185
Y	361.104	257319	256972	257149
Zn	206.200	10692	10822	10838
Zr	257.147	158171	160154	160213

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ag	328.068	2.0000	ppm	377.351	0.4	89040
Al	237.312	10.000	ppm	46.375	0.7	6739.4
As	188.980	10.000	ppm	41.241	1.1	3927.0
B	249.772	10.000	ppm	1457.750	1.2	122521
Ba	233.527	10.000	ppm	3821.939	0.7	535004
Be	234.861	10.000	ppm	4323.789	0.8	534027
Cd	228.802	10.000	ppm	535.955	0.6	93932
Co	231.160	10.000	ppm	501.689	0.6	78495
Cr	267.716	10.000	ppm	3599.413	0.8	455561
Cu	324.754	10.000	ppm	3429.983	0.7	469253
Fe	261.382	10.000	ppm	185.243	0.8	23630
Li	610.365	10.000	ppm	2198.464	0.4	537746
Mn	293.305	10.000	ppm	1266.725	0.7	184302
Ni	221.648	10.000	ppm	148.813	0.7	20546
Pb	220.353	10.000	ppm	121.243	0.6	21756
Se	196.026	10.000	ppm	12.190	0.4	2826.6
Sr	216.596	10.000	ppm	883.055	1.1	77751
Tl	190.794	10.000	ppm	48.634	0.9	5611.1
V	289.164	10.000	ppm	680.784	0.6	104745
Zn	206.200	10.000	ppm	80.193	0.7	10784
Zr	257.147	10.000	ppm	1162.217	0.7	159513

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0000	257147	173.474	0.1

Standard 4 (Std) **7/31/08, 8:34:53 PM** **Rack 1, Tube 3**

El	Wavelen.	Replicates Intensity (c/s)		
Mo	202.032	9449.6	9510.5	9507.5
Sb	217.582	1140.5	1139.3	1132.9
Si	251.611	27275	27646	27634
Sn	189.927	8969.6	8987.7	8995.8
Ti	322.284	115532	116322	116192
Y	361.104	271151	269073	270187

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Mo	202.032	2.0000	ppm	34.343	0.4	9489.2
Sb	217.582	2.0000	ppm	4.085	0.4	1137.6
Si	251.611	10.000	ppm	210.925	0.8	27519
Sn	189.927	10.000	ppm	13.406	0.1	8984.3
Ti	322.284	10.000	ppm	423.677	0.4	116015

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0505	270137	1039.682	0.4

Standard 3 (Std) **7/31/08, 8:38:11 PM** **Rack 1, Tube 4**

El	Wavelen.	Replicates Intensity (c/s)		
Na	589.592	2390876	2417480	2430266
Na	568.821	2963.5	2955.5	2989.2
Y	361.104	257992	256634	256963

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Na	589.592	10.000	ppm	20095.297	0.8	2412874
Na	568.821	10.000	ppm	17.614	0.6	2969.4

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0002	257196	708.168	0.3

Std 3 10 X (Std) **7/31/08, 8:41:28 PM** **Rack 1, Tube 5**

El	Wavelen.	Replicates Intensity (c/s)		
Ca	315.887	1004562	1014142	1009855
K	766.491	3116551	3127252	3118474
Mg	279.078	134800	136130	135481

El	Wavelen.	Replicates Intensity (c/s)		
Na	589.592	25023838	22970570	22732660
Na	568.821	35643	35859	35846
Y	361.104	247087	245673	246495

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ca	315.887	100.00	ppm	4798.703	0.5	1009520
K	766.491	100.00	ppm	5704.949	0.2	3120759
Mg	279.078	100.00	ppm	665.118	0.5	135470
Na	568.821	100.00	ppm	121.209	0.3	35783

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95828	246419	710.330	0.3

Ag 328.068 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-21.968	0.000000	0.000000	-	-
Standard 2		89040	2.0000	2.0000	0.000000	0.0

Curve Type: Linear Equation: y = 44531.1 x - -21.9683

Al 237.312 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.95552	0.000000	0.000000	-	-
Standard 2		6739.4	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 674.031 x - -0.955516

As 188.980 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-1.3841	0.000000	0.000000	-	-
Standard 2		3927.0	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 392.835 x - -1.38409

B 249.772 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.8792	0.000000	0.000000	-	-
Standard 2		122521	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 12251.9 x - 1.87925

Ba 233.527 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		14.079	0.000000	0.000000	-	-
Standard 2		535004	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 53499 x - 14.0794

Be 234.861 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-6.6336	0.000000	0.000000	-	-
Standard 2		534027	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 53403.3 x - -6.6336

Ca 315.887 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		2423.2	0.000000	0.000000	-	-
Std 3 10 X		1009520	100.00	100.00	0.000000	0.0

Curve Type: Linear Equation: y = 10071 x - 2423.22

Cd 228.802 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-1.8787	0.000000	0.000000	-	-
Standard 2		93932	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 9393.38 x - -1.87867

Co 231.160 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		16.575	0.000000	0.000000	-	-
Standard 2		78495	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 7847.89 x - 16.5749

Cr 267.716 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		19.089	0.000000	0.000000	-	-
Standard 2		455561	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 45554.2 x - 19.0887

Cu 324.754 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		56.417	0.000000	0.000000	-	-
Standard 2		469253	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 46919.7 x - 56.4174

Fe 261.382 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		9.1720	0.000000	0.000000	-	-
Standard 2		23630	10.000	10.0000	-0.000001	0.0

Curve Type: Linear Equation: y = 2362.08 x + 9.17204

K 766.491 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-476.00	0.000000	0.000000	-	-
Std 3 10 X		3120759	100.00	100.00	0.000000	0.0

Curve Type: Linear Equation: y = 31212.3 x + -475.996

Li 610.365 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1317.5	0.000000	0.000000	-	-
Standard 2		537746	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 53642.8 x + 1317.51

Mg 279.078 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		9.2536	0.000000	0.000000	-	-
Std 3 10 X		135470	100.00	100.00	0.000008	0.0

Curve Type: Linear Equation: y = 1354.61 x + 9.25358

Mn 293.305 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		21.210	0.000000	0.000000	-	-
Standard 2		184302	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 18428.1 x + 21.2096

Mo 202.032 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.82717	0.000000	0.000000	-	-
Standard 4		9489.2	2.0000	2.0000	0.000000	0.0

Curve Type: Linear Equation: y = 4745 x + -0.827174

Na 589.592 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1332.4	0.000000	0.000000	-	-
Standard 3		2412874	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 241154 x + 1332.41

Na 568.821 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-540.96	0.000000	0.37176	-	-
Standard 3		2969.4	10.000	10.000	0.000000	0.0
Std 3 10 X		35783	100.00	100.00	0.000000	0.0

Curve Type: Linear Equation: y = 364.592 x + -676.507

Ni 221.648 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-5.6392	0.000000	0.000000	-	-
Standard 2		20546	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 2055.14 x + -5.63924

Pb 220.353 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.5649	0.000000	0.000000	-	-
Standard 2		21756	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 2175.45 x + 1.56493

Sb 217.582 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-2.9431	0.000000	0.000000	-	-
Standard 4		1137.6	2.0000	2.0000	0.000000	0.0

Curve Type: Linear Equation: y = 570.253 x + -2.94314

Se 196.026 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.63413	0.000000	0.000000	-	-
Standard 2		2826.6	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 282.595 x + 0.634128

Si 251.611 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		8.7045	0.000000	0.000000	-	-
Standard 4		27519	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 2750.99 x - 8.70449

Sn 189.927 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.61128	0.000000	0.000000	-	-
Standard 4		8984.3	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 898.373 x - 0.61128

Sr 216.596 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.8322	0.000000	0.000000	-	-
Standard 2		77751	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 7774.97 x - 1.83223

Ti 322.284 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		126.41	0.000000	0.000000	-	-
Standard 4		116015	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 11588.9 x - 126.407

Tl 190.794 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-2.3578	0.000000	0.000000	-	-
Standard 2		5611.1	10.000	10.000	0.000001	0.0

Curve Type: Linear Equation: y = 561.347 x - -2.3578

V 289.164 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		2.6439	0.000000	0.000000	-	-
Standard 2		104745	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 10474.2 x - 2.64386

Zn 206.200 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		7.6899	0.000000	0.000000	-	-
Standard 2		10784	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 1077.62 x - 7.68994

Zr 257.147 Calibration (ppm) **7/31/08, 8:41:28 PM** **Correlation Coefficient: 1.000000**

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		21.222	0.000000	0.000000	-	-
Standard 2		159513	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 15949.1 x - 21.2222

CCV (CCV) **7/31/08, 8:44:46 PM** **Rack 1, Tube 6**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	46119	46489	45955
Al	237.312	3442.1	3475.0	3430.8
As	188.980	806.60	812.10	800.44
B	249.772	25150	25408	25060
Ba	233.527	270363	273633	270412
Be	234.861	109730	111295	109849
Ca	315.887	500015	505190	500056
Cd	228.802	48024	48516	48017
Co	231.160	38857	39244	38846
Cr	267.716	224890	227540	225256
Cu	324.754	233617	235798	233888
Fe	261.382	11621	11747	11644
K	766.491	1627477	1639917	1623386
Li	610.365	264090	266532	263635
Mg	279.078	64362	65059	64389
Mn	293.305	91382	92435	91516
Mo	202.032	4876.3	4936.3	4873.2
Na	589.592	11653054	11725026	11644642
Na	568.821	16621	16804	16615
Ni	221.648	10209	10307	10189
Pb	220.353	10736	10834	10726
Sb	217.582	600.19	603.59	596.08
Se	196.026	581.84	586.29	580.57
Si	251.611	14613	14997	14944
Sn	189.927	4476.5	4542.1	4503.7
Sr	216.596	38275	39472	38853
Ti	322.284	59350	60049	59383
Tl	190.794	1099.6	1118.8	1104.0
V	289.164	20909	21151	20942
Y	361.104	251316	251538	252209

El	Wavelen.	Replicates Intensity (c/s)		
Zn	206.200	5346.9	5389.2	5337.7
Zr	257.147	80647	81508	80633

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0195	ppm	0.006138	0.6	46188	1.0195 ppm	Y 361.104	101.95009
Al	237.312	5.0940	ppm	0.034061	0.7	3449.3	5.0940 ppm	Y 361.104	101.88081
As	188.980	2.0545	ppm	0.014854	0.7	806.38	2.0545 ppm	Y 361.104	102.72368
B	249.772	2.0565	ppm	0.014741	0.7	25206	2.0565 ppm	Y 361.104	102.82607
Ba	233.527	5.0740	ppm	0.035028	0.7	271470	5.0740 ppm	Y 361.104	101.48064
Be	234.861	2.0666	ppm	0.016308	0.8	110291	2.0666 ppm	Y 361.104	103.33112
Ca	315.887	49.606	ppm	0.29549	0.6	501753	49.606 ppm	Y 361.104	99.21164
Cd	228.802	5.1253	ppm	0.030501	0.6	48186	5.1253 ppm	Y 361.104	102.50675
Co	231.160	4.9645	ppm	0.028856	0.6	38982	4.9645 ppm	Y 361.104	99.29074
Cr	267.716	4.9573	ppm	0.031522	0.6	225895	4.9573 ppm	Y 361.104	99.14673
Cu	324.754	4.9973	ppm	0.025341	0.5	234434	4.9973 ppm	Y 361.104	99.94552
Fe	261.382	4.9696	ppm	0.028391	0.6	11671	4.9696 ppm	Y 361.104	99.39105
K	766.491	52.246	ppm	0.27585	0.5	1630260	52.246 ppm	Y 361.104	104.49299
Li	610.365	4.9330	ppm	0.029036	0.6	264752	4.9330 ppm	Y 361.104	98.65947
Mg	279.078	47.685	ppm	0.29176	0.6	64603	47.685 ppm	Y 361.104	95.36922
Mn	293.305	4.9792	ppm	0.031113	0.6	91778	4.9792 ppm	Y 361.104	99.58344
Mo	202.032	1.0317	ppm	0.007491	0.7	4895.3	1.0317 ppm	Y 361.104	103.16637
Na	589.592	48.255	ppm	0.18321	0.4	11674240	48.255 ppm	Y 361.104	96.51018
Ni	221.648	4.9779	ppm	0.030670	0.6	10235	4.9779 ppm	Y 361.104	99.55730
Pb	220.353	4.9504	ppm	0.027522	0.6	10765	4.9504 ppm	Y 361.104	99.00764
Sb	217.582	1.0602	ppm	0.006588	0.6	599.95	1.0602 ppm	Y 361.104	106.01864
Se	196.026	2.0553	ppm	0.010643	0.5	582.90	2.0553 ppm	Y 361.104	102.76251
Si	251.611	5.3970	ppm	0.075679	1.4	14851	5.3970 ppm	Y 361.104	107.93996
Sn	189.927	5.0131	ppm	0.036701	0.7	4507.4	5.0131 ppm	Y 361.104	100.26195
Sr	216.596	4.9979	ppm	0.076968	1.5	38867	4.9979 ppm	Y 361.104	99.95789
Ti	322.284	5.1292	ppm	0.034028	0.7	59594	5.1292 ppm	Y 361.104	102.58366
Tl	190.794	1.9613	ppm	0.017946	0.9	1107.5	1.9613 ppm	Y 361.104	98.06676
V	289.164	2.0227	ppm	0.012561	0.6	21001	2.0227 ppm	Y 361.104	101.13335
Zn	206.200	4.9548	ppm	0.025470	0.5	5357.9	4.9548 ppm	Y 361.104	99.09584
Zr	257.147	5.0676	ppm	0.031422	0.6	80929	5.0676 ppm	Y 361.104	101.35272

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97877	251688	465.081	0.2

BLA01 (CCB) **7/31/08, 8:48:02 PM** **Rack 1, Tube 7**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-20.022	-15.090	-20.194
Al	237.312	-2.6755	2.1618	-1.3432
As	188.980	-0.32521	1.7256	1.4102
B	249.772	82.306	27.633	26.752
Ba	233.527	14.446	13.463	15.420
Be	234.861	-10.833	-4.7902	-2.0520
Ca	315.887	2357.7	2362.9	2364.7
Cd	228.802	-2.1963	-1.9556	-2.2871
Co	231.160	11.796	17.042	14.643
Cr	267.716	8.9023	13.921	9.4687
Cu	324.754	73.775	85.912	80.679
Fe	261.382	9.5080	8.0499	10.322
K	766.491	-391.92	-401.54	-427.05
Li	610.365	1270.0	1312.6	1276.8
Mg	279.078	5.8151	6.6076	7.9331
Mn	293.305	21.089	18.786	26.443
Mo	202.032	1.2407	-1.2808	1.6291
Na	589.592	1332.2	1303.8	1284.3
Na	568.821	-531.35	-539.30	-550.26
Ni	221.648	-4.4922	-4.9937	-4.2620
Pb	220.353	-1.3492	2.1432	-1.9904
Sb	217.582	-2.8303	-6.2646	-3.5685
Se	196.026	0.84436	1.9684	-0.16644
Si	251.611	14.657	16.118	14.536
Sn	189.927	0.65578	0.88711	1.6561
Sr	216.596	2.1549	-4.1505	2.9248
Ti	322.284	124.07	128.13	120.72
Tl	190.794	0.11299	-0.44389	0.75900
V	289.164	1.2502	3.1127	-1.9920
Y	361.104	266156	265525	266203
Zn	206.200	7.8469	8.6144	6.5085
Zr	257.147	38.187	35.037	34.626

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000076	ppm	0.000065	85.4	-18.435	0.000076 ppm	Y 361.104	0.00008
Al	237.312	0.000494u	ppm	0.003707	750.9	-0.61895	0.000494 ppm	Y 361.104	0.00049
As	188.980	0.005908	ppm	0.002811	47.6	0.93688	0.005908 ppm	Y 361.104	0.00591
B	249.772	0.003566	ppm	0.002597	72.8	45.564	0.003566 ppm	Y 361.104	0.00357

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	0.000007u	ppm	0.000018	267.7	14.443	0.000007 ppm	Y 361.104	0.00001
Be	234.861	0.000013u	ppm	0.000084	625.9	-5.8916	0.000013 ppm	Y 361.104	0.00001
Ca	315.887	-0.006093u	ppm	0.000362	5.9	2361.8	-0.006093 ppm	Y 361.104	-0.00609
Cd	228.802	-0.000033u	ppm	0.000018	55.2	-2.1463	-0.000033 ppm	Y 361.104	-0.00003
Co	231.160	-0.000262u	ppm	0.000335	127.6	14.493	-0.000262 ppm	Y 361.104	-0.00026
Cr	267.716	-0.000183u	ppm	0.000060	33.0	10.764	-0.000183 ppm	Y 361.104	-0.00018
Cu	324.754	0.000505	ppm	0.000130	25.7	80.122	0.000505 ppm	Y 361.104	0.00050
Fe	261.382	0.000041u	ppm	0.000487	1191.0	9.2934	0.000041 ppm	Y 361.104	0.00004
K	766.491	0.002216	ppm	0.000582	26.2	-406.83	0.002216 ppm	Y 361.104	0.00222
Li	610.365	-0.000654u	ppm	0.000426	65.2	1286.4	-0.000654 ppm	Y 361.104	-0.00065
Mg	279.078	-0.001821u	ppm	0.000790	43.4	6.7853	-0.001821 ppm	Y 361.104	-0.00182
Mn	293.305	0.000049u	ppm	0.000213	438.3	22.106	0.000049 ppm	Y 361.104	0.00005
Mo	202.032	0.000286u	ppm	0.000333	116.4	0.52966	0.000286 ppm	Y 361.104	0.00029
Na	589.592	-0.000108u	ppm	0.000100	92.2	1306.8	-0.000108 ppm	Y 361.104	-0.00011
Ni	221.648	0.000535	ppm	0.000182	34.0	-4.5826	0.000535 ppm	Y 361.104	0.00053
Pb	220.353	-0.000901u	ppm	0.001023	113.5	-0.39882	-0.000901 ppm	Y 361.104	-0.00090
Sb	217.582	-0.002242u	ppm	0.003170	141.4	-4.2212	-0.002242 ppm	Y 361.104	-0.00224
Se	196.026	0.000877u	ppm	0.003779	430.9	0.88210	0.000877 ppm	Y 361.104	0.00088
Si	251.611	0.002324	ppm	0.000320	13.8	15.104	0.002324 ppm	Y 361.104	0.00232
Sn	189.927	0.000506	ppm	0.000583	115.2	1.0663	0.000506 ppm	Y 361.104	0.00051
Sr	216.596	-0.000196u	ppm	0.000499	255.3	0.30974	-0.000196 ppm	Y 361.104	-0.00020
Ti	322.284	-0.000182u	ppm	0.000320	175.6	124.31	-0.000182 ppm	Y 361.104	-0.00018
Tl	190.794	0.004455	ppm	0.001072	24.1	0.14270	0.004455 ppm	Y 361.104	0.00446
V	289.164	-0.000175u	ppm	0.000247	141.0	0.79031	-0.000175 ppm	Y 361.104	-0.00017
Zn	206.200	-0.000031u	ppm	0.000989	3197.8	7.6566	-0.000031 ppm	Y 361.104	-0.00003
Zr	257.147	0.000922	ppm	0.000122	13.2	35.950	0.000922 ppm	Y 361.104	0.00092

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0343	265961	378.568	0.1

ICV01-30 (ICV) **7/31/08, 8:51:18 PM** **Rack 1, Tube 8**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	22875	22748	22580
Al	237.312	683.96	688.96	684.46
As	188.980	402.65	398.61	393.03
B	249.772	12018	12008	11923
Ba	233.527	54882	54791	54375
Be	234.861	53813	53873	53328
Ca	315.887	200425	200167	198733

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	9557.2	9543.8	9468.9
Co	231.160	7874.1	7869.8	7819.9
Cr	267.716	45646	45650	45308
Cu	324.754	47376	47367	47064
Fe	261.382	2384.9	2382.8	2354.4
K	766.491	652125	649379	649110
Li	610.365	53715	53533	53015
Mg	279.078	25829	25826	25596
Mn	293.305	18618	18610	18446
Mo	202.032	2352.0	2347.7	2329.1
Na	589.592	4594785	4557431	4496664
Na	568.821	6168.3	6137.6	6122.9
Ni	221.648	2098.9	2093.8	2077.4
Pb	220.353	2225.9	2206.7	2185.0
Sb	217.582	279.37	283.03	279.35
Se	196.026	287.24	285.16	279.25
Si	251.611	6782.3	6791.4	6750.4
Sn	189.927	1797.8	1798.5	1799.7
Sr	216.596	7597.0	7487.4	7468.0
Ti	322.284	11548	11553	11445
Tl	190.794	567.65	561.70	562.67
V	289.164	10525	10522	10447
Y	361.104	261132	262941	264878
Zn	206.200	1107.8	1114.5	1099.0
Zr	257.147	15976	15953	15819

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.50745	ppm	0.003325	0.7	22734	0.50745 ppm	Y 361.104	101.48934
Al	237.312	1.0143	ppm	0.004088	0.4	685.79	1.0143 ppm	Y 361.104	101.42775
As	188.980	1.0164	ppm	0.012298	1.2	398.10	1.0164 ppm	Y 361.104	101.63670
B	249.772	0.97777	ppm	0.004251	0.4	11983	0.97777 ppm	Y 361.104	97.77705
Ba	233.527	1.0217	ppm	0.005054	0.5	54683	1.0217 ppm	Y 361.104	102.16607
Be	234.861	1.0054	ppm	0.005590	0.6	53671	1.0054 ppm	Y 361.104	100.53961
Ca	315.887	19.599	ppm	0.090528	0.5	199775	19.599 ppm	Y 361.104	97.99379
Cd	228.802	1.0120	ppm	0.005070	0.5	9523.3	1.0120 ppm	Y 361.104	101.20012
Co	231.160	0.99905	ppm	0.003840	0.4	7854.6	0.99905 ppm	Y 361.104	99.90471
Cr	267.716	0.99894	ppm	0.004309	0.4	45535	0.99894 ppm	Y 361.104	99.89378
Cu	324.754	1.0065	ppm	0.003784	0.4	47269	1.0065 ppm	Y 361.104	100.65464
Fe	261.382	1.0070	ppm	0.007207	0.7	2374.0	1.0070 ppm	Y 361.104	100.69923

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
K	766.491	20.847	ppm	0.053441	0.3	650205	20.847 ppm	Y 361.104	104.23451
Li	610.365	0.97992	ppm	0.006770	0.7	53421	0.97992 ppm	Y 361.104	97.99197
Mg	279.078	19.002	ppm	0.098684	0.5	25750	19.002 ppm	Y 361.104	95.01183
Mn	293.305	1.0059	ppm	0.005267	0.5	18558	1.0059 ppm	Y 361.104	100.59090
Mo	202.032	0.49395	ppm	0.002565	0.5	2342.9	0.49395 ppm	Y 361.104	98.78923
Na	589.592	18.830	ppm	0.20536	1.1	4549627	18.830 ppm	Y 361.104	94.15172
Ni	221.648	1.0160	ppm	0.005449	0.5	2090.0	1.0160 ppm	Y 361.104	101.59990
Pb	220.353	1.0146	ppm	0.009387	0.9	2205.9	1.0146 ppm	Y 361.104	101.46408
Sb	217.582	0.49779	ppm	0.003716	0.7	280.58	0.49779 ppm	Y 361.104	99.55882
Se	196.026	1.0013	ppm	0.014675	1.5	283.88	1.0013 ppm	Y 361.104	100.12625
Si	251.611	2.4598	ppm	0.007823	0.3	6774.7	2.4598 ppm	Y 361.104	98.39154
Sn	189.927	2.0008	ppm	0.001038	0.1	1798.6	2.0008 ppm	Y 361.104	100.03764
Sr	216.596	0.96647	ppm	0.008944	0.9	7517.5	0.96647 ppm	Y 361.104	96.64730
Ti	322.284	0.98183	ppm	0.005272	0.5	11515	0.98183 ppm	Y 361.104	98.18311
Tl	190.794	1.0051	ppm	0.005686	0.6	564.01	1.0051 ppm	Y 361.104	100.50988
V	289.164	1.0059	ppm	0.004244	0.4	10498	1.0059 ppm	Y 361.104	100.59467
Zn	206.200	1.0182	ppm	0.007219	0.7	1107.1	1.0182 ppm	Y 361.104	101.81791
Zr	257.147	0.99440	ppm	0.005323	0.5	15916	0.99440 ppm	Y 361.104	99.44033

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0227	262984	1873.407	0.7

BLA01 (CCB) **7/31/08, 8:54:34 PM** **Rack 1, Tube 9**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-22.095	-37.031	-28.059
Al	237.312	3.6527	-0.073429	-4.9430
As	188.980	-1.2655	-0.090504	1.7461
B	249.772	30.342	23.450	13.497
Ba	233.527	16.150	15.696	10.016
Be	234.861	-4.7027	-1.9877	-2.9051
Ca	315.887	2362.7	2359.3	2364.7
Cd	228.802	-1.2134	0.47979	-0.33530
Co	231.160	11.020	19.136	15.872
Cr	267.716	8.7498	5.5333	0.14718
Cu	324.754	61.068	70.402	51.715
Fe	261.382	12.774	13.693	8.2802
K	766.491	-390.93	-408.70	-415.49
Li	610.365	1325.8	1292.8	1287.1
Mg	279.078	11.917	11.165	10.302

El	Wavelen.	Replicates Intensity (c/s)		
Mn	293.305	16.006	17.610	19.436
Mo	202.032	-0.76288	-1.5195	-1.3527
Na	589.592	1282.8	1297.9	1282.7
Na	568.821	-511.93	-560.47	-521.00
Ni	221.648	-4.5198	-5.4472	-3.6471
Pb	220.353	-0.69520	3.4079	0.034648
Sb	217.582	-1.9614	-2.9174	-2.3514
Se	196.026	1.1542	0.57104	1.3335
Si	251.611	10.824	9.2693	11.806
Sn	189.927	0.29145	0.53109	0.060569
Sr	216.596	3.2286	3.1056	-2.3272
Ti	322.284	121.09	125.10	140.71
Tl	190.794	-0.051616	0.82047	0.68214
V	289.164	0.011994	-1.7299	2.9579
Y	361.104	270585	270462	270155
Zn	206.200	7.8664	6.9071	8.6730
Zr	257.147	33.672	35.084	30.902

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000162u	ppm	0.000169	104.5	-29.062	-0.000162 ppm	Y 361.104	-0.00016
Al	237.312	0.000740u	ppm	0.006395	864.8	-0.45458	0.000740 ppm	Y 361.104	0.00074
As	188.980	0.003854	ppm	0.003864	100.2	0.13006	0.003854 ppm	Y 361.104	0.00385
B	249.772	0.001678	ppm	0.000691	41.2	22.430	0.001678 ppm	Y 361.104	0.00168
Ba	233.527	-0.000002u	ppm	0.000064	2782.6	13.954	-0.000002 ppm	Y 361.104	0.00000
Be	234.861	0.000064	ppm	0.000026	40.3	-3.1985	0.000064 ppm	Y 361.104	0.00006
Ca	315.887	-0.006048u	ppm	0.000267	4.4	2362.2	-0.006048 ppm	Y 361.104	-0.00605
Cd	228.802	0.000161	ppm	0.000090	55.9	-0.35630	0.000161 ppm	Y 361.104	0.00016
Co	231.160	-0.000167u	ppm	0.000520	311.0	15.343	-0.000167 ppm	Y 361.104	-0.00017
Cr	267.716	-0.000314u	ppm	0.000095	30.4	4.8101	-0.000314 ppm	Y 361.104	-0.00031
Cu	324.754	0.000099u	ppm	0.000199	202.0	61.062	0.000099 ppm	Y 361.104	0.00010
Fe	261.382	0.001015u	ppm	0.001226	120.9	11.583	0.001015 ppm	Y 361.104	0.00101
K	766.491	0.002273	ppm	0.000406	17.9	-405.04	0.002273 ppm	Y 361.104	0.00227
Li	610.365	-0.000365u	ppm	0.000390	106.6	1301.9	-0.000365 ppm	Y 361.104	-0.00037
Mg	279.078	0.001384	ppm	0.000597	43.1	11.128	0.001384 ppm	Y 361.104	0.00138
Mn	293.305	-0.000191u	ppm	0.000093	48.7	17.684	-0.000191 ppm	Y 361.104	-0.00019
Mo	202.032	-0.000081u	ppm	0.000084	103.4	-1.2117	-0.000081 ppm	Y 361.104	-0.00008
Na	589.592	-0.000187u	ppm	0.000036	19.5	1287.8	-0.000187 ppm	Y 361.104	-0.00019
Ni	221.648	0.000560	ppm	0.000438	78.3	-4.5380	0.000560 ppm	Y 361.104	0.00056
Pb	220.353	-0.000298u	ppm	0.001006	337.6	0.91578	-0.000298 ppm	Y 361.104	-0.00030

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sb	217.582	0.000934	ppm	0.000843	90.2	-2.4101	0.000934 ppm	Y 361.104	0.00093
Se	196.026	0.001363u	ppm	0.001411	103.5	1.0196	0.001363 ppm	Y 361.104	0.00136
Si	251.611	0.000699	ppm	0.000465	66.5	10.633	0.000699 ppm	Y 361.104	0.00070
Sn	189.927	-0.000354u	ppm	0.000262	74.1	0.29437	-0.000354 ppm	Y 361.104	-0.00035
Sr	216.596	-0.000064u	ppm	0.000408	640.4	1.3357	-0.000064 ppm	Y 361.104	-0.00006
Ti	322.284	0.000221u	ppm	0.000894	405.5	128.97	0.000221 ppm	Y 361.104	0.00022
Tl	190.794	0.005062	ppm	0.000835	16.5	0.48366	0.005062 ppm	Y 361.104	0.00506
V	289.164	-0.000212u	ppm	0.000226	106.7	0.41335	-0.000212 ppm	Y 361.104	-0.00021
Zn	206.200	0.000117u	ppm	0.000820	702.2	7.8155	0.000117 ppm	Y 361.104	0.00012
Zr	257.147	0.000752	ppm	0.000133	17.7	33.219	0.000752 ppm	Y 361.104	0.00075

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0515	270401	221.581	0.1

DLS (CRI) **7/31/08, 8:57:50 PM** **Rack 1, Tube 10**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	416.09	422.35	435.31
Al	237.312	29.002	26.958	30.486
As	188.980	2.6648	6.5443	3.2676
B	249.772	598.60	600.09	601.20
Ba	233.527	535.98	542.24	537.44
Be	234.861	194.26	198.82	197.17
Ca	315.887	3338.7	3351.9	3361.8
Cd	228.802	42.396	43.810	42.021
Co	231.160	93.441	87.611	91.710
Cr	267.716	447.46	451.72	465.49
Cu	324.754	511.92	523.87	528.64
Fe	261.382	56.765	58.796	57.514
K	766.491	2576.4	2596.9	2634.5
Li	610.365	1810.5	1795.2	1814.1
Mg	279.078	127.04	130.46	130.07
Mn	293.305	201.00	195.01	201.33
Mo	202.032	44.556	45.223	45.068
Na	589.592	21412	21630	21750
Na	568.821	-503.98	-503.31	-473.19
Ni	221.648	5.8882	7.8655	6.7117
Pb	220.353	19.009	18.883	23.129
Sb	217.582	4.4645	6.0470	-1.8207
Se	196.026	4.6275	5.4826	3.0801

El	Wavelen.	Replicates Intensity (c/s)		
Si	251.611	275.42	282.84	283.80
Sn	189.927	8.0652	9.0092	7.6439
Sr	216.596	72.958	72.713	73.591
Ti	322.284	231.94	241.76	240.67
Tl	190.794	5.5295	3.9959	6.7786
V	289.164	91.681	108.51	106.76
Y	361.104	268725	269022	267453
Zn	206.200	28.759	27.091	30.245
Zr	257.147	186.73	188.76	185.48

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.009991	ppm	0.000220	2.2	424.58	0.009991 ppm	Y 361.104	99.91364
Al	237.312	0.044142	ppm	0.002628	6.0	28.815	0.044142 ppm	Y 361.104	88.28378
As	188.980	0.014101	ppm	0.005315	37.7	4.1589	0.014101 ppm	Y 361.104	141.01295
B	249.772	0.048816	ppm	0.000106	0.2	599.96	0.048816 ppm	Y 361.104	97.63107
Ba	233.527	0.009802	ppm	0.000061	0.6	538.56	0.009802 ppm	Y 361.104	98.01572
Be	234.861	0.003813	ppm	0.000043	1.1	196.75	0.003813 ppm	Y 361.104	95.32828
Ca	315.887	0.092104	ppm	0.001149	1.2	3350.8	0.092104 ppm	Y 361.104	92.10381
Cd	228.802	0.004729	ppm	0.000100	2.1	42.742	0.004729 ppm	Y 361.104	94.58488
Co	231.160	0.009431	ppm	0.000381	4.0	90.921	0.009431 ppm	Y 361.104	94.31136
Cr	267.716	0.009564	ppm	0.000207	2.2	454.89	0.009564 ppm	Y 361.104	95.64368
Cu	324.754	0.009914	ppm	0.000183	1.9	521.48	0.009914 ppm	Y 361.104	99.13876
Fe	261.382	0.020587	ppm	0.000435	2.1	57.692	0.020587 ppm	Y 361.104	102.93462
K	766.491	0.098633	ppm	0.000944	1.0	2602.6	0.098633 ppm	Y 361.104	98.63321
Li	610.365	0.009087	ppm	0.000187	2.1	1806.6	0.009087 ppm	Y 361.104	90.87031
Mg	279.078	0.088541	ppm	0.001381	1.6	129.19	0.088541 ppm	Y 361.104	88.54133
Mn	293.305	0.009654	ppm	0.000193	2.0	199.11	0.009654 ppm	Y 361.104	96.53956
Mo	202.032	0.009647	ppm	0.000074	0.8	44.949	0.009647 ppm	Y 361.104	96.47229
Na	589.592	0.083740	ppm	0.000712	0.9	21597	0.083740 ppm	Y 361.104	83.73997
Ni	221.648	0.005904	ppm	0.000483	8.2	6.8218	0.005904 ppm	Y 361.104	118.08862
Pb	220.353	0.008653	ppm	0.001111	12.8	20.340	0.008653 ppm	Y 361.104	86.53120
Sb	217.582	0.010248	ppm	0.007298	71.2	2.8969	0.010248 ppm	Y 361.104	102.48150
Se	196.026	0.013302	ppm	0.004309	32.4	4.3967	0.013302 ppm	Y 361.104	133.02176
Si	251.611	0.098867	ppm	0.001667	1.7	280.69	0.098867 ppm	Y 361.104	98.86691
Sn	189.927	0.008484	ppm	0.000778	9.2	8.2394	0.008484 ppm	Y 361.104	84.83772
Sr	216.596	0.009162	ppm	0.000058	0.6	73.087	0.009162 ppm	Y 361.104	91.61993
Ti	322.284	0.009623	ppm	0.000464	4.8	238.12	0.009623 ppm	Y 361.104	96.23003
Tl	190.794	0.013856	ppm	0.002483	17.9	5.4347	0.013856 ppm	Y 361.104	138.55759
V	289.164	0.009559	ppm	0.000883	9.2	102.32	0.009559 ppm	Y 361.104	95.59283

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Zn	206.200	0.019476	ppm	0.001464	7.5	28.698	0.019476 ppm	Y 361.104	97.37803
Zr	257.147	0.010373	ppm	0.000104	1.0	186.99	0.010373 ppm	Y 361.104	103.73017

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0438	268400	833.445	0.3

CDL01 (CRI) **7/31/08, 9:01:06 PM** **Rack 1, Tube 11**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	857.60	880.45	873.06
Al	237.312	-0.62307	-4.6889	2.0117
As	188.980	8.0916	7.9523	6.7897
B	249.772	7.5193	7.4222	12.235
Ba	233.527	13.722	12.364	13.679
Be	234.861	494.41	499.26	498.58
Ca	315.887	2444.9	2456.8	2451.7
Cd	228.802	86.201	85.079	89.450
Co	231.160	769.44	783.50	794.38
Cr	267.716	887.27	910.46	903.17
Cu	324.754	2330.1	2353.7	2385.2
Fe	261.382	10.538	8.9874	9.4959
K	766.491	-388.21	-426.24	-404.04
Li	610.365	1233.8	1239.6	1270.8
Mg	279.078	8.1058	7.7162	5.5429
Mn	293.305	543.86	548.03	561.14
Mo	202.032	-1.6091	-1.0213	-3.4875
Na	589.592	1347.2	1377.4	1363.5
Na	568.821	-508.17	-558.45	-539.89
Ni	221.648	155.40	155.28	154.72
Pb	220.353	210.69	211.17	212.73
Sb	217.582	59.681	58.940	61.825
Se	196.026	5.0555	5.6588	1.5589
Si	251.611	21.084	17.330	21.756
Sn	189.927	0.70546	-0.89931	0.77881
Sr	216.596	1.5357	-0.28396	2.2380
Ti	322.284	123.23	120.99	123.53
Tl	190.794	9.7702	8.9874	11.383
V	289.164	1021.1	1028.8	1029.2
Y	361.104	271115	269933	268496
Zn	206.200	47.588	49.511	48.305

El	Wavelen.	Replicates Intensity (c/s)		
Zr	257.147	21.671	19.697	30.014

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.020039	ppm	0.000262	1.3	870.37	0.020039 ppm	Y 361.104	100.19272
Al	237.312	-0.000263u	ppm	0.005008	1907.4	-1.1001	-0.000263 ppm	Y 361.104	-
As	188.980	0.022893	ppm	0.001820	7.9	7.6112	0.022893 ppm	Y 361.104	114.46545
B	249.772	0.000591	ppm	0.000225	38.0	9.0588	0.000591 ppm	Y 361.104	-
Ba	233.527	-0.000035u	ppm	0.000014	40.9	13.255	-0.000035 ppm	Y 361.104	-
Be	234.861	0.009439	ppm	0.000049	0.5	497.42	0.009439 ppm	Y 361.104	94.38618
Ca	315.887	0.002337	ppm	0.000593	25.4	2451.1	0.002337 ppm	Y 361.104	-
Cd	228.802	0.009401	ppm	0.000242	2.6	86.910	0.009401 ppm	Y 361.104	94.01086
Co	231.160	0.097123	ppm	0.001593	1.6	782.44	0.097123 ppm	Y 361.104	97.12287
Cr	267.716	0.019338	ppm	0.000260	1.3	900.30	0.019338 ppm	Y 361.104	96.68962
Cu	324.754	0.049058	ppm	0.000590	1.2	2356.3	0.049058 ppm	Y 361.104	98.11588
Fe	261.382	0.000616u	ppm	0.000335	54.3	9.6737	0.000616 ppm	Y 361.104	-
K	766.491	0.002237	ppm	0.000612	27.4	-406.16	0.002237 ppm	Y 361.104	-
Li	610.365	-0.001365u	ppm	0.000371	27.2	1248.1	-0.001365 ppm	Y 361.104	-
Mg	279.078	-0.001574u	ppm	0.001019	64.8	7.1216	-0.001574 ppm	Y 361.104	-
Mn	293.305	0.028750	ppm	0.000489	1.7	551.01	0.028750 ppm	Y 361.104	95.83211
Mo	202.032	-0.000256u	ppm	0.000271	106.0	-2.0393	-0.000256 ppm	Y 361.104	-
Na	589.592	0.000124	ppm	0.000063	50.5	1362.7	0.000124 ppm	Y 361.104	-
Ni	221.648	0.078300	ppm	0.000175	0.2	155.13	0.078300 ppm	Y 361.104	97.87449
Pb	220.353	0.096536	ppm	0.000490	0.5	211.53	0.096536 ppm	Y 361.104	96.53573
Sb	217.582	0.11067	ppm	0.002627	2.4	60.149	0.11067 ppm	Y 361.104	92.22833
Se	196.026	0.012203	ppm	0.007833	64.2	4.0911	0.012203 ppm	Y 361.104	122.02950
Si	251.611	0.004132	ppm	0.000867	21.0	20.057	0.004132 ppm	Y 361.104	-
Sn	189.927	-0.000461u	ppm	0.001056	228.9	0.19499	-0.000461 ppm	Y 361.104	-
Sr	216.596	-0.000088u	ppm	0.000167	190.2	1.1632	-0.000088 ppm	Y 361.104	-
Ti	322.284	-0.000324u	ppm	0.000120	36.9	122.59	-0.000324 ppm	Y 361.104	-
Tl	190.794	0.021638	ppm	0.002176	10.1	10.047	0.021638 ppm	Y 361.104	108.19201
V	289.164	0.097878	ppm	0.000433	0.4	1026.4	0.097878 ppm	Y 361.104	97.87839
Zn	206.200	0.037800	ppm	0.000901	2.4	48.468	0.037800 ppm	Y 361.104	94.50065
Zr	257.147	0.000161u	ppm	0.000343	213.1	23.794	0.000161 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0494	269848	1311.313	0.5

HMCS (ICV) 7/31/08, 9:04:21 PM Rack 1, Tube 12

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	90611	90071	89299
Al	237.312	6796.9	6753.2	6732.4
As	188.980	4017.0	4003.7	3941.1
B	249.772	122455	123335	122061
Ba	233.527	545356	544576	539413
Be	234.861	545742	545932	539335
Ca	315.887	2038.9	2048.5	2048.2
Cd	228.802	95534	94614	93912
Co	231.160	79918	79541	78902
Cr	267.716	462744	461358	457413
Cu	324.754	477342	475548	471022
Fe	261.382	24060	23993	23737
K	766.491	-369.14	-372.08	-388.65
Li	610.365	551668	544872	542824
Mg	279.078	7.1284	3.8181	10.026
Mn	293.305	187938	187274	185436
Mo	202.032	1.9786	1.5822	1.5658
Na	589.592	26069	25789	25629
Na	568.821	-525.14	-518.34	-562.95
Ni	221.648	20902	20825	20655
Pb	220.353	22143	22021	21832
Sb	217.582	20.816	21.459	22.648
Se	196.026	2904.1	2867.9	2842.0
Si	251.611	1000.2	1264.7	1463.4
Sn	189.927	4.9306	7.6073	4.6173
Sr	216.596	78776	78959	78007
Ti	322.284	134.37	134.74	137.76
Tl	190.794	5706.5	5681.8	5632.7
V	289.164	106436	106018	105082
Y	361.104	256964	259246	259759
Zn	206.200	10883	10825	10755
Zr	257.147	162436	161904	160346

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.9848	ppm	0.014805	0.7	89994	1.9848 ppm	Y 361.104	99.23999
Al	237.312	9.9853	ppm	0.048825	0.5	6760.9	9.9853 ppm	Y 361.104	99.85297
As	188.980	10.150	ppm	0.10318	1.0	3987.2	10.150 ppm	Y 361.104	101.50407
B	249.772	10.007	ppm	0.053230	0.5	122617	10.007 ppm	Y 361.104	100.06517

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	10.150	ppm	0.060368	0.6	543115	10.150 ppm	Y 361.104	101.49568
Be	234.861	10.183	ppm	0.070317	0.7	543670	10.183 ppm	Y 361.104	101.83131
Ca	315.887	-0.000642u	ppm	0.000539	84.0	2045.2	-0.000642 ppm	Y 361.104	-
Cd	228.802	10.060	ppm	0.086585	0.9	94687	10.060 ppm	Y 361.104	100.60012
Co	231.160	10.146	ppm	0.065426	0.6	79454	10.146 ppm	Y 361.104	101.46186
Cr	267.716	10.106	ppm	0.060714	0.6	460505	10.106 ppm	Y 361.104	101.06358
Cu	324.754	10.122	ppm	0.069421	0.7	474637	10.122 ppm	Y 361.104	101.21530
Fe	261.382	10.165	ppm	0.072087	0.7	23930	10.165 ppm	Y 361.104	101.65448
K	766.491	0.003183	ppm	0.000337	10.6	-376.62	0.003183 ppm	Y 361.104	-
Li	610.365	10.162	ppm	0.086308	0.8	546455	10.162 ppm	Y 361.104	101.62345
Mg	279.078	0.000158u	ppm	0.002293	1451.3	6.9909	0.000158 ppm	Y 361.104	-
Mn	293.305	10.140	ppm	0.070329	0.7	186883	10.140 ppm	Y 361.104	101.40049
Mo	202.032	0.000154	ppm	0.000049	32.0	1.7089	0.000154 ppm	Y 361.104	-
Na	589.592	-0.19615	ppm	0.000924	0.5	25829	-0.19615 ppm	Y 361.104	-
Ni	221.648	10.131	ppm	0.061593	0.6	20794	10.131 ppm	Y 361.104	101.31481
Pb	220.353	10.111	ppm	0.072081	0.7	21998	10.111 ppm	Y 361.104	101.11363
Sb	217.582	0.049137	ppm	0.001629	3.3	21.641	0.049137 ppm	Y 361.104	-
Se	196.026	10.148	ppm	0.11032	1.1	2871.3	10.148 ppm	Y 361.104	101.47789
Si	251.611	0.45178	ppm	0.084471	18.7	1242.8	0.45178 ppm	Y 361.104	-
Sn	189.927	0.003262	ppm	0.001829	56.1	5.7184	0.003262 ppm	Y 361.104	-
Sr	216.596	10.105	ppm	0.064965	0.6	78580	10.105 ppm	Y 361.104	101.04860
Ti	322.284	-0.000361	ppm	0.000161	44.5	135.62	-0.000361 ppm	Y 361.104	-
Tl	190.794	10.063	ppm	0.066904	0.7	5673.7	10.063 ppm	Y 361.104	100.63266
V	289.164	10.140	ppm	0.066172	0.7	105845	10.140 ppm	Y 361.104	101.40308
Zn	206.200	10.014	ppm	0.059894	0.6	10821	10.014 ppm	Y 361.104	100.13993
Zr	257.147	10.128	ppm	0.068102	0.7	161562	10.128 ppm	Y 361.104	101.28474

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0059	258656	1487.735	0.6

ICS-A (ICSA) 7/31/08, 9:07:37 PM Rack 1, Tube 13

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-60.085	-28.485	-66.173
Al	237.312	355310	346224	352301
As	188.980	-1.6178	0.37446	-4.6541
B	249.772	393.14	303.00	203.16
Ba	233.527	213.40	199.60	194.35
Be	234.861	-2531.8	-2635.7	-2672.4
Ca	315.887	4851225	4718876	4798575

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	16.508	14.215	21.874
Co	231.160	146.24	160.90	145.89
Cr	267.716	54.516	58.446	66.932
Cu	324.754	-962.75	-958.67	-943.53
Fe	261.382	460360	450357	456551
K	766.491	-154.40	-156.71	-131.69
Li	610.365	-10865	-10654	-10786
Mg	279.078	683613	671347	678323
Mn	293.305	13.518	28.720	6.4029
Mo	202.032	-12.472	-8.4842	-10.732
Na	589.592	3329.3	3254.3	3239.1
Na	568.821	1130.6	1106.5	1132.0
Ni	221.648	3.6558	3.0274	6.3060
Pb	220.353	225.85	224.31	235.38
Sb	217.582	-35.858	-28.732	-20.712
Se	196.026	9.6207	10.138	4.7769
Si	251.611	22.393	35.052	44.012
Sn	189.927	0.62729	3.0532	-0.68367
Sr	216.596	129.65	146.38	135.28
Ti	322.284	142.37	144.21	154.28
Tl	190.794	-16.651	-11.843	-14.377
V	289.164	80.699	83.914	79.539
Y	361.104	225034	230497	228830
Zn	206.200	-11.054	-5.2542	-9.9450
Zr	257.147	210.24	201.79	188.06

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000794u	ppm	0.000454	57.2	-51.581	-0.000794 ppm	Y 361.104	-0.00079
Al	237.312	521.61	ppm	6.8671	1.3	351278	521.61 ppm	Y 361.104	-
As	188.980	-0.001480u	ppm	0.006446	435.6	-1.9658	-0.001480 ppm	Y 361.104	-0.00148
B	249.772	-0.042867	ppm	0.007756	18.1	299.76	-0.042867 ppm	Y 361.104	-0.04287
Ba	233.527	0.003519	ppm	0.000184	5.2	202.45	0.003519 ppm	Y 361.104	0.00352
Be	234.861	-0.000102u	ppm	0.001366	1344.5	-2613.3	-0.000102 ppm	Y 361.104	-0.00010
Ca	315.887	475.24	ppm	6.6164	1.4	4789559	475.24 ppm	Y 361.104	-
Cd	228.802	0.002073	ppm	0.000418	20.2	17.532	0.002073 ppm	Y 361.104	0.00207
Co	231.160	0.000383	ppm	0.001092	285.2	151.01	0.000383 ppm	Y 361.104	0.00038
Cr	267.716	0.000897	ppm	0.000139	15.5	59.964	0.000897 ppm	Y 361.104	0.00090
Cu	324.754	0.004083u	ppm	0.000216	5.3	-954.98	0.004083 ppm	Y 361.104	0.00408
Fe	261.382	192.94	ppm	2.1374	1.1	455756	192.94 ppm	Y 361.104	-

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
K	766.491	0.010521	ppm	0.000443	4.2	-147.60	0.010521 ppm	Y 361.104	0.01052
Li	610.365	-0.004038u	ppm	0.001988	49.2	-10769	-0.004038 ppm	Y 361.104	-0.00404
Mg	279.078	500.33	ppm	4.5418	0.9	677761	500.33 ppm	Y 361.104	-
Mn	293.305	-0.000271u	ppm	0.000619	228.2	16.213	-0.000271 ppm	Y 361.104	-0.00027
Mo	202.032	-0.002052u	ppm	0.000421	20.5	-10.563	-0.002052 ppm	Y 361.104	-0.00205
Na	589.592	0.007948	ppm	0.000200	2.5	3274.3	0.007948 ppm	Y 361.104	0.00795
Ni	221.648	0.004860	ppm	0.000847	17.4	4.3297	0.004860 ppm	Y 361.104	0.00486
Pb	220.353	-0.004457	ppm	0.002757	61.9	228.51	-0.004457 ppm	Y 361.104	-0.00446
Sb	217.582	-0.002308u	ppm	0.013288	575.7	-28.434	-0.002308 ppm	Y 361.104	-0.00231
Se	196.026	-0.003421	ppm	0.010465	305.9	8.1786	-0.003421 ppm	Y 361.104	-0.00342
Si	251.611	0.029207	ppm	0.003948	13.5	33.819	0.029207 ppm	Y 361.104	0.02921
Sn	189.927	0.000417u	ppm	0.002110	505.7	0.99893	0.000417 ppm	Y 361.104	0.00042
Sr	216.596	-0.005514	ppm	0.001095	19.9	137.10	-0.005514 ppm	Y 361.104	-0.00551
Ti	322.284	0.001765	ppm	0.000553	31.3	146.95	0.001765 ppm	Y 361.104	0.00176
Tl	190.794	0.017744u	ppm	0.004285	24.1	-14.290	0.017744 ppm	Y 361.104	0.01774
V	289.164	-0.003246	ppm	0.000216	6.7	81.384	-0.003246 ppm	Y 361.104	-0.00325
Zn	206.200	-0.005369u	ppm	0.002857	53.2	-8.7509	-0.005369 ppm	Y 361.104	-0.00537
Zr	257.147	0.006012	ppm	0.000702	11.7	200.03	0.006012 ppm	Y 361.104	0.00601

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.88712	228121	2800.069	1.2

ICS-AB (ICSAB) **7/31/08, 9:10:52 PM** **Rack 1, Tube 14**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	9626.3	9662.6	9598.7
Al	237.312	341617	342838	342872
As	188.980	37.203	39.627	38.178
B	249.772	159.90	147.96	142.91
Ba	233.527	26721	26792	26698
Be	234.861	25310	25733	25637
Ca	315.887	4652429	4679209	4688978
Cd	228.802	9730.1	9812.1	9666.2
Co	231.160	3815.6	3820.6	3831.7
Cr	267.716	21874	22021	21964
Cu	324.754	23254	23387	23313
Fe	261.382	442701	445399	442879
K	766.491	-139.79	-140.28	-123.12
Li	610.365	-10258	-10437	-10330
Mg	279.078	661580	661308	660483

El	Wavelen.	Replicates Intensity (c/s)		
Mn	293.305	8730.4	8765.6	8735.8
Mo	202.032	-11.679	-1.4935	-8.5582
Na	589.592	4643.5	4665.9	4656.9
Na	568.821	1079.5	1105.4	1037.7
Ni	221.648	1891.6	1903.7	1899.6
Pb	220.353	2285.5	2289.9	2283.1
Sb	217.582	316.71	330.66	322.90
Se	196.026	21.700	19.287	23.920
Si	251.611	68.742	62.520	67.456
Sn	189.927	-0.58887	-2.1206	1.5742
Sr	216.596	138.07	128.04	132.95
Ti	322.284	149.21	140.86	152.76
Tl	190.794	34.810	38.404	37.806
V	289.164	5103.6	5129.4	5131.0
Y	361.104	229255	231354	231505
Zn	206.200	1000.8	1001.9	1010.7
Zr	257.147	184.11	164.01	178.72

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.21657	ppm	0.000719	0.3	9629.2	0.21657 ppm	Y 361.104	108.28299
Al	237.312	508.49	ppm	1.0609	0.2	342442	508.49 ppm	Y 361.104	101.69795
As	188.980	0.10097	ppm	0.003104	3.1	38.336	0.10097 ppm	Y 361.104	100.96712
B	249.772	-0.053183	ppm	0.000712	1.3	150.26	-0.053183 ppm	Y 361.104	-
Ba	233.527	0.49940	ppm	0.000917	0.2	26737	0.49940 ppm	Y 361.104	99.88068
Be	234.861	0.52616	ppm	0.004158	0.8	25560	0.52616 ppm	Y 361.104	105.23251
Ca	315.887	463.72	ppm	1.8790	0.4	4673539	463.72 ppm	Y 361.104	92.74441
Cd	228.802	1.0364	ppm	0.007787	0.8	9736.1	1.0364 ppm	Y 361.104	103.63994
Co	231.160	0.46729	ppm	0.001053	0.2	3822.6	0.46729 ppm	Y 361.104	93.45731
Cr	267.716	0.48139	ppm	0.001631	0.3	21953	0.48139 ppm	Y 361.104	96.27787
Cu	324.754	0.52098	ppm	0.001418	0.3	23318	0.52098 ppm	Y 361.104	104.19566
Fe	261.382	187.82	ppm	0.63889	0.3	443660	187.82 ppm	Y 361.104	93.91113
K	766.491	0.010944	ppm	0.000313	2.9	-134.40	0.010944 ppm	Y 361.104	-
Li	610.365	-0.001470u	ppm	0.001686	114.7	-10342	-0.001470 ppm	Y 361.104	-
Mg	279.078	488.05	ppm	0.42143	0.1	661123	488.05 ppm	Y 361.104	97.60959
Mn	293.305	0.47334	ppm	0.001029	0.2	8743.9	0.47334 ppm	Y 361.104	94.66784
Mo	202.032	-0.001370u	ppm	0.001100	80.3	-7.2436	-0.001370 ppm	Y 361.104	-
Na	589.592	-0.000870	ppm	0.000047	5.4	4655.4	-0.000870 ppm	Y 361.104	-
Ni	221.648	0.92696	ppm	0.002999	0.3	1898.3	0.92696 ppm	Y 361.104	92.69566
Pb	220.353	0.94433	ppm	0.001579	0.2	2286.2	0.94433 ppm	Y 361.104	94.43284

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sb	217.582	0.61394	ppm	0.012258	2.0	323.42	0.61394 ppm	Y 361.104	102.32288
Se	196.026	0.044516	ppm	0.008199	18.4	21.636	0.044516 ppm	Y 361.104	89.03238
Si	251.611	0.040659	ppm	0.001194	2.9	66.239	0.040659 ppm	Y 361.104	-
Sn	189.927	-0.001055u	ppm	0.002066	195.8	-0.37842	-0.001055 ppm	Y 361.104	-
Sr	216.596	-0.005465	ppm	0.000645	11.8	133.02	-0.005465 ppm	Y 361.104	-
Ti	322.284	0.001912	ppm	0.000527	27.6	147.61	0.001912 ppm	Y 361.104	-
Tl	190.794	0.10574	ppm	0.003430	3.2	37.007	0.10574 ppm	Y 361.104	105.73888
V	289.164	0.48083	ppm	0.001465	0.3	5121.3	0.48083 ppm	Y 361.104	96.16544
Zn	206.200	0.93361	ppm	0.005031	0.5	1004.5	0.93361 ppm	Y 361.104	93.36057
Zr	257.147	0.004620	ppm	0.000652	14.1	175.62	0.004620 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.89717	230704	1257.538	0.5

CCV (CCV) **7/31/08, 9:14:07 PM** **Rack 1, Tube 15**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	45437	46558	46678
Al	237.312	3383.5	3500.5	3516.1
As	188.980	797.67	814.05	817.42
B	249.772	24455	25236	25346
Ba	233.527	265975	274088	274718
Be	234.861	107366	111078	111171
Ca	315.887	493012	506323	507375
Cd	228.802	47368	48702	48846
Co	231.160	38258	39462	39571
Cr	267.716	221171	228469	229172
Cu	324.754	230148	236679	236934
Fe	261.382	11424	11807	11841
K	766.491	1607538	1647133	1659586
Li	610.365	260037	267661	267166
Mg	279.078	63357	65349	65383
Mn	293.305	89796	92688	92750
Mo	202.032	4798.0	4946.5	4950.1
Na	589.592	11473321	11790937	11809653
Na	568.821	16420	16857	16869
Ni	221.648	10034	10350	10358
Pb	220.353	10595	10883	10903
Sb	217.582	593.01	599.64	592.89
Se	196.026	576.06	592.98	584.84

El	Wavelen.	Replicates Intensity (c/s)		
Si	251.611	14106	14704	14881
Sn	189.927	4411.7	4577.8	4623.4
Sr	216.596	37666	39397	39524
Ti	322.284	58336	60266	60405
Tl	190.794	1089.4	1114.5	1129.8
V	289.164	20555	21216	21260
Y	361.104	253858	250381	250678
Zn	206.200	5298.2	5445.4	5471.1
Zr	257.147	79352	81815	81877

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0204	ppm	0.015372	1.5	46224	1.0204 ppm	Y 361.104	102.03873
Al	237.312	5.1200	ppm	0.10748	2.1	3466.7	5.1200 ppm	Y 361.104	102.39943
As	188.980	2.0630	ppm	0.026891	1.3	809.71	2.0630 ppm	Y 361.104	103.14782
B	249.772	2.0407	ppm	0.039646	1.9	25013	2.0407 ppm	Y 361.104	102.03648
Ba	233.527	5.0764	ppm	0.091141	1.8	271594	5.0764 ppm	Y 361.104	101.52706
Be	234.861	2.0588	ppm	0.040643	2.0	109872	2.0588 ppm	Y 361.104	102.93816
Ca	315.887	49.654	ppm	0.79500	1.6	502237	49.654 ppm	Y 361.104	99.30735
Cd	228.802	5.1381	ppm	0.086766	1.7	48305	5.1381 ppm	Y 361.104	102.76131
Co	231.160	4.9791	ppm	0.092868	1.9	39097	4.9791 ppm	Y 361.104	99.58266
Cr	267.716	4.9656	ppm	0.097255	2.0	226271	4.9656 ppm	Y 361.104	99.31172
Cu	324.754	5.0005	ppm	0.081986	1.6	234587	5.0005 ppm	Y 361.104	100.01076
Fe	261.382	4.9779	ppm	0.098148	2.0	11691	4.9779 ppm	Y 361.104	99.55730
K	766.491	52.497	ppm	0.87074	1.7	1638086	52.497 ppm	Y 361.104	104.99445
Li	610.365	4.9368	ppm	0.079527	1.6	264955	4.9368 ppm	Y 361.104	98.73536
Mg	279.078	47.753	ppm	0.85646	1.8	64696	47.753 ppm	Y 361.104	95.50650
Mn	293.305	4.9774	ppm	0.091592	1.8	91745	4.9774 ppm	Y 361.104	99.54734
Mo	202.032	1.0323	ppm	0.018295	1.8	4898.2	1.0323 ppm	Y 361.104	103.22784
Na	589.592	48.326	ppm	0.78377	1.6	11691304	48.326 ppm	Y 361.104	96.65155
Ni	221.648	4.9842	ppm	0.089850	1.8	10247	4.9842 ppm	Y 361.104	99.68338
Pb	220.353	4.9633	ppm	0.079165	1.6	10793	4.9633 ppm	Y 361.104	99.26678
Sb	217.582	1.0518	ppm	0.006778	0.6	595.18	1.0518 ppm	Y 361.104	105.18248
Se	196.026	2.0614	ppm	0.029935	1.5	584.62	2.0614 ppm	Y 361.104	103.06778
Si	251.611	5.2924	ppm	0.14752	2.8	14564	5.2924 ppm	Y 361.104	105.84833
Sn	189.927	5.0467	ppm	0.12403	2.5	4537.6	5.0467 ppm	Y 361.104	100.93435
Sr	216.596	4.9973	ppm	0.13348	2.7	38863	4.9973 ppm	Y 361.104	99.94667
Ti	322.284	5.1356	ppm	0.099803	1.9	59669	5.1356 ppm	Y 361.104	102.71291
Tl	190.794	1.9679	ppm	0.036384	1.8	1111.2	1.9679 ppm	Y 361.104	98.39721
V	289.164	2.0236	ppm	0.037728	1.9	21010	2.0236 ppm	Y 361.104	101.18080

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Zn	206.200	4.9984	ppm	0.086543	1.7	5404.9	4.9984 ppm	Y 361.104	99.96721
Zr	257.147	5.0730	ppm	0.090314	1.8	81015	5.0730 ppm	Y 361.104	101.45974

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97858	251639	1927.447	0.8

BLA01 (CCB) **7/31/08, 9:17:24 PM** **Rack 1, Tube 16**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-20.661	-23.300	-22.018
Al	237.312	1.8388	0.009565	-1.9701
As	188.980	-0.44234	-0.49363	-0.076342
B	249.772	103.98	75.167	50.658
Ba	233.527	15.390	19.455	17.055
Be	234.861	-5.5986	-4.7904	-4.7689
Ca	315.887	2374.3	2360.0	2366.5
Cd	228.802	-2.2532	-0.67722	-1.9442
Co	231.160	13.976	19.601	16.057
Cr	267.716	7.6514	8.9530	11.243
Cu	324.754	56.543	55.480	65.108
Fe	261.382	13.097	7.1272	8.3587
K	766.491	-382.97	-397.93	-413.05
Li	610.365	1307.4	1340.3	1327.1
Mg	279.078	9.5946	10.021	10.475
Mn	293.305	19.862	12.064	25.996
Mo	202.032	0.94462	0.74819	0.73415
Na	589.592	1332.7	1296.6	1266.9
Na	568.821	-542.92	-527.09	-524.10
Ni	221.648	-2.8884	-5.2051	-3.1541
Pb	220.353	-2.5504	-1.1387	1.4284
Sb	217.582	-5.0344	-5.8778	-3.7393
Se	196.026	0.21553	-0.21093	3.1919
Si	251.611	29.132	24.075	23.390
Sn	189.927	-0.83222	-0.45529	0.30242
Sr	216.596	-1.6237	0.93700	3.8002
Ti	322.284	124.44	124.77	134.40
Tl	190.794	-1.1633	1.1984	0.86072
V	289.164	-7.5413	0.78301	-0.18874
Y	361.104	264211	265463	266605
Zn	206.200	7.1226	5.3930	7.9589

El	Wavelen.	Replicates Intensity (c/s)		
Zr	257.147	48.874	40.398	36.327

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000005u	ppm	0.000030	575.9	-21.993	-0.000005 ppm	Y 361.104	-0.00001
Al	237.312	0.001349u	ppm	0.002826	209.4	-0.040581	0.001349 ppm	Y 361.104	0.00135
As	188.980	0.002664	ppm	0.000579	21.7	-0.33744	0.002664 ppm	Y 361.104	0.00266
B	249.772	0.006099	ppm	0.002178	35.7	76.601	0.006099 ppm	Y 361.104	0.00610
Ba	233.527	0.000060	ppm	0.000038	63.3	17.300	0.000060 ppm	Y 361.104	0.00006
Be	234.861	0.000029	ppm	0.000009	30.4	-5.0527	0.000029 ppm	Y 361.104	0.00003
Ca	315.887	-0.005574u	ppm	0.000712	12.8	2367.0	-0.005574 ppm	Y 361.104	-0.00557
Cd	228.802	0.000028u	ppm	0.000089	313.5	-1.6249	0.000028 ppm	Y 361.104	0.00003
Co	231.160	0.000004u	ppm	0.000362	9255.5	16.545	0.000004 ppm	Y 361.104	0.00000
Cr	267.716	-0.000215u	ppm	0.000040	18.5	9.2825	-0.000215 ppm	Y 361.104	-0.00022
Cu	324.754	0.000055u	ppm	0.000113	203.1	59.044	0.000055 ppm	Y 361.104	0.00006
Fe	261.382	0.000140u	ppm	0.001334	954.2	9.5277	0.000140 ppm	Y 361.104	0.00014
K	766.491	0.002499	ppm	0.000482	19.3	-397.99	0.002499 ppm	Y 361.104	0.00250
Li	610.365	0.000065u	ppm	0.000309	477.8	1325.0	0.000065 ppm	Y 361.104	0.00006
Mg	279.078	0.000574	ppm	0.000325	56.6	10.030	0.000574 ppm	Y 361.104	0.00057
Mn	293.305	-0.000103u	ppm	0.000379	367.0	19.307	-0.000103 ppm	Y 361.104	-0.00010
Mo	202.032	0.000345	ppm	0.000025	7.2	0.80899	0.000345 ppm	Y 361.104	0.00034
Na	589.592	-0.000143u	ppm	0.000137	95.5	1298.7	-0.000143 ppm	Y 361.104	-0.00014
Ni	221.648	0.000933	ppm	0.000617	66.1	-3.7492	0.000933 ppm	Y 361.104	0.00093
Pb	220.353	-0.001064u	ppm	0.000927	87.1	-0.75354	-0.001064 ppm	Y 361.104	-0.00106
Sb	217.582	-0.003404u	ppm	0.001889	55.5	-4.8838	-0.003404 ppm	Y 361.104	-0.00340
Se	196.026	0.001526u	ppm	0.006560	429.9	1.0655	0.001526 ppm	Y 361.104	0.00153
Si	251.611	0.006115	ppm	0.001140	18.6	25.532	0.006115 ppm	Y 361.104	0.00611
Sn	189.927	-0.001047u	ppm	0.000643	61.4	-0.32837	-0.001047 ppm	Y 361.104	-0.00105
Sr	216.596	-0.000102u	ppm	0.000349	342.4	1.0378	-0.000102 ppm	Y 361.104	-0.00010
Ti	322.284	0.000125u	ppm	0.000488	390.2	127.87	0.000125 ppm	Y 361.104	0.00013
Tl	190.794	0.004733	ppm	0.002275	48.1	0.29861	0.004733 ppm	Y 361.104	0.00473
V	289.164	-0.000473u	ppm	0.000435	91.9	-2.3157	-0.000473 ppm	Y 361.104	-0.00047
Zn	206.200	-0.000803u	ppm	0.001214	151.3	6.8248	-0.000803 ppm	Y 361.104	-0.00080
Zr	257.147	0.001294	ppm	0.000401	31.0	41.866	0.001294 ppm	Y 361.104	0.00129

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0322	265426	1197.559	0.5

A818537 TCLP (Samp) **7/31/08, 9:20:40 PM** **Rack 1, Tube 17**
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-79.827	-75.921	-82.183
Al	237.312	1107.4	1115.7	1101.4
As	188.980	0.34508	-0.27565	1.4369
B	249.772	5512.0	5546.0	5543.9
Ba	233.527	11267	11360	11253
Be	234.861	15.777	24.123	18.912
Ca	315.887	843648	846891	852252
Cd	228.802	8.0173	5.9612	4.9344
Co	231.160	40.041	31.415	35.251
Cr	267.716	135.93	141.01	130.47
Cu	324.754	1242.6	1238.6	1234.5
Fe	261.382	1909.2	1906.5	1913.8
K	766.491	364511	364930	365888
Li	610.365	261.73	235.28	260.94
Mg	279.078	9127.7	9158.5	9184.3
Mn	293.305	6503.4	6528.9	6524.8
Mo	202.032	10.755	12.513	6.5488
Na	589.592	28242948	28012594	28722538
Na	568.821	523312	524649	526140
Ni	221.648	52.252	50.044	51.583
Pb	220.353	-0.92363	-0.87570	6.5375
Sb	217.582	-0.39512	1.2109	4.5064
Se	196.026	5.1023	3.7128	6.8456
Si	251.611	24986	25103	25058
Sn	189.927	-0.041479	3.1090	3.3989
Sr	216.596	6102.2	6139.8	6198.3
Ti	322.284	161.63	170.19	163.84
Tl	190.794	-0.38323	-1.2521	2.7110
V	289.164	3.9911	-0.044501	-0.029584
Y	361.104	228791	229603	228242
Zn	206.200	38.976	36.953	38.599
Zr	257.147	65.641	57.827	58.814

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000898u	ppm	0.000071	7.9	-79.310	-0.000898 ppm	Y 361.104	1.0000
Al	237.312	1.6474	ppm	0.010635	0.6	1108.2	1.6474 ppm	Y 361.104	1.0000
As	188.980	0.004794	ppm	0.002207	46.0	0.50211	0.004794 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sr	216.596	0.69275	ppm	0.023989	3.5	5387.9	6.9275 ppm	Y 361.104	1.0000
Ti	322.284	0.001660	ppm	0.001012	60.9	144.05	0.016600 ppm	Y 361.104	1.0000
Tl	190.794	-0.000901u	ppm	0.001712	189.9	-2.7110	-0.009013 ppm	Y 361.104	1.0000
V	289.164	0.000125u	ppm	0.000925	741.7	-23.991	0.001247 ppm	Y 361.104	1.0000
Zn	206.200	0.005569	ppm	0.002616	47.0	13.686	0.055688 ppm	Y 361.104	1.0000
Zr	257.147	0.001064	ppm	0.000242	22.7	38.554	0.010643 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.92402	237610	1743.591	0.7

CCV (CCV) 7/31/08, 9:33:45 PM Rack 1, Tube 21

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	46025	46644	46812
Al	237.312	3473.7	3534.2	3552.4
As	188.980	809.47	811.37	810.39
B	249.772	24886	25441	25400
Ba	233.527	269736	274209	276000
Be	234.861	108236	110287	111187
Ca	315.887	500008	499839	511083
Cd	228.802	48020	48817	49007
Co	231.160	38890	39571	39778
Cr	267.716	225034	228977	230400
Cu	324.754	232637	237487	238263
Fe	261.382	11599	11802	11886
K	766.491	1631991	1652954	1659678
Li	610.365	262919	266763	268669
Mg	279.078	64277	65443	65788
Mn	293.305	91043	92686	93140
Mo	202.032	4857.3	4948.7	4982.4
Na	589.592	11622084	11784103	11823459
Na	568.821	16733	16973	16986
Ni	221.648	10187	10359	10419
Pb	220.353	10774	10904	10966
Sb	217.582	588.16	598.55	614.01
Se	196.026	584.63	591.19	590.50
Si	251.611	14471	14887	15117
Sn	189.927	4512.9	4579.2	4650.6
Sr	216.596	38415	39505	38994
Ti	322.284	59282	60355	60721

El	Wavelen.	Replicates Intensity (c/s)		
Tl	190.794	1111.2	1122.5	1131.5
V	289.164	20871	21207	21328
Y	361.104	252139	250967	249099
Zn	206.200	5437.9	5506.1	5526.1
Zr	257.147	80679	81960	82435

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0264	ppm	0.009305	0.9	46493	1.0264 ppm	Y 361.104	102.63689
Al	237.312	5.1991	ppm	0.061107	1.2	3520.1	5.1991 ppm	Y 361.104	103.98212
As	188.980	2.0647	ppm	0.002421	0.1	810.41	2.0647 ppm	Y 361.104	103.23558
B	249.772	2.0595	ppm	0.025237	1.2	25243	2.0595 ppm	Y 361.104	102.97511
Ba	233.527	5.1085	ppm	0.060307	1.2	273315	5.1085 ppm	Y 361.104	102.17059
Be	234.861	2.0594	ppm	0.028315	1.4	109903	2.0594 ppm	Y 361.104	102.96839
Ca	315.887	49.793	ppm	0.63981	1.3	503644	49.793 ppm	Y 361.104	99.58681
Cd	228.802	5.1710	ppm	0.055767	1.1	48615	5.1710 ppm	Y 361.104	103.41935
Co	231.160	5.0194	ppm	0.059164	1.2	39413	5.0194 ppm	Y 361.104	100.38756
Cr	267.716	5.0065	ppm	0.061020	1.2	228137	5.0065 ppm	Y 361.104	100.13089
Cu	324.754	5.0334	ppm	0.064984	1.3	236129	5.0334 ppm	Y 361.104	100.66827
Fe	261.382	5.0086	ppm	0.062376	1.2	11763	5.0086 ppm	Y 361.104	100.17157
K	766.491	52.822	ppm	0.46266	0.9	1648208	52.822 ppm	Y 361.104	105.64304
Li	610.365	4.9585	ppm	0.054607	1.1	266117	4.9585 ppm	Y 361.104	99.16993
Mg	279.078	48.102	ppm	0.58471	1.2	65169	48.102 ppm	Y 361.104	96.20467
Mn	293.305	5.0069	ppm	0.059862	1.2	92290	5.0069 ppm	Y 361.104	100.13882
Mo	202.032	1.0389	ppm	0.013644	1.3	4929.4	1.0389 ppm	Y 361.104	103.88620
Na	589.592	48.540	ppm	0.44259	0.9	11743216	48.540 ppm	Y 361.104	97.08018
Ni	221.648	5.0201	ppm	0.058534	1.2	10322	5.0201 ppm	Y 361.104	100.40282
Pb	220.353	5.0037	ppm	0.045038	0.9	10881	5.0037 ppm	Y 361.104	100.07410
Sb	217.582	1.0607	ppm	0.022814	2.2	600.24	1.0607 ppm	Y 361.104	106.07173
Se	196.026	2.0760	ppm	0.012751	0.6	588.77	2.0760 ppm	Y 361.104	103.80018
Si	251.611	5.3875	ppm	0.11890	2.2	14825	5.3875 ppm	Y 361.104	107.74931
Sn	189.927	5.0949	ppm	0.076656	1.5	4580.9	5.0949 ppm	Y 361.104	101.89713
Sr	216.596	5.0113	ppm	0.070140	1.4	38971	5.0113 ppm	Y 361.104	100.22591
Ti	322.284	5.1745	ppm	0.064529	1.2	60120	5.1745 ppm	Y 361.104	103.49070
Tl	190.794	1.9866	ppm	0.018182	0.9	1121.7	1.9866 ppm	Y 361.104	99.32793
V	289.164	2.0357	ppm	0.022597	1.1	21136	2.0357 ppm	Y 361.104	101.78678
Zn	206.200	5.0773	ppm	0.042922	0.8	5490.0	5.0773 ppm	Y 361.104	101.54548
Zr	257.147	5.1154	ppm	0.056977	1.1	81691	5.1154 ppm	Y 361.104	102.30801

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97507	250735	1532.853	0.6

BLA01 (CCB) **7/31/08, 9:37:01 PM** **Rack 1, Tube 22**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-15.026	-19.420	-21.854
Al	237.312	1.0758	-4.0442	1.1568
As	188.980	-0.32967	0.39039	0.74160
B	249.772	98.911	75.040	62.391
Ba	233.527	22.935	9.4134	16.118
Be	234.861	1.9201	-2.2065	-5.4311
Ca	315.887	2364.0	2362.2	2361.2
Cd	228.802	-3.9523	-5.9850	0.26502
Co	231.160	15.160	16.282	9.5590
Cr	267.716	19.148	16.482	15.227
Cu	324.754	60.543	71.879	54.582
Fe	261.382	12.274	13.943	13.287
K	766.491	-365.95	-367.36	-396.10
Li	610.365	1290.2	1313.6	1325.3
Mg	279.078	10.525	10.681	6.8207
Mn	293.305	17.247	9.8089	14.395
Mo	202.032	-0.092769	0.069507	-1.6866
Na	589.592	1334.9	1314.6	1354.4
Na	568.821	-562.28	-509.13	-507.13
Ni	221.648	-3.7129	-4.7253	-6.4787
Pb	220.353	-1.6924	-0.53381	0.34173
Sb	217.582	-2.0597	-2.3975	-2.7860
Se	196.026	0.77121	1.8691	1.3406
Si	251.611	31.796	28.858	26.227
Sn	189.927	-1.1680	1.8017	-1.1986
Sr	216.596	1.0919	-2.6483	2.9804
Ti	322.284	116.45	127.35	121.13
Tl	190.794	0.45989	1.4048	0.020066
V	289.164	-1.3113	12.534	1.3299
Y	361.104	271969	272155	272953
Zn	206.200	6.5457	6.9561	6.2106
Zr	257.147	40.689	34.881	35.307

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000068	ppm	0.000078	114.1	-18.767	0.000068 ppm	Y 361.104	0.00007
Al	237.312	0.000517u	ppm	0.004421	854.3	-0.60388	0.000517 ppm	Y 361.104	0.00052
As	188.980	0.004204	ppm	0.001390	33.1	0.26744	0.004204 ppm	Y 361.104	0.00420
B	249.772	0.006277	ppm	0.001514	24.1	78.781	0.006277 ppm	Y 361.104	0.00628
Ba	233.527	0.000039u	ppm	0.000126	325.9	16.156	0.000039 ppm	Y 361.104	0.00004
Be	234.861	0.000088	ppm	0.000069	78.0	-1.9058	0.000088 ppm	Y 361.104	0.00009
Ca	315.887	-0.006025u	ppm	0.000144	2.4	2362.5	-0.006025 ppm	Y 361.104	-0.00602
Cd	228.802	-0.000145u	ppm	0.000339	234.6	-3.2241	-0.000145 ppm	Y 361.104	-0.00014
Co	231.160	-0.000381u	ppm	0.000459	120.5	13.667	-0.000381 ppm	Y 361.104	-0.00038
Cr	267.716	-0.000047u	ppm	0.000044	93.5	16.952	-0.000047 ppm	Y 361.104	-0.00005
Cu	324.754	0.000126u	ppm	0.000187	148.8	62.335	0.000126 ppm	Y 361.104	0.00013
Fe	261.382	0.001680	ppm	0.000356	21.2	13.168	0.001680 ppm	Y 361.104	0.00168
K	766.491	0.003189	ppm	0.000545	17.1	-376.47	0.003189 ppm	Y 361.104	0.00319
Li	610.365	-0.000220u	ppm	0.000333	151.7	1309.7	-0.000220 ppm	Y 361.104	-0.00022
Mg	279.078	0.000066u	ppm	0.001613	2451.7	9.3423	0.000066 ppm	Y 361.104	0.00007
Mn	293.305	-0.000401u	ppm	0.000204	50.8	13.817	-0.000401 ppm	Y 361.104	-0.00040
Mo	202.032	0.000054u	ppm	0.000205	377.3	-0.56997	0.000054 ppm	Y 361.104	0.00005
Na	589.592	0.000006u	ppm	0.000082	1279.2	1334.6	0.000006 ppm	Y 361.104	0.00001
Ni	221.648	0.000335u	ppm	0.000681	203.1	-4.9723	0.000335 ppm	Y 361.104	0.00034
Pb	220.353	-0.001008u	ppm	0.000469	46.6	-0.62816	-0.001008 ppm	Y 361.104	-0.00101
Sb	217.582	0.000926	ppm	0.000637	68.8	-2.4144	0.000926 ppm	Y 361.104	0.00093
Se	196.026	0.002451	ppm	0.001943	79.3	1.3270	0.002451 ppm	Y 361.104	0.00245
Si	251.611	0.007361	ppm	0.001013	13.8	28.960	0.007361 ppm	Y 361.104	0.00736
Sn	189.927	-0.000891u	ppm	0.001918	215.4	-0.18831	-0.000891 ppm	Y 361.104	-0.00089
Sr	216.596	-0.000175u	ppm	0.000368	211.1	0.47464	-0.000175 ppm	Y 361.104	-0.00017
Ti	322.284	-0.000412u	ppm	0.000472	114.5	121.64	-0.000412 ppm	Y 361.104	-0.00041
Tl	190.794	0.005319	ppm	0.001260	23.7	0.62824	0.005319 ppm	Y 361.104	0.00532
V	289.164	0.000147u	ppm	0.000702	476.1	4.1842	0.000147 ppm	Y 361.104	0.00015
Zn	206.200	-0.001039u	ppm	0.000346	33.4	6.5708	-0.001039 ppm	Y 361.104	-0.00104
Zr	257.147	0.000986	ppm	0.000203	20.6	36.959	0.000986 ppm	Y 361.104	0.00099

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0592	272359	522.579	0.2

Q2102518 BLA02 (Samp) **7/31/08, 9:40:17 PM** **Rack 1, Tube 23**
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-34.237	-19.508	-19.619
Al	237.312	5.5380	3.0152	8.7296

El	Wavelen.	Replicates Intensity (c/s)		
As	188.980	-1.6631	0.19881	-0.21861
B	249.772	76.819	67.578	66.198
Ba	233.527	15.871	16.195	10.749
Be	234.861	-3.3410	-7.1169	-1.0954
Ca	315.887	2661.7	2658.6	2658.7
Cd	228.802	-0.92250	-0.86743	-6.0736
Co	231.160	14.632	9.4190	13.986
Cr	267.716	11.491	9.3567	9.3470
Cu	324.754	73.210	47.620	71.962
Fe	261.382	10.842	11.638	12.165
K	766.491	-377.47	-396.27	-383.95
Li	610.365	1298.7	1296.9	1321.8
Mg	279.078	6.5186	4.2200	7.8906
Mn	293.305	12.974	22.910	15.653
Mo	202.032	0.88955	-0.59178	-2.2372
Na	589.592	1467.1	1467.1	1452.0
Na	568.821	-530.95	-524.49	-527.31
Ni	221.648	-5.1166	-4.7108	-4.0940
Pb	220.353	-2.6687	-0.46398	0.25970
Sb	217.582	-1.9919	-2.6225	-2.9694
Se	196.026	0.64521	0.32391	-1.1253
Si	251.611	12.409	13.158	9.9362
Sn	189.927	-0.59863	-0.66112	3.8074
Sr	216.596	3.3284	3.8209	4.8733
Ti	322.284	124.67	127.86	124.12
Tl	190.794	0.88082	1.6589	-0.22348
V	289.164	6.4615	2.7107	-4.3789
Y	361.104	267977	268997	269250
Zn	206.200	8.4846	9.0490	8.7412
Zr	257.147	19.535	21.234	18.087

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000055u	ppm	0.000190	347.3	-24.455	-0.000055 ppm	Y 361.104	1.0000
Al	237.312	0.009965	ppm	0.004249	42.6	5.7609	0.009965 ppm	Y 361.104	1.0000
As	188.980	0.002095u	ppm	0.002487	118.7	-0.56098	0.002095 ppm	Y 361.104	1.0000
B	249.772	0.005576	ppm	0.000471	8.5	70.198	0.005576 ppm	Y 361.104	1.0000
Ba	233.527	0.000004u	ppm	0.000057	1577.3	14.272	0.000004 ppm	Y 361.104	1.0000
Be	234.861	0.000052u	ppm	0.000057	109.8	-3.8511	0.000052 ppm	Y 361.104	1.0000
Ca	315.887	0.023480	ppm	0.000173	0.7	2659.7	0.023480 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Cd	228.802	-0.000077u	ppm	0.000318	415.6	-2.6212	-0.000077 ppm	Y 361.104	1.0000
Co	231.160	-0.000506u	ppm	0.000362	71.6	12.679	-0.000506 ppm	Y 361.104	1.0000
Cr	267.716	-0.000198u	ppm	0.000027	13.7	10.065	-0.000198 ppm	Y 361.104	1.0000
Cu	324.754	0.000167u	ppm	0.000307	184.4	64.264	0.000167 ppm	Y 361.104	1.0000
Fe	261.382	0.000994	ppm	0.000282	28.4	11.549	0.000994 ppm	Y 361.104	1.0000
K	766.491	0.002887	ppm	0.000306	10.6	-385.90	0.002887 ppm	Y 361.104	1.0000
Li	610.365	-0.000280u	ppm	0.000260	92.8	1305.8	-0.000280 ppm	Y 361.104	1.0000
Mg	279.078	-0.002247u	ppm	0.001369	60.9	6.2097	-0.002247 ppm	Y 361.104	1.0000
Mn	293.305	-0.000219u	ppm	0.000279	127.5	17.179	-0.000219 ppm	Y 361.104	1.0000
Mo	202.032	0.000038u	ppm	0.000330	865.6	-0.64647	0.000038 ppm	Y 361.104	1.0000
Na	589.592	0.000536	ppm	0.000036	6.8	1462.1	0.000536 ppm	Y 361.104	1.0000
Na	568.821	0.41072v	ppm	0.008879	2.2	-527.58	0.41072 ppm	Y 361.104	1.0000
Ni	221.648	0.000509	ppm	0.000251	49.2	-4.6405	0.000509 ppm	Y 361.104	1.0000
Pb	220.353	-0.001160u	ppm	0.000701	60.4	-0.95767	-0.001160 ppm	Y 361.104	1.0000
Sb	217.582	0.000727u	ppm	0.000869	119.5	-2.5279	0.000727 ppm	Y 361.104	1.0000
Se	196.026	-0.002429u	ppm	0.003338	137.4	-0.052043	-0.002429 ppm	Y 361.104	1.0000
Si	251.611	0.001136	ppm	0.000613	54.0	11.834	0.001136 ppm	Y 361.104	1.0000
Sn	189.927	0.000264u	ppm	0.002852	1078.4	0.84923	0.000264 ppm	Y 361.104	1.0000
Sr	216.596	0.000280	ppm	0.000102	36.3	4.0075	0.000280 ppm	Y 361.104	1.0000
Ti	322.284	-0.000074u	ppm	0.000174	234.0	125.55	-0.000074 ppm	Y 361.104	1.0000
Tl	190.794	0.005576	ppm	0.001685	30.2	0.77207	0.005576 ppm	Y 361.104	1.0000
V	289.164	-0.000097u	ppm	0.000526	541.4	1.5977	-0.000097 ppm	Y 361.104	1.0000
Zn	206.200	0.000991	ppm	0.000262	26.5	8.7583	0.000991 ppm	Y 361.104	1.0000
Zr	257.147	-0.000101u	ppm	0.000099	97.5	19.619	-0.000101 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0451	268741	674.042	0.3

Q2102519 LCS (Samp) **7/31/08, 9:43:33 PM** **Rack 1, Tube 24**

Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	5070.9	5067.7	5065.5
Al	237.312	2895.8	2904.5	2904.4
As	188.980	1695.0	1691.3	1696.6
B	249.772	25696	25858	25544
Ba	233.527	216026	217557	216806
Be	234.861	5639.8	5673.9	5688.4
Ca	315.887	1987855	1993189	1995361
Cd	228.802	1087.8	1077.3	1069.7

El	Wavelen.	Replicates Intensity (c/s)		
Co	231.160	7752.0	7844.5	7851.1
Cr	267.716	18225	18372	18378
Cu	324.754	24152	24309	24288
Fe	261.382	4695.4	4713.1	4733.0
K	766.491	5817348	5850068	5832409
Li	610.365	96709	97064	97197
Mg	279.078	268089	269725	270018
Mn	293.305	18294	18412	18448
Mo	202.032	9407.7	9455.6	9472.6
Na	589.592	29433986	29764082	29268666
Na	568.821	74207	74533	74459
Ni	221.648	2032.2	2040.9	2044.9
Pb	220.353	2144.2	2140.0	2144.6
Sb	217.582	602.85	614.92	606.69
Se	196.026	1224.2	1228.3	1230.9
Si	251.611	5885.5	5935.7	5952.8
Sn	189.927	7070.6	7144.0	7172.0
Sr	216.596	15295	15549	15517
Ti	322.284	23590	23688	23732
Tl	190.794	3206.8	3215.8	3215.5
V	289.164	10552	10602	10623
Y	361.104	237315	237291	237221
Zn	206.200	1090.8	1104.4	1097.9
Zr	257.147	32517	32707	32746

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.10707	ppm	0.000062	0.1	5068.0	0.10707 ppm	Y 361.104	1.0000
Al	237.312	4.2840	ppm	0.007397	0.2	2901.6	4.2840 ppm	Y 361.104	1.0000
As	188.980	4.3151	ppm	0.006958	0.2	1694.3	4.3151 ppm	Y 361.104	1.0000
B	249.772	2.0968	ppm	0.012811	0.6	25700	2.0968 ppm	Y 361.104	1.0000
Ba	233.527	4.0521	ppm	0.014315	0.4	216796	4.0521 ppm	Y 361.104	1.0000
Be	234.861	0.10675	ppm	0.000468	0.4	5667.3	0.10675 ppm	Y 361.104	1.0000
Ca	315.887	197.57	ppm	0.38355	0.2	1992135	197.57 ppm	Y 361.104	1.0000
Cd	228.802	0.10691	ppm	0.000969	0.9	1078.3	0.10691 ppm	Y 361.104	1.0000
Co	231.160	0.98915	ppm	0.007064	0.7	7815.9	0.98915 ppm	Y 361.104	1.0000
Cr	267.716	0.40163	ppm	0.001899	0.5	18325	0.40163 ppm	Y 361.104	1.0000
Cu	324.754	0.51523	ppm	0.001812	0.4	24250	0.51523 ppm	Y 361.104	1.0000
Fe	261.382	2.0001	ppm	0.007970	0.4	4713.8	2.0001 ppm	Y 361.104	1.0000
K	766.491	186.91b	ppm	0.52471	0.3	5833275	186.91 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Li	610.365	1.8706	ppm	0.004702	0.3	96990	1.8706 ppm	Y 361.104	1.0000
Mg	279.078	198.78	ppm	0.76757	0.4	269278	198.78 ppm	Y 361.104	1.0000
Mn	293.305	0.99649	ppm	0.004391	0.4	18385	0.99649 ppm	Y 361.104	1.0000
Mo	202.032	1.9908	ppm	0.007092	0.4	9445.3	1.9908 ppm	Y 361.104	1.0000
Na	589.592	122.16ox	ppm	1.0459	0.9	29488912	122.16 ppm	Y 361.104	1.0000
Na	568.821	203.01	ppm	0.46827	0.2	74400	203.01 ppm	Y 361.104	1.0000
Ni	221.648	0.99133	ppm	0.003179	0.3	2039.3	0.99133 ppm	Y 361.104	1.0000
Pb	220.353	0.98949	ppm	0.001185	0.1	2142.9	0.98949 ppm	Y 361.104	1.0000
Sb	217.582	1.0724	ppm	0.010812	1.0	608.15	1.0724 ppm	Y 361.104	1.0000
Se	196.026	4.3414	ppm	0.011916	0.3	1227.8	4.3414 ppm	Y 361.104	1.0000
Si	251.611	2.1509	ppm	0.012714	0.6	5924.7	2.1509 ppm	Y 361.104	1.0000
Sn	189.927	7.9330	ppm	0.058278	0.7	7128.8	7.9330 ppm	Y 361.104	1.0000
Sr	216.596	1.9871	ppm	0.017784	0.9	15453	1.9871 ppm	Y 361.104	1.0000
Ti	322.284	2.0280	ppm	0.006266	0.3	23670	2.0280 ppm	Y 361.104	1.0000
Tl	190.794	5.7265	ppm	0.009116	0.2	3212.7	5.7265 ppm	Y 361.104	1.0000
V	289.164	1.0126	ppm	0.003465	0.3	10592	1.0126 ppm	Y 361.104	1.0000
Zn	206.200	1.0108	ppm	0.006284	0.6	1097.7	1.0108 ppm	Y 361.104	1.0000
Zr	257.147	2.0377	ppm	0.007668	0.4	32657	2.0377 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.92272	237276	48.777	0.0

A818871 1:5 TCLP (Samp) **7/31/08, 9:46:50 PM** **Rack 1, Tube 25**

Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-25.761	-38.728	-31.779
Al	237.312	11.102	9.4023	17.294
As	188.980	1.4210	0.40747	2.0626
B	249.772	1508.3	1525.2	1509.5
Ba	233.527	4502.4	4545.2	4566.5
Be	234.861	0.99836	-7.9820	-8.3544
Ca	315.887	732296	735520	739056
Cd	228.802	9.9701	11.256	15.447
Co	231.160	25.824	19.268	16.797
Cr	267.716	21.948	21.972	27.996
Cu	324.754	1053.9	1073.9	1062.4
Fe	261.382	14.488	13.822	17.807
K	766.491	138527	139745	139648
Li	610.365	238.46	237.04	282.48

El	Wavelen.	Replicates Intensity (c/s)		
Mg	279.078	23818	24006	24069
Mn	293.305	4218.8	4237.9	4258.8
Mo	202.032	101.37	98.100	100.35
Na	589.592	28935800	28916258	29885674
Na	568.821	102199	103083	103274
Ni	221.648	60.313	59.934	58.433
Pb	220.353	-6.6280	0.072526	4.3576
Sb	217.582	3.3821	4.7300	3.5759
Se	196.026	18.071	12.014	14.491
Si	251.611	24844	24459	24585
Sn	189.927	-0.18994	-0.12409	0.39551
Sr	216.596	1073.2	1083.9	1083.7
Ti	322.284	140.72	143.47	139.58
Tl	190.794	-1.6553	0.25272	-2.0969
V	289.164	9.4267	4.1212	9.9530
Y	361.104	248002	248303	247478
Zn	206.200	33.399	31.815	28.735
Zr	257.147	65.021	76.513	69.832

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000183u	ppm	0.000146	79.8	-32.089	-0.000913 ppm	Y 361.104	1.0000
Al	237.312	0.020368	ppm	0.006162	30.3	12.599	0.10184 ppm	Y 361.104	1.0000
As	188.980	0.006808	ppm	0.002124	31.2	1.2970	0.034040 ppm	Y 361.104	1.0000
B	249.772	0.12345	ppm	0.000769	0.6	1514.3	0.61723 ppm	Y 361.104	1.0000
Ba	233.527	0.084562	ppm	0.000611	0.7	4538.0	0.42281 ppm	Y 361.104	1.0000
Be	234.861	0.000029u	ppm	0.000099	345.8	-5.1127	0.000143 ppm	Y 361.104	1.0000
Ca	315.887	72.803	ppm	0.33575	0.5	735624	364.02 ppm	Y 361.104	1.0000
Cd	228.802	0.001493	ppm	0.000305	20.4	12.224	0.007467 ppm	Y 361.104	1.0000
Co	231.160	0.000451	ppm	0.000594	131.8	20.630	0.002255 ppm	Y 361.104	1.0000
Cr	267.716	0.000058	ppm	0.000076	131.8	23.972	0.000290 ppm	Y 361.104	1.0000
Cu	324.754	0.021454	ppm	0.000213	1.0	1063.4	0.10727 ppm	Y 361.104	1.0000
Fe	261.382	0.002633	ppm	0.000904	34.3	15.372	0.013166 ppm	Y 361.104	1.0000
K	766.491	4.4784	ppm	0.021698	0.5	139307	22.392 ppm	Y 361.104	1.0000
Li	610.365	0.012142u	ppm	0.000482	4.0	252.66	0.060710 ppm	Y 361.104	1.0000
Mg	279.078	17.684	ppm	0.096243	0.5	23964	88.421 ppm	Y 361.104	1.0000
Mn	293.305	0.22885	ppm	0.001087	0.5	4238.5	1.1443 ppm	Y 361.104	1.0000
Mo	202.032	0.021237	ppm	0.000353	1.7	99.940	0.10618 ppm	Y 361.104	1.0000
Na	589.592	121.27ox	ppm	2.2979	1.9	29245910	606.35 ppm	Y 361.104	1.0000
Na	568.821	282.81	ppm	1.5731	0.6	102852	1414.1 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ni	221.648	0.014169	ppm	0.000484	3.4	59.560	0.070847 ppm	Y 361.104	1.0000
Pb	220.353	-0.000994u	ppm	0.002545	256.1	-0.73261	-0.004969 ppm	Y 361.104	1.0000
Sb	217.582	0.011993	ppm	0.001278	10.7	3.8960	0.059966 ppm	Y 361.104	1.0000
Se	196.026	0.050102	ppm	0.010776	21.5	14.859	0.25051 ppm	Y 361.104	1.0000
Si	251.611	8.9498	ppm	0.071344	0.8	24629	44.749 ppm	Y 361.104	1.0000
Sn	189.927	-0.000652u	ppm	0.000357	54.7	0.027161	-0.003261 ppm	Y 361.104	1.0000
Sr	216.596	0.13870	ppm	0.000788	0.6	1080.3	0.69352 ppm	Y 361.104	1.0000
Ti	322.284	0.001290	ppm	0.000173	13.4	141.25	0.006450 ppm	Y 361.104	1.0000
Tl	190.794	0.002072	ppm	0.002225	107.4	-1.1665	0.010358 ppm	Y 361.104	1.0000
V	289.164	0.001237	ppm	0.000308	24.9	7.8336	0.006187 ppm	Y 361.104	1.0000
Zn	206.200	0.021925	ppm	0.002201	10.0	31.316	0.10962 ppm	Y 361.104	1.0000
Zr	257.147	0.003058	ppm	0.000362	11.8	70.456	0.015290 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96415	247928	417.360	0.2

Q2102520 SPI02 1:5 (Samp) **7/31/08, 9:50:06 PM** **Rack 1, Tube 26**

Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	965.76	971.64	947.31
Al	237.312	562.93	567.78	566.51
As	188.980	321.83	326.87	330.19
B	249.772	6395.2	6427.6	6425.9
Ba	233.527	46293	47503	47693
Be	234.861	1093.0	1093.5	1107.0
Ca	315.887	1125386	1131926	1129642
Cd	228.802	219.14	223.15	220.02
Co	231.160	1560.5	1565.2	1560.6
Cr	267.716	3639.8	3667.2	3659.2
Cu	324.754	5661.8	5703.9	5694.8
Fe	261.382	935.27	938.36	947.48
K	766.491	1724172	1734936	1728513
Li	610.365	18505	18481	18492
Mg	279.078	74651	75049	74917
Mn	293.305	7746.1	7785.7	7779.1
Mo	202.032	1959.2	1971.3	1976.0
Na	589.592	30536580	29904840	31118808
Na	568.821	118673	119188	118894
Ni	221.648	467.51	470.63	470.51

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El	Wavelen.	Replicates Intensity (c/s)		
Pb	220.353	416.21	417.43	421.77
Sb	217.582	118.86	121.52	117.67
Se	196.026	251.52	253.86	251.84
Si	251.611	30401	30521	30459
Sn	189.927	1403.5	1410.9	1412.6
Sr	216.596	4120.9	4144.4	4175.4
Ti	322.284	4766.0	4803.7	4791.0
Tl	190.794	622.92	632.16	627.78
V	289.164	2089.8	2102.0	2096.1
Y	361.104	243389	243364	244138
Zn	206.200	245.95	249.53	251.20
Zr	257.147	6424.2	6454.4	6428.4

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.020728	ppm	0.000285	1.4	961.57	0.10364 ppm	Y 361.104	1.0000
Al	237.312	0.83664	ppm	0.003729	0.4	565.74	4.1832 ppm	Y 361.104	1.0000
As	188.980	0.83384	ppm	0.010718	1.3	326.30	4.1692 ppm	Y 361.104	1.0000
B	249.772	0.52342	ppm	0.001488	0.3	6416.2	2.6171 ppm	Y 361.104	1.0000
Ba	233.527	0.88131	ppm	0.014197	1.6	47163	4.4065 ppm	Y 361.104	1.0000
Be	234.861	0.020780	ppm	0.000149	0.7	1097.8	0.10390 ppm	Y 361.104	1.0000
Ca	315.887	111.86	ppm	0.32955	0.3	1128985	559.31 ppm	Y 361.104	1.0000
Cd	228.802	0.022143	ppm	0.000224	1.0	220.77	0.11072 ppm	Y 361.104	1.0000
Co	231.160	0.19599	ppm	0.000344	0.2	1562.1	0.97995 ppm	Y 361.104	1.0000
Cr	267.716	0.079734	ppm	0.000310	0.4	3655.4	0.39867 ppm	Y 361.104	1.0000
Cu	324.754	0.11991	ppm	0.000472	0.4	5686.8	0.59956 ppm	Y 361.104	1.0000
Fe	261.382	0.39587	ppm	0.002688	0.7	940.37	1.9794 ppm	Y 361.104	1.0000
K	766.491	55.417	ppm	0.17350	0.3	1729207	277.08 ppm	Y 361.104	1.0000
Li	610.365	0.36940	ppm	0.000218	0.1	18493	1.8470 ppm	Y 361.104	1.0000
Mg	279.078	55.266	ppm	0.14970	0.3	74872	276.33 ppm	Y 361.104	1.0000
Mn	293.305	0.42050	ppm	0.001151	0.3	7770.3	2.1025 ppm	Y 361.104	1.0000
Mo	202.032	0.41510	ppm	0.001819	0.4	1968.8	2.0755 ppm	Y 361.104	1.0000
Na	589.592	126.53ox	ppm	2.5177	2.0	30520074	632.63 ppm	Y 361.104	~~1.0000~~
Na	568.821	326.30	ppm	0.70906	0.2	118918	1631.5 ppm	Y 361.104	1.0000
Ni	221.648	0.20959	ppm	0.000860	0.4	469.55	1.0480 ppm	Y 361.104	1.0000
Pb	220.353	0.19273	ppm	0.001343	0.7	418.47	0.96365 ppm	Y 361.104	1.0000
Sb	217.582	0.21461	ppm	0.003450	1.6	119.35	1.0730 ppm	Y 361.104	1.0000
Se	196.026	0.89048	ppm	0.004486	0.5	252.40	4.4524 ppm	Y 361.104	1.0000
Si	251.611	11.069	ppm	0.021674	0.2	30460	55.346 ppm	Y 361.104	1.0000
Sn	189.927	1.5674	ppm	0.005371	0.3	1409.0	7.8370 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sr	216.596	0.53313	ppm	0.003521	0.7	4146.9	2.6657 ppm	Y 361.104	1.0000
Ti	322.284	0.40145	ppm	0.001654	0.4	4786.9	2.0072 ppm	Y 361.104	1.0000
Tl	190.794	1.1220	ppm	0.008237	0.7	627.62	5.6102 ppm	Y 361.104	1.0000
V	289.164	0.20091	ppm	0.000582	0.3	2096.0	1.0046 ppm	Y 361.104	1.0000
Zn	206.200	0.22368	ppm	0.002489	1.1	248.89	1.1184 ppm	Y 361.104	1.0000
Zr	257.147	0.40046	ppm	0.001024	0.3	6435.7	2.0023 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.94744	243631	439.723	0.2

Q2102521 DPS02 1:5 (Samp) **7/31/08, 9:53:22 PM** **Rack 1, Tube 27**

Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	987.00	995.11	985.14
Al	237.312	572.36	577.64	575.48
As	188.980	333.95	330.58	337.03
B	249.772	6494.5	6548.3	6545.9
Ba	233.527	47636	48089	47492
Be	234.861	1084.6	1120.2	1119.4
Ca	315.887	1143025	1148686	1149824
Cd	228.802	224.64	225.73	221.22
Co	231.160	1580.3	1591.0	1593.1
Cr	267.716	3709.6	3738.0	3732.8
Cu	324.754	5745.1	5862.8	5868.5
Fe	261.382	954.22	949.51	954.72
K	766.491	1750776	1769455	1764966
Li	610.365	18732	18790	18758
Mg	279.078	75791	76399	76316
Mn	293.305	7831.8	7914.2	7898.9
Mo	202.032	1997.1	2004.4	2005.9
Na	589.592	31280202	30506784	30815148
Na	568.821	120294	121268	120924
Ni	221.648	474.30	480.64	477.33
Pb	220.353	426.13	428.13	427.03
Sb	217.582	126.28	124.55	122.89
Se	196.026	254.28	256.44	257.09
Si	251.611	30441	30618	30590
Sn	189.927	1428.8	1438.9	1435.7
Sr	216.596	4200.1	4227.2	4235.3

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El	Wavelen.	Replicates Intensity (c/s)		
Ti	322.284	4837.3	4853.7	4813.3
Tl	190.794	636.44	640.80	645.94
V	289.164	2123.9	2148.0	2146.1
Y	361.104	242640	242507	242895
Zn	206.200	252.32	246.50	257.19
Zr	257.147	6520.2	6570.9	6581.6

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.021322	ppm	0.000119	0.6	989.08	0.10661 ppm	Y 361.104	1.0000
Al	237.312	0.85056	ppm	0.003934	0.5	575.16	4.2528 ppm	Y 361.104	1.0000
As	188.980	0.85308	ppm	0.008207	1.0	333.85	4.2654 ppm	Y 361.104	1.0000
B	249.772	0.53267	ppm	0.002481	0.5	6529.6	2.6634 ppm	Y 361.104	1.0000
Ba	233.527	0.89207	ppm	0.005832	0.7	47739	4.4603 ppm	Y 361.104	1.0000
Be	234.861	0.020974	ppm	0.000381	1.8	1108.1	0.10487 ppm	Y 361.104	1.0000
Ca	315.887	113.67	ppm	0.36158	0.3	1147179	568.34 ppm	Y 361.104	1.0000
Cd	228.802	0.022437	ppm	0.000251	1.1	223.86	0.11218 ppm	Y 361.104	1.0000
Co	231.160	0.19927	ppm	0.000875	0.4	1588.1	0.99633 ppm	Y 361.104	1.0000
Cr	267.716	0.081300	ppm	0.000332	0.4	3726.8	0.40650 ppm	Y 361.104	1.0000
Cu	324.754	0.12287	ppm	0.001484	1.2	5825.5	0.61433 ppm	Y 361.104	1.0000
Fe	261.382	0.40117	ppm	0.001218	0.3	952.82	2.0058 ppm	Y 361.104	1.0000
K	766.491	56.459	ppm	0.31239	0.6	1761732	282.29 ppm	Y 361.104	1.0000
Li	610.365	0.37517	ppm	0.000540	0.1	18760	1.8759 ppm	Y 361.104	1.0000
Mg	279.078	56.222	ppm	0.24313	0.4	76169	281.11 ppm	Y 361.104	1.0000
Mn	293.305	0.42655	ppm	0.002381	0.6	7881.6	2.1327 ppm	Y 361.104	1.0000
Mo	202.032	0.42219	ppm	0.000988	0.2	2002.5	2.1110 ppm	Y 361.104	1.0000
Na	589.592	127.97ox	ppm	1.6145	1.3	30867378	639.83 ppm	Y 361.104	1.0000
Na	568.821	331.51	ppm	1.3541	0.4	120829	1657.6 ppm	Y 361.104	1.0000
Ni	221.648	0.21336	ppm	0.001544	0.7	477.42	1.0668 ppm	Y 361.104	1.0000
Pb	220.353	0.19671	ppm	0.000460	0.2	427.10	0.98357 ppm	Y 361.104	1.0000
Sb	217.582	0.22378	ppm	0.002965	1.3	124.57	1.1189 ppm	Y 361.104	1.0000
Se	196.026	0.90297	ppm	0.005201	0.6	255.93	4.5148 ppm	Y 361.104	1.0000
Si	251.611	11.102	ppm	0.034659	0.3	30550	55.509 ppm	Y 361.104	1.0000
Sn	189.927	1.5957	ppm	0.005759	0.4	1434.5	7.9787 ppm	Y 361.104	1.0000
Sr	216.596	0.54264	ppm	0.002370	0.4	4220.9	2.7132 ppm	Y 361.104	1.0000
Ti	322.284	0.40556	ppm	0.001753	0.4	4834.7	2.0278 ppm	Y 361.104	1.0000
Tl	190.794	1.1460	ppm	0.008465	0.7	641.06	5.7299 ppm	Y 361.104	1.0000
V	289.164	0.20507	ppm	0.001278	0.6	2139.4	1.0254 ppm	Y 361.104	1.0000
Zn	206.200	0.22656	ppm	0.004967	2.2	252.00	1.1328 ppm	Y 361.104	1.0000
Zr	257.147	0.40808	ppm	0.002057	0.5	6557.6	2.0404 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.94374	242680	197.129	0.1

Q2102522 SPI03 1:5 (Samp) **7/31/08, 9:56:37 PM** **Rack 1, Tube 28**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	1729.2	1754.9	1770.2
Al	237.312	278.33	280.90	282.93
As	188.980	311.00	311.29	315.01
B	249.772	6207.9	6273.0	6280.9
Ba	233.527	15124	15180	15210
Be	234.861	21495	21447	21673
Ca	315.887	726873	733552	732931
Cd	228.802	404.63	412.44	408.70
Co	231.160	348.75	355.75	352.88
Cr	267.716	8864.8	8941.5	8960.8
Cu	324.754	10212	10314	10270
Fe	261.382	478.02	484.62	488.63
K	766.491	137511	138960	139066
Li	610.365	276.43	284.43	299.34
Mg	279.078	23688	23822	23860
Mn	293.305	11255	11314	11327
Mo	202.032	94.290	95.450	96.585
Na	589.592	29244522	29197754	29002996
Na	568.821	101690	102420	102454
Ni	221.648	462.31	466.28	466.15
Pb	220.353	827.98	836.30	829.57
Sb	217.582	364.75	368.46	368.78
Se	196.026	74.689	76.167	74.750
Si	251.611	26892	26961	26898
Sn	189.927	0.33755	0.72290	0.99251
Sr	216.596	1068.9	1074.9	1080.4
Ti	322.284	150.48	143.46	133.56
Tl	190.794	208.61	212.04	210.31
V	289.164	8214.1	8245.1	8271.9
Y	361.104	248003	248860	248625
Zn	206.200	253.79	252.41	252.37
Zr	257.147	75.984	56.419	55.794

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.039836	ppm	0.000465	1.2	1751.5	0.19918 ppm	Y 361.104	1.0000
Al	237.312	0.41894	ppm	0.003419	0.8	280.72	2.0947 ppm	Y 361.104	1.0000
As	188.980	0.79886	ppm	0.005695	0.7	312.44	3.9943 ppm	Y 361.104	1.0000
B	249.772	0.51030	ppm	0.003269	0.6	6254.0	2.5515 ppm	Y 361.104	1.0000
Ba	233.527	0.28316	ppm	0.000817	0.3	15171	1.4158 ppm	Y 361.104	1.0000
Be	234.861	0.40349	ppm	0.002226	0.6	21538	2.0174 ppm	Y 361.104	1.0000
Ca	315.887	72.356	ppm	0.36641	0.5	731119	361.78 ppm	Y 361.104	1.0000
Cd	228.802	0.042220	ppm	0.000416	1.0	408.59	0.21110 ppm	Y 361.104	1.0000
Co	231.160	0.041101	ppm	0.000448	1.1	352.46	0.20551 ppm	Y 361.104	1.0000
Cr	267.716	0.19531	ppm	0.001114	0.6	8922.4	0.97656 ppm	Y 361.104	1.0000
Cu	324.754	0.21764	ppm	0.001088	0.5	10265	1.0882 ppm	Y 361.104	1.0000
Fe	261.382	0.20223	ppm	0.002268	1.1	483.76	1.0112 ppm	Y 361.104	1.0000
K	766.491	4.4530	ppm	0.027831	0.6	138512	22.265 ppm	Y 361.104	1.0000
Li	610.365	0.012592u	ppm	0.000217	1.7	286.73	0.062962 ppm	Y 361.104	1.0000
Mg	279.078	17.555	ppm	0.066619	0.4	23790	87.777 ppm	Y 361.104	1.0000
Mn	293.305	0.61197	ppm	0.002063	0.3	11299	3.0598 ppm	Y 361.104	1.0000
Mo	202.032	0.020281	ppm	0.000242	1.2	95.442	0.10141 ppm	Y 361.104	1.0000
Na	589.592	120.86ox	ppm	0.53118	0.4	29148424	604.32 ppm	Y 361.104	1.0000
Na	568.821	281.00	ppm	1.1835	0.4	102188	1405.0 ppm	Y 361.104	1.0000
Ni	221.648	0.20995	ppm	0.001097	0.5	464.92	1.0498 ppm	Y 361.104	1.0000
Pb	220.353	0.38140	ppm	0.002031	0.5	831.28	1.9070 ppm	Y 361.104	1.0000
Sb	217.582	0.64950	ppm	0.003923	0.6	367.33	3.2475 ppm	Y 361.104	1.0000
Se	196.026	0.26321	ppm	0.002960	1.1	75.202	1.3161 ppm	Y 361.104	1.0000
Si	251.611	9.7812	ppm	0.013831	0.1	26917	48.906 ppm	Y 361.104	1.0000
Sn	189.927	0.000104u	ppm	0.000366	353.3	0.68432	0.000519 ppm	Y 361.104	1.0000
Sr	216.596	0.13796	ppm	0.000739	0.5	1074.7	0.68980 ppm	Y 361.104	1.0000
Ti	322.284	0.001473	ppm	0.000734	49.8	142.50	0.007363 ppm	Y 361.104	1.0000
Tl	190.794	0.37702	ppm	0.003050	0.8	210.32	1.8851 ppm	Y 361.104	1.0000
V	289.164	0.78919	ppm	0.002763	0.4	8243.7	3.9460 ppm	Y 361.104	1.0000
Zn	206.200	0.22711	ppm	0.000754	0.3	252.86	1.1356 ppm	Y 361.104	1.0000
Zr	257.147	0.002570	ppm	0.000720	28.0	62.732	0.012849 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96636	248496	442.890	0.2

Q2102523 DPS03 1:5 (Samp) **7/31/08, 9:59:53 PM** **Rack 1, Tube 29**

Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	1722.9	1726.5	1733.2
Al	237.312	270.70	277.19	279.52
As	188.980	314.09	312.55	313.41
B	249.772	6186.5	6200.2	6158.2
Ba	233.527	15029	15071	14959
Be	234.861	21224	21319	21363
Ca	315.887	727602	729914	724398
Cd	228.802	400.68	407.12	399.47
Co	231.160	346.78	342.46	352.43
Cr	267.716	8776.9	8825.0	8780.6
Cu	324.754	10197	10179	10129
Fe	261.382	469.87	476.75	474.68
K	766.491	137995	138124	137077
Li	610.365	259.04	242.85	219.19
Mg	279.078	23691	23772	23579
Mn	293.305	11218	11245	11179
Mo	202.032	96.620	94.181	94.454
Na	589.592	28945494	28876124	29323222
Na	568.821	101801	101966	101274
Ni	221.648	456.94	455.96	450.88
Pb	220.353	829.63	832.46	822.28
Sb	217.582	366.92	366.26	368.84
Se	196.026	72.484	72.646	72.120
Si	251.611	24377	24196	23698
Sn	189.927	1.9772	0.047156	-0.26795
Sr	216.596	1077.1	1069.5	1069.5
Ti	322.284	135.49	132.23	146.90
Tl	190.794	210.08	207.71	208.96
V	289.164	8153.7	8181.5	8131.7
Y	361.104	248040	248605	249834
Zn	206.200	242.71	243.40	249.55
Zr	257.147	35.668	25.320	26.879

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.039307	ppm	0.000118	0.3	1727.5	0.19653 ppm	Y 361.104	1.0000
Al	237.312	0.41164	ppm	0.006787	1.6	275.80	2.0582 ppm	Y 361.104	1.0000
As	188.980	0.80118	ppm	0.001962	0.2	313.35	4.0059 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
B	249.772	0.50439	ppm	0.001749	0.3	6181.6	2.5220 ppm	Y 361.104	1.0000
Ba	233.527	0.28032	ppm	0.001063	0.4	15020	1.4016 ppm	Y 361.104	1.0000
Be	234.861	0.39907	ppm	0.001331	0.3	21302	1.9954 ppm	Y 361.104	1.0000
Ca	315.887	71.977	ppm	0.27503	0.4	727305	359.89 ppm	Y 361.104	1.0000
Cd	228.802	0.041560	ppm	0.000438	1.1	402.42	0.20780 ppm	Y 361.104	1.0000
Co	231.160	0.040424	ppm	0.000638	1.6	347.22	0.20212 ppm	Y 361.104	1.0000
Cr	267.716	0.19250	ppm	0.000588	0.3	8794.2	0.96250 ppm	Y 361.104	1.0000
Cu	324.754	0.21558	ppm	0.000758	0.4	10169	1.0779 ppm	Y 361.104	1.0000
Fe	261.382	0.19801	ppm	0.001494	0.8	473.77	0.99003 ppm	Y 361.104	1.0000
K	766.491	4.4280	ppm	0.018297	0.4	137732	22.140 ppm	Y 361.104	1.0000
Li	610.365	0.011561u	ppm	0.000374	3.2	240.36	0.057804 ppm	Y 361.104	1.0000
Mg	279.078	17.475	ppm	0.071541	0.4	23681	87.373 ppm	Y 361.104	1.0000
Mn	293.305	0.60738	ppm	0.001815	0.3	11214	3.0369 ppm	Y 361.104	1.0000
Mo	202.032	0.020206	ppm	0.000282	1.4	95.085	0.10103 ppm	Y 361.104	1.0000
Na	589.592	120.45ox	ppm	0.99778	0.8	29048280	602.25 ppm	Y 361.104	1.0000
Na	568.821	279.61	ppm	0.99083	0.4	101681	1398.1 ppm	Y 361.104	1.0000
Ni	221.648	0.20695	ppm	0.001584	0.8	454.59	1.0347 ppm	Y 361.104	1.0000
Pb	220.353	0.37995	ppm	0.002414	0.6	828.12	1.8997 ppm	Y 361.104	1.0000
Sb	217.582	0.64951	ppm	0.002345	0.4	367.34	3.2476 ppm	Y 361.104	1.0000
Se	196.026	0.25336	ppm	0.000952	0.4	72.417	1.2668 ppm	Y 361.104	1.0000
Si	251.611	8.7537	ppm	0.12786	1.5	24090	43.769 ppm	Y 361.104	1.0000
Sn	189.927	-0.000006u	ppm	0.001353	23186.1	0.58548	-0.000029 ppm	Y 361.104	1.0000
Sr	216.596	0.13761	ppm	0.000566	0.4	1072.0	0.68807 ppm	Y 361.104	1.0000
Ti	322.284	0.001102	ppm	0.000665	60.3	138.21	0.005511 ppm	Y 361.104	1.0000
Tl	190.794	0.37455	ppm	0.002111	0.6	208.92	1.8727 ppm	Y 361.104	1.0000
V	289.164	0.78077	ppm	0.002379	0.3	8155.7	3.9038 ppm	Y 361.104	1.0000
Zn	206.200	0.22003	ppm	0.003496	1.6	245.22	1.1001 ppm	Y 361.104	1.0000
Zr	257.147	0.000473	ppm	0.000350	74.0	29.289	0.002363 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96764	248826	916.875	0.4

A818872 1:5 TCLP (Samp) **7/31/08, 10:03:08 PM** **Rack 1, Tube 30**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-13.029	-10.918	-24.164
Al	237.312	79.778	80.399	77.110
As	188.980	3.4852	1.9451	1.0392
B	249.772	1383.9	1377.3	1396.1

El	Wavelen.	Replicates Intensity (c/s)		
Ba	233.527	6244.7	6269.1	6292.5
Be	234.861	-8.5368	-12.467	-2.7880
Ca	315.887	754879	761481	766857
Cd	228.802	16.412	11.470	14.778
Co	231.160	24.627	30.794	21.737
Cr	267.716	35.420	37.470	39.392
Cu	324.754	2210.8	2227.3	2244.0
Fe	261.382	309.67	314.78	311.80
K	766.491	131244	132326	132524
Li	610.365	110.29	103.87	139.42
Mg	279.078	22817	23050	23129
Mn	293.305	3678.8	3707.6	3715.2
Mo	202.032	94.775	98.148	98.545
Na	589.592	29478092	29203688	29697888
Na	568.821	106897	107929	108246
Ni	221.648	58.172	59.861	58.647
Pb	220.353	3.2358	0.96055	2.6244
Sb	217.582	-0.040388	-0.47858	0.27097
Se	196.026	13.118	14.957	12.519
Si	251.611	24105	24120	24284
Sn	189.927	2.8870	2.2082	1.8584
Sr	216.596	1087.1	1096.5	1104.6
Ti	322.284	192.28	190.71	171.31
Tl	190.794	-1.6224	-3.0278	-2.8562
V	289.164	34.005	31.503	32.180
Y	361.104	246744	246472	247030
Zn	206.200	122.54	119.24	123.08
Zr	257.147	40.362	41.300	33.698

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.000189u	ppm	0.000160	84.4	-16.037	0.000947 ppm	Y 361.104	1.0000
Al	237.312	0.11909	ppm	0.002593	2.2	79.096	0.59543 ppm	Y 361.104	1.0000
As	188.980	0.008996	ppm	0.003148	35.0	2.1565	0.044978 ppm	Y 361.104	1.0000
B	249.772	0.11291	ppm	0.000778	0.7	1385.8	0.56454 ppm	Y 361.104	1.0000
Ba	233.527	0.11691	ppm	0.000446	0.4	6268.8	0.58456 ppm	Y 361.104	1.0000
Be	234.861	0.000008u	ppm	0.000091	1195.5	-7.9305	0.000038 ppm	Y 361.104	1.0000
Ca	315.887	75.330	ppm	0.59571	0.8	761072	376.65 ppm	Y 361.104	1.0000
Cd	228.802	0.001702	ppm	0.000268	15.8	14.220	0.008509 ppm	Y 361.104	1.0000
Co	231.160	0.001118	ppm	0.000589	52.7	25.720	0.005589 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Cr	267.716	0.000360	ppm	0.000044	12.1	37.427	0.001798 ppm	Y 361.104	1.0000
Cu	324.754	0.046278	ppm	0.000354	0.8	2227.4	0.23139 ppm	Y 361.104	1.0000
Fe	261.382	0.12826	ppm	0.001088	0.8	312.08	0.64129 ppm	Y 361.104	1.0000
K	766.491	4.2454	ppm	0.022070	0.5	132031	21.227 ppm	Y 361.104	1.0000
Li	610.365	0.010750u	ppm	0.000353	3.3	117.86	0.053749 ppm	Y 361.104	1.0000
Mg	279.078	16.971	ppm	0.11967	0.7	22999	84.856 ppm	Y 361.104	1.0000
Mn	293.305	0.19966	ppm	0.001041	0.5	3700.5	0.99829 ppm	Y 361.104	1.0000
Mo	202.032	0.020650	ppm	0.000437	2.1	97.156	0.10325 ppm	Y 361.104	1.0000
Na	589.592	122.16ox	ppm	1.0267	0.8	29459888	610.78 ppm	Y 361.104	1.0000
Na	568.821	296.04	ppm	1.9348	0.7	107690	1480.2 ppm	Y 361.104	1.0000
Ni	221.648	0.014179	ppm	0.000424	3.0	58.893	0.070895 ppm	Y 361.104	1.0000
Pb	220.353	0.000353u	ppm	0.000541	153.2	2.2736	0.001767 ppm	Y 361.104	1.0000
Sb	217.582	0.005044	ppm	0.000660	13.1	-0.082665	0.025218 ppm	Y 361.104	1.0000
Se	196.026	0.045414	ppm	0.004495	9.9	13.531	0.22707 ppm	Y 361.104	1.0000
Si	251.611	8.7825	ppm	0.036088	0.4	24169	43.913 ppm	Y 361.104	1.0000
Sn	189.927	0.001897	ppm	0.000582	30.7	2.3178	0.009483 ppm	Y 361.104	1.0000
Sr	216.596	0.14072	ppm	0.001124	0.8	1096.1	0.70362 ppm	Y 361.104	1.0000
Ti	322.284	0.005041	ppm	0.001008	20.0	184.77	0.025204 ppm	Y 361.104	1.0000
Tl	190.794	-0.000279u	ppm	0.001366	490.2	-2.5021	-0.001393 ppm	Y 361.104	1.0000
V	289.164	0.003502	ppm	0.000124	3.5	32.563	0.017512 ppm	Y 361.104	1.0000
Zn	206.200	0.10572	ppm	0.001932	1.8	121.62	0.52862 ppm	Y 361.104	1.0000
Zr	257.147	0.001047	ppm	0.000260	24.8	38.453	0.005237 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95956	246749	279.230	0.1

Q2102524 SPI03 1:5 (Samp) **7/31/08, 10:06:25 PM** **Rack 1, Tube 31**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	1766.6	1775.6	1754.1
Al	237.312	329.03	331.08	332.94
As	188.980	313.81	308.56	310.28
B	249.772	5943.0	5981.6	6013.2
Ba	233.527	16341	16480	16516
Be	234.861	21266	21402	21489
Ca	315.887	710916	714882	716903
Cd	228.802	408.55	412.38	414.78
Co	231.160	349.21	348.52	351.38
Cr	267.716	8733.9	8831.2	8832.1

El	Wavelen.	Replicates Intensity (c/s)		
Cu	324.754	11138	11222	11246
Fe	261.382	705.88	711.66	715.20
K	766.491	121592	122623	122618
Li	610.365	270.48	225.53	259.98
Mg	279.078	21403	21590	21653
Mn	293.305	10432	10522	10549
Mo	202.032	90.971	95.608	91.170
Na	589.592	29196940	28649380	29105824
Na	568.821	100012	100864	101037
Ni	221.648	444.01	445.02	446.59
Pb	220.353	834.63	829.87	834.89
Sb	217.582	360.62	363.59	363.42
Se	196.026	70.276	68.805	67.642
Si	251.611	18513	18220	17967
Sn	189.927	-0.044911	1.2484	-1.2557
Sr	216.596	1022.8	1031.7	1031.4
Ti	322.284	171.21	170.79	168.19
Tl	190.794	205.65	208.11	210.14
V	289.164	8119.7	8181.1	8196.7
Y	361.104	248158	248575	248086
Zn	206.200	328.32	337.91	337.86
Zr	257.147	40.427	44.985	37.336

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.040156	ppm	0.000242	0.6	1765.4	0.20078 ppm	Y 361.104	1.0000
Al	237.312	0.49355	ppm	0.002901	0.6	331.02	2.4678 ppm	Y 361.104	1.0000
As	188.980	0.79491	ppm	0.006821	0.9	310.88	3.9745 ppm	Y 361.104	1.0000
B	249.772	0.48781	ppm	0.002869	0.6	5979.2	2.4391 ppm	Y 361.104	1.0000
Ba	233.527	0.30698	ppm	0.001724	0.6	16446	1.5349 ppm	Y 361.104	1.0000
Be	234.861	0.40065	ppm	0.002105	0.5	21385	2.0033 ppm	Y 361.104	1.0000
Ca	315.887	70.679	ppm	0.30243	0.4	714233	353.40 ppm	Y 361.104	1.0000
Cd	228.802	0.042581	ppm	0.000334	0.8	411.90	0.21290 ppm	Y 361.104	1.0000
Co	231.160	0.040772	ppm	0.000190	0.5	349.70	0.20386 ppm	Y 361.104	1.0000
Cr	267.716	0.19262	ppm	0.001239	0.6	8799.1	0.96308 ppm	Y 361.104	1.0000
Cu	324.754	0.23763	ppm	0.001203	0.5	11202	1.1881 ppm	Y 361.104	1.0000
Fe	261.382	0.29842	ppm	0.001991	0.7	710.91	1.4921 ppm	Y 361.104	1.0000
K	766.491	3.9329	ppm	0.019017	0.5	122278	19.664 ppm	Y 361.104	1.0000
Li	610.365	0.011212u	ppm	0.000438	3.9	252.00	0.056062 ppm	Y 361.104	1.0000
Mg	279.078	15.901	ppm	0.096153	0.6	21549	79.504 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Mn	293.305	0.56868	ppm	0.003325	0.6	10501	2.8434 ppm	Y 361.104	1.0000
Mo	202.032	0.019679	ppm	0.000553	2.8	92.583	0.098394 ppm	Y 361.104	1.0000
Na	589.592	120.18ox	ppm	1.2166	1.0	28984048	600.92 ppm	Y 361.104	1.0000
Na	568.821	276.77	ppm	1.5056	0.5	100638	1383.9 ppm	Y 361.104	1.0000
Ni	221.648	0.20656	ppm	0.000632	0.3	445.20	1.0328 ppm	Y 361.104	1.0000
Pb	220.353	0.38221	ppm	0.001300	0.3	833.13	1.9111 ppm	Y 361.104	1.0000
Sb	217.582	0.64113	ppm	0.002921	0.5	362.54	3.2056 ppm	Y 361.104	1.0000
Se	196.026	0.24097	ppm	0.004672	1.9	68.908	1.2048 ppm	Y 361.104	1.0000
Si	251.611	6.6248	ppm	0.099382	1.5	18233	33.124 ppm	Y 361.104	1.0000
Sn	189.927	-0.000678u	ppm	0.001394	205.5	-0.017384	-0.003391 ppm	Y 361.104	1.0000
Sr	216.596	0.13202	ppm	0.000655	0.5	1028.6	0.66010 ppm	Y 361.104	1.0000
Ti	322.284	0.003844	ppm	0.000141	3.7	170.06	0.019220 ppm	Y 361.104	1.0000
Tl	190.794	0.37288	ppm	0.004002	1.1	207.97	1.8644 ppm	Y 361.104	1.0000
V	289.164	0.78161	ppm	0.003888	0.5	8165.9	3.9081 ppm	Y 361.104	1.0000
Zn	206.200	0.30307	ppm	0.005125	1.7	334.70	1.5153 ppm	Y 361.104	1.0000
Zr	257.147	0.001200	ppm	0.000241	20.1	40.916	0.006001 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96549	248273	264.183	0.1

Q2102525 DPS03 1:5 (Samp) **7/31/08, 10:09:41 PM** **Rack 1, Tube 32**

Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	1739.7	1743.0	1727.5
Al	237.312	330.37	331.79	329.43
As	188.980	305.20	309.42	309.64
B	249.772	5975.1	6006.5	6012.2
Ba	233.527	16338	16439	16411
Be	234.861	21126	21204	21176
Ca	315.887	715991	721079	717859
Cd	228.802	405.78	405.53	404.37
Co	231.160	341.78	342.72	346.81
Cr	267.716	8718.3	8783.0	8773.7
Cu	324.754	11062	11189	11166
Fe	261.382	701.50	707.53	707.60
K	766.491	122588	123410	123048
Li	610.365	270.30	259.02	244.72
Mg	279.078	21629	21759	21739
Mn	293.305	10438	10492	10484

El	Wavelen.	Replicates Intensity (c/s)		
Mo	202.032	91.510	90.928	90.277
Na	589.592	29018896	29357956	28923922
Na	568.821	101137	101782	101523
Ni	221.648	449.04	450.52	451.26
Pb	220.353	823.83	822.12	825.86
Sb	217.582	358.51	367.52	359.21
Se	196.026	70.920	71.793	69.331
Si	251.611	22447	22412	22352
Sn	189.927	2.2617	2.4211	1.3397
Sr	216.596	1031.6	1037.0	1036.6
Ti	322.284	188.04	184.39	187.54
Tl	190.794	204.65	206.95	207.04
V	289.164	8074.4	8125.8	8130.7
Y	361.104	248262	247688	248621
Zn	206.200	325.55	334.79	333.84
Zr	257.147	39.359	39.323	38.089

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.039512	ppm	0.000183	0.5	1736.7	0.19756 ppm	Y 361.104	1.0000
Al	237.312	0.49282	ppm	0.001762	0.4	330.53	2.4641 ppm	Y 361.104	1.0000
As	188.980	0.78779	ppm	0.006372	0.8	308.09	3.9389 ppm	Y 361.104	1.0000
B	249.772	0.48934	ppm	0.001631	0.3	5997.9	2.4467 ppm	Y 361.104	1.0000
Ba	233.527	0.30606	ppm	0.000973	0.3	16396	1.5303 ppm	Y 361.104	1.0000
Be	234.861	0.39659	ppm	0.000747	0.2	21169	1.9830 ppm	Y 361.104	1.0000
Ca	315.887	71.084	ppm	0.25553	0.4	718310	355.42 ppm	Y 361.104	1.0000
Cd	228.802	0.041883	ppm	0.000080	0.2	405.23	0.20942 ppm	Y 361.104	1.0000
Co	231.160	0.040010	ppm	0.000341	0.9	343.77	0.20005 ppm	Y 361.104	1.0000
Cr	267.716	0.19172	ppm	0.000768	0.4	8758.3	0.95860 ppm	Y 361.104	1.0000
Cu	324.754	0.23628	ppm	0.001447	0.6	11139	1.1814 ppm	Y 361.104	1.0000
Fe	261.382	0.29613	ppm	0.001483	0.5	705.54	1.4806 ppm	Y 361.104	1.0000
K	766.491	3.9565	ppm	0.013200	0.3	123015	19.782 ppm	Y 361.104	1.0000
Li	610.365	0.011503u	ppm	0.000239	2.1	258.01	0.057514 ppm	Y 361.104	1.0000
Mg	279.078	16.019	ppm	0.051644	0.3	21709	80.096 ppm	Y 361.104	1.0000
Mn	293.305	0.56708	ppm	0.001562	0.3	10471	2.8354 ppm	Y 361.104	1.0000
Mo	202.032	0.019325	ppm	0.000130	0.7	90.905	0.096626 ppm	Y 361.104	1.0000
Na	589.592	120.67ox	ppm	0.94616	0.8	29100258	603.33 ppm	Y 361.104	1.0000
Na	568.821	279.08	ppm	0.89088	0.3	101481	1395.4 ppm	Y 361.104	1.0000
Ni	221.648	0.20605	ppm	0.000551	0.3	450.27	1.0303 ppm	Y 361.104	1.0000
Pb	220.353	0.37798	ppm	0.000861	0.2	823.94	1.8899 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sb	217.582	0.63973	ppm	0.008787	1.4	361.75	3.1987 ppm	Y 361.104	1.0000
Se	196.026	0.24725	ppm	0.004418	1.8	70.681	1.2362 ppm	Y 361.104	1.0000
Si	251.611	8.1408	ppm	0.017462	0.2	22404	40.704 ppm	Y 361.104	1.0000
Sn	189.927	0.001575	ppm	0.000650	41.3	2.0075	0.007875 ppm	Y 361.104	1.0000
Sr	216.596	0.13285	ppm	0.000387	0.3	1035.1	0.66423 ppm	Y 361.104	1.0000
Ti	322.284	0.005276	ppm	0.000171	3.2	186.66	0.026382 ppm	Y 361.104	1.0000
Tl	190.794	0.36976	ppm	0.002410	0.7	206.21	1.8488 ppm	Y 361.104	1.0000
V	289.164	0.77630	ppm	0.002976	0.4	8110.3	3.8815 ppm	Y 361.104	1.0000
Zn	206.200	0.30000	ppm	0.004715	1.6	331.40	1.5000 ppm	Y 361.104	1.0000
Zr	257.147	0.001074	ppm	0.000045	4.2	38.924	0.005370 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96517	248191	470.671	0.2

CCV (CCV) **7/31/08, 10:12:58 PM** **Rack 1, Tube 33**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	45876	46014	46107
Al	237.312	3479.1	3519.7	3521.9
As	188.980	803.68	808.64	801.38
B	249.772	24739	25004	24991
Ba	233.527	268423	270245	270801
Be	234.861	107417	108053	108374
Ca	315.887	498221	495666	500531
Cd	228.802	47923	48203	48298
Co	231.160	38791	39094	39178
Cr	267.716	224012	226087	226438
Cu	324.754	232632	235294	235494
Fe	261.382	11552	11631	11670
K	766.491	1628848	1644850	1649931
Li	610.365	261162	262397	263081
Mg	279.078	63958	64488	64620
Mn	293.305	90445	91208	91340
Mo	202.032	4840.5	4870.6	4882.1
Na	589.592	11607079	11657030	11671335
Na	568.821	16616	16766	16766
Ni	221.648	10154	10221	10253
Pb	220.353	10710	10804	10804
Sb	217.582	583.48	600.55	598.13
Se	196.026	581.91	587.64	584.75

El	Wavelen.	Replicates Intensity (c/s)		
Si	251.611	15262	15698	15934
Sn	189.927	4466.5	4538.3	4544.5
Sr	216.596	38573	38740	38884
Ti	322.284	59051	59556	59654
Tl	190.794	1100.0	1110.4	1122.0
V	289.164	20777	20961	20981
Y	361.104	253132	252999	253406
Zn	206.200	5436.0	5489.3	5498.7
Zr	257.147	80355	80973	81009

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0156	ppm	0.002610	0.3	45999	1.0156 ppm	Y 361.104	101.55984
Al	237.312	5.1799	ppm	0.035759	0.7	3506.9	5.1799 ppm	Y 361.104	103.59734
As	188.980	2.0499	ppm	0.009447	0.5	804.57	2.0499 ppm	Y 361.104	102.49293
B	249.772	2.0325	ppm	0.012192	0.6	24911	2.0325 ppm	Y 361.104	101.62294
Ba	233.527	5.0433	ppm	0.023246	0.5	269823	5.0433 ppm	Y 361.104	100.86514
Be	234.861	2.0227	ppm	0.009122	0.5	107948	2.0227 ppm	Y 361.104	101.13674
Ca	315.887	49.246	ppm	0.24161	0.5	498139	49.246 ppm	Y 361.104	98.49245
Cd	228.802	5.1206	ppm	0.020772	0.4	48141	5.1206 ppm	Y 361.104	102.41216
Co	231.160	4.9694	ppm	0.025994	0.5	39021	4.9694 ppm	Y 361.104	99.38816
Cr	267.716	4.9489	ppm	0.028782	0.6	225512	4.9489 ppm	Y 361.104	98.97872
Cu	324.754	4.9981	ppm	0.034050	0.7	234473	4.9981 ppm	Y 361.104	99.96222
Fe	261.382	4.9470	ppm	0.025432	0.5	11618	4.9470 ppm	Y 361.104	98.93942
K	766.491	52.597	ppm	0.35252	0.7	1641210	52.597 ppm	Y 361.104	105.19462
Li	610.365	4.8855	ppm	0.018124	0.4	262213	4.8855 ppm	Y 361.104	97.70973
Mg	279.078	47.502	ppm	0.25859	0.5	64355	47.502 ppm	Y 361.104	95.00335
Mn	293.305	4.9369	ppm	0.026218	0.5	90998	4.9369 ppm	Y 361.104	98.73706
Mo	202.032	1.0252	ppm	0.004531	0.4	4864.4	1.0252 ppm	Y 361.104	102.51505
Na	589.592	48.135	ppm	0.13989	0.3	11645148	48.135 ppm	Y 361.104	96.27071
Ni	221.648	4.9648	ppm	0.024735	0.5	10209	4.9648 ppm	Y 361.104	99.29517
Pb	220.353	4.9538	ppm	0.024968	0.5	10773	4.9538 ppm	Y 361.104	99.07597
Sb	217.582	1.0498	ppm	0.016195	1.5	594.05	1.0498 ppm	Y 361.104	104.98369
Se	196.026	2.0619	ppm	0.010149	0.5	584.77	2.0619 ppm	Y 361.104	103.09523
Si	251.611	5.6804	ppm	0.12390	2.2	15631	5.6804 ppm	Y 361.104	113.60897Q
Sn	189.927	5.0232	ppm	0.048277	1.0	4516.5	5.0232 ppm	Y 361.104	100.46371
Sr	216.596	4.9806	ppm	0.020054	0.4	38732	4.9806 ppm	Y 361.104	99.61178
Ti	322.284	5.1142	ppm	0.027944	0.5	59420	5.1142 ppm	Y 361.104	102.28435
Tl	190.794	1.9673	ppm	0.019586	1.0	1110.8	1.9673 ppm	Y 361.104	98.36517
V	289.164	2.0137	ppm	0.010762	0.5	20906	2.0137 ppm	Y 361.104	100.68279

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Zn	206.200	5.0631	ppm	0.031394	0.6	5474.7	5.0631 ppm	Y 361.104	101.26282
Zr	257.147	5.0583	ppm	0.023028	0.5	80779	5.0583 ppm	Y 361.104	101.16545

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98457	253179	207.279	0.1

BLA01 (CCB) **7/31/08, 10:16:14 PM** **Rack 1, Tube 34**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-20.426	-38.433	-22.409
Al	237.312	-0.014412	-3.3197	-3.5876
As	188.980	-0.10065	-1.8830	-0.23976
B	249.772	154.92	101.40	77.882
Ba	233.527	17.875	14.861	16.304
Be	234.861	-4.2670	-6.3315	0.47674
Ca	315.887	2362.7	2366.5	2369.9
Cd	228.802	-1.8837	-4.6916	0.14130
Co	231.160	19.312	11.165	10.235
Cr	267.716	17.950	13.617	17.679
Cu	324.754	56.819	56.945	69.444
Fe	261.382	10.673	8.9301	10.671
K	766.491	-399.10	-403.94	-404.39
Li	610.365	1304.3	1289.8	1283.2
Mg	279.078	4.3684	6.3552	12.699
Mn	293.305	17.776	18.133	11.605
Mo	202.032	-1.4715	-1.9055	-2.6678
Na	589.592	1356.4	1356.9	1391.9
Na	568.821	-519.92	-518.90	-539.46
Ni	221.648	-6.7133	-4.9492	-4.1839
Pb	220.353	1.5286	0.92747	0.68221
Sb	217.582	-1.3567	-3.5683	-3.9007
Se	196.026	2.7397	-0.26317	2.5869
Si	251.611	123.16	129.99	131.45
Sn	189.927	0.23559	-1.0793	0.74980
Sr	216.596	-2.8552	1.0137	-0.033819
Ti	322.284	128.49	127.06	120.73
Tl	190.794	1.3470	1.8993	-0.25815
V	289.164	-3.5655	4.1526	4.1127
Y	361.104	267794	267790	269303
Zn	206.200	7.0859	6.4129	7.7380

El	Wavelen.	Replicates Intensity (c/s)		
Zr	257.147	34.218	42.101	34.047

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000119u	ppm	0.000222	186.8	-27.089	-0.000119 ppm	Y 361.104	-0.00012
Al	237.312	-0.002012u	ppm	0.002953	146.7	-2.3072	-0.002012 ppm	Y 361.104	-0.00201
As	188.980	0.001637u	ppm	0.002523	154.2	-0.74112	0.001637 ppm	Y 361.104	0.00164
B	249.772	0.008939	ppm	0.003222	36.0	111.40	0.008939 ppm	Y 361.104	0.00894
Ba	233.527	0.000042	ppm	0.000028	66.4	16.347	0.000042 ppm	Y 361.104	0.00004
Be	234.861	0.000061	ppm	0.000065	107.7	-3.3739	0.000061 ppm	Y 361.104	0.00006
Ca	315.887	-0.005648u	ppm	0.000361	6.4	2366.4	-0.005648 ppm	Y 361.104	-0.00565
Cd	228.802	-0.000025u	ppm	0.000258	1033.1	-2.1447	-0.000025 ppm	Y 361.104	-0.00003
Co	231.160	-0.000389u	ppm	0.000636	163.6	13.571	-0.000389 ppm	Y 361.104	-0.00039
Cr	267.716	-0.000059u	ppm	0.000053	90.6	16.416	-0.000059 ppm	Y 361.104	-0.00006
Cu	324.754	0.000099	ppm	0.000155	156.6	61.069	0.000099 ppm	Y 361.104	0.00010
Fe	261.382	0.000383u	ppm	0.000426	111.2	10.091	0.000383 ppm	Y 361.104	0.00038
K	766.491	0.002355	ppm	0.000094	4.0	-402.48	0.002355 ppm	Y 361.104	0.00236
Li	610.365	-0.000542u	ppm	0.000202	37.2	1292.4	-0.000542 ppm	Y 361.104	-0.00054
Mg	279.078	-0.001067u	ppm	0.003212	301.0	7.8074	-0.001067 ppm	Y 361.104	-0.00107
Mn	293.305	-0.000291u	ppm	0.000199	68.3	15.838	-0.000291 ppm	Y 361.104	-0.00029
Mo	202.032	-0.000250u	ppm	0.000128	51.0	-2.0150	-0.000250 ppm	Y 361.104	-0.00025
Na	589.592	0.000147	ppm	0.000085	57.7	1368.4	0.000147 ppm	Y 361.104	0.00015
Ni	221.648	0.000114u	ppm	0.000631	555.4	-5.2821	0.000114 ppm	Y 361.104	0.00011
Pb	220.353	-0.000238u	ppm	0.000200	84.0	1.0461	-0.000238 ppm	Y 361.104	-0.00024
Sb	217.582	0.000001u	ppm	0.002425	174680.6	-2.9419	0.000001 ppm	Y 361.104	0.00000
Se	196.026	0.003729u	ppm	0.005985	160.5	1.6878	0.003729 ppm	Y 361.104	0.00373
Si	251.611	0.043438	ppm	0.001609	3.7	128.20	0.043438 ppm	Y 361.104	0.04344
Sn	189.927	-0.000716u	ppm	0.001050	146.6	-0.031311	-0.000716 ppm	Y 361.104	-0.00072
Sr	216.596	-0.000316u	ppm	0.000257	81.5	-0.62509	-0.000316 ppm	Y 361.104	-0.00032
Ti	322.284	-0.000085u	ppm	0.000356	419.3	125.43	-0.000085 ppm	Y 361.104	-0.00008
Tl	190.794	0.005975	ppm	0.001996	33.4	0.99603	0.005975 ppm	Y 361.104	0.00597
V	289.164	-0.000102u	ppm	0.000424	414.8	1.5666	-0.000102 ppm	Y 361.104	-0.00010
Zn	206.200	-0.000567u	ppm	0.000615	108.4	7.0789	-0.000567 ppm	Y 361.104	-0.00057
Zr	257.147	0.000976	ppm	0.000289	29.6	36.789	0.000976 ppm	Y 361.104	0.00098

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0434	268296	872.370	0.3

A818873 1:5 TCLP (Samp) **7/31/08, 10:19:31 PM** **Rack 1, Tube 35**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-26.747	-25.941	-14.350
Al	237.312	10.114	17.835	13.631
As	188.980	-0.23150	-0.042117	-0.34368
B	249.772	1049.4	1052.9	1026.8
Ba	233.527	6950.7	6862.3	7011.3
Be	234.861	-14.109	-4.5433	-3.2392
Ca	315.887	880725	883329	879956
Cd	228.802	7.8089	2.8238	13.720
Co	231.160	29.641	25.546	28.482
Cr	267.716	23.642	30.808	21.856
Cu	324.754	1671.1	1680.7	1671.6
Fe	261.382	11.673	11.015	23.858
K	766.491	91286	91703	91275
Li	610.365	-213.49	-206.99	-223.26
Mg	279.078	17282	17341	17307
Mn	293.305	3573.0	3567.4	3570.9
Mo	202.032	77.126	76.023	78.694
Na	589.592	28971800	28895900	28622786
Na	568.821	102308	102584	102280
Ni	221.648	42.668	42.536	42.609
Pb	220.353	0.98896	-0.34687	0.77026
Sb	217.582	-3.2796	1.9111	1.3573
Se	196.026	9.4157	10.366	11.670
Si	251.611	15249	15068	15293
Sn	189.927	0.73938	-0.77282	-1.0822
Sr	216.596	1083.6	1091.8	1096.3
Ti	322.284	140.05	136.66	142.16
Tl	190.794	-1.5846	-1.7875	-0.72838
V	289.164	18.156	10.765	17.957
Y	361.104	249389	250243	250863
Zn	206.200	63.666	65.186	65.231
Zr	257.147	36.122	40.553	36.995

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.000048u	ppm	0.000156	324.5	-22.346	0.000240 ppm	Y 361.104	1.0000
Al	237.312	0.021924	ppm	0.005735	26.2	13.860	0.10962 ppm	Y 361.104	1.0000
As	188.980	0.002984	ppm	0.000388	13.0	-0.20576	0.014922 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
B	249.772	0.084982	ppm	0.001156	1.4	1043.1	0.42491 ppm	Y 361.104	1.0000
Ba	233.527	0.12949	ppm	0.001400	1.1	6941.4	0.64743 ppm	Y 361.104	1.0000
Be	234.861	-0.000012u	ppm	0.000111	910.0	-7.2971	-0.000061 ppm	Y 361.104	1.0000
Ca	315.887	87.272	ppm	0.17552	0.2	881337	436.36 ppm	Y 361.104	1.0000
Cd	228.802	0.001063	ppm	0.000581	54.6	8.1177	0.005317 ppm	Y 361.104	1.0000
Co	231.160	0.001407	ppm	0.000269	19.1	27.890	0.007035 ppm	Y 361.104	1.0000
Cr	267.716	0.000098	ppm	0.000104	106.2	25.435	0.000490 ppm	Y 361.104	1.0000
Cu	324.754	0.034480	ppm	0.000116	0.3	1674.5	0.17240 ppm	Y 361.104	1.0000
Fe	261.382	0.002692	ppm	0.003062	113.7	15.515	0.013460 ppm	Y 361.104	1.0000
K	766.491	2.9443	ppm	0.007823	0.3	91421	14.721 ppm	Y 361.104	1.0000
Li	610.365	0.009804u	ppm	0.000153	1.6	-214.58	0.049020 ppm	Y 361.104	1.0000
Mg	279.078	12.772	ppm	0.021870	0.2	17310	63.858 ppm	Y 361.104	1.0000
Mn	293.305	0.19260	ppm	0.000153	0.1	3570.4	0.96300 ppm	Y 361.104	1.0000
Mo	202.032	0.016461	ppm	0.000283	1.7	77.281	0.082306 ppm	Y 361.104	1.0000
Na	589.592	119.55ox	ppm	0.76117	0.6	28830162	597.73 ppm	Y 361.104	1.0000
Na	568.821	281.32	ppm	0.45975	0.2	102391	1406.6 ppm	Y 361.104	1.0000
Ni	221.648	0.012654	ppm	0.000032	0.3	42.604	0.063271 ppm	Y 361.104	1.0000
Pb	220.353	-0.000453u	ppm	0.000329	72.7	0.47078	-0.002264 ppm	Y 361.104	1.0000
Sb	217.582	0.005155u	ppm	0.004999	97.0	-0.003733	0.025773 ppm	Y 361.104	1.0000
Se	196.026	0.034658	ppm	0.004004	11.6	10.484	0.17329 ppm	Y 361.104	1.0000
Si	251.611	5.5234	ppm	0.043413	0.8	15203	27.617 ppm	Y 361.104	1.0000
Sn	189.927	-0.001096u	ppm	0.001085	99.0	-0.37187	-0.005478 ppm	Y 361.104	1.0000
Sr	216.596	0.14003	ppm	0.000824	0.6	1090.6	0.70014 ppm	Y 361.104	1.0000
Ti	322.284	0.001150	ppm	0.000240	20.8	139.62	0.005752 ppm	Y 361.104	1.0000
Tl	190.794	0.001716	ppm	0.001001	58.4	-1.3668	0.008579 ppm	Y 361.104	1.0000
V	289.164	0.001866	ppm	0.000402	21.5	15.626	0.009331 ppm	Y 361.104	1.0000
Zn	206.200	0.052898	ppm	0.000827	1.6	64.694	0.26449 ppm	Y 361.104	1.0000
Zr	257.147	0.001023	ppm	0.000147	14.4	37.890	0.005116 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97285	250165	739.798	0.3

A818874 1:5 TCLP (Samp) **7/31/08, 10:22:47 PM** **Rack 1, Tube 36**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-24.787	-25.645	-26.014
Al	237.312	375.33	376.87	374.47
As	188.980	6.1922	5.1579	5.7559
B	249.772	1596.6	1604.3	1594.1

El	Wavelen.	Replicates Intensity (c/s)		
Ba	233.527	9531.5	9520.7	9696.6
Be	234.861	-7.4903	-9.7743	-5.6396
Ca	315.887	914153	915001	912568
Cd	228.802	48.976	52.045	43.275
Co	231.160	59.678	63.203	65.051
Cr	267.716	31.027	31.058	33.461
Cu	324.754	32184	31995	32043
Fe	261.382	108.58	107.61	110.19
K	766.491	110349	110815	110500
Li	610.365	-167.97	-125.29	-179.51
Mg	279.078	41111	41235	41128
Mn	293.305	11458	11508	11489
Mo	202.032	19.682	18.153	14.881
Na	589.592	1188862	1191742	1186986
Na	568.821	1313.0	1355.1	1330.2
Ni	221.648	106.56	104.62	106.60
Pb	220.353	5.5132	3.0934	3.4424
Sb	217.582	1.7082	-0.24376	2.0096
Se	196.026	17.278	14.209	11.958
Si	251.611	38837	37678	37402
Sn	189.927	-0.80654	1.1870	0.90482
Sr	216.596	1714.1	1722.5	1719.5
Ti	322.284	135.14	146.29	137.43
Tl	190.794	-1.7843	-2.8680	-2.5249
V	289.164	-4.6218	-9.7526	0.48429
Y	361.104	259086	260803	259432
Zn	206.200	1039.8	1044.7	1039.8
Zr	257.147	34.703	28.628	31.607

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000015u	ppm	0.000014	93.2	-25.482	-0.000076 ppm	Y 361.104	1.0000
Al	237.312	0.55969	ppm	0.001799	0.3	375.56	2.7984 ppm	Y 361.104	1.0000
As	188.980	0.018031	ppm	0.001322	7.3	5.7020	0.090153 ppm	Y 361.104	1.0000
B	249.772	0.13029	ppm	0.000435	0.3	1598.3	0.65144 ppm	Y 361.104	1.0000
Ba	233.527	0.17886	ppm	0.001843	1.0	9582.9	0.89430 ppm	Y 361.104	1.0000
Be	234.861	-0.000009u	ppm	0.000039	452.8	-7.6348	-0.000043 ppm	Y 361.104	1.0000
Ca	315.887	90.506	ppm	0.12261	0.1	913907	452.53 ppm	Y 361.104	1.0000
Cd	228.802	0.005290	ppm	0.000474	9.0	48.098	0.026450 ppm	Y 361.104	1.0000
Co	231.160	0.005815	ppm	0.000348	6.0	62.644	0.029074 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Cr	267.716	0.000147	ppm	0.000031	20.9	31.848	0.000734 ppm	Y 361.104	1.0000
Cu	324.754	0.68239	ppm	0.002096	0.3	32074	3.4119 ppm	Y 361.104	1.0000
Fe	261.382	0.042213	ppm	0.000551	1.3	108.79	0.21106 ppm	Y 361.104	1.0000
K	766.491	3.5573	ppm	0.007616	0.2	110555	17.786 ppm	Y 361.104	1.0000
Li	610.365	0.012293u	ppm	0.000532	4.3	-157.59	0.061466 ppm	Y 361.104	1.0000
Mg	279.078	30.377	ppm	0.049722	0.2	41158	151.88 ppm	Y 361.104	1.0000
Mn	293.305	0.62208	ppm	0.001388	0.2	11485	3.1104 ppm	Y 361.104	1.0000
Mo	202.032	0.003878	ppm	0.000517	13.3	17.572	0.019388 ppm	Y 361.104	1.0000
Na	589.592	4.9205	ppm	0.009934	0.2	1189197	24.603 ppm	Y 361.104	1.0000
Na	568.821	4.0838	ppm	0.058087	1.4	1332.8	20.419 ppm	Y 361.104	1.0000
Ni	221.648	0.027342	ppm	0.000550	2.0	105.93	0.13671 ppm	Y 361.104	1.0000
Pb	220.353	0.001122	ppm	0.000601	53.6	4.0163	0.005608 ppm	Y 361.104	1.0000
Sb	217.582	0.007201	ppm	0.002145	29.8	1.1580	0.036003 ppm	Y 361.104	1.0000
Se	196.026	0.048363	ppm	0.009449	19.5	14.482	0.24181 ppm	Y 361.104	1.0000
Si	251.611	13.800	ppm	0.27691	2.0	37972	69.000 ppm	Y 361.104	1.0000
Sn	189.927	-0.000205u	ppm	0.001201	586.7	0.42844	-0.001023 ppm	Y 361.104	1.0000
Sr	216.596	0.22079	ppm	0.000547	0.2	1718.7	1.1039 ppm	Y 361.104	1.0000
Ti	322.284	0.001253	ppm	0.000508	40.6	139.62	0.006264 ppm	Y 361.104	1.0000
Tl	190.794	-0.000299u	ppm	0.000987	330.4	-2.3924	-0.001493 ppm	Y 361.104	1.0000
V	289.164	0.001283u	ppm	0.000489	38.1	-4.6301	0.006416 ppm	Y 361.104	1.0000
Zn	206.200	0.95929	ppm	0.002590	0.3	1041.4	4.7964 ppm	Y 361.104	1.0000
Zr	257.147	0.000647	ppm	0.000190	29.4	31.646	0.003235 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0102	259774	907.695	0.3

A818875 1:5 TCLP (Samp) **7/31/08, 10:26:04 PM** **Rack 1, Tube 37**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-33.679	-29.143	-46.941
Al	237.312	41.396	39.186	41.811
As	188.980	7.4416	5.6905	5.9999
B	249.772	1275.3	1278.5	1281.0
Ba	233.527	4221.0	4204.8	4196.6
Be	234.861	-5.1139	-2.7078	-11.791
Ca	315.887	455990	458298	459548
Cd	228.802	15.674	18.701	17.952
Co	231.160	32.446	29.522	31.200
Cr	267.716	24.065	24.553	28.691

El	Wavelen.	Replicates Intensity (c/s)		
Cu	324.754	6179.2	6120.5	6143.5
Fe	261.382	19.938	24.105	17.799
K	766.491	117565	118567	118405
Li	610.365	726.14	742.25	731.87
Mg	279.078	16324	16409	16467
Mn	293.305	3588.0	3597.8	3622.9
Mo	202.032	89.198	88.981	92.654
Na	589.592	29091020	29358930	29526196
Na	568.821	103775	104298	104401
Ni	221.648	46.165	47.569	44.197
Pb	220.353	-0.25550	-0.79427	2.8247
Sb	217.582	-6.0536	-3.5221	0.095124
Se	196.026	16.703	12.714	12.157
Si	251.611	19641	19147	19136
Sn	189.927	1.6639	0.017797	1.2001
Sr	216.596	836.42	836.89	841.75
Ti	322.284	137.38	137.91	136.88
Tl	190.794	-3.7231	-0.90436	-0.24808
V	289.164	24.103	32.053	24.960
Y	361.104	247368	248473	247062
Zn	206.200	466.41	471.85	472.58
Zr	257.147	23.137	35.962	26.801

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000288u	ppm	0.000208	72.0	-36.588	-0.001442 ppm	Y 361.104	1.0000
Al	237.312	0.062161	ppm	0.002093	3.4	40.798	0.31080 ppm	Y 361.104	1.0000
As	188.980	0.019742	ppm	0.002379	12.1	6.3773	0.098710 ppm	Y 361.104	1.0000
B	249.772	0.10418	ppm	0.000234	0.2	1278.3	0.52089 ppm	Y 361.104	1.0000
Ba	233.527	0.078382	ppm	0.000232	0.3	4207.5	0.39191 ppm	Y 361.104	1.0000
Be	234.861	0.000003u	ppm	0.000088	3447.6	-6.5375	0.000013 ppm	Y 361.104	1.0000
Ca	315.887	45.231	ppm	0.17923	0.4	457946	226.16 ppm	Y 361.104	1.0000
Cd	228.802	0.002025	ppm	0.000168	8.3	17.443	0.010127 ppm	Y 361.104	1.0000
Co	231.160	0.001833	ppm	0.000187	10.2	31.056	0.009165 ppm	Y 361.104	1.0000
Cr	267.716	0.000105	ppm	0.000056	53.2	25.769	0.000524 ppm	Y 361.104	1.0000
Cu	324.754	0.12982	ppm	0.000631	0.5	6147.8	0.64912 ppm	Y 361.104	1.0000
Fe	261.382	0.004850	ppm	0.001358	28.0	20.614	0.024248 ppm	Y 361.104	1.0000
K	766.491	3.8015	ppm	0.017236	0.5	118179	19.008 ppm	Y 361.104	1.0000
Li	610.365	0.008961u	ppm	0.000152	1.7	733.42	0.044804 ppm	Y 361.104	1.0000
Mg	279.078	12.100	ppm	0.053285	0.4	16400	60.501 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Mn	293.305	0.19436	ppm	0.000977	0.5	3602.9	0.97180 ppm	Y 361.104	1.0000
Mo	202.032	0.019200	ppm	0.000434	2.3	90.278	0.096001 ppm	Y 361.104	1.0000
Na	589.592	121.60ox	ppm	0.91029	0.7	29325382	607.99 ppm	Y 361.104	1.0000
Na	568.821	286.83	ppm	0.91975	0.3	104158	1434.1 ppm	Y 361.104	1.0000
Ni	221.648	0.011383	ppm	0.000824	7.2	45.977	0.056916 ppm	Y 361.104	1.0000
Pb	220.353	-0.000370u	ppm	0.000898	242.8	0.59163	-0.001848 ppm	Y 361.104	1.0000
Sb	217.582	-0.000381u	ppm	0.005419	1424.0	-3.1602	-0.001903 ppm	Y 361.104	1.0000
Se	196.026	0.046596	ppm	0.008773	18.8	13.858	0.23298 ppm	Y 361.104	1.0000
Si	251.611	7.0154	ppm	0.10487	1.5	19308	35.077 ppm	Y 361.104	1.0000
Sn	189.927	0.000388u	ppm	0.000945	243.7	0.96057	0.001939 ppm	Y 361.104	1.0000
Sr	216.596	0.10759	ppm	0.000379	0.4	838.36	0.53796 ppm	Y 361.104	1.0000
Ti	322.284	0.000954	ppm	0.000044	4.7	137.39	0.004768 ppm	Y 361.104	1.0000
Tl	190.794	0.001257u	ppm	0.003289	261.6	-1.6252	0.006286 ppm	Y 361.104	1.0000
V	289.164	0.002964	ppm	0.000417	14.1	27.039	0.014820 ppm	Y 361.104	1.0000
Zn	206.200	0.42927	ppm	0.003130	0.7	470.28	2.1463 ppm	Y 361.104	1.0000
Zr	257.147	0.000438	ppm	0.000414	94.6	28.634	0.002189 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96301	247634	742.195	0.3

A818876 1:5 TCLP (Samp) **7/31/08, 10:29:20 PM** **Rack 1, Tube 38**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-21.311	-32.872	-13.593
Al	237.312	290.88	294.78	288.96
As	188.980	4.8693	6.7915	3.0163
B	249.772	1640.7	1661.1	1666.4
Ba	233.527	9587.6	9742.9	9733.3
Be	234.861	-5.1988	-7.5541	-6.0508
Ca	315.887	1047069	1048809	1052222
Cd	228.802	18.380	18.214	22.356
Co	231.160	47.580	48.790	53.776
Cr	267.716	22.959	28.971	39.784
Cu	324.754	27293	27633	27503
Fe	261.382	62.117	54.750	62.582
K	766.491	128157	129100	129124
Li	610.365	-350.26	-404.83	-404.61
Mg	279.078	25593	25697	25777
Mn	293.305	8370.9	8395.3	8430.0

El	Wavelen.	Replicates Intensity (c/s)		
Mo	202.032	26.253	27.760	30.773
Na	589.592	1292769	1300725	1299192
Na	568.821	1529.4	1521.1	1549.2
Ni	221.648	100.19	101.60	102.23
Pb	220.353	1.5758	1.3174	3.1151
Sb	217.582	-2.8976	-0.86026	-0.88305
Se	196.026	10.090	9.9481	10.507
Si	251.611	36288	35878	35088
Sn	189.927	0.88871	-1.9388	0.68050
Sr	216.596	1573.9	1585.6	1595.2
Ti	322.284	131.67	127.90	126.09
Tl	190.794	-1.3678	-3.5433	-2.5279
V	289.164	6.1453	-6.3184	-7.3742
Y	361.104	258803	259491	258403
Zn	206.200	694.14	693.95	699.03
Zr	257.147	30.992	33.482	30.358

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.000056u	ppm	0.000218	388.3	-22.592	0.000281 ppm	Y 361.104	1.0000
Al	237.312	0.43449	ppm	0.004401	1.0	291.54	2.1724 ppm	Y 361.104	1.0000
As	188.980	0.015968	ppm	0.004805	30.1	4.8924	0.079839 ppm	Y 361.104	1.0000
B	249.772	0.13501	ppm	0.001104	0.8	1656.1	0.67507 ppm	Y 361.104	1.0000
Ba	233.527	0.18082	ppm	0.001627	0.9	9687.9	0.90412 ppm	Y 361.104	1.0000
Be	234.861	0.000012u	ppm	0.000022	189.3	-6.2679	0.000059 ppm	Y 361.104	1.0000
Ca	315.887	103.96	ppm	0.26027	0.3	1049367	519.78 ppm	Y 361.104	1.0000
Cd	228.802	0.002265	ppm	0.000250	11.0	19.650	0.011327 ppm	Y 361.104	1.0000
Co	231.160	0.004232	ppm	0.000418	9.9	50.049	0.021161 ppm	Y 361.104	1.0000
Cr	267.716	0.000155	ppm	0.000187	121.1	30.571	0.000773 ppm	Y 361.104	1.0000
Cu	324.754	0.58439	ppm	0.003660	0.6	27476	2.9220 ppm	Y 361.104	1.0000
Fe	261.382	0.021462	ppm	0.001860	8.7	59.816	0.10731 ppm	Y 361.104	1.0000
K	766.491	4.1416	ppm	0.017670	0.4	128793	20.708 ppm	Y 361.104	1.0000
Li	610.365	0.013947u	ppm	0.000586	4.2	-386.57	0.069737 ppm	Y 361.104	1.0000
Mg	279.078	18.957	ppm	0.068295	0.4	25689	94.786 ppm	Y 361.104	1.0000
Mn	293.305	0.45461	ppm	0.001610	0.4	8398.7	2.2730 ppm	Y 361.104	1.0000
Mo	202.032	0.006130	ppm	0.000485	7.9	28.262	0.030652 ppm	Y 361.104	1.0000
Na	589.592	5.3698	ppm	0.017504	0.3	1297562	26.849 ppm	Y 361.104	1.0000
Na	568.821	4.4208	ppm	0.039512	0.9	1533.2	22.104 ppm	Y 361.104	1.0000
Ni	221.648	0.026674	ppm	0.000508	1.9	101.34	0.13337 ppm	Y 361.104	1.0000
Pb	220.353	0.000202u	ppm	0.000447	221.6	2.0028	0.001008 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sb	217.582	0.002452	ppm	0.002051	83.6	-1.5470	0.012262 ppm	Y 361.104	1.0000
Se	196.026	0.033320	ppm	0.001027	3.1	10.182	0.16660 ppm	Y 361.104	1.0000
Si	251.611	12.993	ppm	0.22181	1.7	35751	64.963 ppm	Y 361.104	1.0000
Sn	189.927	-0.000818u	ppm	0.001754	214.4	-0.12318	-0.004091 ppm	Y 361.104	1.0000
Sr	216.596	0.20358	ppm	0.001369	0.7	1584.9	1.0179 ppm	Y 361.104	1.0000
Ti	322.284	0.000262u	ppm	0.000246	93.6	128.56	0.001312 ppm	Y 361.104	1.0000
Tl	190.794	-0.000386u	ppm	0.001939	502.0	-2.4797	-0.001931 ppm	Y 361.104	1.0000
V	289.164	0.000957u	ppm	0.000718	75.0	-2.5158	0.004785 ppm	Y 361.104	1.0000
Zn	206.200	0.63846	ppm	0.002673	0.4	695.71	3.1923 ppm	Y 361.104	1.0000
Zr	257.147	0.000643	ppm	0.000104	16.1	31.611	0.003214 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0068	258899	550.103	0.2

A818877 1:5 TCLP (Samp) **7/31/08, 10:32:37 PM** **Rack 1, Tube 39**
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-27.605	-24.600	-17.751
Al	237.312	4.1208	5.6416	8.9815
As	188.980	-1.4213	0.010249	0.092173
B	249.772	163.33	165.46	174.13
Ba	233.527	51.236	59.080	54.929
Be	234.861	-3.0137	-4.9961	0.62478
Ca	315.887	3394.6	3410.5	3423.8
Cd	228.802	-2.5533	1.4439	1.8848
Co	231.160	11.867	13.516	12.449
Cr	267.716	20.154	5.1324	16.991
Cu	324.754	100.77	101.12	98.799
Fe	261.382	14.915	17.459	15.571
K	766.491	-53.586	-37.042	-17.723
Li	610.365	1344.9	1351.2	1336.6
Mg	279.078	27.063	30.616	28.646
Mn	293.305	24.964	16.203	27.302
Mo	202.032	-1.1597	-0.59690	1.8876
Na	589.592	623424	628223	635138
Na	568.821	443.36	454.28	436.22
Ni	221.648	-3.4705	-4.7308	-4.0017
Pb	220.353	-2.8451	0.001158	-0.50199
Sb	217.582	-2.6005	-2.8891	-2.7439

El	Wavelen.	Replicates Intensity (c/s)		
Se	196.026	0.74828	0.57671	0.63024
Si	251.611	440.18	428.36	411.93
Sn	189.927	-1.1935	0.41060	-0.54552
Sr	216.596	3.0054	1.4945	0.56800
Ti	322.284	122.03	124.76	118.93
Tl	190.794	-1.4860	-0.41876	0.68535
V	289.164	7.0795	8.9016	-5.0945
Y	361.104	270560	270428	268826
Zn	206.200	11.671	12.260	11.238
Zr	257.147	19.702	14.963	18.966

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000030u	ppm	0.000113	383.1	-23.318	-0.000148 ppm	Y 361.104	1.0000
Al	237.312	0.010689	ppm	0.003689	34.5	6.2480	0.053446 ppm	Y 361.104	1.0000
As	188.980	0.002404u	ppm	0.002167	90.1	-0.43962	0.012019 ppm	Y 361.104	1.0000
B	249.772	0.013529	ppm	0.000467	3.5	167.64	0.067647 ppm	Y 361.104	1.0000
Ba	233.527	0.000766	ppm	0.000073	9.6	55.082	0.003832 ppm	Y 361.104	1.0000
Be	234.861	0.000078	ppm	0.000053	68.1	-2.4617	0.000392 ppm	Y 361.104	1.0000
Ca	315.887	0.097898	ppm	0.001452	1.5	3409.6	0.48949 ppm	Y 361.104	1.0000
Cd	228.802	0.000229u	ppm	0.000260	113.5	0.25850	0.001147 ppm	Y 361.104	1.0000
Co	231.160	-0.000513u	ppm	0.000107	20.8	12.611	-0.002566 ppm	Y 361.104	1.0000
Cr	267.716	-0.000110u	ppm	0.000174	158.2	14.092	-0.000549 ppm	Y 361.104	1.0000
Cu	324.754	0.000934	ppm	0.000027	2.9	100.23	0.004668 ppm	Y 361.104	1.0000
Fe	261.382	0.002870	ppm	0.000559	19.5	15.982	0.014348 ppm	Y 361.104	1.0000
K	766.491	0.014093	ppm	0.000575	4.1	-36.117	0.070466 ppm	Y 361.104	1.0000
Li	610.365	0.000470	ppm	0.000137	29.1	1344.2	0.002349 ppm	Y 361.104	1.0000
Mg	279.078	0.014411	ppm	0.001314	9.1	28.775	0.072056 ppm	Y 361.104	1.0000
Mn	293.305	0.000088u	ppm	0.000318	362.7	22.823	0.000438 ppm	Y 361.104	1.0000
Mo	202.032	0.000184u	ppm	0.000342	186.2	0.043651	0.000918 ppm	Y 361.104	1.0000
Na	589.592	2.6025	ppm	0.024419	0.9	628928	13.012 ppm	Y 361.104	1.0000
Na	568.821	3.0761	ppm	0.024942	0.8	444.62	15.381 ppm	Y 361.104	1.0000
Ni	221.648	0.000491	ppm	0.000308	62.7	-4.0677	0.002457 ppm	Y 361.104	1.0000
Pb	220.353	-0.001232u	ppm	0.000698	56.7	-1.1153	-0.006162 ppm	Y 361.104	1.0000
Sb	217.582	0.000348	ppm	0.000253	72.8	-2.7445	0.001739 ppm	Y 361.104	1.0000
Se	196.026	0.000061u	ppm	0.000311	508.1	0.65174	0.000306 ppm	Y 361.104	1.0000
Si	251.611	0.15199	ppm	0.005157	3.4	426.82	0.75994 ppm	Y 361.104	1.0000
Sn	189.927	-0.001174u	ppm	0.000898	76.5	-0.44280	-0.005868 ppm	Y 361.104	1.0000
Sr	216.596	-0.000018u	ppm	0.000158	855.5	1.6893	-0.000092 ppm	Y 361.104	1.0000
Ti	322.284	-0.000389u	ppm	0.000252	64.6	121.91	-0.001945 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Tl	190.794	0.003477	ppm	0.001934	55.6	-0.40646	0.017386 ppm	Y 361.104	1.0000
V	289.164	0.000098u	ppm	0.000726	741.4	3.6289	0.000490 ppm	Y 361.104	1.0000
Zn	206.200	0.003742	ppm	0.000476	12.7	11.723	0.018712 ppm	Y 361.104	1.0000
Zr	257.147	-0.000210u	ppm	0.000160	76.2	17.877	-0.001049 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0497	269938	965.099	0.4

CCV (CCV) **7/31/08, 10:35:53 PM** **Rack 1, Tube 40**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	45217	45439	45396
Al	237.312	3417.1	3450.8	3462.1
As	188.980	791.75	789.45	800.73
B	249.772	24426	24545	24678
Ba	233.527	264352	266528	266537
Be	234.861	105659	106493	106576
Ca	315.887	490478	494189	486823
Cd	228.802	47176	47444	47458
Co	231.160	38211	38501	38503
Cr	267.716	220502	222570	222668
Cu	324.754	229963	231398	231383
Fe	261.382	11418	11502	11501
K	766.491	1610184	1622888	1622409
Li	610.365	256957	258589	258193
Mg	279.078	62918	63532	63478
Mn	293.305	89129	89793	89919
Mo	202.032	4758.9	4801.9	4808.3
Na	589.592	11442010	11534484	11478604
Na	568.821	16455	16560	16517
Ni	221.648	10002	10082	10062
Pb	220.353	10575	10653	10619
Sb	217.582	582.67	593.49	587.67
Se	196.026	577.69	579.27	578.81
Si	251.611	15242	15842	16168
Sn	189.927	4408.2	4482.5	4501.8
Sr	216.596	37869	38258	38687
Ti	322.284	58185	58654	58701
Tl	190.794	1087.5	1097.5	1101.7
V	289.164	20464	20656	20651

El	Wavelen.	Replicates Intensity (c/s)		
Y	361.104	256282	256366	257600
Zn	206.200	5337.6	5351.9	5357.0
Zr	257.147	79243	79625	79645

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0013	ppm	0.002638	0.3	45351	1.0013 ppm	Y 361.104	100.13239
Al	237.312	5.0860	ppm	0.034711	0.7	3443.4	5.0860 ppm	Y 361.104	101.71967
As	188.980	2.0229	ppm	0.015166	0.7	793.98	2.0229 ppm	Y 361.104	101.14640
B	249.772	2.0030	ppm	0.010324	0.5	24550	2.0030 ppm	Y 361.104	100.14822
Ba	233.527	4.9682	ppm	0.023528	0.5	265806	4.9682 ppm	Y 361.104	99.36320
Be	234.861	1.9908	ppm	0.009502	0.5	106243	1.9908 ppm	Y 361.104	99.53933
Ca	315.887	48.487	ppm	0.36568	0.8	490497	48.487 ppm	Y 361.104	96.97395
Cd	228.802	5.0374	ppm	0.016942	0.3	47359	5.0374 ppm	Y 361.104	100.74841
Co	231.160	4.8909	ppm	0.021399	0.4	38405	4.8909 ppm	Y 361.104	97.81801
Cr	267.716	4.8699	ppm	0.026848	0.6	221913	4.8699 ppm	Y 361.104	97.39896
Cu	324.754	4.9222	ppm	0.017565	0.4	230914	4.9222 ppm	Y 361.104	98.44458
Fe	261.382	4.8856	ppm	0.020371	0.4	11474	4.8856 ppm	Y 361.104	97.71136
K	766.491	51.870	ppm	0.23068	0.4	1618494	51.870 ppm	Y 361.104	103.73905
Li	610.365	4.8050	ppm	0.015868	0.3	257913	4.8050 ppm	Y 361.104	96.09963
Mg	279.078	46.729	ppm	0.25079	0.5	63309	46.729 ppm	Y 361.104	93.45859
Mn	293.305	4.8617	ppm	0.023027	0.5	89613	4.8617 ppm	Y 361.104	97.23438
Mo	202.032	1.0094	ppm	0.005663	0.6	4789.7	1.0094 ppm	Y 361.104	100.94168
Na	589.592	47.474	ppm	0.19312	0.4	11485032	47.474 ppm	Y 361.104	94.94722
Ni	221.648	4.8866	ppm	0.020158	0.4	10049	4.8866 ppm	Y 361.104	97.73289
Pb	220.353	4.8815	ppm	0.018012	0.4	10615	4.8815 ppm	Y 361.104	97.62986
Sb	217.582	1.0391	ppm	0.009501	0.9	587.94	1.0391 ppm	Y 361.104	103.90820
Se	196.026	2.0401	ppm	0.002860	0.1	578.59	2.0401 ppm	Y 361.104	102.00565
Si	251.611	5.7238	ppm	0.17073	3.0	15751	5.7238 ppm	Y 361.104	114.47671Q
Sn	189.927	4.9650	ppm	0.055037	1.1	4464.2	4.9650 ppm	Y 361.104	99.30053
Sr	216.596	4.9213	ppm	0.052644	1.1	38271	4.9213 ppm	Y 361.104	98.42563
Ti	322.284	5.0360	ppm	0.024650	0.5	58513	5.0360 ppm	Y 361.104	100.71979
Tl	190.794	1.9403	ppm	0.012963	0.7	1095.5	1.9403 ppm	Y 361.104	97.01604
V	289.164	1.9832	ppm	0.010458	0.5	20590	1.9832 ppm	Y 361.104	99.15958
Zn	206.200	4.9465	ppm	0.009367	0.2	5348.8	4.9465 ppm	Y 361.104	98.93074
Zr	257.147	4.9784	ppm	0.014236	0.3	79504	4.9784 ppm	Y 361.104	99.56851

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.99845	256749	737.639	0.3

BLA01 (CCB) **7/31/08, 10:39:09 PM** **Rack 1, Tube 41**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-14.702	-15.087	-19.151
Al	237.312	0.28432	-3.0844	1.5107
As	188.980	0.82258	1.1604	0.031799
B	249.772	106.30	85.936	70.324
Ba	233.527	11.399	11.164	12.297
Be	234.861	-4.5798	-2.1990	0.75465
Ca	315.887	2369.4	2368.7	2360.4
Cd	228.802	-1.1226	-4.0556	-2.6466
Co	231.160	13.189	10.450	18.320
Cr	267.716	23.920	22.244	35.430
Cu	324.754	60.067	57.942	50.180
Fe	261.382	9.9280	12.001	13.612
K	766.491	-371.59	-348.67	-394.24
Li	610.365	1248.8	1250.7	1285.2
Mg	279.078	9.4257	9.4222	9.1664
Mn	293.305	17.166	13.178	21.859
Mo	202.032	-0.10917	-0.19147	-1.8446
Na	589.592	1308.3	1270.0	1300.9
Na	568.821	-513.57	-540.93	-522.15
Ni	221.648	-3.7013	-4.0646	-4.0088
Pb	220.353	2.3431	-4.9328	2.3405
Sb	217.582	-5.7076	-2.6404	-4.6653
Se	196.026	0.030515	1.0975	0.62438
Si	251.611	113.57	109.85	109.43
Sn	189.927	0.50044	0.51857	1.6927
Sr	216.596	-1.9272	1.1405	-0.15344
Ti	322.284	128.41	124.53	128.98
Tl	190.794	1.4140	1.5858	-1.7897
V	289.164	-3.1806	4.9475	1.3163
Y	361.104	272003	273026	272865
Zn	206.200	7.0280	6.6764	7.8468
Zr	257.147	38.525	34.723	34.347

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000122	ppm	0.000055	45.2	-16.314	0.000122 ppm	Y 361.104	0.00012
Al	237.312	0.000775u	ppm	0.003530	455.4	-0.42978	0.000775 ppm	Y 361.104	0.00078
As	188.980	0.005233	ppm	0.001475	28.2	0.67158	0.005233 ppm	Y 361.104	0.00523
B	249.772	0.006990	ppm	0.001472	21.1	87.520	0.006990 ppm	Y 361.104	0.00699

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	-0.000046u	ppm	0.000011	24.3	11.620	-0.000046 ppm	Y 361.104	-0.00005
Be	234.861	0.000086	ppm	0.000050	57.9	-2.0081	0.000086 ppm	Y 361.104	0.00009
Ca	315.887	-0.005663u	ppm	0.000495	8.7	2366.2	-0.005663 ppm	Y 361.104	-0.00566
Cd	228.802	-0.000081u	ppm	0.000156	192.8	-2.6083	-0.000081 ppm	Y 361.104	-0.00008
Co	231.160	-0.000326u	ppm	0.000509	156.1	13.986	-0.000326 ppm	Y 361.104	-0.00033
Cr	267.716	0.000178	ppm	0.000158	88.6	27.198	0.000178 ppm	Y 361.104	0.00018
Cu	324.754	-0.000008u	ppm	0.000111	1395.0	56.063	-0.000008 ppm	Y 361.104	-0.00001
Fe	261.382	0.001123	ppm	0.000782	69.6	11.847	0.001123 ppm	Y 361.104	0.00112
K	766.491	0.003348	ppm	0.000730	21.8	-371.50	0.003348 ppm	Y 361.104	0.00335
Li	610.365	-0.001117u	ppm	0.000382	34.2	1261.6	-0.001117 ppm	Y 361.104	-0.00112
Mg	279.078	0.000063u	ppm	0.000110	174.5	9.3381	0.000063 ppm	Y 361.104	0.00006
Mn	293.305	-0.000207u	ppm	0.000236	114.1	17.401	-0.000207 ppm	Y 361.104	-0.00021
Mo	202.032	0.000024u	ppm	0.000206	873.9	-0.71509	0.000024 ppm	Y 361.104	0.00002
Na	589.592	-0.000163u	ppm	0.000084	51.6	1293.1	-0.000163 ppm	Y 361.104	-0.00016
Ni	221.648	0.000787	ppm	0.000095	12.1	-3.9249	0.000787 ppm	Y 361.104	0.00079
Pb	220.353	-0.000757u	ppm	0.001931	255.1	-0.083074	-0.000757 ppm	Y 361.104	-0.00076
Sb	217.582	-0.002446u	ppm	0.002735	111.8	-4.3378	-0.002446 ppm	Y 361.104	-0.00245
Se	196.026	-0.000177u	ppm	0.001892	1066.9	0.58414	-0.000177 ppm	Y 361.104	-0.00018
Si	251.611	0.037167	ppm	0.000829	2.2	110.95	0.037167 ppm	Y 361.104	0.03717
Sn	189.927	0.000325u	ppm	0.000760	234.1	0.90390	0.000325 ppm	Y 361.104	0.00032
Sr	216.596	-0.000276u	ppm	0.000198	71.8	-0.31339	-0.000276 ppm	Y 361.104	-0.00028
Ti	322.284	0.000077u	ppm	0.000209	272.5	127.31	0.000077 ppm	Y 361.104	0.00008
Tl	190.794	0.004919	ppm	0.003387	68.8	0.40335	0.004919 ppm	Y 361.104	0.00492
V	289.164	-0.000153u	ppm	0.000389	253.9	1.0277	-0.000153 ppm	Y 361.104	-0.00015
Zn	206.200	-0.000470u	ppm	0.000557	118.4	7.1837	-0.000470 ppm	Y 361.104	-0.00047
Zr	257.147	0.000917	ppm	0.000145	15.8	35.865	0.000917 ppm	Y 361.104	0.00092

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0602	272631	550.283	0.2

DLS (CRI) **7/31/08, 11:01:35 PM** **Rack 1, Tube 42**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	420.45	416.61	423.35
Al	237.312	29.470	31.568	32.437
As	188.980	4.1324	3.3007	4.9020
B	249.772	663.42	663.82	659.29
Ba	233.527	536.75	547.84	545.40
Be	234.861	192.51	191.73	195.41
Ca	315.887	3340.8	3347.1	3350.6

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	44.828	46.207	42.008
Co	231.160	90.615	85.374	90.986
Cr	267.716	544.92	517.59	529.26
Cu	324.754	523.69	522.56	528.71
Fe	261.382	55.605	54.392	56.255
K	766.491	2642.7	2673.2	2676.4
Li	610.365	1802.6	1786.9	1830.8
Mg	279.078	130.46	130.14	131.37
Mn	293.305	197.65	190.10	192.43
Mo	202.032	48.587	44.186	46.182
Na	589.592	22722	22149	21983
Na	568.821	-496.41	-501.84	-505.10
Ni	221.648	6.0076	4.1969	5.5155
Pb	220.353	19.932	22.627	22.108
Sb	217.582	-0.66070	2.3192	3.1084
Se	196.026	5.0623	1.6301	4.1295
Si	251.611	349.51	353.11	358.82
Sn	189.927	9.5795	9.8876	7.4738
Sr	216.596	71.877	75.205	80.410
Ti	322.284	246.57	247.46	250.09
Tl	190.794	6.7123	7.2489	6.5313
V	289.164	99.792	100.11	95.779
Y	361.104	266588	268282	266913
Zn	206.200	29.604	29.131	29.451
Zr	257.147	252.45	229.38	212.20

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.009880	ppm	0.000076	0.8	420.14	0.009880 ppm	Y 361.104	98.80404
Al	237.312	0.047603	ppm	0.002263	4.8	31.158	0.047603 ppm	Y 361.104	95.20604
As	188.980	0.013981	ppm	0.002039	14.6	4.1117	0.013981 ppm	Y 361.104	139.80589
B	249.772	0.053894	ppm	0.000205	0.4	662.18	0.053894 ppm	Y 361.104	107.78751
Ba	233.527	0.009891	ppm	0.000109	1.1	543.33	0.009891 ppm	Y 361.104	98.90863
Be	234.861	0.003747	ppm	0.000036	1.0	193.22	0.003747 ppm	Y 361.104	93.67007
Ca	315.887	0.091663	ppm	0.000490	0.5	3346.1	0.091663 ppm	Y 361.104	91.66346
Cd	228.802	0.004900	ppm	0.000228	4.6	44.348	0.004900 ppm	Y 361.104	98.00879
Co	231.160	0.009195	ppm	0.000400	4.3	88.992	0.009195 ppm	Y 361.104	91.95036
Cr	267.716	0.011226	ppm	0.000301	2.7	530.59	0.011226 ppm	Y 361.104	112.26194
Cu	324.754	0.009988	ppm	0.000070	0.7	524.99	0.009988 ppm	Y 361.104	99.88460
Fe	261.382	0.019629	ppm	0.000400	2.0	55.418	0.019629 ppm	Y 361.104	98.14572

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
K	766.491	0.10060	ppm	0.000596	0.6	2664.1	0.10060 ppm	Y 361.104	100.60390
Li	610.365	0.009090	ppm	0.000415	4.6	1806.8	0.009090 ppm	Y 361.104	90.90251
Mg	279.078	0.089624	ppm	0.000470	0.5	130.66	0.089624 ppm	Y 361.104	89.62395
Mn	293.305	0.009344	ppm	0.000210	2.2	193.39	0.009344 ppm	Y 361.104	93.44405
Mo	202.032	0.009936	ppm	0.000464	4.7	46.318	0.009936 ppm	Y 361.104	99.35867
Na	589.592	0.086588	ppm	0.001609	1.9	22285	0.086588 ppm	Y 361.104	86.58781
Ni	221.648	0.005083	ppm	0.000456	9.0	5.2400	0.005083 ppm	Y 361.104	101.66920
Pb	220.353	0.009212	ppm	0.000657	7.1	21.556	0.009212 ppm	Y 361.104	92.12273
Sb	217.582	0.007954	ppm	0.003486	43.8	1.5890	0.007954 ppm	Y 361.104	79.54462
Se	196.026	0.010509	ppm	0.006280	59.8	3.6073	0.010509 ppm	Y 361.104	105.09464
Si	251.611	0.12545	ppm	0.001707	1.4	353.82	0.12545 ppm	Y 361.104	125.44967
Sn	189.927	0.009307	ppm	0.001462	15.7	8.9803	0.009307 ppm	Y 361.104	93.07273
Sr	216.596	0.009515	ppm	0.000553	5.8	75.830	0.009515 ppm	Y 361.104	95.14958
Ti	322.284	0.010477	ppm	0.000158	1.5	248.04	0.010477 ppm	Y 361.104	104.77159
Tl	190.794	0.016345	ppm	0.000665	4.1	6.8308	0.016345 ppm	Y 361.104	163.44769R
V	289.164	0.009199	ppm	0.000231	2.5	98.561	0.009199 ppm	Y 361.104	91.98563
Zn	206.200	0.020119	ppm	0.000224	1.1	29.395	0.020119 ppm	Y 361.104	100.59608
Zr	257.147	0.013153	ppm	0.001266	9.6	231.35	0.013153 ppm	Y 361.104	131.53256

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0393	267261	898.996	0.3

CDL01 (CRI) 7/31/08, 11:04:51 PM Rack 1, Tube 43

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	850.11	851.07	844.99
Al	237.312	1.2891	1.3730	4.1430
As	188.980	8.1047	7.9661	10.335
B	249.772	36.501	33.813	30.561
Ba	233.527	18.041	19.671	12.266
Be	234.861	471.56	486.79	482.54
Ca	315.887	2453.3	2457.2	2456.3
Cd	228.802	87.296	87.096	91.315
Co	231.160	758.79	761.91	771.49
Cr	267.716	913.72	931.67	941.85
Cu	324.754	2300.7	2308.7	2321.3
Fe	261.382	8.8888	8.7882	11.955
K	766.491	-387.24	-356.04	-397.85
Li	610.365	1258.4	1254.2	1280.2
Mg	279.078	7.4980	9.2373	5.4925

El	Wavelen.	Replicates Intensity (c/s)		
Mn	293.305	536.39	534.93	535.30
Mo	202.032	-1.2899	-2.2490	-0.97522
Na	589.592	1399.4	1392.9	1389.5
Na	568.821	-537.18	-507.35	-517.57
Ni	221.648	149.78	153.99	152.35
Pb	220.353	207.14	207.44	204.70
Sb	217.582	59.402	61.693	59.630
Se	196.026	1.6795	3.5132	5.5334
Si	251.611	56.243	62.246	63.791
Sn	189.927	-0.20358	0.75351	0.75573
Sr	216.596	1.1385	2.9979	0.81842
Ti	322.284	123.14	123.64	125.27
Tl	190.794	12.194	10.450	11.335
V	289.164	1001.4	1005.3	1002.0
Y	361.104	273719	272932	273387
Zn	206.200	49.813	47.066	48.770
Zr	257.147	23.720	17.795	14.306

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.019552	ppm	0.000073	0.4	848.72	0.019552 ppm	Y 361.104	97.76225
Al	237.312	0.004736	ppm	0.002409	50.9	2.2684	0.004736 ppm	Y 361.104	-
As	188.980	0.025924	ppm	0.003384	13.1	8.8018	0.025924 ppm	Y 361.104	129.61809
B	249.772	0.002596	ppm	0.000243	9.4	33.625	0.002596 ppm	Y 361.104	-
Ba	233.527	0.000029u	ppm	0.000073	252.1	16.660	0.000029 ppm	Y 361.104	-
Be	234.861	0.009118	ppm	0.000147	1.6	480.30	0.009118 ppm	Y 361.104	91.18011
Ca	315.887	0.002786	ppm	0.000201	7.2	2455.6	0.002786 ppm	Y 361.104	-
Cd	228.802	0.009573	ppm	0.000253	2.6	88.569	0.009573 ppm	Y 361.104	95.72532
Co	231.160	0.094780	ppm	0.000843	0.9	764.06	0.094780 ppm	Y 361.104	94.78028
Cr	267.716	0.019970	ppm	0.000313	1.6	929.08	0.019970 ppm	Y 361.104	99.84927
Cu	324.754	0.048076	ppm	0.000221	0.5	2310.3	0.048076 ppm	Y 361.104	96.15112
Fe	261.382	0.000691u	ppm	0.000762	110.2	9.8772	0.000691 ppm	Y 361.104	-
K	766.491	0.003064	ppm	0.000696	22.7	-380.37	0.003064 ppm	Y 361.104	-
Li	610.365	-0.001063u	ppm	0.000261	24.5	1264.3	-0.001063 ppm	Y 361.104	-
Mg	279.078	-0.001362u	ppm	0.001383	101.6	7.4093	-0.001362 ppm	Y 361.104	-
Mn	293.305	0.027910	ppm	0.000041	0.1	535.54	0.027910 ppm	Y 361.104	93.03379
Mo	202.032	-0.000144u	ppm	0.000140	97.4	-1.5047	-0.000144 ppm	Y 361.104	-
Na	589.592	0.000252	ppm	0.000021	8.3	1394.0	0.000252 ppm	Y 361.104	-
Ni	221.648	0.076763	ppm	0.001033	1.3	152.04	0.076763 ppm	Y 361.104	95.95435
Pb	220.353	0.094190	ppm	0.000690	0.7	206.43	0.094190 ppm	Y 361.104	94.19012

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sb	217.582	0.11084	ppm	0.002213	2.0	60.242	0.11084 ppm	Y 361.104	92.36319
Se	196.026	0.010379	ppm	0.006821	65.7	3.5754	0.010379 ppm	Y 361.104	103.78975
Si	251.611	0.018928	ppm	0.001449	7.7	60.760	0.018928 ppm	Y 361.104	-
Sn	189.927	-0.000194u	ppm	0.000616	317.7	0.43522	-0.000194 ppm	Y 361.104	-
Sr	216.596	-0.000025u	ppm	0.000151	601.8	1.6516	-0.000025 ppm	Y 361.104	-
Ti	322.284	-0.000201u	ppm	0.000096	47.9	124.02	-0.000201 ppm	Y 361.104	-
Tl	190.794	0.023928	ppm	0.001553	6.5	11.326	0.023928 ppm	Y 361.104	119.64182
V	289.164	0.095636	ppm	0.000196	0.2	1002.9	0.095636 ppm	Y 361.104	95.63586
Zn	206.200	0.037875	ppm	0.001287	3.4	48.550	0.037875 ppm	Y 361.104	94.68674
Zr	257.147	-0.000164u	ppm	0.000298	181.6	18.607	-0.000164 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0630	273346	395.368	0.1

ICS-A (ICSA) **7/31/08, 11:08:07 PM** **Rack 1, Tube 44**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-38.444	-7.9178	-31.777
Al	237.312	341063	341797	339445
As	188.980	1.3119	-2.0335	-6.6313
B	249.772	277.71	306.16	301.94
Ba	233.527	189.51	191.49	189.87
Be	234.861	-2445.6	-2470.8	-2506.0
Ca	315.887	4576310	4577326	4549908
Cd	228.802	15.424	13.735	6.5104
Co	231.160	159.93	158.54	160.83
Cr	267.716	100.91	102.48	85.698
Cu	324.754	-926.85	-917.22	-924.21
Fe	261.382	433458	434938	432014
K	766.491	-102.56	-101.22	-107.77
Li	610.365	-9898.7	-10079	-10052
Mg	279.078	642982	646201	641701
Mn	293.305	8.3793	9.7653	35.046
Mo	202.032	-4.6162	-7.8543	-1.9102
Na	589.592	3218.3	3225.0	3230.2
Na	568.821	1019.4	1051.6	1030.5
Ni	221.648	3.6436	5.8233	3.0574
Pb	220.353	222.19	216.21	212.39
Sb	217.582	-31.190	-33.724	-33.435
Se	196.026	9.7296	7.0589	7.1300

El	Wavelen.	Replicates Intensity (c/s)		
Si	251.611	51.055	45.187	60.025
Sn	189.927	-0.062684	1.0947	0.21046
Sr	216.596	118.16	128.23	128.13
Ti	322.284	136.75	142.69	146.49
Tl	190.794	-16.587	-19.994	-17.612
V	289.164	97.389	79.145	86.396
Y	361.104	236591	238519	238763
Zn	206.200	-4.2781	-3.9100	-1.6001
Zr	257.147	143.44	143.20	153.73

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000207u	ppm	0.000360	174.4	-26.046	-0.000207 ppm	Y 361.104	-0.00021
Al	237.312	506.00	ppm	1.7851	0.4	340769	506.00 ppm	Y 361.104	-
As	188.980	-0.002716u	ppm	0.010152	373.8	-2.4510	-0.002716 ppm	Y 361.104	-0.00272
B	249.772	-0.039948	ppm	0.001253	3.1	295.27	-0.039948 ppm	Y 361.104	-0.03995
Ba	233.527	0.003292	ppm	0.000020	0.6	190.29	0.003292 ppm	Y 361.104	0.00329
Be	234.861	0.000123u	ppm	0.000568	462.5	-2474.1	0.000123 ppm	Y 361.104	0.00012
Ca	315.887	453.23	ppm	1.5435	0.3	4567848	453.23 ppm	Y 361.104	-
Cd	228.802	0.001475	ppm	0.000504	34.2	11.890	0.001475 ppm	Y 361.104	0.00147
Co	231.160	0.002360	ppm	0.000147	6.2	159.77	0.002360 ppm	Y 361.104	0.00236
Cr	267.716	0.001696	ppm	0.000204	12.0	96.364	0.001696 ppm	Y 361.104	0.00170
Cu	324.754	0.003516u	ppm	0.000106	3.0	-922.76	0.003516 ppm	Y 361.104	0.00352
Fe	261.382	183.51	ppm	0.61898	0.3	433470	183.51 ppm	Y 361.104	-
K	766.491	0.011923	ppm	0.000111	0.9	-103.85	0.011923 ppm	Y 361.104	0.01192
Li	610.365	-0.000173u	ppm	0.001810	1043.8	-10010	-0.000173 ppm	Y 361.104	-0.00017
Mg	279.078	475.13	ppm	1.7118	0.4	643628	475.13 ppm	Y 361.104	-
Mn	293.305	-0.000189u	ppm	0.000815	431.8	17.730	-0.000189 ppm	Y 361.104	-0.00019
Mo	202.032	-0.000836u	ppm	0.000627	75.0	-4.7936	-0.000836 ppm	Y 361.104	-0.00084
Na	589.592	0.007748	ppm	0.000025	0.3	3224.5	0.007748 ppm	Y 361.104	0.00775
Ni	221.648	0.004772	ppm	0.000709	14.9	4.1748	0.004772 ppm	Y 361.104	0.00477
Pb	220.353	-0.005783	ppm	0.002272	39.3	216.93	-0.005783 ppm	Y 361.104	-0.00578
Sb	217.582	-0.012008u	ppm	0.002433	20.3	-32.783	-0.012008 ppm	Y 361.104	-0.01201
Se	196.026	-0.002677	ppm	0.005385	201.2	7.9728	-0.002677 ppm	Y 361.104	-0.00268
Si	251.611	0.034868	ppm	0.002716	7.8	52.089	0.034868 ppm	Y 361.104	0.03487
Sn	189.927	-0.000232u	ppm	0.000673	290.4	0.41415	-0.000232 ppm	Y 361.104	-0.00023
Sr	216.596	-0.005970	ppm	0.000744	12.5	124.84	-0.005970 ppm	Y 361.104	-0.00597
Ti	322.284	0.001334	ppm	0.000424	31.8	141.97	0.001334 ppm	Y 361.104	0.00133
Tl	190.794	0.009109u	ppm	0.003114	34.2	-18.064	0.009109 ppm	Y 361.104	0.00911
V	289.164	-0.002115	ppm	0.000877	41.5	87.643	-0.002115 ppm	Y 361.104	-0.00211

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Zn	206.200	-0.000761u	ppm	0.001347	177.0	-3.2627	-0.000761 ppm	Y 361.104	-0.00076
Zr	257.147	0.002927	ppm	0.000377	12.9	146.79	0.002927 ppm	Y 361.104	0.00293

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.92538	237958	1189.743	0.5

ICS-AB (ICSAB) **7/31/08, 11:11:22 PM** **Rack 1, Tube 45**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	9442.5	9458.9	9467.3
Al	237.312	339057	341110	341934
As	188.980	38.740	34.249	40.417
B	249.772	306.32	307.66	206.74
Ba	233.527	25959	26153	26193
Be	234.861	24638	24857	24605
Ca	315.887	4568628	4588695	4588655
Cd	228.802	9491.9	9608.8	9513.9
Co	231.160	3741.4	3765.5	3750.0
Cr	267.716	21422	21641	21598
Cu	324.754	22835	22989	23017
Fe	261.382	432086	435549	435010
K	766.491	-100.42	-106.71	-102.37
Li	610.365	-9951.7	-10049	-9936.2
Mg	279.078	643850	645846	646946
Mn	293.305	8509.1	8560.1	8547.5
Mo	202.032	-3.9232	-3.1005	-8.3324
Na	589.592	4669.0	4696.0	4651.7
Na	568.821	997.36	1063.0	1063.5
Ni	221.648	1850.6	1863.9	1856.4
Pb	220.353	2251.6	2256.2	2249.8
Sb	217.582	315.37	322.85	317.83
Se	196.026	26.330	22.586	19.671
Si	251.611	83.108	91.039	92.546
Sn	189.927	-1.0869	-0.26529	-0.28615
Sr	216.596	124.94	128.94	126.01
Ti	322.284	154.30	138.37	149.37
Tl	190.794	33.071	35.343	33.525
V	289.164	4986.8	4996.7	5009.1
Y	361.104	236649	235518	236659
Zn	206.200	979.15	988.26	1001.6

El	Wavelen.	Replicates Intensity (c/s)		
Zr	257.147	154.87	157.41	165.88

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.21269	ppm	0.000283	0.1	9456.2	0.21269 ppm	Y 361.104	106.34397
Al	237.312	505.90	ppm	2.1986	0.4	340700	505.90 ppm	Y 361.104	101.17930
As	188.980	0.099611	ppm	0.008118	8.1	37.802	0.099611 ppm	Y 361.104	99.61126
B	249.772	-0.041728	ppm	0.004725	11.3	273.57	-0.041728 ppm	Y 361.104	-
Ba	233.527	0.48753	ppm	0.002345	0.5	26102	0.48753 ppm	Y 361.104	97.50565
Be	234.861	0.50905	ppm	0.002561	0.5	24700	0.50905 ppm	Y 361.104	101.80998
Ca	315.887	454.63	ppm	1.1493	0.3	4581993	454.63 ppm	Y 361.104	90.92650
Cd	228.802	1.0153	ppm	0.006612	0.7	9538.2	1.0153 ppm	Y 361.104	101.53345
Co	231.160	0.45867	ppm	0.001554	0.3	3752.3	0.45867 ppm	Y 361.104	91.73373
Cr	267.716	0.47263	ppm	0.002548	0.5	21554	0.47263 ppm	Y 361.104	94.52533
Cu	324.754	0.51254	ppm	0.002085	0.4	22947	0.51254 ppm	Y 361.104	102.50744
Fe	261.382	183.82	ppm	0.78894	0.4	434215	183.82 ppm	Y 361.104	91.91192
K	766.491	0.011945	ppm	0.000103	0.9	-103.17	0.011945 ppm	Y 361.104	-
Li	610.365	0.001040u	ppm	0.001135	109.1	-9978.8	0.001040 ppm	Y 361.104	-
Mg	279.078	476.55	ppm	1.1586	0.2	645548	476.55 ppm	Y 361.104	95.30989
Mn	293.305	0.46221	ppm	0.001443	0.3	8538.9	0.46221 ppm	Y 361.104	92.44241
Mo	202.032	-0.000922u	ppm	0.000593	64.3	-5.1187	-0.000922 ppm	Y 361.104	-
Na	589.592	-0.000453	ppm	0.000093	20.5	4672.2	-0.000453 ppm	Y 361.104	-
Ni	221.648	0.90682	ppm	0.003239	0.4	1856.9	0.90682 ppm	Y 361.104	90.68172
Pb	220.353	0.93003	ppm	0.001523	0.2	2252.5	0.93003 ppm	Y 361.104	93.00298
Sb	217.582	0.60475	ppm	0.006686	1.1	318.69	0.60475 ppm	Y 361.104	100.79231
Se	196.026	0.049494	ppm	0.011813	23.9	22.863	0.049494 ppm	Y 361.104	98.98778
Si	251.611	0.048477	ppm	0.001843	3.8	88.898	0.048477 ppm	Y 361.104	-
Sn	189.927	-0.001242u	ppm	0.000521	42.0	-0.54611	-0.001242 ppm	Y 361.104	-
Sr	216.596	-0.005812	ppm	0.000267	4.6	126.63	-0.005812 ppm	Y 361.104	-
Ti	322.284	0.001887	ppm	0.000704	37.3	147.35	0.001887 ppm	Y 361.104	-
Tl	190.794	0.099589	ppm	0.002142	2.2	33.980	0.099589 ppm	Y 361.104	99.58881
V	289.164	0.46918	ppm	0.001066	0.2	4997.5	0.46918 ppm	Y 361.104	93.83555
Zn	206.200	0.91968	ppm	0.010470	1.1	989.67	0.91968 ppm	Y 361.104	91.96845
Zr	257.147	0.003710	ppm	0.000361	9.7	159.39	0.003710 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.91884	236276	655.799	0.3

CCV (CCV) 7/31/08, 11:14:38 PM Rack 1, Tube 46

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	45543	45655	45767
Al	237.312	3454.5	3483.3	3488.8
As	188.980	790.99	794.97	793.77
B	249.772	24426	24748	24842
Ba	233.527	266352	268127	268974
Be	234.861	106335	107255	107679
Ca	315.887	494185	488529	495599
Cd	228.802	47504	47723	47856
Co	231.160	38495	38732	38871
Cr	267.716	221965	223897	224733
Cu	324.754	231238	232335	234393
Fe	261.382	11456	11548	11574
K	766.491	1619904	1620302	1626390
Li	610.365	258751	260315	260614
Mg	279.078	63370	63820	63984
Mn	293.305	89620	90323	90644
Mo	202.032	4791.9	4837.7	4850.9
Na	589.592	11595238	11534932	11582844
Na	568.821	16560	16668	16648
Ni	221.648	10067	10126	10162
Pb	220.353	10641	10683	10706
Sb	217.582	592.03	592.61	594.03
Se	196.026	581.55	576.31	579.34
Si	251.611	14807	15243	15612
Sn	189.927	4443.5	4492.5	4511.4
Sr	216.596	38013	38678	38913
Ti	322.284	58570	59070	59297
Tl	190.794	1089.5	1102.1	1105.6
V	289.164	20621	20758	20843
Y	361.104	255784	256139	256824
Zn	206.200	5383.5	5424.0	5429.9
Zr	257.147	79702	80257	79834

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.0080	ppm	0.002512	0.2	45655	1.0080 ppm	Y 361.104	100.80372
Al	237.312	5.1335	ppm	0.027387	0.5	3475.5	5.1335 ppm	Y 361.104	102.67035
As	188.980	2.0210	ppm	0.005206	0.3	793.24	2.0210 ppm	Y 361.104	101.05245
B	249.772	2.0129	ppm	0.017794	0.9	24672	2.0129 ppm	Y 361.104	100.64587

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	5.0058	ppm	0.025008	0.5	267818	5.0058 ppm	Y 361.104	100.11542
Be	234.861	2.0067	ppm	0.012865	0.6	107090	2.0067 ppm	Y 361.104	100.33271
Ca	315.887	48.713	ppm	0.37149	0.8	492771	48.713 ppm	Y 361.104	97.42601
Cd	228.802	5.0731	ppm	0.018953	0.4	47694	5.0731 ppm	Y 361.104	101.46187
Co	231.160	4.9284	ppm	0.024232	0.5	38699	4.9284 ppm	Y 361.104	98.56762
Cr	267.716	4.9055	ppm	0.031160	0.6	223532	4.9055 ppm	Y 361.104	98.10947
Cu	324.754	4.9594	ppm	0.034140	0.7	232656	4.9594 ppm	Y 361.104	99.18701
Fe	261.382	4.9078	ppm	0.026331	0.5	11526	4.9078 ppm	Y 361.104	98.15556
K	766.491	51.988	ppm	0.11648	0.2	1622199	51.988 ppm	Y 361.104	103.97646
Li	610.365	4.8420	ppm	0.018649	0.4	259894	4.8420 ppm	Y 361.104	96.84003
Mg	279.078	47.036	ppm	0.23486	0.5	63725	47.036 ppm	Y 361.104	94.07239
Mn	293.305	4.8933	ppm	0.028408	0.6	90196	4.8933 ppm	Y 361.104	97.86630
Mo	202.032	1.0172	ppm	0.006525	0.6	4826.8	1.0172 ppm	Y 361.104	101.72417
Na	589.592	47.829	ppm	0.13207	0.3	11571005	47.829 ppm	Y 361.104	95.65801
Ni	221.648	4.9208	ppm	0.023341	0.5	10118	4.9208 ppm	Y 361.104	98.41669
Pb	220.353	4.9095	ppm	0.015147	0.3	10676	4.9095 ppm	Y 361.104	98.19032
Sb	217.582	1.0478	ppm	0.001807	0.2	592.89	1.0478 ppm	Y 361.104	104.77699
Se	196.026	2.0418	ppm	0.009301	0.5	579.07	2.0418 ppm	Y 361.104	102.08846
Si	251.611	5.5312	ppm	0.14644	2.6	15221	5.5312 ppm	Y 361.104	110.62443Q
Sn	189.927	4.9854	ppm	0.039009	0.8	4482.5	4.9854 ppm	Y 361.104	99.70761
Sr	216.596	4.9552	ppm	0.060025	1.2	38535	4.9552 ppm	Y 361.104	99.10376
Ti	322.284	5.0761	ppm	0.032054	0.6	58979	5.0761 ppm	Y 361.104	101.52294
Tl	190.794	1.9465	ppm	0.015111	0.8	1099.1	1.9465 ppm	Y 361.104	97.32381
V	289.164	1.9977	ppm	0.010671	0.5	20741	1.9977 ppm	Y 361.104	99.88386
Zn	206.200	5.0055	ppm	0.023426	0.5	5412.5	5.0055 ppm	Y 361.104	100.11067
Zr	257.147	5.0051	ppm	0.018169	0.4	79931	5.0051 ppm	Y 361.104	100.10247

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.99651	256249	528.774	0.2

BLA01 (CCB) 7/31/08, 11:17:55 PM Rack 1, Tube 47

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-10.587	-17.295	-19.951
Al	237.312	-0.78579	-0.20492	-3.9068
As	188.980	0.69575	-2.5665	-0.78176
B	249.772	95.204	91.838	73.804
Ba	233.527	20.981	17.443	19.526
Be	234.861	-5.8471	-5.8283	-4.7792
Ca	315.887	2358.9	2364.5	2363.3

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	0.15164	0.23755	2.3282
Co	231.160	17.752	13.358	11.829
Cr	267.716	47.144	52.572	58.964
Cu	324.754	57.443	68.043	64.069
Fe	261.382	6.9793	14.124	6.6690
K	766.491	-365.99	-350.06	-385.02
Li	610.365	1326.2	1333.9	1311.5
Mg	279.078	9.5870	11.941	8.3375
Mn	293.305	21.668	18.791	10.015
Mo	202.032	3.7937	0.99580	-0.85319
Na	589.592	1285.2	1316.0	1293.3
Na	568.821	-535.46	-531.70	-495.62
Ni	221.648	-4.8541	-3.7697	-3.5931
Pb	220.353	-5.2919	2.7646	-0.50911
Sb	217.582	-3.3972	-7.0425	-0.78903
Se	196.026	0.55205	2.1167	-1.9138
Si	251.611	46.851	52.989	52.357
Sn	189.927	0.75643	0.59946	0.56467
Sr	216.596	-3.4252	3.0942	0.36215
Ti	322.284	132.61	125.74	125.03
Tl	190.794	0.13566	-1.6400	-0.26793
V	289.164	9.4889	3.8177	-6.9750
Y	361.104	270780	270984	272231
Zn	206.200	7.1235	7.0179	7.2272
Zr	257.147	49.239	36.434	41.828

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000130	ppm	0.000108	83.2	-15.944	0.000130 ppm	Y 361.104	0.00013
Al	237.312	-0.001013u	ppm	0.002954	291.5	-1.6325	-0.001013 ppm	Y 361.104	-0.00101
As	188.980	0.001272u	ppm	0.004158	326.9	-0.88417	0.001272 ppm	Y 361.104	0.00127
B	249.772	0.006944	ppm	0.000939	13.5	86.949	0.006944 ppm	Y 361.104	0.00694
Ba	233.527	0.000098	ppm	0.000033	33.9	19.317	0.000098 ppm	Y 361.104	0.00010
Be	234.861	0.000021	ppm	0.000011	54.4	-5.4849	0.000021 ppm	Y 361.104	0.00002
Ca	315.887	-0.006044u	ppm	0.000291	4.8	2362.2	-0.006044 ppm	Y 361.104	-0.00604
Cd	228.802	0.000300	ppm	0.000131	43.7	0.90580	0.000300 ppm	Y 361.104	0.00030
Co	231.160	-0.000289u	ppm	0.000392	135.7	14.313	-0.000289 ppm	Y 361.104	-0.00029
Cr	267.716	0.000742	ppm	0.000130	17.5	52.893	0.000742 ppm	Y 361.104	0.00074
Cu	324.754	0.000144	ppm	0.000114	79.5	63.185	0.000144 ppm	Y 361.104	0.00014
Fe	261.382	0.000024u	ppm	0.001785	7517.7	9.2575	0.000024 ppm	Y 361.104	0.00002

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
K	766.491	0.003491	ppm	0.000561	16.1	-367.02	0.003491 ppm	Y 361.104	0.00349
Li	610.365	0.000043u	ppm	0.000212	488.4	1323.8	0.000043 ppm	Y 361.104	0.00004
Mg	279.078	0.000519u	ppm	0.001351	260.4	9.9552	0.000519 ppm	Y 361.104	0.00052
Mn	293.305	-0.000238u	ppm	0.000329	138.5	16.824	-0.000238 ppm	Y 361.104	-0.00024
Mo	202.032	0.000451u	ppm	0.000493	109.4	1.3121	0.000451 ppm	Y 361.104	0.00045
Na	589.592	-0.000147u	ppm	0.000066	45.2	1298.2	-0.000147 ppm	Y 361.104	-0.00015
Ni	221.648	0.000758	ppm	0.000332	43.8	-4.0723	0.000758 ppm	Y 361.104	0.00076
Pb	220.353	-0.001182u	ppm	0.001862	157.5	-1.0121	-0.001182 ppm	Y 361.104	-0.00118
Sb	217.582	-0.001404u	ppm	0.005508	392.4	-3.7429	-0.001404 ppm	Y 361.104	-0.00140
Se	196.026	-0.001354u	ppm	0.007190	531.2	0.25165	-0.001354 ppm	Y 361.104	-0.00135
Si	251.611	0.015275	ppm	0.001227	8.0	50.732	0.015275 ppm	Y 361.104	0.01528
Sn	189.927	0.000031u	ppm	0.000114	363.6	0.64018	0.000031 ppm	Y 361.104	0.00003
Sr	216.596	-0.000234u	ppm	0.000421	179.9	0.010386	-0.000234 ppm	Y 361.104	-0.00023
Ti	322.284	0.000118u	ppm	0.000361	306.2	127.79	0.000118 ppm	Y 361.104	0.00012
Tl	190.794	0.003149	ppm	0.001658	52.7	-0.59077	0.003149 ppm	Y 361.104	0.00315
V	289.164	-0.000048u	ppm	0.000799	1650.6	2.1105	-0.000048 ppm	Y 361.104	-0.00005
Zn	206.200	-0.000528u	ppm	0.000097	18.4	7.1228	-0.000528 ppm	Y 361.104	-0.00053
Zr	257.147	0.001333	ppm	0.000403	30.2	42.500	0.001333 ppm	Y 361.104	0.00133

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0552	271332	785.777	0.3

Q2102075 7-30-08 1X (Samp) **7/31/08, 11:21:12 PM** **Rack 1, Tube 48**
Weight: 1 Volume: 1 Dilution: 1

7-30 prep
7-31 run
JPK

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	34.979	18.945	24.895
Al	237.312	24.708	28.119	28.046
As	188.980	6.1185	5.8103	6.3337
B	249.772	336.37	331.91	326.51
Ba	233.527	71.944	69.589	77.027
Be	234.861	19.724	[illegible]	22.141
Ca	315.887	3271.0	3264.8	3264.6
Cd	228.802	6.6659	8.5298	12.938
Co	231.160	29.026	33.317	[illegible]
Cr	267.716	199.86	198.46	202.36
Cu	324.754	285.31	272.40	258.75
Fe	261.382	35.702	36.918	32.585
K	766.491	1498.4	1507.3	1494.7
Li	610.365	1501.5	1456.3	1445.0

Analysis Begun

Logged In Analyst: Heritage
Spectrometer Model: FIMS-400, S/N B050-9560
Technique: AA FIMS-MHS
Autosampler Model: AS-90

COPY

Sample Information File: C:\data-AA\Heritage\Sample Information\HG8-1-08.sif
Batch ID: 008575
Results Data Set: HG8-1-08
Results Library: C:\data-AA\Heritage\Results\Results.mdb

Sequence No.: 1
Sample ID: BLA01
Analyst:
Initial Sample Wt:
Dilution:

H2so4 EMD 47050 ICV/LCS Leeman 861301
HNO3 fisher 1107030 CCV 15287
KMN04 REDBIRd 4706254
K2S208 fisher 064731
NH2CL HCL fisher 071579
Hotblock 95C

Mercury
JO-1016
8/1/08
FIMS 377

Replicate Data: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCor Signal
1		[0.00]	0.0002

Auto-zero performed.

Sequence No.: 2
Sample ID: 1
Analyst:
Initial Sample Wt:
Dilution:

A818871-877
TCLP

Autosampler Location: 2
Date Collected: 8/1/2008 11:27:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

MDLs

Replicate Data: 1

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00020]	0.0013	0.0072	0.0015	11:27:58	Yes

Standard number 1 applied. [0.00020]
Correlation Coef.: 1.000000 Slope: 6.45895 Intercept: 0.00000

Sequence No.: 3
Sample ID: 2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 8/1/2008 11:28:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 2

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00050]	0.0033	0.0165	0.0036	11:29:10	Yes

Standard number 2 applied. [0.00050]
Correlation Coef.: 0.999877 Slope: 6.70205 Intercept: -0.00002

Sequence No.: 4
Sample ID: 3
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 8/1/2008 11:29:29 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 3

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.0010]	0.0064	0.0310	0.0067	11:30:22	Yes

Standard number 3 applied. [0.0010]
Correlation Coef.: 0.999750 Slope: 6.44942 Intercept: 0.00003

Sequence No.: 5
Sample ID: 4
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 8/1/2008 11:30:42 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 4

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.0020]	0.0156	0.0747	0.0158	11:31:36	Yes

Standard number 4 applied. [0.0020]
Correlation Coef.: 0.995910 Slope: 7.75962 Intercept: -0.00041

Sequence No.: 6
Sample ID: 5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 8/1/2008 11:31:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 5

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.0030]	0.0209	0.0982	0.0211	11:32:51	Yes

Standard number 5 applied. [0.0030]
Correlation Coef.: 0.996484 Slope: 7.20914 Intercept: -0.00013

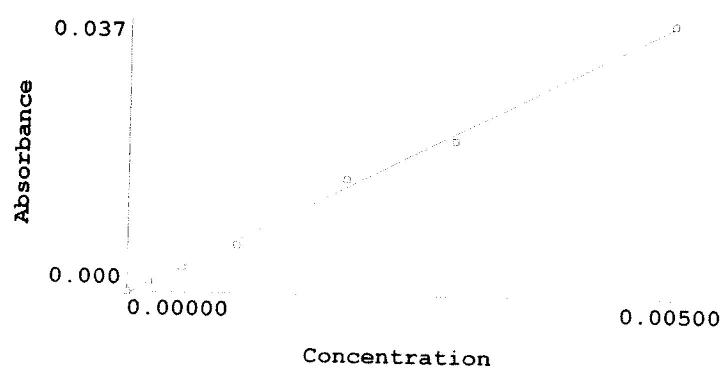
Sequence No.: 7
Sample ID: 6
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 8/1/2008 11:33:11 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 6

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.0050]	0.0370	0.1721	0.0373	11:34:06	Yes

Standard number 6 applied. [0.0050]
Correlation Coef.: 0.998675 Slope: 7.39638 Intercept: -0.00028



Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. mg/L	Calculated Conc. mg/L	Standard Deviation	%RSD
BLA01	0.0000	0	0.000038	----	----
1	0.0013	0.00020	0.000213	----	----
2	0.0033	0.00050	0.000491	----	----
3	0.0064	0.0010	0.000908	----	----
4	0.0156	0.0020	0.002145	----	----
5	0.0209	0.0030	0.002861	----	----
6	0.0370	0.0050	0.005044	----	----

Correlation Coef.: 0.998675 Slope: 7.39638 Intercept: -0.00028

Sequence No.: 8
Sample ID: BLA01
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 8/1/2008 11:34:28 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000035	0.000035	-0.0000	-0.0003	0.0002	11:35:20	Yes

Reagent blank performed.

Sequence No.: 9
Sample ID: ICV-HG
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 9
Date Collected: 8/1/2008 11:35:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001834	0.001834	0.0133	0.0589	0.0135	11:36:30	Yes

QC value within limits for Hg 253.7 Recovery = 91.70%
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: BLA01-HG
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 8/1/2008 11:36:49 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000039	0.000039	0.0000	0.0008	0.0002	11:37:41	Yes

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCV-HG
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 8
Date Collected: 8/1/2008 11:37:59 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.002960	0.002960	0.0216	0.0961	0.0219	11:38:55	Yes

QC value within limits for Hg 253.7 Recovery = 98.66%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: BLA01-HG
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 8/1/2008 11:39:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000047	0.000047	0.0001	0.0019	0.0003	11:40:08	Yes

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 13
Sample ID: CDL-HG
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 2
Date Collected: 8/1/2008 11:40:27 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CDL-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000234	0.000234	0.0015	0.0071	0.0017	11:41:20	Yes

QC value within limits for Hg 253.7 Recovery = 117.18%
All analyte(s) passed QC.

Sequence No.: 14
Sample ID: Sample095 LCS G2102902
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 95
Date Collected: 8/1/2008 11:41:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Sample095 B-3cm L 8/1/08

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001807	0.001807	0.0133	0.0595	0.0136	11:42:30	Yes

Sequence No.: 15
Sample ID: Sample096
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 96
Date Collected: 8/1/2008 11:42:48 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Sample096 Blank G2102903

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000004	0.000004	0.0000	0.0005	0.0002	11:43:40	Yes

Sequence No.: 16
Sample ID: 0.1 MDL 1
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 10
Date Collected: 8/1/2008 11:43:58 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 0.1 MDL 1

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000093	0.000093	0.0007	0.0030	0.0009	11:44:50	Yes

Sequence No.: 17
Sample ID: 0.1 MDL 2
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 11
Date Collected: 8/1/2008 11:45:09 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 0.1 MDL 2

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000089	0.000089	0.0006	0.0022	0.0009	11:46:02	Yes

Sequence No.: 18
Autosampler Location: 12

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000099	0.000099	0.0007	0.0045	0.0010	11:53:30	Yes

Sequence No.: 24
Sample ID: CCV-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 8/1/2008 11:53:48 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.002937	0.002937	0.0217	0.0972	0.0219	11:54:43	Yes

97.6

Sequence No.: 25
Sample ID: BLA01-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 8/1/2008 11:55:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000002	0.000002	-0.0000	0.0009	0.0002	11:55:57	Yes

<0.00020

Sequence No.: 26
Sample ID: Q2102671 LCS- HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 18
Date Collected: 8/1/2008 11:56:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102671 LCS- HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.002210	0.002210	0.0163	0.0718	0.0166	11:57:07	Yes

110.5

Sequence No.: 27
Sample ID: Q2102672 BLA02-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 19
Date Collected: 8/1/2008 11:57:26 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102672 BLA02-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000010	-0.000010	-0.0001	-0.0002	0.0001	11:58:17	Yes

<0.00020

Sequence No.: 28
Sample ID: A818877 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 8/1/2008 11:58:36 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818877 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000019	-0.000019	-0.0002	-0.0009	0.0001	11:59:29	Yes

BDL

Sequence No.: 29
Sample ID: Q2102673 TMS-HG 4:40

Autosampler Location: 21
Date Collected: 8/1/2008 11:59:47 AM

Analyst:
Initial Sample Wt: 877
Dilution:

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102673 TMS-HG 4:40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.000935	0.000935	0.0069	0.0292	0.0071	12:00:40	Yes	93.5

Sequence No.: 30
Sample ID: Q2102674 TMSD-HG 4:40
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 22
Date Collected: 8/1/2008 12:00:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102674 TMSD-HG 4:40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.000924	0.000924	0.0068	0.0297	0.0070	12:01:52	Yes	92.4

Sequence No.: 31
Sample ID: CCV-HG 877
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 8/1/2008 12:02:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.002925	0.002925	0.0216	0.0955	0.0218	12:03:06	Yes	97.3

Sequence No.: 32
Sample ID: BLA01-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 8/1/2008 12:03:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.000003	0.000003	-0.0000	0.0011	0.0002	12:04:20	Yes	<0.00020

Sequence No.: 33
Sample ID: A818871 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 23
Date Collected: 8/1/2008 12:04:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818871 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.000004	0.000004	0.0000	0.0004	0.0002	12:05:32	Yes	BDL

Sequence No.: 34
Sample ID: Q2102659 MS03-HG 4:40
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 24
Date Collected: 8/1/2008 12:05:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102659 MS03-HG 4:40

Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak

#	mg/L	mg/L	Signal	Area	Height		Stored
1	0.001630	0.001630	0.0120	0.0530	0.0123	12:06:44	Yes

81.5

Sequence No.: 35
Sample ID: Q2102660 MSD03-HG 4:40
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 25
Date Collected: 8/1/2008 12:07:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102660 MSD03-HG 4:40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001527	0.001527	0.0113	0.0496	0.0115	12:07:58	Yes

76.3

Sequence No.: 36
Sample ID: A818872 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 26
Date Collected: 8/1/2008 12:08:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818872 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000008	-0.000008	-0.0001	-0.0004	0.0002	12:09:12	Yes

BDL

Sequence No.: 37
Sample ID: Q2102661 MS03 4:40 HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 27
Date Collected: 8/1/2008 12:09:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102661 MS03 4:40 HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001443	0.001443	0.0106	0.0463	0.0109	12:10:26	Yes

72

Sequence No.: 38
Sample ID: Q2102662 MSD03- HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 28
Date Collected: 8/1/2008 12:10:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102662 MSD03- HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001439	0.001439	0.0106	0.0467	0.0109	12:11:41	Yes

72

Sequence No.: 39
Sample ID: A818873 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 29
Date Collected: 8/1/2008 12:12:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818873 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000005	-0.000005	-0.0001	0.0001	0.0002	12:12:56	Yes

BDL

Sequence No.: 40
Sample ID: A818874 4:40 TCLP
Analyst:

Autosampler Location: 30
Date Collected: 8/1/2008 12:13:17 PM
Data Type: Original

Initial Sample Wt:
Dilution:

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818874 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000014	-0.000014	-0.0001	-0.0014	0.0001	12:14:12	Yes

Sequence No.: 41
Sample ID: A818875 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 31
Date Collected: 8/1/2008 12:14:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818875 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	-0.000012	-0.000012	-0.0001	-0.0006	0.0001	12:15:28	Yes	BDL

Sequence No.: 42
Sample ID: A818876 4:40 TCLP
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 32
Date Collected: 8/1/2008 12:15:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: A818876 4:40 TCLP

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	-0.000014	-0.000014	-0.0001	-0.0010	0.0001	12:16:41	Yes	BDL

Sequence No.: 43
Sample ID: CCV-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 8/1/2008 12:16:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.002958	0.002958	0.0219	0.0965	0.0221	12:17:54	Yes	98.3

Sequence No.: 44
Sample ID: BLA01-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 8/1/2008 12:18:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: BLA01-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored	
1	0.000006	0.000006	0.0000	0.0004	0.0003	12:19:08	Yes	<0.00020

Sequence No.: 45
Sample ID: Q2102647 LCS-HG
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 33
Date Collected: 8/1/2008 12:19:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: Q2102647 LCS-HG

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

APPENDIX

G

Priority Pollutant Scans

- CERTIFICATE OF ANALYSIS -

Report Date: *28-Sep-10*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	10011501-001	**Your Sample ID:**	ICK
Your Project #		**Collection Date:**	09/15/10 06:00
Your Project Name:		**Collected By:**	Client
Sample Type:	Sludge	**Receipt Date:**	09/16/10 13:30

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 100	ug/kg		100	74-87-3	9/21/2010	rbische
Vinyl chloride	< 100	ug/kg		100	75-01-4	9/21/2010	rbische
Bromomethane	< 100	ug/kg		100	74-83-9	9/21/2010	rbische
Chloroethane	< 100	ug/kg		100	75-00-3	9/21/2010	rbische
Trichlorofluoromethane	< 100	ug/kg		100	75-69-4	9/21/2010	rbische
1,1-Dichloroethene	< 50	ug/kg		50	75-35-4	9/21/2010	rbische
Carbon disulfide	< 50	ug/kg		50	75-15-0	9/21/2010	rbische
Methylene chloride	< 50	ug/kg		50	75-09-2	9/21/2010	rbische
trans-1,2-Dichloroethene	< 50	ug/kg		50	156-60-5	9/21/2010	rbische
1,1-Dichloroethane	< 50	ug/kg		50	75-34-3	9/21/2010	rbische
Chloroform	< 50	ug/kg		50	67-66-3	9/21/2010	rbische
1,1,1-Trichloroethane	< 50	ug/kg		50	71-55-6	9/21/2010	rbische
Carbon tetrachloride	< 50	ug/kg		50	56-23-5	9/21/2010	rbische
Benzene	< 50	ug/kg		50	71-43-2	9/21/2010	rbische
1,2-Dichloroethane	< 50	ug/kg		50	107-06-2	9/21/2010	rbische
Trichloroethene	< 50	ug/kg		50	79-01-6	9/21/2010	rbische
1,2-Dichloropropane	< 50	ug/kg		50	78-87-5	9/21/2010	rbische
Bromodichloromethane	< 50	ug/kg		50	75-27-4	9/21/2010	rbische
2-Chloroethyl vinyl ether	< 200	ug/kg		200	110-75-8	9/21/2010	rbische
cis-1,3-Dichloropropene	< 50	ug/kg		50	10061-01-5	9/21/2010	rbische
Toluene	1100	ug/kg		50	108-88-3	9/21/2010	rbische
trans-1,3-Dichloropropene	< 50	ug/kg		50	10061-02-6	9/21/2010	rbische
1,1,2-Trichloroethane	< 50	ug/kg		50	79-00-5	9/21/2010	rbische
Tetrachloroethene	< 50	ug/kg		50	127-18-4	9/21/2010	rbische
Dibromochloromethane	< 50	ug/kg		50	124-48-1	9/21/2010	rbische
Chlorobenzene	< 50	ug/kg		50	108-90-7	9/21/2010	rbische
Ethylbenzene	< 50	ug/kg		50	100-41-4	9/21/2010	rbische
Bromoform	< 50	ug/kg		50	75-25-2	9/21/2010	rbische
1,1,2,2-Tetrachloroethane	< 50	ug/kg		50	79-34-5	9/21/2010	rbische
1,3-Dichlorobenzene	< 50	ug/kg		50	541-73-1	9/21/2010	rbische
1,4-Dichlorobenzene	< 50	ug/kg		50	106-46-7	9/21/2010	rbische
1,2-Dichlorobenzene	< 50	ug/kg		50	95-50-1	9/21/2010	rbische
Dibromofluoromethane (Surr)	101	%			1868-53-7	9/21/2010	rbische
Toluene-d8 (Surr)	97	%			2037-26-5	9/21/2010	rbische
4-Bromofluorobenzene (Surr)	98	%			460-00-4	9/21/2010	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					9/21/2010	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Base/Neutral/Acid Extractables, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 1000	ug/kg		1000	62-75-9	9/23/2010	dmacdonald
Bis(2-chloroethyl) ether	< 1000	ug/kg		1000	111-44-4	9/23/2010	dmacdonald
2-Chlorophenol	< 1000	ug/kg		1000	95-57-8	9/23/2010	dmacdonald
Phenol	1300	ug/kg		1000	108-95-2	9/23/2010	dmacdonald
1,3-Dichlorobenzene	< 1000	ug/kg		1000	541-73-1	9/23/2010	dmacdonald
1,4-Dichlorobenzene	< 1000	ug/kg		1000	106-46-7	9/23/2010	dmacdonald
1,2-Dichlorobenzene	< 1000	ug/kg		1000	95-50-1	9/23/2010	dmacdonald
Bis(2-chloroisopropyl) ether	< 1000	ug/kg		1000	108-60-1	9/23/2010	dmacdonald
Hexachloroethane	< 1000	ug/kg		1000	67-72-1	9/23/2010	dmacdonald
N-Nitrosodi-n-propylamine	< 1000	ug/kg		1000	621-64-7	9/23/2010	dmacdonald
Nitrobenzene	< 1000	ug/kg		1000	98-95-3	9/23/2010	dmacdonald
Isophorone	< 1000	ug/kg		1000	78-59-1	9/23/2010	dmacdonald
2-Nitrophenol	< 1000	ug/kg		1000	88-75-5	9/23/2010	dmacdonald
2,4-Dimethylphenol	< 1000	ug/kg		1000	105-67-9	9/23/2010	dmacdonald
Bis(2-chloroethoxy) methane	< 1000	ug/kg		1000	111-91-1	9/23/2010	dmacdonald
2,4-Dichlorophenol	< 1000	ug/kg		1000	120-83-2	9/23/2010	dmacdonald
1,2,4-Trichlorobenzene	< 1000	ug/kg		1000	120-82-1	9/23/2010	dmacdonald
Naphthalene	< 1000	ug/kg		1000	91-20-3	9/23/2010	dmacdonald
Hexachlorobutadiene	< 1000	ug/kg		1000	87-68-3	9/23/2010	dmacdonald
4-Chloro-3-methylphenol	< 1000	ug/kg		1000	59-50-7	9/23/2010	dmacdonald
Hexachlorocyclopentadiene	< 2000	ug/kg		2000	77-47-4	9/23/2010	dmacdonald
2,4,6-Trichlorophenol	< 1000	ug/kg		1000	88-06-2	9/23/2010	dmacdonald
2-Chloronaphthalene	< 1000	ug/kg		1000	91-58-7	9/23/2010	dmacdonald
Dimethyl phthalate	< 1000	ug/kg		1000	131-11-3	9/23/2010	dmacdonald
2,6-Dinitrotoluene	< 1000	ug/kg		1000	606-20-2	9/23/2010	dmacdonald
Acenaphthylene	< 1000	ug/kg		1000	208-96-8	9/23/2010	dmacdonald
Acenaphthene	< 1000	ug/kg		1000	83-32-9	9/23/2010	dmacdonald
2,4-Dinitrophenol	< 5000	ug/kg		5000	51-28-5	9/23/2010	dmacdonald
4-Nitrophenol	< 2000	ug/kg		2000	100-02-7	9/23/2010	dmacdonald
2,4-Dinitrotoluene	< 1000	ug/kg		1000	121-14-2	9/23/2010	dmacdonald
Diethyl phthalate	< 1000	ug/kg		1000	84-66-2	9/23/2010	dmacdonald
Fluorene	< 1000	ug/kg		1000	86-73-7	9/23/2010	dmacdonald
4-Chlorophenyl phenyl ether	< 1000	ug/kg		1000	7005-72-3	9/23/2010	dmacdonald
4,6-Dinitro-2-methylphenol	< 2000	ug/kg		2000	534-52-1	9/23/2010	dmacdonald
N-Nitrosodiphenylamine	< 1000	ug/kg		1000	86-30-6	9/23/2010	dmacdonald
4-Bromophenyl phenyl ether	< 1000	ug/kg		1000	101-55-3	9/23/2010	dmacdonald
Hexachlorobenzene	< 1000	ug/kg		1000	118-74-1	9/23/2010	dmacdonald
Pentachlorophenol	< 2000	ug/kg		2000	87-86-5	9/23/2010	dmacdonald
Phenanthrene	< 1000	ug/kg		1000	85-01-8	9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Base/Neutral/Acid Extractables, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Anthracene	< 1000	ug/kg		1000	120-12-7	9/23/2010	dmacdonald
Di-n-butyl phthalate	< 1000	ug/kg		1000	84-74-2	9/23/2010	dmacdonald
Fluoranthene	< 1000	ug/kg		1000	206-44-0	9/23/2010	dmacdonald
Benzidine	< 5000	ug/kg		5000	92-87-5	9/23/2010	dmacdonald
Pyrene	< 1000	ug/kg		1000	129-00-0	9/23/2010	dmacdonald
Butyl benzyl phthalate	< 1000	ug/kg	PQL	1000	85-68-7	9/23/2010	dmacdonald
Benzo[a]anthracene	< 1000	ug/kg		1000	56-55-3	9/23/2010	dmacdonald
3,3'-Dichlorobenzidine	< 1000	ug/kg		1000	91-94-1	9/23/2010	dmacdonald
Chrysene	< 1000	ug/kg		1000	218-01-9	9/23/2010	dmacdonald
Bis(2-ethylhexyl) phthalate	3000	ug/kg	J	1000	117-81-7	9/23/2010	dmacdonald
Di-n-octylphthalate	< 1000	ug/kg		1000	117-84-0	9/23/2010	dmacdonald
Benzo[b]fluoranthene	< 1000	ug/kg		1000	205-99-2	9/23/2010	dmacdonald
Benzo[k]fluoranthene	< 1000	ug/kg		1000	207-08-9	9/23/2010	dmacdonald
Benzo[a]pyrene	< 1000	ug/kg		1000	50-32-8	9/23/2010	dmacdonald
Indeno[1,2,3-cd]pyrene	< 1000	ug/kg		1000	193-39-5	9/23/2010	dmacdonald
Dibenzo[a,h]anthracene	< 2000	ug/kg		2000	53-70-3	9/23/2010	dmacdonald
Benzo[g,h,i]perylene	< 1000	ug/kg		1000	191-24-2	9/23/2010	dmacdonald
2-Fluorophenol (Surr)	54	%			367-12-4	9/23/2010	dmacdonald
Phenol-d6 (Surr)	70	%			4165-62-2	9/23/2010	dmacdonald
Nitrobenzene-d5 (Surr)	59	%			4165-60-0	9/23/2010	dmacdonald
2-Fluorobiphenyl (Surr)	63	%			321-60-8	9/23/2010	dmacdonald
2,4,6-Tribromophenol (Surr)	41	%			118-79-6	9/23/2010	dmacdonald
Terphenyl-d14 (Surr)	67	%			1718-51-0	9/23/2010	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.0033	mg/kg		0.0033	309-00-2	9/23/2010	mglasheen
alpha-BHC	< 0.0033	mg/kg		0.0033	319-84-6	9/23/2010	mglasheen
beta-BHC	< 0.0033	mg/kg		0.0033	319-85-7	9/23/2010	mglasheen
gamma-BHC (Lindane)	< 0.0033	mg/kg		0.0033	58-89-9	9/23/2010	mglasheen
delta-BHC	< 0.0033	mg/kg		0.0033	319-86-8	9/23/2010	mglasheen
4,4'-DDD	< 0.0033	mg/kg		0.0033	72-54-8	9/23/2010	mglasheen
4,4'-DDE	< 0.0033	mg/kg		0.0033	72-55-9	9/23/2010	mglasheen
4,4'-DDT	< 0.0033	mg/kg		0.0033	50-29-3	9/23/2010	mglasheen
Dieldrin	< 0.0033	mg/kg		0.0033	60-57-1	9/23/2010	mglasheen
Endosulfan I	< 0.0033	mg/kg		0.0033	959-98-8	9/23/2010	mglasheen
Endosulfan II	< 0.0033	mg/kg		0.0033	33213-65-9	9/23/2010	mglasheen
Endosulfan sulfate	< 0.0033	mg/kg		0.0033	1031-07-8	9/23/2010	mglasheen
Endrin	< 0.0033	mg/kg		0.0033	72-20-8	9/23/2010	mglasheen
Endrin aldehyde	< 0.0033	mg/kg		0.0033	7421-93-4	9/23/2010	mglasheen
Heptachlor	< 0.0033	mg/kg		0.0033	76-44-8	9/23/2010	mglasheen
Heptachlor epoxide	< 0.0033	mg/kg		0.0033	1024-57-3	9/23/2010	mglasheen
Methoxychlor	< 0.0033	mg/kg		0.0033	72-43-5	9/23/2010	mglasheen
Chlordane(Total)	< 0.0170	mg/kg		0.0170	57-74-9	9/23/2010	mglasheen
Toxaphene	< 0.0830	mg/kg		0.0830	8001-35-2	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	89	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	99	%			2051-24-3	9/23/2010	mglasheen

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 0.080	mg/kg		0.080	12674-11-2	9/23/2010	mglasheen
Aroclor 1221	< 0.080	mg/kg		0.080	11104-28-2	9/23/2010	mglasheen
Aroclor 1232	< 0.080	mg/kg		0.080	11141-16-5	9/23/2010	mglasheen
Aroclor 1242	< 0.080	mg/kg		0.080	53469-21-9	9/23/2010	mglasheen
Aroclor 1248	< 0.080	mg/kg		0.080	12672-29-6	9/23/2010	mglasheen
Aroclor 1254	< 0.080	mg/kg		0.080	11097-69-1	9/23/2010	mglasheen
Aroclor 1260	< 0.080	mg/kg		0.080	11096-82-5	9/23/2010	mglasheen
Aroclor 1262	< 0.080	mg/kg		0.080	37324-23-5	9/23/2010	mglasheen
Aroclor 1268	< 0.080	mg/kg		0.080	11100-14-4	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	89	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	99	%			2051-24-3	9/23/2010	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

9/28/2010

Lab Manager **Date**

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10011501-001

Lab Name: Environmental Service Group Contract: ________

Lab Code: IN00042 Case No.: ________ SAS No.: ________ SDG No.: ________

Matrix: (soil/water) SOIL Lab Sample ID: 10011501-001 Unit

Sample wt/vol: 0.5 (g/ml) G Lab File ID: 0921E.D

Level: (low/med) LOW Date Received: 09/15/10

% Moisture: not dec. 0 Date Analyzed: 09/21/10

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 6

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000115-10-6	Methane, oxybis-	2.70	31	JND
2. 000067-64-1	2-Propanone	5.09	78000	JND
3. 000078-93-3	2-Butanone	7.98	31000	JND
4. 000107-87-9	2-Pentanone	10.61	200	JND
5. 000591-78-6	2-Hexanone	13.31	400	JND
6.	column bleed	19.37	66	JD

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 24 Sep 2010   2:02
Data File: D:\HPCHEM\1\DATA\SEP\0923A17A.D
Name: 10011501-01A UNITED SLDG
Misc: 09/23/10 SOIL 9/20 10g-1mL 1.0SY
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Butanoic acid, 3-met	7.06	8941.9	ug/L	3321180	ISTD01	10.60	1485680	40.0
Dodecanoic acid	14.03	6602.4	ug/L	2865540	ISTD02	13.43	1736070	40.0
Ethanol, 2-(dodecylo	15.14	3981.9	ug/L	828544	ISTD03	15.75	832313	40.0
Tetradecanoic acid	15.53	20188.7	ug/L	4200830	ISTD03	15.75	832313	40.0
Pentadecanoic acid	15.91	3400.7	ug/L	707615	ISTD03	15.75	832313	40.0
Pentadecanoic acid	16.16	3280.0	ug/L	682505	ISTD03	15.75	832313	40.0
Hexadecanoic acid, m	16.56	3488.2	ug/L	725816	ISTD03	15.75	832313	40.0
Hexadecanoic acid	17.00	93459.3	ug/L	19446900	ISTD03	15.75	832313	40.0
Octadecanoic acid	18.20	53037.3	ug/L	8426820	ISTD04	19.99	635539	40.0
unknown	21.56	4000.0	ug/L	635539	ISTD05	22.08	635539	40.0

1001501

Chain of Custody Record

United Water
Environmental Monitoring & Process Support Laboratory
2700 South Belmont Avenue
(317) 639-7000

Project Name
Client United Water - Belmont

Sampler: (Signature) Operations

Sampling Location

Laboratory Analysis

Sample ID	Date	Time	Composite	Grab	Water	Soil	Sludge	ICBD	Filtered	HCl	HNO_3	H_2SO_4	NaOH	# Bottles	Cd - Total Rec.	Cd, Cr, Cu, Pb, Ni, Zn	As	Be, Mo, Se, Hg	NH3	Total Metals	*Organics			
ICK	9/15/10	6:00 AM	X				X							1							X			

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Amadka Angelo	9/16/10	7:00 AM	Mark A. Bo	Mark A. Bo	9/16/10	1:30P	
Relinquished by:	**Date**	**Time**	**Received for Laboratory by:**	**Project Manager:**			**Phone #:**

*Organics - 608, 624, 625, and the TOP TEN Tentatively Identified Compunds

- CERTIFICATE OF ANALYSIS -

Report Date: *28-Sep-10*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	10011502-001	**Your Sample ID:**	Belmont Influent Grab
Your Project #		**Collection Date:**	09/15/10 09:00
Your Project Name:	**2010 TTO**	**Collected By:**	Client
Sample Type:	Wastewater	**Receipt Date:**	09/16/10 13:30

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	9/21/2010	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	9/21/2010	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	9/21/2010	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	9/21/2010	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	9/21/2010	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	9/21/2010	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	9/21/2010	rbische
Methylene chloride	< 5.0	ug/L	PQL	5.0	75-09-2	9/21/2010	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	9/21/2010	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	9/21/2010	rbische
Chloroform	5.2	ug/L		5.0	67-66-3	9/21/2010	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	9/21/2010	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	9/21/2010	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	9/21/2010	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	9/21/2010	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	9/21/2010	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	9/21/2010	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	9/21/2010	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	9/21/2010	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	9/21/2010	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	9/21/2010	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	9/21/2010	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	9/21/2010	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	9/21/2010	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	9/21/2010	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	9/21/2010	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	9/21/2010	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	9/21/2010	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	9/21/2010	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	9/21/2010	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	9/21/2010	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	9/21/2010	rbische
Dibromofluoromethane (Surr)	99	%			1868-53-7	9/21/2010	rbische
Toluene-d8 (Surr)	100	%			2037-26-5	9/21/2010	rbische
4-Bromofluorobenzene (Surr)	104	%			460-00-4	9/21/2010	rbische

ESG Laboratories

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PHONE (317) 290-1471
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Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					9/21/2010	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab #	10011502-002	Your Sample ID:	Belmont Effluent Grab
Your Project #		Collection Date:	09/15/10 10:30
Your Project Name:	2010 TTO	Collected By:	Client
Sample Type:	Wastewater	Receipt Date:	09/16/10 13:30

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	9/21/2010	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	9/21/2010	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	9/21/2010	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	9/21/2010	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	9/21/2010	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	9/21/2010	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	9/21/2010	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	9/21/2010	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	9/21/2010	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	9/21/2010	rbische
Chloroform	7.1	ug/L		5.0	67-66-3	9/21/2010	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	9/21/2010	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	9/21/2010	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	9/21/2010	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	9/21/2010	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	9/21/2010	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	9/21/2010	rbische
Bromodichloromethane	< 5.0	ug/L	PQL	5.0	75-27-4	9/21/2010	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	9/21/2010	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	9/21/2010	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	9/21/2010	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	9/21/2010	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	9/21/2010	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	9/21/2010	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	9/21/2010	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	9/21/2010	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	9/21/2010	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	9/21/2010	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	9/21/2010	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	9/21/2010	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	9/21/2010	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	9/21/2010	rbische
Dibromofluoromethane (Surr)	101	%			1868-53-7	9/21/2010	rbische

ESC Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	100	%			2037-26-5	9/21/2010	rbische
4-Bromofluorobenzene (Surr)	105	%			460-00-4	9/21/2010	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					9/21/2010	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab #	10011502-003	Your Sample ID:	Belmont Influent Comp.
Your Project #		Collection Date:	09/16/10 09:00
Your Project Name:	2010 TTO	Collected By:	Client
Sample Type:	Wastewater	Receipt Date:	09/16/10 13:30

Base/Neutral/Acid Extractables, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10	ug/L		10	62-75-9	9/23/2010	dmacdonald
Bis(2-chloroethyl) ether	< 10	ug/L		10	111-44-4	9/23/2010	dmacdonald
2-Chlorophenol	< 10	ug/L		10	95-57-8	9/23/2010	dmacdonald
Phenol	58	ug/L		10	108-95-2	9/23/2010	dmacdonald
1,3-Dichlorobenzene	< 10	ug/L		10	541-73-1	9/23/2010	dmacdonald
1,4-Dichlorobenzene	< 10	ug/L		10	106-46-7	9/23/2010	dmacdonald
1,2-Dichlorobenzene	< 10	ug/L		10	95-50-1	9/23/2010	dmacdonald
Bis(2-chloroisopropyl) ether	< 10	ug/L		10	108-60-1	9/23/2010	dmacdonald
Hexachloroethane	< 10	ug/L		10	67-72-1	9/23/2010	dmacdonald
N-Nitrosodi-n-propylamine	< 10	ug/L		10	621-64-7	9/23/2010	dmacdonald
Nitrobenzene	< 10	ug/L		10	98-95-3	9/23/2010	dmacdonald
Isophorone	< 10	ug/L	PQL	10	78-59-1	9/23/2010	dmacdonald
2-Nitrophenol	< 10	ug/L		10	88-75-5	9/23/2010	dmacdonald
2,4-Dimethylphenol	< 10	ug/L		10	105-67-9	9/23/2010	dmacdonald
Bis(2-chloroethoxy) methane	< 10	ug/L		10	111-91-1	9/23/2010	dmacdonald
2,4-Dichlorophenol	< 10	ug/L		10	120-83-2	9/23/2010	dmacdonald
1,2,4-Trichlorobenzene	< 10	ug/L		10	120-82-1	9/23/2010	dmacdonald
Naphthalene	< 5	ug/L		5	91-20-3	9/23/2010	dmacdonald
Hexachlorobutadiene	< 10	ug/L		10	87-68-3	9/23/2010	dmacdonald
4-Chloro-3-methylphenol	< 10	ug/L	PQL	10	59-50-7	9/23/2010	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	9/23/2010	dmacdonald
2,4,6-Trichlorophenol	< 10	ug/L		10	88-06-2	9/23/2010	dmacdonald
2-Chloronaphthalene	< 10	ug/L		10	91-58-7	9/23/2010	dmacdonald
Dimethyl phthalate	< 10	ug/L		10	131-11-3	9/23/2010	dmacdonald
2,6-Dinitrotoluene	< 10	ug/L		10	606-20-2	9/23/2010	dmacdonald
Acenaphthylene	< 10	ug/L		10	208-96-8	9/23/2010	dmacdonald
Acenaphthene	< 10	ug/L		10	83-32-9	9/23/2010	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	9/23/2010	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	9/23/2010	dmacdonald
2,4-Dinitrotoluene	< 10	ug/L		10	121-14-2	9/23/2010	dmacdonald
Diethyl phthalate	< 10	ug/L	PQL	10	84-66-2	9/23/2010	dmacdonald
Fluorene	< 10	ug/L		10	86-73-7	9/23/2010	dmacdonald
4-Chlorophenyl phenyl ether	< 10	ug/L		10	7005-72-3	9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Base/Neutral/Acid Extractables, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	9/23/2010	dmacdonald
N-Nitrosodiphenylamine	< 10	ug/L		10	86-30-6	9/23/2010	dmacdonald
4-Bromophenyl phenyl ether	< 10	ug/L		10	101-55-3	9/23/2010	dmacdonald
Hexachlorobenzene	< 10	ug/L		10	118-74-1	9/23/2010	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	9/23/2010	dmacdonald
Phenanthrene	< 10	ug/L		10	85-01-8	9/23/2010	dmacdonald
Anthracene	< 10	ug/L		10	120-12-7	9/23/2010	dmacdonald
Di-n-butyl phthalate	< 10	ug/L	PQL	10	84-74-2	9/23/2010	dmacdonald
Fluoranthene	< 10	ug/L		10	206-44-0	9/23/2010	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	9/23/2010	dmacdonald
Pyrene	< 10	ug/L		10	129-00-0	9/23/2010	dmacdonald
Butyl benzyl phthalate	< 10	ug/L		10	85-68-7	9/23/2010	dmacdonald
Benzo[a]anthracene	< 10	ug/L		10	56-55-3	9/23/2010	dmacdonald
3,3'-Dichlorobenzidine	< 10	ug/L		10	91-94-1	9/23/2010	dmacdonald
Chrysene	< 10	ug/L		10	218-01-9	9/23/2010	dmacdonald
Bis(2-ethylhexyl) phthalate	34	ug/L	J	10	117-81-7	9/23/2010	dmacdonald
Di-n-octylphthalate	< 10	ug/L		10	117-84-0	9/23/2010	dmacdonald
Benzo[b]fluoranthene	< 10	ug/L		10	205-99-2	9/23/2010	dmacdonald
Benzo[k]fluoranthene	< 10	ug/L		10	207-08-9	9/23/2010	dmacdonald
Benzo[a]pyrene	< 10	ug/L		10	50-32-8	9/23/2010	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10	ug/L		10	193-39-5	9/23/2010	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	9/23/2010	dmacdonald
Benzo[g,h,i]perylene	< 10	ug/L		10	191-24-2	9/23/2010	dmacdonald
2-Fluorophenol (Surr)	49	%			367-12-4	9/23/2010	dmacdonald
Phenol-d6 (Surr)	55	%			4165-62-2	9/23/2010	dmacdonald
Nitrobenzene-d5 (Surr)	58	%			4165-60-0	9/23/2010	dmacdonald
2-Fluorobiphenyl (Surr)	53	%			321-60-8	9/23/2010	dmacdonald
2,4,6-Tribromophenol (Surr)	58	%			118-79-6	9/23/2010	dmacdonald
Terphenyl-d14 (Surr)	98	%			1718-51-0	9/23/2010	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	9/23/2010	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	9/23/2010	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	9/23/2010	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	9/23/2010	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	9/23/2010	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	9/23/2010	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	9/23/2010	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	9/23/2010	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	9/23/2010	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	9/23/2010	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	9/23/2010	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	9/23/2010	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	9/23/2010	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	9/23/2010	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	9/23/2010	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	9/23/2010	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	9/23/2010	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	9/23/2010	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	80	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	75	%			2051-24-3	9/23/2010	mglasheen

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	9/23/2010	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	9/23/2010	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	9/23/2010	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	9/23/2010	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	9/23/2010	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	9/23/2010	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	9/23/2010	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	9/23/2010	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	80	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	75	%			2051-24-3	9/23/2010	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Our Lab # 10011502-004		**Your Sample ID:**	Belmont Effluent Comp.
Your Project #		**Collection Date:**	09/16/10 10:30
Your Project Name:	2010 TTO	**Collected By:**	Client
Sample Type:	Wastewater	**Receipt Date:**	09/16/10 13:30

Base/Neutral/Acid Extractables, GC/MS	Analytical Method	Prep Method	Prep Date	By
	EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10	ug/L		10	62-75-9	9/23/2010	dmacdonald
Bis(2-chloroethyl) ether	< 10	ug/L		10	111-44-4	9/23/2010	dmacdonald
2-Chlorophenol	< 10	ug/L		10	95-57-8	9/23/2010	dmacdonald
Phenol	< 10	ug/L		10	108-95-2	9/23/2010	dmacdonald
1,3-Dichlorobenzene	< 10	ug/L		10	541-73-1	9/23/2010	dmacdonald
1,4-Dichlorobenzene	< 10	ug/L		10	106-46-7	9/23/2010	dmacdonald
1,2-Dichlorobenzene	< 10	ug/L		10	95-50-1	9/23/2010	dmacdonald
Bis(2-chloroisopropyl) ether	< 10	ug/L		10	108-60-1	9/23/2010	dmacdonald
Hexachloroethane	< 10	ug/L		10	67-72-1	9/23/2010	dmacdonald
N-Nitrosodi-n-propylamine	< 10	ug/L		10	621-64-7	9/23/2010	dmacdonald
Nitrobenzene	< 10	ug/L		10	98-95-3	9/23/2010	dmacdonald
Isophorone	< 10	ug/L		10	78-59-1	9/23/2010	dmacdonald
2-Nitrophenol	< 10	ug/L		10	88-75-5	9/23/2010	dmacdonald
2,4-Dimethylphenol	< 10	ug/L		10	105-67-9	9/23/2010	dmacdonald
Bis(2-chloroethoxy) methane	< 10	ug/L		10	111-91-1	9/23/2010	dmacdonald
2,4-Dichlorophenol	< 10	ug/L		10	120-83-2	9/23/2010	dmacdonald
1,2,4-Trichlorobenzene	< 10	ug/L		10	120-82-1	9/23/2010	dmacdonald
Naphthalene	< 5	ug/L		5	91-20-3	9/23/2010	dmacdonald
Hexachlorobutadiene	< 10	ug/L		10	87-68-3	9/23/2010	dmacdonald
4-Chloro-3-methylphenol	< 10	ug/L		10	59-50-7	9/23/2010	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	9/23/2010	dmacdonald
2,4,6-Trichlorophenol	< 10	ug/L		10	88-06-2	9/23/2010	dmacdonald
2-Chloronaphthalene	< 10	ug/L		10	91-58-7	9/23/2010	dmacdonald
Dimethyl phthalate	< 10	ug/L		10	131-11-3	9/23/2010	dmacdonald
2,6-Dinitrotoluene	< 10	ug/L		10	606-20-2	9/23/2010	dmacdonald
Acenaphthylene	< 10	ug/L		10	208-96-8	9/23/2010	dmacdonald
Acenaphthene	< 10	ug/L		10	83-32-9	9/23/2010	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	9/23/2010	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	9/23/2010	dmacdonald
2,4-Dinitrotoluene	< 10	ug/L		10	121-14-2	9/23/2010	dmacdonald
Diethyl phthalate	< 10	ug/L		10	84-66-2	9/23/2010	dmacdonald
Fluorene	< 10	ug/L		10	86-73-7	9/23/2010	dmacdonald
4-Chlorophenyl phenyl ether	< 10	ug/L		10	7005-72-3	9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Base/Neutral/Acid Extractables, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	9/23/2010	dmacdonald
N-Nitrosodiphenylamine	< 10	ug/L		10	86-30-6	9/23/2010	dmacdonald
4-Bromophenyl phenyl ether	< 10	ug/L		10	101-55-3	9/23/2010	dmacdonald
Hexachlorobenzene	< 10	ug/L		10	118-74-1	9/23/2010	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	9/23/2010	dmacdonald
Phenanthrene	< 10	ug/L		10	85-01-8	9/23/2010	dmacdonald
Anthracene	< 10	ug/L		10	120-12-7	9/23/2010	dmacdonald
Di-n-butyl phthalate	< 10	ug/L		10	84-74-2	9/23/2010	dmacdonald
Fluoranthene	< 10	ug/L		10	206-44-0	9/23/2010	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	9/23/2010	dmacdonald
Pyrene	< 10	ug/L		10	129-00-0	9/23/2010	dmacdonald
Butyl benzyl phthalate	< 10	ug/L		10	85-68-7	9/23/2010	dmacdonald
Benzo[a]anthracene	< 10	ug/L		10	56-55-3	9/23/2010	dmacdonald
3,3'-Dichlorobenzidine	< 10	ug/L		10	91-94-1	9/23/2010	dmacdonald
Chrysene	< 10	ug/L		10	218-01-9	9/23/2010	dmacdonald
Bis(2-ethylhexyl) phthalate	< 10	ug/L	PQL	10	117-81-7	9/23/2010	dmacdonald
Di-n-octylphthalate	< 10	ug/L		10	117-84-0	9/23/2010	dmacdonald
Benzo[b]fluoranthene	< 10	ug/L		10	205-99-2	9/23/2010	dmacdonald
Benzo[k]fluoranthene	< 10	ug/L		10	207-08-9	9/23/2010	dmacdonald
Benzo[a]pyrene	< 10	ug/L		10	50-32-8	9/23/2010	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10	ug/L		10	193-39-5	9/23/2010	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	9/23/2010	dmacdonald
Benzo[g,h,i]perylene	< 10	ug/L		10	191-24-2	9/23/2010	dmacdonald
2-Fluorophenol (Surr)	36	%			367-12-4	9/23/2010	dmacdonald
Phenol-d6 (Surr)	41	%			4165-62-2	9/23/2010	dmacdonald
Nitrobenzene-d5 (Surr)	45	%			4165-60-0	9/23/2010	dmacdonald
2-Fluorobiphenyl (Surr)	48	%			321-60-8	9/23/2010	dmacdonald
2,4,6-Tribromophenol (Surr)	47	%			118-79-6	9/23/2010	dmacdonald
Terphenyl-d14 (Surr)	47	%			1718-51-0	9/23/2010	dmacdonald

Qualitative SVOC Scan, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					9/23/2010	dmacdonald

ESG Laboratories
5927 WEST 71ST STREET
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Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	9/23/2010	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	9/23/2010	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	9/23/2010	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	9/23/2010	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	9/23/2010	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	9/23/2010	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	9/23/2010	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	9/23/2010	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	9/23/2010	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	9/23/2010	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	9/23/2010	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	9/23/2010	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	9/23/2010	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	9/23/2010	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	9/23/2010	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	9/23/2010	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	9/23/2010	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	9/23/2010	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	74	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	74	%			2051-24-3	9/23/2010	mglasheen

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	9/23/2010	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	9/23/2010	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	9/23/2010	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	9/23/2010	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	9/23/2010	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	9/23/2010	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	9/23/2010	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	9/23/2010	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	74	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	74	%			2051-24-3	9/23/2010	mglasheen

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Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

9/28/2010

Lab Manager

Date

ESG Laboratories

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10011502-001

Lab Name: Environmental Service Group Contract: ____

Lab Code: IN00042 Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 10011502-001 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 0921A.D

Level: (low/med) LOW Date Received: 09/15/10

% Moisture: not dec. ____ Date Analyzed: 09/21/10

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 9

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	2.47	4	J
2. 007446-09-5	Sulfur dioxide	2.92	16	JN
3. 000074-93-1	Methanethiol	3.31	7	JN
4. 000064-17-5	Ethanol	4.54	16	JN
5. 000075-08-1	Ethanethiol	5.07	4	JN
6. 001184-60-7	1-Propene, 2-fluoro-	7.33	16	JN
7. 000591-78-6	2-Hexanone	12.00	7	JN
8. 000616-44-4	Thiophene, 3-methyl-	12.47	2	JN
9.	column bleed	19.37	4	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10011502-002

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) WATER Lab Sample ID: 10011502-002 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 0921B.D

Level: (low/med) LOW Date Received: 09/15/10

% Moisture: not dec. ______ Date Analyzed: 09/21/10

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 4

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	2.72	1	JN
2. 007446-09-5	Sulfur dioxide	3.01	3	JN
3.	unknown	5.36	0	J
4.	column bleed	19.38	4	J

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 23 Sep 2010   20:17
Data File: D:\HPCHEM\1\DATA\SEP\0923A06A.D
Name: 10011502-03A UNITED BLMT INFL
Misc: 09/23/10 EX 9/20 400-0.4mL 0.4SY
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
unknown	5.81	26.6	ug/L	1779960	ISTD01	10.60	2678950	40.0
Pyridine, 2-methyl-	6.25	54.5	ug/L	3651160	ISTD01	10.60	2678950	40.0
Ethanol, 2-butoxy-	7.04	40.7	ug/L	2728770	ISTD01	10.60	2678950	40.0
Benzenemethanol	8.91	59.3	ug/L	3973440	ISTD01	10.60	2678950	40.0
Ethanol, 2-[2-(2-met	10.93	30.0	ug/L	2012200	ISTD01	10.60	2678950	40.0
Ethanol, 2-[2-(2-but	13.20	43.3	ug/L	1742920	ISTD02	13.42	1609970	40.0
unknown	13.77	25.8	ug/L	1037460	ISTD02	13.42	1609970	40.0
Dodecanoic acid	14.03	56.0	ug/L	2255780	ISTD02	13.42	1609970	40.0
Tetradecanoic acid	15.47	29.7	ug/L	829554	ISTD03	15.76	1118920	40.0
Octadecanoic acid	18.07	111.2	ug/L	727066	ISTD04	19.97	261532	40.0

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 23 Sep 2010   19:11
Data File: D:\HPCHEM\1\DATA\SEP\0923A04A.D
Name: 10011502-04A UNITED BLMT EFFL
Misc: 09/23/10 EX 9/20 400-0.4mL 0.4SY
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Phosphonic acid, bis	8.73	6.5	ug/L	134753	ISTD01	10.59	832414	40.0
unknown	10.91	4.2	ug/L	87429	ISTD01	10.59	832414	40.0
unknown	11.24	4.8	ug/L	99947	ISTD01	10.59	832414	40.0
Hydrazine, 1,1-dieth	11.41	11.1	ug/L	231722	ISTD01	10.59	832414	40.0
unknown	11.48	7.3	ug/L	152139	ISTD01	10.59	832414	40.0
Piperidine, 1-ethyl-	11.65	5.4	ug/L	111656	ISTD01	10.59	832414	40.0
Benzoic acid, 2,4-di	13.65	11.3	ug/L	229781	ISTD02	13.41	812446	40.0
Oxindole	13.75	7.2	ug/L	146383	ISTD02	13.41	812446	40.0
unknown	16.46	8.5	ug/L	156256	ISTD03	15.74	732313	40.0
Hexanedioic acid, di	19.39	6.2	ug/L	88938	ISTD04	19.97	576634	40.0

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Phone (317) 290-1471 • Fax (317)290-1670

CHAIN OF CUSTODY RECORD

Client Name: United Water

ESG Work Order #: 1311502

Project Name: 2010 TTO

Project No:

Sampler(s) Signature: Mark A. Bre

Filtered (Y or N): N

Preserv. Code: 2N/ON

Analyses

Stat No.	DATE	TIME	COMP	GRAB	SAMPLE ID	Total Number of Containers	VOC	SVOC	Pest	PCB						Comments
	9/15/10	9:00A		X	Belmont Influent	4	X									
	9/15/10	10:30A		X	Belmont Effluent	4	X									
	9/16/10	9:00A	X		Belmont Influent	3		X	X	X						
	9/16/10	10:30A	X		Belmont Effluent	3		X	X	X						

TRANSFER OF CUSTODY

	Date/Time
Relinquished By: Mark A. Boyce	9/16/10 1:30P
Received By:	
Relinquished By:	Date/Time
Received By:	
Relinquished By:	Date/Time
Received By:	

SAMPLE CONDITION UPON RECEIPT

Sample Temp: 4.0 °C
Received on Ice: Y / N
Samples Intact: Y / N
Adequate Volume: Y / N
Appropriate Containers: Y / N
Appropriate Preservative: Y / N
Within Hold Time: Y / N
Head Space Absent: Y / N / NA

TURN AROUND TIME

Normal ______ Rush ______

Requested Due Date: ______

SAMPLE COMMENTS

Please note if sample(s) suspected to be hazardous, corrosive, or requires special handling for any reason.

pH METER CALIBRATION

4.00______ 7.00______ 10.00______

PRESERVATION CODES

N = HNO_3 / Nitric Acid
S = H_2SO_4 / Sulfuric Acid
H = HCl / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
OH = NaOH / Sodium Hydroxide
SO = $Na_2S_2O_3$ / Sodium Thiosulfate

- CERTIFICATE OF ANALYSIS -

Report Date: *28-Sep-10*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221
Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	10011503-001	**Your Sample ID:**	Southport Influent Grab
Your Project #		**Collection Date:**	09/15/10 11:30
Your Project Name:	**2010 TTO**	**Collected By:**	Client
Sample Type:	Wastewater	**Receipt Date:**	09/16/10 13:30

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FAX (317) 290-1670

Volatile Organics, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	9/21/2010	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	9/21/2010	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	9/21/2010	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	9/21/2010	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	9/21/2010	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	9/21/2010	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	9/21/2010	rbische
Methylene chloride	< 5.0	ug/L	PQL	5.0	75-09-2	9/21/2010	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	9/21/2010	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	9/21/2010	rbische
Chloroform	< 5.0	ug/L	PQL	5.0	67-66-3	9/21/2010	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	9/21/2010	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	9/21/2010	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	9/21/2010	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	9/21/2010	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	9/21/2010	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	9/21/2010	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	9/21/2010	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	9/21/2010	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	9/21/2010	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	9/21/2010	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	9/21/2010	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	9/21/2010	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	9/21/2010	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	9/21/2010	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	9/21/2010	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	9/21/2010	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	9/21/2010	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	9/21/2010	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	9/21/2010	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	9/21/2010	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	9/21/2010	rbische
Dibromofluoromethane (Surr)	100	%			1868-53-7	9/21/2010	rbische
Toluene-d8 (Surr)	101	%			2037-26-5	9/21/2010	rbische
4-Bromofluorobenzene (Surr)	104	%			460-00-4	9/21/2010	rbische

Lab # 10011503-001 **Sample ID:** Southport Influent Grab

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Qualitative VOC Scan, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					9/21/2010	rbische

[redacted]

Lab # 10011503-001 **Sample ID:** Southport Influent Grab

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab #	10011503-002	Your Sample ID:	Southport Effluent Grab
Your Project #		Collection Date:	09/15/10 11:45
Your Project Name:	2010 TTO	Collected By:	Client
Sample Type:	Wastewater	Receipt Date:	09/16/10 13:30

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	9/21/2010	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	9/21/2010	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	9/21/2010	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	9/21/2010	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	9/21/2010	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	9/21/2010	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	9/21/2010	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	9/21/2010	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	9/21/2010	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	9/21/2010	rbische
Chloroform	5.5	ug/L		5.0	67-66-3	9/21/2010	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	9/21/2010	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	9/21/2010	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	9/21/2010	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	9/21/2010	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	9/21/2010	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	9/21/2010	rbische
Bromodichloromethane	< 5.0	ug/L	PQL	5.0	75-27-4	9/21/2010	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	9/21/2010	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	9/21/2010	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	9/21/2010	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	9/21/2010	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	9/21/2010	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	9/21/2010	rbische
Dibromochloromethane	< 5.0	ug/L	PQL	5.0	124-48-1	9/21/2010	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	9/21/2010	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	9/21/2010	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	9/21/2010	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	9/21/2010	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	9/21/2010	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	9/21/2010	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	9/21/2010	rbische
Dibromofluoromethane (Surr)	101	%			1868-53-7	9/21/2010	rbische

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INDIANAPOLIS, INDIANA 46278

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FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	101	%			2037-26-5	9/21/2010	rbische
4-Bromofluorobenzene (Surr)	104	%			460-00-4	9/21/2010	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					9/21/2010	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 10011503-003		**Your Sample ID:**	Southport Influent Comp.
Your Project #		**Collection Date:**	09/16/10 11:30
Your Project Name: 2010 TTO		**Collected By:**	Client
Sample Type: Wastewater		**Receipt Date:**	09/16/10 13:30

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	9/23/2010	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	9/23/2010	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	9/23/2010	dmacdonald
Phenol	66	ug/L		10.0	108-95-2	9/23/2010	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	9/23/2010	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	9/23/2010	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	9/23/2010	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	9/23/2010	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	9/23/2010	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	9/23/2010	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	9/23/2010	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	9/23/2010	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	9/23/2010	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	9/23/2010	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	9/23/2010	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	9/23/2010	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	9/23/2010	dmacdonald
Naphthalene	< 10.0	ug/L	PQL	10.0	91-20-3	9/23/2010	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	9/23/2010	dmacdonald
4-Chloro-3-methylphenol	11	ug/L		10.0	59-50-7	9/23/2010	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	9/23/2010	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	9/23/2010	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	9/23/2010	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	9/23/2010	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	9/23/2010	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	9/23/2010	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	9/23/2010	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	9/23/2010	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	9/23/2010	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	9/23/2010	dmacdonald
Diethyl phthalate	< 10.0	ug/L	PQL	10.0	84-66-2	9/23/2010	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	9/23/2010	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	9/23/2010	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	9/23/2010	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	9/23/2010	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	9/23/2010	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	9/23/2010	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	9/23/2010	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	9/23/2010	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	9/23/2010	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	9/23/2010	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	9/23/2010	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	9/23/2010	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L	PQL	10.0	85-68-7	9/23/2010	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	9/23/2010	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	9/23/2010	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	9/23/2010	dmacdonald
Bis(2-ethylhexyl) phthalate	13	ug/L	J	10.0	117-81-7	9/23/2010	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	9/23/2010	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	9/23/2010	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	9/23/2010	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	9/23/2010	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	9/23/2010	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	9/23/2010	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	9/23/2010	dmacdonald
2-Fluorophenol (Surr)	47	%			367-12-4	9/23/2010	dmacdonald
Phenol-d6 (Surr)	47	%			4165-62-2	9/23/2010	dmacdonald
Nitrobenzene-d5 (Surr)	55	%			4165-60-0	9/23/2010	dmacdonald
2-Fluorobiphenyl (Surr)	47	%			321-60-8	9/23/2010	dmacdonald
2,4,6-Tribromophenol (Surr)	53	%			118-79-6	9/23/2010	dmacdonald
Terphenyl-d14 (Surr)	97	%			1718-51-0	9/23/2010	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					9/23/2010	dmacdonald

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

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Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	9/23/2010	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	9/23/2010	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	9/23/2010	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	9/23/2010	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	9/23/2010	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	9/23/2010	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	9/23/2010	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	9/23/2010	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	9/23/2010	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	9/23/2010	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	9/23/2010	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	9/23/2010	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	9/23/2010	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	9/23/2010	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	9/23/2010	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	9/23/2010	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	9/23/2010	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	9/23/2010	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	84	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	9/23/2010	mglasheen

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	9/23/2010	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	9/23/2010	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	9/23/2010	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	9/23/2010	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	9/23/2010	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	9/23/2010	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	9/23/2010	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	9/23/2010	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	84	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	9/23/2010	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Our Lab # 10011503-004		**Your Sample ID:**	Southport Effluent Comp.
Your Project #		**Collection Date:**	09/16/10 11:45
Your Project Name:	2010 TTO	**Collected By:**	Client
Sample Type:	Wastewater	**Receipt Date:**	09/16/10 13:30

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	9/23/2010	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	9/23/2010	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	9/23/2010	dmacdonald
Phenol	< 10.0	ug/L		10.0	108-95-2	9/23/2010	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	9/23/2010	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	9/23/2010	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	9/23/2010	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	9/23/2010	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	9/23/2010	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	9/23/2010	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	9/23/2010	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	9/23/2010	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	9/23/2010	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	9/23/2010	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	9/23/2010	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	9/23/2010	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	9/23/2010	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	9/23/2010	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	9/23/2010	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L		10.0	59-50-7	9/23/2010	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	9/23/2010	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	9/23/2010	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	9/23/2010	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	9/23/2010	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	9/23/2010	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	9/23/2010	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	9/23/2010	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	9/23/2010	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	9/23/2010	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	9/23/2010	dmacdonald
Diethyl phthalate	< 10.0	ug/L		10.0	84-66-2	9/23/2010	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	9/23/2010	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	9/23/2010	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	9/20/2010	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	9/23/2010	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	9/23/2010	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	9/23/2010	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	9/23/2010	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	9/23/2010	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	9/23/2010	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	9/23/2010	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	9/23/2010	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	9/23/2010	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	9/23/2010	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	9/23/2010	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	9/23/2010	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	9/23/2010	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	9/23/2010	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	9/23/2010	dmacdonald
Bis(2-ethylhexyl) phthalate	< 10.0	ug/L	PQL	10.0	117-81-7	9/23/2010	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	9/23/2010	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	9/23/2010	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	9/23/2010	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	9/23/2010	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	9/23/2010	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	9/23/2010	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	9/23/2010	dmacdonald
2-Fluorophenol (Surr)	39	%			367-12-4	9/23/2010	dmacdonald
Phenol-d6 (Surr)	39	%			4165-62-2	9/23/2010	dmacdonald
Nitrobenzene-d5 (Surr)	48	%			4165-60-0	9/23/2010	dmacdonald
2-Fluorobiphenyl (Surr)	50	%			321-60-8	9/23/2010	dmacdonald
2,4,6-Tribromophenol (Surr)	50	%			118-79-6	9/23/2010	dmacdonald
Terphenyl-d14 (Surr)	49	%			1718-51-0	9/23/2010	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					9/23/2010	dmacdonald

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Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	9/23/2010	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	9/23/2010	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	9/23/2010	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	9/23/2010	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	9/23/2010	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	9/23/2010	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	9/23/2010	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	9/23/2010	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	9/23/2010	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	9/23/2010	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	9/23/2010	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	9/23/2010	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	9/23/2010	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	9/23/2010	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	9/23/2010	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	9/23/2010	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	9/23/2010	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	9/23/2010	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	73	%			2051-24-3	9/23/2010	mglasheen

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	9/17/2010	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	9/23/2010	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	9/23/2010	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	9/23/2010	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	9/23/2010	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	9/23/2010	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	9/23/2010	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	9/23/2010	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	9/23/2010	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	9/23/2010	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	9/23/2010	mglasheen
Decachlorobiphenyl (Surr)	73	%			2051-24-3	9/23/2010	mglasheen

ESG Laboratories

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Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

9/28/2010

Lab Manager **Date**

ESG Laboratories

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10011503-001

Lab Name: Environmental Service Group Contract: ____

Lab Code: IN00042 Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 10011503-001 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 0921C.D

Level: (low/med) LOW Date Received: 09/15/10

% Moisture: not dec. ____ Date Analyzed: 09/21/10

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 8

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	2.49	1	J
2. 007446-09-5	Sulfur dioxide	2.70	0	JN
3. 007446-09-5	Sulfur dioxide	2.94	11	JN
4. 000074-93-1	Methanethiol	3.33	8	JN
5. 000067-63-0	2-Propanol	5.47	2	JN
6. 000624-92-0	Disulfide, dimethyl	11.91	4	JN
7. 003658-80-8	Trisulfide, dimethyl	17.54	3	JN
8.	column bleed	19.37	4	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10011503-002

Lab Name: Environmental Service Group Contract: ____

Lab Code: IN00042 Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 10011503-002 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 0921D.D

Level: (low/med) LOW Date Received: 09/15/10

% Moisture: not dec. ____ Date Analyzed: 09/21/10

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	2.69	0	JN
2. 007446-09-5	Sulfur dioxide	2.95	2	JN

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald Date Acquired: 23 Sep 2010 20:50
Data File: D:\HPCHEM\1\DATA\SEP\0923A07A.D
Name: 10011503-03A UNITED SPRT INFL
Misc: 09/23/10 EX 9/20 400-0.4mL 0.4SY
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Pentanedioic acid, d	10.04	40.3	ug/L	2598220	ISTD01	10.60	2580240	40.0
1-Propanol, 2-(2-hyd	11.15	30.8	ug/L	1985000	ISTD01	10.60	2580240	40.0
2-Butanol, 3,3'-oxyb	11.19	27.5	ug/L	1774370	ISTD01	10.60	2580240	40.0
Ethanol, 2-(2-butoxy	12.27	32.9	ug/L	1073860	ISTD02	13.43	1304130	40.0
Cyclohexanamine, N-c	12.96	92.9	ug/L	3029710	ISTD02	13.43	1304130	40.0
Oxindole	13.84	30.4	ug/L	989878	ISTD02	13.43	1304130	40.0
Dodecanoic acid	14.06	104.4	ug/L	3404780	ISTD02	13.43	1304130	40.0
Tetradecanoic acid	15.50	59.1	ug/L	1914490	ISTD03	15.76	1295270	40.0
Hexadecanoic acid	16.88	121.6	ug/L	3937810	ISTD03	15.76	1295270	40.0
unknown fatty acid	18.08	51.7	ug/L	769446	ISTD04	19.97	595633	40.0

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 23 Sep 2010 19:44
Data File: D:\HPCHEM\1\DATA\SEP\0923A05A.D
Name: 10011503-04A UNITED SPRT EFFL
Misc: 09/23/10 EX 9/20 400-0.4mL 0.4SY
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
1H-Indol-4-ol	13.73	4.3	ug/L	85370	ISTD02	13.41	790080	40.0
Hexanedioic acid, di	19.38	5.7	ug/L	81210	ISTD04	19.97	571959	40.0

0923A05A.D CLP.M   Fri Sep 24 11:58:11 2010   RPT1

ESG Laboratories

5927 West 71st Street • Indianapolis, IN 46278
Phone (317) 290-1471 • Fax (317)290-1670

CHAIN OF CUSTODY RECORD

Client Name: United Water
ESG Work Order #: 1011503
Project Name: 2010 TTO
Project No:
Sampler(s) Signature: Mark A. Bae

Filtered (Y or N): N
Preserv. Code: ZA/ZA
Analyses

Stat No	DATE	TIME	COMP	GRAB	SAMPLE ID	Total Number of Containers	VOC	SVOC	Pest	PCB						Comments
	9/15/10	11:30A		X	Southport Influent	4	X									
	9/15/10	11:45A		X	Southport Effluent	4	X									
	9/16/10	11:30A	X		Southport Influent	3		X	X	X						
	9/16/10	11:45A	X		Southport Effluent	3		X	X	X						

TRANSFER OF CUSTODY

	Date/Time
Relinquished By: Mark A. Bae	9/16/10 1:30P
Received By: [illegible]	
Relinquished By:	Date/Time
Received By:	
Relinquished By:	Date/Time
Received By:	

SAMPLE CONDITION UPON RECEIPT

Sample Temp: 4.0 °C
Received on Ice: Y / N
Samples Intact: Y / N
Adequate Volume: Y / N
Appropriate Containers: Y / N
Appropriate Preservative: Y / N
Within Hold Time: Y / N
Head Space Absent: Y / N / NA

TURN AROUND TIME

Normal ______ Rush ______

Requested Due Date: ______

SAMPLE COMMENTS

Please note if sample(s) suspected to be hazardous, corrosive, or requires special handling for any reason.

pH METER CALIBRATION

4.00______ 7.00______ 10.00______

PRESERVATION CODES

N = HNO_3 / Nitric Acid
S = H_2SO_4 / Sulfuric Acid
H = HCl / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
OH = NaOH / Sodium Hydroxide
SO = $Na_2S_2O_3$ / Sodium Thiosulfate

City of
Indianapolis
Gregory A. Ballard, Mayor

December 17, 2008

Ms. Natalie Maupin
Indiana Department of Environmental Management
Office of Water Quality
100 North Senate Avenue
Mail Code 65-40
Indianapolis, IN 46206-2251

Re: Annual Inventory of Organic Pollutants

Dear Ms. Maupin:

Enclosed is the annual report of organic pollutants which occur in the influent and effluent of the Belmont and Southport AWT facilities. In addition, analytical results for organic pollutants found in the sludge are included. This report is due to IDEM prior to December 31, 2008 as required by Part I.A.8.b. of NPDES Permit No. IN0023183. The report contains analytical results of the priority pollutants as well as the identification and quantification of the ten most abundant constituents of each sample fraction shown to be present by peaks on the gas chromatogram and found to be more than ten times higher than the adjacent background noise. A determination as to whether the pollutants interfere, pass through, or otherwise violate the requirements of 40 CFR 403.2 will be completed and the evaluation will be included in the program effectiveness review section of the Indianapolis Pretreatment Annual Report.

If you have any questions concerning the contents of this report, please contact Cheryl Carlson, Enforcement Manager, at (317)327-2281.

Sincerely,

Richard Wise

Richard Wise
Administrator

RW/TMH/tmh
08th070

Enclosure

cc: Pam Wolsiefer-Leak, United Water Services
Tim Heider, Pretreatment Program Coordinator, United Water Services
Cheryl Carlson, Enforcement Manager, OES

Department of Public Works
Office of Environmental Services

Office of Environmental Services
2700 South Belmont Avenue
Indianapolis, Indiana 46221

(317) 327-2234
(fax) 327-2274
www.indy.GOV

2263

- CERTIFICATE OF ANALYSIS -

Report Date: *24-Nov-08*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Belmont Influent VOCs

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	08013115-001	**Your Sample ID:**	Raw Grab
Your Project #		**Collection Date:**	10/29/08 09:40
Your Project Name:	Belmont TTO'S	**Collected By:**	K. Wetzel
Sample Type:	Wastewater	**Receipt Date:**	10/29/08 16:10

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Belmont VOCs Influent

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	11/3/2008	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	11/3/2008	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	11/3/2008	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	11/3/2008	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	11/3/2008	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	11/3/2008	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	11/3/2008	rbische
Methylene chloride	< 5.0	ug/L	PQL	5.0	75-09-2	11/3/2008	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	11/3/2008	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	11/3/2008	rbische
Chloroform	5.3	ug/L		5.0	67-66-3	11/3/2008	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	11/3/2008	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	11/3/2008	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	11/3/2008	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	11/3/2008	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	11/3/2008	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	11/3/2008	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	11/3/2008	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	11/3/2008	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	11/3/2008	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	11/3/2008	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	11/3/2008	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	11/3/2008	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	11/3/2008	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	11/3/2008	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	11/3/2008	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	11/3/2008	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	11/3/2008	rbische
1 1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	11/3/2008	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	11/3/2008	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	11/3/2008	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	11/3/2008	rbische
Dibromofluoromethane (Surr)	102	%			1868-53-7	11/3/2008	rbische
Toluene-d8 (Surr)	102	%			2037-26-5	11/3/2008	rbische
4-Bromofluorobenzene (Surr)	98	%			460-00-4	11/3/2008	rbische

Lab # 08013115-001 **Sample ID:** Raw Grab

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Belmont Inf VOCs

Qualitative VOC Scan, GC/MS	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete d					11/3/2008	rbische

[redacted]

Lab # 08013115-001 Sample ID: Raw Grab

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Belmont Influent SVOC

Our Lab #	08013115-002	Your Sample ID:	Raw Composite
Your Project #		Collection Date:	10/29/08 08:00
Your Project Name:	Belmont TTO'S	Collected By:	K. Wetzel
Sample Type:	Wastewater	Receipt Date:	10/29/08 16:10

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	11/4/2008	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	11/4/2008	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	11/4/2008	dmacdonald
Phenol	29	ug/L		10.0	108-95-2	11/4/2008	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	11/4/2008	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	11/4/2008	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	11/4/2008	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	11/4/2008	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	11/4/2008	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	11/4/2008	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	11/4/2008	dmacdonald
Isophorone	< 10.0	ug/L	PQL	10.0	78-59-1	11/4/2008	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	11/4/2008	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	11/4/2008	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	11/4/2008	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	11/4/2008	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	11/4/2008	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	11/4/2008	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	11/4/2008	dmacdonald
4-Chloro-3-methylphenol	15	ug/L		10.0	59-50-7	11/4/2008	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	11/4/2008	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	11/4/2008	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	11/4/2008	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	11/4/2008	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	11/4/2008	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	11/4/2008	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	11/4/2008	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	11/4/2008	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	11/4/2008	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	11/4/2008	dmacdonald
Diethyl phthalate	< 10.0	ug/L	PQL	10.0	84-66-2	11/4/2008	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	11/4/2008	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	11/4/2008	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Belmont INF SVOCs

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	11/4/2008	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	11/4/2008	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	11/4/2008	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	11/4/2008	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	11/4/2008	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	11/4/2008	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	11/4/2008	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L	PQL	10.0	84-74-2	11/4/2008	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	11/4/2008	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	11/4/2008	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	11/4/2008	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L	PQL	10.0	85-68-7	11/4/2008	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	11/4/2008	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	11/4/2008	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	11/4/2008	dmacdonald
Bis(2-ethylhexyl) phthalate	36	ug/L		10.0	117-81-7	11/4/2008	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	11/4/2008	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	11/4/2008	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	11/4/2008	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	11/4/2008	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	11/4/2008	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	11/4/2008	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	11/4/2008	dmacdonald
2-Fluorophenol (Surr)	40	%			367-12-4	11/4/2008	dmacdonald
Phenol-d6 (Surr)	33	%			4165-62-2	11/4/2008	dmacdonald
Nitrobenzene-d5 (Surr)	49	%			4165-60-0	11/4/2008	dmacdonald
2-Fluorobiphenyl (Surr)	49	%			321-60-8	11/4/2008	dmacdonald
2,4,6-Tribromophenol (Surr)	46	%			118-79-6	11/4/2008	dmacdonald
Terphenyl-d14 (Surr)	64	%			1718-51-0	11/4/2008	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					11/4/2008	dmacdonald

Lab # 08013115-002 **Sample ID:** Raw Composite

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Belmont Inf SVOCs

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	11/13/2008	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	11/13/2008	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	11/13/2008	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	11/13/2008	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	11/13/2008	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	11/13/2008	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	11/13/2008	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	11/13/2008	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	93	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	78	%			2051-24-3	11/13/2008	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	11/13/2008	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	11/13/2008	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	11/13/2008	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	11/13/2008	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	11/13/2008	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	11/13/2008	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	11/13/2008	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	11/13/2008	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	11/13/2008	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	11/13/2008	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	11/13/2008	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	11/13/2008	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	11/13/2008	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	11/13/2008	mglasheen
Heptachlor	1.8	ug/L		0.10	76-44-8	11/13/2008	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	11/13/2008	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	11/13/2008	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	11/13/2008	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	93	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	78	%			2051-24-3	11/13/2008	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Belmont Effluent VOC

Our Lab #	08013115-003	**Your Sample ID:**	Final Grab
Your Project #		**Collection Date:**	10/29/08 10:00
Your Project Name:	Belmont TTO'S	**Collected By:**	K. Wetzel
Sample Type:	Wastewater	**Receipt Date:**	10/29/08 16:10

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	11/3/2008	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	11/3/2008	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	11/3/2008	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	11/3/2008	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	11/3/2008	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	11/3/2008	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	11/3/2008	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	11/3/2008	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	11/3/2008	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	11/3/2008	rbische
Chloroform	< 5.0	ug/L	PQL	5.0	67-66-3	11/3/2008	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	11/3/2008	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	11/3/2008	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	11/3/2008	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	11/3/2008	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	11/3/2008	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	11/3/2008	rbische
Bromodichloromethane	< 5.0	ug/L	PQL	5.0	75-27-4	11/3/2008	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	11/3/2008	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	11/3/2008	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	11/3/2008	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	11/3/2008	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	11/3/2008	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	11/3/2008	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	11/3/2008	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	11/3/2008	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	11/3/2008	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	11/3/2008	rbische
1 1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	11/3/2008	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	11/3/2008	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	11/3/2008	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	11/3/2008	rbische
Dibromofluoromethane (Surr)	103	%			1868-53-7	11/3/2008	rbische

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Belmont EFF VOCs

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	100	%			2037-26-5	11/3/2008	rbische
4-Bromofluorobenzene (Surr)	87	%			460-00-4	11/3/2008	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					11/3/2008	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Belmont Effluent SVOC

Our Lab #	08013115-004	Your Sample ID:	Final Composite
Your Project #		Collection Date:	10/29/08 08:00
Your Project Name:	Belmont TTO'S	Collected By:	K. Wetzel
Sample Type:	Wastewater	Receipt Date:	10/29/08 16:10

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	11/4/2008	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	11/4/2008	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	11/4/2008	dmacdonald
Phenol	< 10.0	ug/L		10.0	108-95-2	11/4/2008	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	11/4/2008	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	11/4/2008	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	11/4/2008	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	11/4/2008	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	11/4/2008	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	11/4/2008	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	11/4/2008	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	11/4/2008	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	11/4/2008	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	11/4/2008	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	11/4/2008	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	11/4/2008	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	11/4/2008	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	11/4/2008	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	11/4/2008	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L		10.0	59-50-7	11/4/2008	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	11/4/2008	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	11/4/2008	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	11/4/2008	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	11/4/2008	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	11/4/2008	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	11/4/2008	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	11/4/2008	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	11/4/2008	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	11/4/2008	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	11/4/2008	dmacdonald
Diethyl phthalate	< 10.0	ug/L		10.0	84-66-2	11/4/2008	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	11/4/2008	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	11/4/2008	dmacdonald

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Belmont SVOCs EFF

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	11/4/2008	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	11/4/2008	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	11/4/2008	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	11/4/2008	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	11/4/2008	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	11/4/2008	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	11/4/2008	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	11/4/2008	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	11/4/2008	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	11/4/2008	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	11/4/2008	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	11/4/2008	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	11/4/2008	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	11/4/2008	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	11/4/2008	dmacdonald
Bis(2-ethylhexyl) phthalate	< 10.0	ug/L	PQL	10.0	117-81-7	11/4/2008	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	11/4/2008	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	11/4/2008	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	11/4/2008	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	11/4/2008	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	11/4/2008	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	11/4/2008	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	11/4/2008	dmacdonald
2-Fluorophenol (Surr)	30	%			367-12-4	11/4/2008	dmacdonald
Phenol-d6 (Surr)	28	%			4165-62-2	11/4/2008	dmacdonald
Nitrobenzene-d5 (Surr)	37	%			4165-60-0	11/4/2008	dmacdonald
2-Fluorobiphenyl (Surr)	44	%			321-60-8	11/4/2008	dmacdonald
2,4,6-Tribromophenol (Surr)	49	%			118-79-6	11/4/2008	dmacdonald
Terphenyl-d14 (Surr)	43	%			1718-51-0	11/4/2008	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					11/4/2008	dmacdonald

Lab # 08013115-004 **Sample ID:** Final Composite

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Belmont EFF SVOCs

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	11/6/2008	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	11/6/2008	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	11/6/2008	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	11/6/2008	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	11/6/2008	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	11/6/2008	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	11/6/2008	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	11/6/2008	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	11/6/2008	mglasheen
Tetrachloro-m-xylene (Surr)	85	%			877-09-8	11/6/2008	mglasheen
Decachlorobiphenyl (Surr)	93	%			2051-24-3	11/6/2008	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	11/6/2008	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	11/6/2008	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	11/6/2008	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	11/6/2008	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	11/6/2008	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	11/6/2008	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	11/6/2008	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	11/6/2008	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	11/6/2008	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	11/6/2008	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	11/6/2008	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	11/6/2008	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	11/6/2008	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	11/6/2008	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	11/6/2008	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	11/6/2008	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	11/6/2008	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	11/6/2008	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	11/6/2008	mglasheen
Tetrachloro-m-xylene (Surr)	85	%			877-09-8	11/6/2008	mglasheen
Decachlorobiphenyl (Surr)	93	%			2051-24-3	11/6/2008	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Belmont EFF SVOCs

Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit

11/24/2008

Lab Manager **Date**

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
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- CERTIFICATE OF ANALYSIS -

2263

Report Date: *24-Nov-08*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Southport Influent VOCs

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	08013116-001	**Your Sample ID:**	Raw Grab
Your Project #		**Collection Date:**	10/29/08 08:25
Your Project Name:	**Southport TTO'S**	**Collected By:**	K. Wetzel
Sample Type:	Wastewater	**Receipt Date:**	10/29/08 16:10

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Southport Influent VOCs

Volatile Organics, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	11/3/2008	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	11/3/2008	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	11/3/2008	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	11/3/2008	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	11/3/2008	rbische
1 1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	11/3/2008	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	11/3/2008	rbische
Methylene chloride	5.3	ug/L		5.0	75-09-2	11/3/2008	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	11/3/2008	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	11/3/2008	rbische
Chloroform	5.8	ug/L		5.0	67-66-3	11/3/2008	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	11/3/2008	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	11/3/2008	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	11/3/2008	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	11/3/2008	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	11/3/2008	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	11/3/2008	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	11/3/2008	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	11/3/2008	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	11/3/2008	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	11/3/2008	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	11/3/2008	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	11/3/2008	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	11/3/2008	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	11/3/2008	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	11/3/2008	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	11/3/2008	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	11/3/2008	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	11/3/2008	rbische
1 3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	11/3/2008	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	11/3/2008	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	11/3/2008	rbische
Dibromofluoromethane (Surr)	103	%			1868-53-7	11/3/2008	rbische
Toluene-d8 (Surr)	100	%			2037-26-5	11/3/2008	rbische
4-Bromofluorobenzene (Surr)	88	%			460-00-4	11/3/2008	rbische

Lab # 08013116-001 **Sample ID:** Raw Grab

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SP Inf VOCs

Qualitative VOC Scan, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					11/3/2008	rbische

[redacted]

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Southport Influent SVOCs

Our Lab # 08013116-002

Your Project #

Your Project Name: Southport TTO'S

Sample Type: Wastewater

Your Sample ID: Raw Composite

Collection Date: 10/29/08 08:00

Collected By: K. Wetzel

Receipt Date: 10/29/08 16:10

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	11/4/2008	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	11/4/2008	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	11/4/2008	dmacdonald
Phenol	13	ug/L		10.0	108-95-2	11/4/2008	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	11/4/2008	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	11/4/2008	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	11/4/2008	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	11/4/2008	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	11/4/2008	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	11/4/2008	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	11/4/2008	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	11/4/2008	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	11/4/2008	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	11/4/2008	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	11/4/2008	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	11/4/2008	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	11/4/2008	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	11/4/2008	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	11/4/2008	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L	PQL	10.0	59-50-7	11/4/2008	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	11/4/2008	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	11/4/2008	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	11/4/2008	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	11/4/2008	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	11/4/2008	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	11/4/2008	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	11/4/2008	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	11/4/2008	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	11/4/2008	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	11/4/2008	dmacdonald
Diethyl phthalate	< 10.0	ug/L	PQL	10.0	84-66-2	11/4/2008	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	11/4/2008	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	11/4/2008	dmacdonald

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SP InF SVOCs

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	11/4/2008	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	11/4/2008	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	11/4/2008	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	11/4/2008	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	11/4/2008	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	11/4/2008	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	11/4/2008	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L	PQL	10.0	84-74-2	11/4/2008	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	11/4/2008	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	11/4/2008	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	11/4/2008	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	11/4/2008	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	11/4/2008	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	11/4/2008	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	11/4/2008	dmacdonald
Bis(2-ethylhexyl) phthalate	11	ug/L		10.0	117-81-7	11/4/2008	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	11/4/2008	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	11/4/2008	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	11/4/2008	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	11/4/2008	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	11/4/2008	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	11/4/2008	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	11/4/2008	dmacdonald
2-Fluorophenol (Surr)	37	%			367-12-4	11/4/2008	dmacdonald
Phenol-d6 (Surr)	33	%			4165-62-2	11/4/2008	dmacdonald
Nitrobenzene-d5 (Surr)	51	%			4165-60-0	11/4/2008	dmacdonald
2-Fluorobiphenyl (Surr)	54	%			321-60-8	11/4/2008	dmacdonald
2,4,6-Tribromophenol (Surr)	51	%			118-79-6	11/4/2008	dmacdonald
Terphenyl-d14 (Surr)	65	%			1718-51-0	11/4/2008	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					11/4/2008	dmacdonald

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SP Inf SVOCs

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	11/13/2008	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	11/13/2008	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	11/13/2008	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	11/13/2008	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	11/13/2008	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	11/13/2008	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	11/13/2008	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	11/13/2008	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	11/13/2008	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	11/13/2008	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	11/13/2008	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	11/13/2008	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9.	11/13/2008	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	11/13/2008	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	11/13/2008	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	11/13/2008	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	11/13/2008	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	11/13/2008	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	11/13/2008	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	11/13/2008	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	11/13/2008	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	11/13/2008	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	11/13/2008	mglasheen
Heptachlor	0.23	ug/L		0.10	76-44-8	11/13/2008	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	11/13/2008	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	11/13/2008	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	11/13/2008	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	11/13/2008	mglasheen

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

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Southport Effluent VOCs

Our Lab #	08013116-003	**Your Sample ID:**	Final Grab
Your Project #		**Collection Date:**	10/29/08 09:05
Your Project Name:	Southport TTO'S	**Collected By:**	K. Wetzel
Sample Type:	Wastewater	**Receipt Date:**	10/29/08 16:10

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	11/3/2008	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	11/3/2008	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	11/3/2008	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	11/3/2008	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	11/3/2008	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	11/3/2008	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	11/3/2008	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	11/3/2008	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	11/3/2008	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	11/3/2008	rbische
Chloroform	< 5.0	ug/L	PQL	5.0	67-66-3	11/3/2008	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	11/3/2008	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	11/3/2008	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	11/3/2008	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	11/3/2008	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	11/3/2008	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	11/3/2008	rbische
Bromodichloromethane	< 5.0	ug/L	PQL	5.0	75-27-4	11/3/2008	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	11/3/2008	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	11/3/2008	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	11/3/2008	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	11/3/2008	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	11/3/2008	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	11/3/2008	rbische
Dibromochloromethane	< 5.0	ug/L	PQL	5.0	124-48-1	11/3/2008	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	11/3/2008	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	11/3/2008	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	11/3/2008	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	11/3/2008	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	11/3/2008	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	11/3/2008	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	11/3/2008	rbische
Dibromofluoromethane (Surr)	104	%			1868-53-7	11/3/2008	rbische

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SP EFF VOCs

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	101	%			2037-26-5	11/3/2008	rbische
4-Bromofluorobenzene (Surr)	86	%			460-00-4	11/3/2008	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete d					11/3/2008	rbische

ESG Laboratories

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Southport Effluent SVOCs

Our Lab #	08013116-004	**Your Sample ID:**	Final Composite
Your Project #		**Collection Date:**	10/29/08 08:00
Your Project Name:	Southport TTO'S	**Collected By:**	K. Wetzel
Sample Type:	Wastewater	**Receipt Date:**	10/29/08 16:10

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	11/4/2008	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	11/4/2008	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	11/4/2008	dmacdonald
Phenol	< 10.0	ug/L		10.0	108-95-2	11/4/2008	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	11/4/2008	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	11/4/2008	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	11/4/2008	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	11/4/2008	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	11/4/2008	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	11/4/2008	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	11/4/2008	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	11/4/2008	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	11/4/2008	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	11/4/2008	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	11/4/2008	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	11/4/2008	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	11/4/2008	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	11/4/2008	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	11/4/2008	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L		10.0	59-50-7	11/4/2008	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	11/4/2008	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	11/4/2008	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	11/4/2008	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	11/4/2008	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	11/4/2008	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	11/4/2008	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	11/4/2008	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	11/4/2008	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	11/4/2008	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	11/4/2008	dmacdonald
Diethyl phthalate	< 10.0	ug/L		10.0	84-66-2	11/4/2008	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	11/4/2008	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	11/4/2008	dmacdonald

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

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SP EFF SVOCs

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	10/30/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	11/4/2008	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	11/4/2008	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	11/4/2008	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	11/4/2008	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	11/4/2008	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	11/4/2008	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	11/4/2008	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	11/4/2008	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	11/4/2008	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	11/4/2008	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	11/4/2008	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	11/4/2008	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	11/4/2008	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	11/4/2008	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	11/4/2008	dmacdonald
Bis(2-ethylhexyl) phthalate	11	ug/L		10.0	117-81-7	11/4/2008	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	11/4/2008	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	11/4/2008	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	11/4/2008	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	11/4/2008	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	11/4/2008	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	11/4/2008	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	11/4/2008	dmacdonald
2-Fluorophenol (Surr)	41	%			367-12-4	11/4/2008	dmacdonald
Phenol-d6 (Surr)	36	%			4165-62-2	11/4/2008	dmacdonald
Nitrobenzene-d5 (Surr)	62	%			4165-60-0	11/4/2008	dmacdonald
2-Fluorobiphenyl (Surr)	61	%			321-60-8	11/4/2008	dmacdonald
2,4,6-Tribromophenol (Surr)	66	%			118-79-6	11/4/2008	dmacdonald
Terphenyl-d14 (Surr)	52	%			1718-51-0	11/4/2008	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					11/4/2008	dmacdonald

ESG Laboratories

6927 WEST 71ST STREET
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SP EFF SVOCs

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	11/6/2008	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	11/6/2008	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	11/6/2008	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	11/6/2008	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	11/6/2008	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	11/6/2008	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	11/6/2008	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	11/6/2008	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	11/6/2008	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	11/6/2008	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	11/6/2008	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	11/4/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	11/6/2008	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	11/6/2008	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	11/6/2008	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	11/6/2008	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	11/6/2008	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	11/6/2008	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	11/6/2008	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	11/6/2008	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	11/6/2008	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	11/6/2008	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	11/6/2008	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	11/6/2008	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	11/6/2008	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	11/6/2008	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	11/6/2008	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	11/6/2008	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	11/6/2008	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	11/6/2008	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	11/6/2008	mglasheen
Tetrachloro-m-xylene (Surr)	81	%			877-09-8	11/6/2008	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	11/6/2008	mglasheen

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SP EFF SVOCs

Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit

11/24/2008

Lab Manager **Date**

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

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Sludge
2263

- CERTIFICATE OF ANALYSIS -

Report Date: *24-Nov-08*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Phone: (317) 639-7049
FAX: (317) 639-7602

Attn: Kim Cussen

Our Lab # 08013182-001
Your Sample ID: ICK

Your Project #
Collection Date: 10/28/08

Your Project Name:
Collected By: Client

Sample Type: Sludge
Receipt Date: 10/30/08 11:15

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS INDIANA 46278
PHONE (317) 290-1471
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Sludge VOCs

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 100	ug/kg		100	74-87-3	11/3/2008	rbische
Vinyl chloride	< 100	ug/kg		100	75-01-4	11/3/2008	rbische
Bromomethane	< 100	ug/kg		100	74-83-9	11/3/2008	rbische
Chloroethane	< 100	ug/kg		100	75-00-3	11/3/2008	rbische
Trichlorofluoromethane	< 100	ug/kg		100	75-69-4	11/3/2008	rbische
1,1-Dichloroethene	< 50	ug/kg		50	75-35-4	11/3/2008	rbische
Carbon disulfide	80	ug/kg		50	75-15-0	11/3/2008	rbische
Methylene chloride	< 50	ug/kg		50	75-09-2	11/3/2008	rbische
trans-1,2-Dichloroethene	< 50	ug/kg		50	156-60-5	11/3/2008	rbische
1,1-Dichloroethane	< 50	ug/kg		50	75-34-3	11/3/2008	rbische
Chloroform	< 50	ug/kg		50	67-66-3	11/3/2008	rbische
1,1,1-Trichloroethane	< 50	ug/kg		50	71-55-6	11/3/2008	rbische
Carbon tetrachloride	< 50	ug/kg		50	56-23-5	11/3/2008	rbische
Benzene	< 50	ug/kg		50	71-43-2	11/3/2008	rbische
1,2-Dichloroethane	< 50	ug/kg		50	107-06-2	11/3/2008	rbische
Trichloroethene	< 50	ug/kg		50	79-01-6	11/3/2008	rbische
1,2-Dichloropropane	< 50	ug/kg		50	78-87-5	11/3/2008	rbische
Bromodichloromethane	< 50	ug/kg		50	75-27-4	11/3/2008	rbische
2-Chloroethyl vinyl ether	< 200	ug/kg		200	110-75-8	11/3/2008	rbische
cis-1,3-Dichloropropene	< 50	ug/kg		50	10061-01-5	11/3/2008	rbische
Toluene	1800	ug/kg		500	108-88-3	11/3/2008	rbische
trans-1,3-Dichloropropene	< 50	ug/kg		50	10061-02-6	11/3/2008	rbische
1,1,2-Trichloroethane	< 50	ug/kg		50	79-00-5	11/3/2008	rbische
Tetrachloroethene	< 50	ug/kg		50	127-18-4	11/3/2008	rbische
Dibromochloromethane	< 50	ug/kg		50	124-48-1	11/3/2008	rbische
Chlorobenzene	< 50	ug/kg		50	108-90-7	11/3/2008	rbische
Ethylbenzene	< 50	ug/kg		50	100-41-4	11/3/2008	rbische
Bromoform	< 50	ug/kg		50	75-25-2	11/3/2008	rbische
1,1,2,2-Tetrachloroethane	< 50	ug/kg		50	79-34-5	11/3/2008	rbische
1,3-Dichlorobenzene	< 50	ug/kg		50	541-73-1	11/3/2008	rbische
1,4-Dichlorobenzene	< 50	ug/kg	PQL	50	106-46-7	11/3/2008	rbische
1,2-Dichlorobenzene	< 50	ug/kg		50	95-50-1	11/3/2008	rbische
Dibromofluoromethane (Surr)	115	%			1868-53-7	11/3/2008	rbische
Toluene-d8 (Surr)	94	%			2037-26-5	11/3/2008	rbische
4-Bromofluorobenzene (Surr)	83	%			460-00-4	11/3/2008	rbische

Lab # 08013182-001 **Sample ID:** ICK

ESG Laboratories

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Sludge VOCs

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					11/3/2008	rbische

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Sludge SVOCs

Base/Neutral/Acid Extractables	Analytical Method	Prep Method	Prep Date	By
	EPA 625	EPA 625	11/3/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 1700	ug/kg		1700	62-75-9	11/7/2008	dmacdonald
Bis(2-chloroethyl) ether	< 1700	ug/kg		1700	111-44-4	11/7/2008	dmacdonald
2-Chlorophenol	< 1700	ug/kg		1700	95-57-8	11/7/2008	dmacdonald
Phenol	< 1700	ug/kg	PQL	1700	108-95-2	11/7/2008	dmacdonald
1,3-Dichlorobenzene	< 1700	ug/kg		1700	541-73-1	11/7/2008	dmacdonald
1,4-Dichlorobenzene	< 1700	ug/kg		1700	106-46-7	11/7/2008	dmacdonald
1,2-Dichlorobenzene	< 1700	ug/kg		1700	95-50-1	11/7/2008	dmacdonald
Bis(2-chloroisopropyl) ether	< 1700	ug/kg		1700	108-60-1	11/7/2008	dmacdonald
Hexachloroethane	< 1700	ug/kg		1700	67-72-1	11/7/2008	dmacdonald
N-Nitrosodi-n-propylamine	< 1700	ug/kg		1700	621-64-7	11/7/2008	dmacdonald
Nitrobenzene	< 1700	ug/kg		1700	98-95-3	11/7/2008	dmacdonald
Isophorone	< 1700	ug/kg		1700	78-59-1	11/7/2008	dmacdonald
2-Nitrophenol	< 1700	ug/kg		1700	88-75-5	11/7/2008	dmacdonald
2,4-Dimethylphenol	< 1700	ug/kg		1700	105-67-9	11/7/2008	dmacdonald
Bis(2-chloroethoxy) methane	< 1700	ug/kg		1700	111-91-1	11/7/2008	dmacdonald
2,4-Dichlorophenol	< 1700	ug/kg		1700	120-83-2	11/7/2008	dmacdonald
1,2,4-Trichlorobenzene	< 1700	ug/kg		1700	120-82-1	11/7/2008	dmacdonald
Naphthalene	< 1700	ug/kg		1700	91-20-3	11/7/2008	dmacdonald
Hexachlorobutadiene	< 1700	ug/kg		1700	87-68-3	11/7/2008	dmacdonald
4-Chloro-3-methylphenol	< 1700	ug/kg		1700	59-50-7	11/7/2008	dmacdonald
Hexachlorocyclopentadiene	< 3300	ug/kg		3300	77-47-4	11/7/2008	dmacdonald
2,4,6-Trichlorophenol	< 1700	ug/kg		1700	88-06-2	11/7/2008	dmacdonald
2-Chloronaphthalene	< 1700	ug/kg		1700	91-58-7	11/7/2008	dmacdonald
Dimethyl phthalate	< 1700	ug/kg		1700	131-11-3	11/7/2008	dmacdonald
2,6-Dinitrotoluene	< 1700	ug/kg		1700	606-20-2	11/7/2008	dmacdonald
Acenaphthylene	< 1700	ug/kg		1700	208-96-8	11/7/2008	dmacdonald
Acenaphthene	< 1700	ug/kg		1700	83-32-9	11/7/2008	dmacdonald
2,4-Dinitrophenol	< 8300	ug/kg		8300	51-28-5	11/7/2008	dmacdonald
4-Nitrophenol	< 3300	ug/kg		3300	100-02-7	11/7/2008	dmacdonald
2,4-Dinitrotoluene	< 1700	ug/kg		1700	121-14-2	11/7/2008	dmacdonald
Diethyl phthalate	< 1700	ug/kg		1700	84-66-2	11/7/2008	dmacdonald
Fluorene	< 1700	ug/kg		1700	86-73-7	11/7/2008	dmacdonald
4-Chlorophenyl phenyl ether	< 1700	ug/kg		1700	7005-72-3	11/7/2008	dmacdonald
4,6-Dinitro-2-methylphenol	< 3300	ug/kg		3300	534-52-1	11/7/2008	dmacdonald
N-Nitrosodiphenylamine	< 1700	ug/kg		1700	86-30-6	11/7/2008	dmacdonald
4-Bromophenyl phenyl ether	< 1700	ug/kg		1700	101-55-3	11/7/2008	dmacdonald
Hexachlorobenzene	< 1700	ug/kg		1700	118-74-1	11/7/2008	dmacdonald
Pentachlorophenol	< 3300	ug/kg		3300	87-86-5	11/7/2008	dmacdonald
Phenanthrene	< 1700	ug/kg	PQL	1700	85-01-8	11/7/2008	dmacdonald

Lab # 08013182-001 Sample ID: ICK

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

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Sludge SVOCs

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	11/3/2008	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Anthracene	< 1700	ug/kg		1700	120-12-7	11/7/2008	dmacdonald
Di-n-butyl phthalate	< 1700	ug/kg	PQL	1700	84-74-2	11/7/2008	dmacdonald
Fluoranthene	< 1700	ug/kg		1700	206-44-0	11/7/2008	dmacdonald
Benzidine	< 8300	ug/kg		8300	92-87-5	11/7/2008	dmacdonald
Pyrene	< 1700	ug/kg	PQL	1700	129-00-0	11/7/2008	dmacdonald
Butyl benzyl phthalate	< 1700	ug/kg		1700	85-68-7	11/7/2008	dmacdonald
Benzo[a]anthracene	< 1700	ug/kg		1700	56-55-3	11/7/2008	dmacdonald
3,3'-Dichlorobenzidine	< 1700	ug/kg		1700	91-94-1	11/7/2008	dmacdonald
Chrysene	< 1700	ug/kg		1700	218-01-9	11/7/2008	dmacdonald
Bis(2-ethylhexyl) phthalate	4500	ug/kg	J	1700	117-81-7	11/7/2008	dmacdonald
Di-n-octylphthalate	< 1700	ug/kg		1700	117-84-0	11/7/2008	dmacdonald
Benzo[b]fluoranthene	< 1700	ug/kg		1700	205-99-2	11/7/2008	dmacdonald
Benzo[k]fluoranthene	< 1700	ug/kg		1700	207-08-9	11/7/2008	dmacdonald
Benzo[a]pyrene	< 1700	ug/kg		1700	50-32-8	11/7/2008	dmacdonald
Indeno[1,2,3-cd]pyrene	< 1700	ug/kg		1700	193-39-5	11/7/2008	dmacdonald
Dibenzo[a,h]anthracene	< 3300	ug/kg		3300	53-70-3	11/7/2008	dmacdonald
Benzo[g,h,i]perylene	< 1700	ug/kg		1700	191-24-2	11/7/2008	dmacdonald
2-Fluorophenol (Surr)	73	%			367-12-4	11/7/2008	dmacdonald
Phenol-d6 (Surr)	66	%			4165-62-2	11/7/2008	dmacdonald
Nitrobenzene-d5 (Surr)	76	%			4165-60-0	11/7/2008	dmacdonald
2-Fluorobiphenyl (Surr)	75	%			321-60-8	11/7/2008	dmacdonald
2,4,6-Tribromophenol (Surr)	52	%			118-79-6	11/7/2008	dmacdonald
Terphenyl-d14 (Surr)	83	%			1718-51-0	11/7/2008	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					11/6/2008	dmacdonald

Lab # 08013182-001 Sample ID: ICK

ESG Laboratories

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INDIANAPOLIS INDIANA 46278

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Sludge SVOCs

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	10/31/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 0.080	mg/kg		0.080	12674-11-2	11/13/2008	mglasheen
Aroclor 1221	< 0.080	mg/kg		0.080	11104-28-2	11/13/2008	mglasheen
Aroclor 1232	< 0.080	mg/kg		0.080	11141-16-5	11/13/2008	mglasheen
Aroclor 1242	< 0.080	mg/kg		0.080	53469-21-9	11/13/2008	mglasheen
Aroclor 1248	< 0.080	mg/kg		0.080	12672-29-6	11/13/2008	mglasheen
Aroclor 1254	< 0.080	mg/kg		0.080	11097-69-1	11/13/2008	mglasheen
Aroclor 1260	< 0.080	mg/kg		0.080	11096-82-5	11/13/2008	mglasheen
Aroclor 1262	< 0.080	mg/kg		0.080	37324-23-5	11/13/2008	mglasheen
Aroclor 1268	< 0.080	mg/kg		0.080	11100-14-4	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	72	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	83	%			2051-24-3	11/13/2008	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	10/31/2008	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.0033	mg/kg		0.0033	309-00-2	11/13/2008	mglasheen
alpha-BHC	< 0.0033	mg/kg		0.0033	319-84-6	11/13/2008	mglasheen
beta-BHC	< 0.0033	mg/kg		0.0033	319-85-7	11/13/2008	mglasheen
gamma-BHC (Lindane)	< 0.0033	mg/kg		0.0033	58-89-9	11/13/2008	mglasheen
delta-BHC	< 0.0033	mg/kg		0.0033	319-86-8	11/13/2008	mglasheen
4,4'-DDD	< 0.0033	mg/kg		0.0033	72-54-8	11/13/2008	mglasheen
4,4'-DDE	< 0.0033	mg/kg		0.0033	72-55-9	11/13/2008	mglasheen
4,4'-DDT	< 0.0033	mg/kg		0.0033	50-29-3	11/13/2008	mglasheen
Dieldrin	< 0.0033	mg/kg		0.0033	60-57-1	11/13/2008	mglasheen
Endosulfan I	< 0.0033	mg/kg	PQL	0.0033	959-98-8	11/13/2008	mglasheen
Endosulfan II	< 0.0033	mg/kg		0.0033	33213-65-9	11/13/2008	mglasheen
Endosulfan sulfate	< 0.0033	mg/kg		0.0033	1031-07-8	11/13/2008	mglasheen
Endrin	< 0.0033	mg/kg		0.0033	72-20-8	11/13/2008	mglasheen
Endrin aldehyde	< 0.0033	mg/kg		0.0033	7421-93-4	11/13/2008	mglasheen
Heptachlor	0.0410	mg/kg		0.0033	76-44-8	11/13/2008	mglasheen
Heptachlor epoxide	< 0.0033	mg/kg		0.0033	1024-57-3	11/13/2008	mglasheen
Methoxychlor	< 0.0033	mg/kg		0.0033	72-43-5	11/13/2008	mglasheen
Chlordane(Total)	< 0.0170	mg/kg		0.0170	57-74-9	11/13/2008	mglasheen
Toxaphene	< 0.0830	mg/kg		0.0830	8001-35-2	11/13/2008	mglasheen
Tetrachloro-m-xylene (Surr)	72	%			877-09-8	11/13/2008	mglasheen
Decachlorobiphenyl (Surr)	83	%			2051-24-3	11/13/2008	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Sludge SVOCs

Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

11/24/2008

Lab Manager **Date**

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Chain of Custody Record

584318

Environmental Monitoring & Process Support Laboratory
2700 South Belmont Avenue
(317) 639-7000

Project Name
Client
Sampler: (Signature)
Sampling Location

Sample ID	Date	Time	Composite	Grab	Water	Soil	Sludge	ICED	Filtered	HCl	HNO_3	H_2SO_4	NaOH	# Bottles	Cd - Total Rec.	Cd, Cr, Cu, Pb, Ni, Zn	As	Be, Mo, Se, Hg	NH3	Total Metals	*Organics			
ICK	10/28/08		X				X		-					1							X			

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Genadia Angeloe	10/29/08	7:00 pm	K.W. Fan	K.W. Tan	10/30/08	11:15	

Relinquished by:	Date	Time	Received for Laboratory by:	Project Manager:	Phone #:
			10/30/08 11:15		

* Organics - 608, 624, 625 and the top ten Tentatively Identified Compunds

ATTACHMENT XIX

Organics Inventory and Ten Most Abundant Constituents

2008 Organics Inventory

All results are in micrograms per liter (ug/L)

Pollutant	Belmont Influent	Belmont Effluent	Southport Influent	Southport Effluent	Sludge
Bis (2-ethylhexyl) phthalate	36		11	11	4500
Carbon disulfide					8
4-chloro-3-methylphenol	15				
Dichloromethane (methylene chloride)			5.3		
Heptachlor	1.8		0.23		0.041
Phenols	29		13		
Methylbenzene (toluene)					1800
Trichloromethane (chloroform)	5.3		5.8		

Pollutant	**Source**
Bis (2-ethylhexyl) phthalate	Plastizer used in PVC pipe. Domestic contaminant from plastic and household glue products.
Carbon disulfide	Breakdown product of carbamate compounds used in heavy metals treatment. Used by several industries for wastewater treatment.
4-chloro-3-methylphenol	General germicidal compound and preservative in glues, paints, and ink. Found in domestic and industrial wastewater.
Dichloromethane (methylene chloride)	Regulated industrial pollutant found in two permitted pharmaceutical facilities. Common laboratory extraction solvent.
Heptachlor	Agricultural and residential insecticide. Use has been discontinued except for termite control. Likely from surface runoff into sewer.
Phenols	Regulated pollutant found in permitted cokemaking facility. Household pollutant found in ordinary domestic wastewater.
Toluene	Regulated pollutant found in three permitted CWT facilities, OCPSF plant, and several remediation sites. Frequent runoff constituent.
Trichloromethane (chloroform)	Regulated industrial pollutant found in two permitted pharmaceutical facilities. Common laboratory extraction solvent.

Ten Most Abundant Pollutants- Belmont AWT Plant

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the Belmont influent and effluent. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter (ug/L)

Influent Grab Sample Fraction

Pollutant	Result
2-propanone (acetone)	210
2-propanol (isopropyl alcohol)	16

Influent Composite Sample Fraction

Pollutant	Result
Octadecanoic acid	242
4-hydroxy-2-pentanone	158
Unknown organic alcohol	116
1-propanol	107
Hexadecanoic acid	101
2-butoxyethanol (butyl cellosolve)	92
1-propanol (2-hyd)	80
2-(2-butoxyethanol)	71
Unknown fatty acid	70
2-methylpyridine	45

Effluent Grab Sample Fraction

Pollutant	Result
None found	

Effluent Composite Sample Fraction

Pollutant	Result
2H-1-benzopyran	24

Pollutant	Source
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
2-propanol (isopropyl alcohol)	Solvent used extensively by permitted pharmaceutical facility.
Octadecanoic acid	Most common fatty acid found in animal and vegetable fats.
4-hydroxy-2-pentanone	Synthetic product of propanone and acetone used in pharamaceuticals.
Unknown organic alcohol	Source cannot be determined.
1-propanol	Isomer of 2-propanone used in pharmaceutical facility.
Hexadecanoic acid	Fatty acid found in nearly all fats.
2-butoxyethanol (butyl cellosolve)	Common ingredient in home, commercial, and industrial cleaning solutions.
1-propanol (2-hyd)	Isomer of 2-propanone used in pharmaceutical facility.
2-(2-butoxyethanol)	Common ingredient in home, commercial, and industrial cleaning solutions.
Unknown fatty acid	Source cannot be determined.
2-methylpyridine	Pollutant found in regulated OCPSF facility.
2H-1-benzopyran	Pesticide and rodenticide.

Ten Most Abundant Pollutants- Southport AWT Plant

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the Southport influent and effluent. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter (ug/L)

Influent Grab Sample Fraction

Pollutant	Result
2-propanone (acetone)	85
Sulfur dioxide	6

Influent Composite Sample Fraction

Pollutant	Result
Octadecanoic acid	450
Molecular sulfur	106
Hexadecanoic acid	90
2,6,10-dodecatrien	79
Dodecanoic acid	65
Limonine	35
Dodecanamine	33
Propanedioic acid	31
1-methyl-3-cyclohexane	30
2-propanol (isopropyl alcohol)	30

Effluent Grab Sample Fraction

Pollutant

None found

Effluent Composite Sample Fraction

Pollutant	
1,1-oxybisethane (diethyl ether)	34

Pollutant	Source
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
Sulfur dioxide	Byproduct of coal combustion. Solvent used in laboratories.
Octadecanoic acid	Most common fatty acid found in animal and vegetable fats.
Molecular sulfur	Common element of organic substances and their breakdown products.
Hexadecanoic acid	Fatty acid found in nearly all fats.
2,6,10-dodecatrien	Chemical used in pesticide products (miticide).
Dodecanoic acid	Lauric acid found in coconut oil, human and cow's milk.
Limonine	Natural citrus compound, common industrial and commercial cleaner.
Dodecanamine	Used in cosmetics and as an animal feed supplement.
Propanedioic acid	Vitamin synthesis compound, possibly contributed by OCPSF facility.
1-methyl-3-cyclohexane	Used in organic synthesis from petroleum compounds. OCPSF source.
2-propanol (isopropyl alcohol)	Solvent used extensively by permitted pharmaceutical facility.
1,1-oxybisethane (diethyl ether)	Industrial solvent used in analytical chemistry. Likely from laboratory waste.

Ten Most Abundant Pollutants- Sludge

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the AWT sludge. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter- ug/L

Sludge Grab Sample Fraction

Pollutant	Result
2-propanone (acetone)	49000
2-butanone (MEK)	16000
2-pentanone (MPK)	140
Ethanol	130
Sebacic acid (decanedioic acid)	99
2-propanol (isopropyl alcohol)	63

Sludge Composite Sample Fraction

Pollutant	Result
Octodecanoic acid	85210
Unknown fatty acid	76401
Dodecanoic acid	18858
Tetradecanoic acid	11876
Molecular sulfur	11453
Unknown aromatic hydrocarbon	6660
Cholesterol	6277
Unknown fatty acid	5336
Indole (2,3-benzopyrrole)	3779
Pentanoic acid	3269

Pollutant	Source
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
2-butanone (MEK)	Natural vegetable constituent, paint and household glue ingredient
2-pentanone (MPK)	Used primarily in microadditives for food flavoring.
Ethanol	Common industrial and commercial use.Surface runoff from gasoline additive.
2-propanol (isopropyl alcohol)	Solvent used extensively by permitted pharmaceutical facility.
Octodecanoic acid	Most common fatty acid found in animal and vegetable fats.
Unknown fatty acid	Source cannot be determined.
Dodecanoic acid	Lauric acid found in coconut oil, human and cow's milk.
Tetradecanoic acid	Common fatty acid used in topical medications and as food ingredient.
Molecular sulfur	Common element of organic substances and their breakdown products.
Unknown aromatic hydrocarbon	Source cannot be determined.
Cholesterol	Bloodstream constiuent of humans and other mammels. Multitude of sources.
Unknown fatty acid	Source cannot be determined.
Indole (2,3-benzopyrrole)	Occurs naturally in human feces. Used in perfumes. Found in coal tar.
Pentanoic acid	Valeric acid. Used in perfumes and cosmetics and as a food additive.
Sebacic acid (decanedioic acid)	Widespread use in candle mfg, hydraulic fluids, plasticizers, and antiseptics.

Belmont Influent VOC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

08013115-001

Lab Name: Environmental Service Group Contract:

Lab Code: IN00042 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 08013115-001 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1103A.D

Level: (low/med) LOW Date Received: 10/29/08

% Moisture: not dec. Date Analyzed: 11/03/08

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	2.99	3	JN
2. 000064-17-5	Ethanol	4.54	4	JN
3. 000067-64-1	2-Propanone acetone	5.15	210	JN
4. 000067-63-0	2-Propanol Isopropyl alcohol	5.46	16	JN
5. 001184-60-7	1-Propene, 2-fluoro-	7.40	4	JN
6. 000156-59-2	Ethene, 1,2-dichloro-, (Z)-	8.04	0	JN
7. 004786-20-3	2-Butenenitrile	8.46	0	JN
8. 000106-92-3	Oxirane, [(2-propenyloxy)methyl]-	9.59	0	JN
9. 000108-10-1	Isopropylacetone	12.31	2	JN
10.	unknown	17.45	2	J

Tentatively Identified Compound (LSC) summary

Belmont Influent SVOC

Operator ID: David Macdonald Date Acquired: 4 Nov 2008 1:48
Data File: D:\HPCHEM\1\DATA\1103A12A.D
Name: 08013115-02A UNITED WATER INFL
Misc: 11/03/08 EX 10/30 400÷0.4mL 0.4SF
Method: D:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
2-Pentanone, 4-hydro	2.82	157.5	ug/L	4414920	ISTD01	8.55	1121260	40.0
Pyridine, 2-methyl-	3.18	44.6	ug/L	1251310	ISTD01	8.55	1121260	40.0
Ethanol, 2-butoxy-	4.54	91.9	ug/L	2574970	ISTD01	8.55	1121260	40.0
2-Propanol, 1-butoxy	5.29	24.3	ug/L	680924	ISTD01	8.55	1121260	40.0
2-Propanol, 1-(2-met	6.63	33.7	ug/L	944019	ISTD01	8.55	1121260	40.0
Benzenemethanol	6.87	36.0	ug/L	1008150	ISTD01	8.55	1121260	40.0
Ethanol, 2-(2-butoxy	8.74	71.3	ug/L	1998440	ISTD01	8.55	1121260	40.0
unknown organic alco	9.07	115.8	ug/L	3244910	ISTD01	8.55	1121260	40.0
1-Propanol, 2-(2-hyd	9.28	79.6	ug/L	2231690	ISTD01	8.55	1121260	40.0
2-Propanol, 1,1'-[(1	9.34	106.7	ug/L	2990060	ISTD01	8.55	1121260	40.0
Pyridine, Substitute	9.54	25.2	ug/L	706031	ISTD01	8.55	1121260	40.0
3,6,9,12-Tetraoxahex	13.39	33.3	ug/L	665762	ISTD03	13.60	800871	40.0
Hexadecanoic acid	14.92	101.3	ug/L	2028940	ISTD03	13.60	800871	40.0
Sulfur, mol. (S8)	15.28	28.0	ug/L	561187	ISTD03	13.60	800871	40.0
Octadecanoic acid	16.10	241.8	ug/L	704620	ISTD04	17.68	116573	40.0
unknown fatty acid	17.47	69.8	ug/L	203530	ISTD04	17.68	116573	40.0

1103A12A.D BNA.M Tue Nov 04 13:28:35 2008 RPT1

Belmont Effluent VOC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

08013115-003

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) WATER Lab Sample ID: 08013115-003 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1103B.D

Level: (low/med) LOW Date Received: 10/29/08

% Moisture: not dec. ______ Date Analyzed: 11/03/08

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	2.97	0	JN
2. 000141-91-3	Morpholine, 2,6-dimethyl-	16.40	0	JN

Tentatively Identified Compound (LSC) summary

Belmont Effluent SVOC

Operator ID: David Macdonald Date Acquired: 4 Nov 2008 00:47
Data File: D:\HPCHEM\1\DATA\1103A10A.D
Name: 08013115-04A UNITED WATER EFFL
Misc: 11/03/08 EX 10/30 400-0.4mL 0.4SF
Method: D:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Ethane, 1,1'-oxybis[	5.52	8.1	ug/L	171743	ISTD01	8.54	843750	40.0
unknown	15.23	7.9	ug/L	155228	ISTD03	13.59	782558	40.0
2H-1-Benzopyran, 3,4 chromene	16.00	23.5	ug/L	219707	ISTD04	17.68	373510	40.0

1103A10A.D BNA.M Tue Nov 04 12:57:51 2008 RPT1

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Met
Tit
Lib

Southport Influent VOC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
08013116-001

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) WATER Lab Sample ID: 08013116-001 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1103D.D

Level: (low/med) LOW Date Received: 10/29/08

% Moisture: not dec. ______ Date Analyzed: 11/03/08

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 3

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000463-58-1	Carbon oxide sulfide (COS) / carbonyl sulfide	2.54	1	JN
2. 007446-09-5	Sulfur dioxide	2.95	6	JN
3. 000067-64-1	2-Propanone acetone	5.15	85	JN

Southport Influent SVOCs

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald Date Acquired: 4 Nov 2008 2:18
Data File: D:\HPCHEM\1\DATA\1103A13A.D
Name: 08013116-02A UNITED WATER INFL
Misc: 11/03/08 EX 10/30 400-0.4mL 0.4SF
Method: D:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
2-Pentanone, 4-hydro	2.73	24.2	ug/L	526234	ISTD01	8.54	869167	40.0
Ethanol, 2-butoxy-	4.43	24.9	ug/L	541201	ISTD01	8.54	869167	40.0
Limonene	6.67	35.8	ug/L	778242	ISTD01	8.54	869167	40.0
Pentanedioic acid, d	8.14	22.1	ug/L	481112	ISTD01	8.54	869167	40.0
3-Cyclohexene-1-meth	8.70	29.9	ug/L	649999	ISTD01	8.54	869167	40.0
2-Propanol, 1,1'-[(1	9.25	29.7	ug/L	646339	ISTD01	8.54	869167	40.0
2-Butanol, 3,3'-oxyb	9.29	23.8	ug/L	516605	ISTD01	8.54	869167	40.0
Propanedioic acid, p	9.67	30.7	ug/L	666227	ISTD01	8.54	869167	40.0
unknown	10.58	25.4	ug/L	558178	ISTD02	11.34	878112	40.0
1-Dodecanamine, N,N-	11.64	33.3	ug/L	732100	ISTD02	11.34	878112	40.0
Dodecanoic acid	12.18	65.4	ug/L	741402	ISTD02	11.34	878112	40.0
Hexadecanoic acid	14.95	90.3	ug/L	4376520	ISTD03	13.59	1939620	40.0
Sulfur, mol. (S8)	15.37	105.7	ug/L	5125870	ISTD03	13.59	1939620	40.0
Octadecanoic acid	16.13	449.6	ug/L	1390820	ISTD04	17.68	123733	40.0
2,6,10-Dodecatrien-1	19.49	78.5	ug/L	129855	ISTD05	19.71	66171	40.0

1103A13A.D BNA.M Tue Nov 04 13:56:17 2008 RPT1

Southport Effluent VOC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

08013116-003

Lab Name: Environmental Service Group Contract: ____

Lab Code: IN00042 Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 08013116-003 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1103C.D

Level: (low/med) LOW Date Received: 10/29/08

% Moisture: not dec. ____ Date Analyzed: 11/03/08

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Tentatively Identified Compound (LSC) summary

Southport Effluent SVOCs

Operator ID: David Macdonald Date Acquired: 4 Nov 2008 1:18
Data File: D:\HPCHEM\1\DATA\1103A11A.D
Name: 08013116-04A UNITED WATER EFFL
Misc: 11/03/08 EX 10/30 400-0.4mL 0.4SF
Method: D:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

diethyl ether

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Ethane, 1,1'-oxybis[	5.52	33.9	ug/L	700632	ISTD01	8.54	827195	40.0

1103A11A.D BNA.M Tue Nov 04 12:55:15 2008 RPT1

ESG Laboratories

927 West 71st Street • Indianapolis, IN 46278
Phone (317) 290-1471 • Fax (317)290-1670

CHAIN OF CUSTODY RECORD

Client Name: UNITED WATER
ESG Work Order #: 0843116
Project Name: Southport Comm
Project No:
Sampler(s) Signature:

Filtered (Y or N):
Preserv. Code:
Analyses: TTO

						Total Number of Containers	TTO									Comments
	10/29/08	825		X	Raw grab	4	X									
	10/29/08	800	X		Raw comp.	2	X									
	10/29/08	905		X	Final grab	4	X									
	10/29/08	800	X		Final comp	2	X									

Relinquished By:
Received By: [signature] Date/Time: 10/29/08

Relinquished By: [signature] Date/Time: 10/29/08 4:10 PM
Received By: [signature]

Relinquished By: Date/Time
Received By:

Sample Temp: 3.0 °C
Received on Ice: Y / N
Samples Intact: Y / N
Adequate Volume: Y / N
Appropriate Containers: Y / N
Appropriate Preservative: Y / N
Within Hold Time: Y / N
Head Space Absent: Y / N / NA

Normal ______ Rush ______
Requested Due Date: ______

Please note if sample(s) suspected to be hazardous, corrosive, or requires special handling for any reason.

4.00 ______ 7.00 ______ 10.00 ______

N = HNO_3 / Nitric Acid
S = H_2SO_4 / Sulfuric Acid
H = HCl / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
OH = NaOH / Sodium Hydroxide
SO = $Na_2S_2O_3$ / Sodium Thiosulfate

Sludge VOC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

08013182-001

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) SOIL Lab Sample ID: 08013182-001 Unit

Sample wt/vol: 0.5 (g/ml) G Lab File ID: 1301005.D

Level: (low/med) LOW Date Received: 10/28/08

% Moisture: not dec. 0 Date Analyzed: 11/03/08

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 6

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000064-17-5	Ethanol	4.56	130	JND
2. 000067-64-1	2-Propanone Acetone	6.15	49000	JND
3. 000067-63-0	2-Propanol Isopropyl alcohol IPA	5.48	63	JND
4. 000078-93-3	2-Butanone MEK	8.13	16000	JND
5. 000107-87-9	2-Pentanone Methyl propyl Ketone	10.83	140	JND
6. 002432-89-5	Decanedioic acid, didecyl ester	17.36	99	JND

Sebacic acid

Sludge SVOCs

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald Date Acquired: 7 Nov 2008 3:04
Data File: D:\HPCHEM\1\DATA\1106A17A.D
Name: 08013182-01A UNITED TECH 1/5
Misc: 11/06/08 SOIL 11/3 30g-1mL 1.0SF 1/5
Method: D:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
unknown fatty acid	4.98	5336.4	ug/L	789911	ISTD01	8.43	985841	40.0
Pentanoic acid	6.29	3268.9	ug/L	483875	ISTD01	8.43	985841	40.0
Indole, substituted	10.45	3779.1	ug/L	619713	ISTD02	11.21	1092130	40.0
unknown fatty acid	10.49	3045.1	ug/L	499351	ISTD02	11.21	1092130	40.0
Dodecanoic acid	12.12	18858.4	ug/L	3092460	ISTD02	11.21	1092130	40.0
Tetradecanoic acid	13.55	11876.4	ug/L	3367160	ISTD03	13.46	1888220	40.0
unknown fatty acid	15.00	76401.2	ug/L	21661000	ISTD03	13.46	1888220	40.0
Sulfur, mol. (S8)	15.20	11453.4	ug/L	3247220	ISTD03	13.46	1888220	40.0
Octadecanoic acid	16.14	85209.5	ug/L	8137430	ISTD04	17.55	636024	40.0
unknown aromatic hyd	17.12	6660.0	ug/L	636024	ISTD04	17.55	636024	40.0
Cholesterol (8CI)	20.64	6277.3	ug/L	225585	ISTD05	19.58	239340	40.0

1106A17A.D BNA.M Fri Nov 07 12:53:40 2008 RPT1

City of
Indianapolis
Gregory A. Ballard, Mayor

December 24, 2009

Ms. Natalie Maupin
Indiana Department of Environmental Management
Office of Water Quality
100 North Senate Avenue
Mail Code 65-40
Indianapolis, IN 46206-2251

Re: Annual Inventory of Organic Pollutants

Dear Ms. Maupin:

Enclosed is the annual report of organic pollutants which occur in the influent and effluent of the Belmont and Southport AWT facilities. In addition, analytical results for organic pollutants found in the sludge are included. This report is due to IDEM prior to December 31, 2009 as required by Part I.A.8.b. of NPDES Permit No. IN0023183. The report contains analytical results of the priority pollutants as well as the identification and quantification of the ten most abundant constituents of each sample fraction shown to be present by peaks on the gas chromatogram and found to be more than ten times higher than the adjacent background noise. A determination as to whether the pollutants interfere, pass through, or otherwise violate the requirements of 40 CFR 403.2 will be completed and the evaluation will be included in the program effectiveness review section of the Indianapolis Pretreatment Annual Report.

If you have any questions concerning the contents of this report, please contact Cheryl Carlson, Enforcement Manager, at 327-2281.

Sincerely,

Richard Wise

Richard Wise
Administrator

RW/TMH/tmh
09lh040

Enclosure

cc: Pam Wolsiefer-Leak, United Water Services
Tim Heider, Pretreatment Program Coordinator, United Water Services
Cheryl Carlson, Enforcement Manager

Department of Public Works
Office of Environmental Services
2700 South Belmont Avenue
Indianapolis, Indiana 46221
(317) 327-2234
(fax) 327-2274
(TDD) 327-5186
indygov.org

Hand delivered 12/30/09 by M. Maier

City of
Indianapolis
Gregory A. Ballard, Mayor

December 24, 2009

Ms. Natalie Maupin
Indiana Department of Environmental Management
Office of Water Quality
100 North Senate Avenue
Mail Code 65-40
Indianapolis, IN 46206-2251

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Sincerely,

Richard Wise

Richard Wise
Administrator

RW/TMH/tmh
09th040

Enclosure

cc: Pam Wolsiefer-Leak, United Water Services
Tim Heider, Pretreatment Program Coordinator, United Water Services
Cheryl Carlson, Enforcement Manager

Department of Public Works
Office of Environmental Services
2700 South Belmont Avenue
Indianapolis, Indiana 46221
(317) 327-2234
(fax) 327-2274
(TDD) 327-5186
indygov.org

- CERTIFICATE OF ANALYSIS -

Report Date: *30-Dec-09*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	09015556-001	**Your Sample ID:**	ICK
Your Project #		**Collection Date:**	12/22/09 07:00
Your Project Name:		**Collected By:**	Client
Sample Type:	Sludge	**Receipt Date:**	12/23/09 00:00

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 100	ug/kg		100	74-87-3	12/26/2009	rbische
Vinyl chloride	< 100	ug/kg		100	75-01-4	12/26/2009	rbische
Bromomethane	< 100	ug/kg		100	74-83-9	12/26/2009	rbische
Chloroethane	< 100	ug/kg		100	75-00-3	12/26/2009	rbische
Trichlorofluoromethane	< 100	ug/kg		100	75-69-4	12/26/2009	rbische
1,1-Dichloroethene	< 50	ug/kg		50	75-35-4	12/26/2009	rbische
Carbon disulfide	< 50	ug/kg	PQL	50	75-15-0	12/26/2009	rbische
Methylene chloride	< 50	ug/kg		50	75-09-2	12/26/2009	rbische
trans-1,2-Dichloroethene	< 50	ug/kg		50	156-60-5	12/26/2009	rbische
1,1-Dichloroethane	< 50	ug/kg		50	75-34-3	12/26/2009	rbische
Chloroform	< 50	ug/kg		50	67-66-3	12/26/2009	rbische
1,1,1-Trichloroethane	< 50	ug/kg		50	71-55-6	12/26/2009	rbische
Carbon tetrachloride	< 50	ug/kg		50	56-23-5	12/26/2009	rbische
Benzene	< 50	ug/kg		50.	71-43-2	12/26/2009	rbische
1,2-Dichloroethane	< 50	ug/kg		50	107-06-2	12/26/2009	rbische
Trichloroethene	96	ug/kg		50	79-01-6	12/26/2009	rbische
1,2-Dichloropropane	< 50	ug/kg		50	78-87-5	12/26/2009	rbische
Bromodichloromethane	< 50	ug/kg		50	75-27-4	12/26/2009	rbische
2-Chloroethyl vinyl ether	< 200	ug/kg		200	110-75-8	12/26/2009	rbische
cis-1,3-Dichloropropene	< 50	ug/kg		50	10061-01-5	12/26/2009	rbische
Toluene	890	ug/kg		50	108-88-3	12/26/2009	rbische
trans-1,3-Dichloropropene	< 50	ug/kg		50	10061-02-6	12/26/2009	rbische
1,1,2-Trichloroethane	< 50	ug/kg		50	79-00-5	12/26/2009	rbische
Tetrachloroethene	< 50	ug/kg	PQL	50	127-18-4	12/26/2009	rbische
Dibromochloromethane	< 50	ug/kg		50	124-48-1	12/26/2009	rbische
Chlorobenzene	< 50	ug/kg		50	108-90-7	12/26/2009	rbische
Ethylbenzene	< 50	ug/kg		50	100-41-4	12/26/2009	rbische
Bromoform	< 50	ug/kg		50	75-25-2	12/26/2009	rbische
1,1,2,2-Tetrachloroethane	< 50	ug/kg		50	79-34-5	12/26/2009	rbische
1,3-Dichlorobenzene	< 50	ug/kg		50	541-73-1	12/26/2009	rbische
1,4-Dichlorobenzene	< 50	ug/kg	PQL	50	106-46-7	12/26/2009	rbische
1,2-Dichlorobenzene	< 50	ug/kg		50	95-50-1	12/26/2009	rbische
Dibromofluoromethane (Surr)	94	%			1868-53-7	12/26/2009	rbische
Toluene-d8 (Surr)	87	%			2037-26-5	12/26/2009	rbische
4-Bromofluorobenzene (Surr)	86	%			460-00-4	12/26/2009	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Qualitative VOC Scan, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					12/26/2009	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 1000	ug/kg		1000	62-75-9	12/30/2009	dmacdonald
Bis(2-chloroethyl) ether	< 1000	ug/kg		1000	111-44-4	12/30/2009	dmacdonald
2-Chlorophenol	< 1000	ug/kg		1000	95-57-8	12/30/2009	dmacdonald
Phenol	< 1000	ug/kg	PQL	1000	108-95-2	12/30/2009	dmacdonald
1,3-Dichlorobenzene	< 1000	ug/kg		1000	541-73-1	12/30/2009	dmacdonald
1,4-Dichlorobenzene	< 1000	ug/kg		1000	106-46-7	12/30/2009	dmacdonald
1,2-Dichlorobenzene	< 1000	ug/kg		1000	95-50-1	12/30/2009	dmacdonald
Bis(2-chloroisopropyl) ether	< 1000	ug/kg		1000	108-60-1	12/30/2009	dmacdonald
Hexachloroethane	< 1000	ug/kg		1000	67-72-1	12/30/2009	dmacdonald
N-Nitrosodi-n-propylamine	< 1000	ug/kg		1000	621-64-7	12/30/2009	dmacdonald
Nitrobenzene	< 1000	ug/kg		1000	98-95-3	12/30/2009	dmacdonald
Isophorone	< 1000	ug/kg		1000	78-59-1	12/30/2009	dmacdonald
2-Nitrophenol	< 1000	ug/kg		1000	88-75-5	12/30/2009	dmacdonald
2,4-Dimethylphenol	< 1000	ug/kg		1000	105-67-9	12/30/2009	dmacdonald
Bis(2-chloroethoxy) methane	< 1000	ug/kg		1000	111-91-1	12/30/2009	dmacdonald
2,4-Dichlorophenol	< 1000	ug/kg		1000	120-83-2	12/30/2009	dmacdonald
1,2,4-Trichlorobenzene	< 1000	ug/kg		1000	120-82-1	12/30/2009	dmacdonald
Naphthalene	< 1000	ug/kg	PQL	1000	91-20-3	12/30/2009	dmacdonald
Hexachlorobutadiene	< 1000	ug/kg		1000	87-68-3	12/30/2009	dmacdonald
4-Chloro-3-methylphenol	< 1000	ug/kg		1000	59-50-7	12/30/2009	dmacdonald
Hexachlorocyclopentadiene	< 2000	ug/kg		2000	77-47-4	12/30/2009	dmacdonald
2,4,6-Trichlorophenol	< 1000	ug/kg		1000	88-06-2	12/30/2009	dmacdonald
2-Chloronaphthalene	< 1000	ug/kg		1000	91-58-7	12/30/2009	dmacdonald
Dimethyl phthalate	< 1000	ug/kg		1000	131-11-3	12/30/2009	dmacdonald
2,6-Dinitrotoluene	< 1000	ug/kg		1000	606-20-2	12/30/2009	dmacdonald
Acenaphthylene	< 1000	ug/kg		1000	208-96-8	12/30/2009	dmacdonald
Acenaphthene	< 1000	ug/kg		1000	83-32-9	12/30/2009	dmacdonald
2,4-Dinitrophenol	< 5000	ug/kg		5000	51-28-5	12/30/2009	dmacdonald
4-Nitrophenol	< 2000	ug/kg		2000	100-02-7	12/30/2009	dmacdonald
2,4-Dinitrotoluene	< 1000	ug/kg		1000	121-14-2	12/30/2009	dmacdonald
Diethyl phthalate	< 1000	ug/kg		1000	84-66-2	12/30/2009	dmacdonald
Fluorene	< 1000	ug/kg		1000	86-73-7	12/30/2009	dmacdonald
4-Chlorophenyl phenyl ether	< 1000	ug/kg		1000	7005-72-3	12/30/2009	dmacdonald
4,6-Dinitro-2-methylphenol	< 2000	ug/kg		2000	534-52-1	12/30/2009	dmacdonald
N-Nitrosodiphenylamine	< 1000	ug/kg		1000	86-30-6	12/30/2009	dmacdonald
4-Bromophenyl phenyl ether	< 1000	ug/kg		1000	101-55-3	12/30/2009	dmacdonald
Hexachlorobenzene	< 1000	ug/kg		1000	118-74-1	12/30/2009	dmacdonald
Pentachlorophenol	< 2000	ug/kg		2000	87-86-5	12/30/2009	dmacdonald
Phenanthrene	< 1000	ug/kg		1000	85-01-8	12/30/2009	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Anthracene	< 1000	ug/kg		1000	120-12-7	12/30/2009	dmacdonald
Di-n-butyl phthalate	< 1000	ug/kg		1000	84-74-2	12/30/2009	dmacdonald
Fluoranthene	< 1000	ug/kg		1000	206-44-0	12/30/2009	dmacdonald
Benzidine	< 5000	ug/kg		5000	92-87-5	12/30/2009	dmacdonald
Pyrene	< 1000	ug/kg		1000	129-00-0	12/30/2009	dmacdonald
Butyl benzyl phthalate	< 1000	ug/kg		1000	85-68-7	12/30/2009	dmacdonald
Benzo[a]anthracene	< 1000	ug/kg		1000	56-55-3	12/30/2009	dmacdonald
3,3'-Dichlorobenzidine	< 1000	ug/kg		1000	91-94-1	12/30/2009	dmacdonald
Chrysene	< 1000	ug/kg		1000	218-01-9	12/30/2009	dmacdonald
Bis(2-ethylhexyl) phthalate	7300	ug/kg		1000	117-81-7	12/30/2009	dmacdonald
Di-n-octylphthalate	< 1000	ug/kg		1000	117-84-0	12/30/2009	dmacdonald
Benzo[b]fluoranthene	< 1000	ug/kg		1000	205-99-2	12/30/2009	dmacdonald
Benzo[k]fluoranthene	< 1000	ug/kg		1000	207-08-9	12/30/2009	dmacdonald
Benzo[a]pyrene	< 1000	ug/kg		1000	50-32-8	12/30/2009	dmacdonald
Indeno[1,2,3-cd]pyrene	< 1000	ug/kg		1000	193-39-5	12/30/2009	dmacdonald
Dibenzo[a,h]anthracene	< 2000	ug/kg		2000	53-70-3	12/30/2009	dmacdonald
Benzo[g,h,i]perylene	< 1000	ug/kg		1000	191-24-2	12/30/2009	dmacdonald
2-Fluorophenol (Surr)	53	%			367-12-4	12/30/2009	dmacdonald
Phenol-d6 (Surr)	78	%			4165-62-2	12/30/2009	dmacdonald
Nitrobenzene-d5 (Surr)	74	%			4165-60-0	12/30/2009	dmacdonald
2-Fluorobiphenyl (Surr)	100	%			321-60-8	12/30/2009	dmacdonald
2,4,6-Tribromophenol (Surr)	33	%			118-79-6	12/30/2009	dmacdonald
Terphenyl-d14 (Surr)	85	%			1718-51-0	12/30/2009	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					12/30/2009	dmacdonald

Lab # 09015556-001 Sample ID: ICK

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 0.080	mg/kg		0.080	12674-11-2	12/29/2009	mglasheen
Aroclor 1221	< 0.080	mg/kg		0.080	11104-28-2	12/29/2009	mglasheen
Aroclor 1232	< 0.080	mg/kg		0.080	11141-16-5	12/29/2009	mglasheen
Aroclor 1242	< 0.080	mg/kg		0.080	53469-21-9	12/29/2009	mglasheen
Aroclor 1248	< 0.080	mg/kg		0.080	12672-29-6	12/29/2009	mglasheen
Aroclor 1254	< 0.080	mg/kg		0.080	11097-69-1	12/29/2009	mglasheen
Aroclor 1260	< 0.080	mg/kg		0.080	11096-82-5	12/29/2009	mglasheen
Aroclor 1262	< 0.080	mg/kg		0.080	37324-23-5	12/29/2009	mglasheen
Aroclor 1268	< 0.080	mg/kg		0.080	11100-14-4	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	129	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	99	%			2051-24-3	12/29/2009	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.0033	mg/kg		0.0033	309-00-2	12/29/2009	mglasheen
alpha-BHC	< 0.0033	mg/kg		0.0033	319-84-6	12/29/2009	mglasheen
beta-BHC	< 0.0033	mg/kg		0.0033	319-85-7	12/29/2009	mglasheen
gamma-BHC (Lindane)	< 0.0033	mg/kg		0.0033	58-89-9	12/29/2009	mglasheen
delta-BHC	< 0.0033	mg/kg		0.0033	319-86-8	12/29/2009	mglasheen
4,4'-DDD	< 0.0033	mg/kg		0.0033	72-54-8	12/29/2009	mglasheen
4,4'-DDE	< 0.0033	mg/kg		0.0033	72-55-9	12/29/2009	mglasheen
4,4'-DDT	< 0.0033	mg/kg		0.0033	50-29-3	12/29/2009	mglasheen
Dieldrin	< 0.0033	mg/kg		0.0033	60-57-1	12/29/2009	mglasheen
Endosulfan I	< 0.0033	mg/kg		0.0033	959-98-8	12/29/2009	mglasheen
Endosulfan II	< 0.0033	mg/kg		0.0033	33213-65-9	12/29/2009	mglasheen
Endosulfan sulfate	< 0.0033	mg/kg		0.0033	1031-07-8	12/29/2009	mglasheen
Endrin	< 0.0033	mg/kg		0.0033	72-20-8	12/29/2009	mglasheen
Endrin aldehyde	< 0.0033	mg/kg		0.0033	7421-93-4	12/29/2009	mglasheen
Heptachlor	< 0.0033	mg/kg		0.0033	76-44-8	12/29/2009	mglasheen
Heptachlor epoxide	< 0.0033	mg/kg		0.0033	1024-57-3	12/29/2009	mglasheen
Methoxychlor	< 0.0033	mg/kg		0.0033	72-43-5	12/29/2009	mglasheen
Chlordane(Total)	< 0.0170	mg/kg		0.0170	57-74-9	12/29/2009	mglasheen
Toxaphene	< 0.0830	mg/kg		0.0830	8001-35-2	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	129	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	99	%			2051-24-3	12/29/2009	mglasheen

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit

12/30/2009

Lab Manager **Date**

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

09015556-001

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) SOIL Lab Sample ID: 09015556-001 Unit

Sample wt/vol: 0.5 (g/ml) G Lab File ID: 1226E.D

Level: (low/med) LOW Date Received: 12/22/09

% Moisture: not dec. 0 Date Analyzed: 12/26/09

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 7

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000067-64-1	2-Propanone	5.17	20000	JND
2. 000078-93-3	2-Butanone	8.04	8500	JND
3. 000107-87-9	2-Pentanone	10.67	38	JND
4. 000624-92-0	Disulfide, dimethyl	11.98	160	JND
5. 000110-43-0	2-Heptanone	15.72	40	JND
6. 003913-02-8	1-Octanol, 2-butyl-	16.93	77	JND
7. 029812-79-1	Hydroxylamine, O-decyl-	17.36	17	JND

above 50ug/l

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 30 Dec 2009   3:41
Data File: D:\HPCHEM\1\DATA\1229A16A.D
Name: 09015556-01A UNITED WATER
Misc: 12/29/09 EX 12/28 10g-1mL 1.0SR
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Butanoic acid	6.32	6359.0	ug/L	1459420	ISTD01	10.82	918017	40.0
Butanoic acid, 2-met	7.67	5866.7	ug/L	1346440	ISTD01	10.82	918017	40.0
Phenol, 4-methyl-	9.67	18431.3	ug/L	3203980	ISTD01	10.82	918017	40.0
Dodecanoic acid	14.24	6888.0	ug/L	1431540	ISTD02	13.65	831319	40.0
Tetradecanoic acid	15.72	23701.1	ug/L	1346230	ISTD03	15.98	227202	40.0
Hexadecanoic acid, m	16.77	5087.4	ug/L	288966	ISTD03	15.98	227202	40.0
Hexadecanoic acid	17.15	95497.4	ug/L	5424300	ISTD03	15.98	227202	40.0
Sulfur, mol. (S8)	17.87	5761.4	ug/L	327249	ISTD03	15.98	227202	40.0
9-Octadecenoic acid	18.25	73768.2	ug/L	5249590	ISTD04	20.22	284653	40.0
Octadecanoic acid	18.36	11632.8	ug/L	827829	ISTD04	20.22	284653	40.0

Chain of Custody Record

090155560

United Water
Environmental Monitoring & Process Support Laboratory
2700 South Belmont Avenue
(317) 639-7000

Project Name
Client
Sampler: (Signature)

Sampling Location

Laboratory Analysis

Sample ID	Date	Time	Composite	Grab	Water	Soil	Sludge	ICED	Filtered	HCl	HNO_3	H_2SO_4	NaOH	# Bottles	Cd - Total Rec.	Cd, Cr, Cu, Pb, Ni, Zn	As	Be, Mo, Se, Hg	NH3	Total Metals	*ORGANICS			
*ICK	12/22/09	7:00	X				X							1							X			

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Genadia Angelov	12/23/09	10:50	[signature]	[signature]	12/23	11:20	

Relinquished by:	Date	Time	Received for Laboratory by:	Project Manager:	Phone #:
			[signature] 12/23/09 1120		

*ICK - organics - Method 624, 608, 625 and Top ten Tentatively Identified Compunds

Temp. 7.9 °C

[2] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are recommended for use in the analysis of the effluent samples. Alternative 40 CFR 136 approved methods may be used provided the LOD is less than the monthly average and/or daily maximum effluent limitations.

The permittee may determine a case-specific method detection level (MDL) using one of the analytical methods specified below, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. NOTE: The MDL for purposes of this document, is synonymous with the "limit of detection" or "LOD" as defined in 327 IAC 5-1.5-26: "the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix".

Parameter	EPA Method	LOD	LOQ
Arsenic	3113 B	0.001 mg/l	0.0032 mg/l
Cadmium	3113 B	0.0001 mg/l	0.00032 mg/l
Chromium	3111 C or 3113 B	0.002 mg/l	0.0064 mg/l
Copper	3113 B	0.001 mg/l	0.0032 mg/l
Lead	3113 B	0.001 mg/l	0.0032 mg/l
Nickel	3113 B	0.001 mg/l	0.0032 mg/l
Zinc	200.7, Revision 4.4	0.002 mg/l	0.0064 mg/l

[3] Mercury effluent monitoring shall be conducted two times yearly for the term of the permit. Monitoring shall be conducted in the months of February and August of each year. Mercury monitoring and analysis will be performed using EPA Test Method 1631, Revision E. If Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as practicable after approval by EPA. The permittee shall measure and report this parameter as total recoverable metal.

b. Organic Pollutant Monitoring

The permittee shall conduct an annual inventory of organic pollutants and shall identify and quantify additional organic compounds which occur in the influent, effluent, and sludge at both the Belmont and Southport AWT facilities. The analytical report shall be sent to the Pretreatment Group, Office of Water Quality. This report is due December 31st each year. The inventory shall consist of:

1. Sampling and Analysis of Influent and Effluent

Sampling shall be conducted on a day when industrial discharges are occurring at normal production levels. The samples shall be 24-hour flow proportional composites, except for volatile organics, which shall be taken by appropriate grab sampling techniques. Analysis for the U.S. EPA organic priority pollutants shall be performed using U.S. EPA methods 624, 625 and 608 in 40 CFR 136, or other equivalent methods approved by U.S.

EPA. Equivalent methods must be at least as sensitive and specific as methods 624, 625 and 608.

All samples must be collected, preserved and stored in accordance with 40 CFR 136, Appendix A. Samples for volatile organics must be analyzed within 14 days of collection. Samples for semivolatile organics, PCBs and pesticides must be extracted within 7 days of collection and analyzed within 40 days of extraction. For composite samples, the collection date shall be the date at the end of the daily collection period.

2. Sampling and Analysis of Sludge

Sampling collection, storage, and analysis shall conform to the U.S. EPA recommended procedures equivalent to methods 624, 625 and 608 in 40 CFR 136 or applicable methods in SW 846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Special sampling and/or preservation techniques will be required for those pollutants which deteriorate rapidly.

Sludge samples for volatile organics must be analyzed within 14 days of collection. Sludge samples for semivolatile organics, PCBs and pesticides must be extracted within 14 days of collection and analyzed within 40 days of extraction.

3. Additional Pollutant Identification

In addition to the priority pollutants, a reasonable attempt shall be made to identify and quantify the ten most abundant constituents of each fraction (excluding priority pollutants and unsubstituted aliphatic compounds) shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) more than ten times higher than the adjacent background noise. Identification shall be attempted through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation by an experienced analyst. Quantification may be based on an order of magnitude estimate based upon comparison with an internal standard.

The annual program effectiveness review, Part III.A.7; should identify the additional steps necessary to determine whether the pollutants present interfere, pass through, or otherwise violate 40 CFR 403.2. Upon such determination, the report must also identify the steps taken to develop and enforce local limitations on industrial discharges for those pollutants. This is a requirement of 40 CFR 403.5

- CERTIFICATE OF ANALYSIS -

Report Date: *30-Dec-09*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	09015629-001	**Your Sample ID:**	Southport Raw Grab
Your Project #		**Collection Date:**	12/23/09 15:00
Your Project Name:	Southport	**Collected By:**	T. Rump
Sample Type:	Wastewater	**Receipt Date:**	12/23/09 17:00

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	12/26/2009	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	12/26/2009	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	12/26/2009	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	12/26/2009	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	12/26/2009	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	12/26/2009	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	12/26/2009	rbische
Methylene chloride	6.3	ug/L		5.0	75-09-2	12/26/2009	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	12/26/2009	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	12/26/2009	rbische
Chloroform	< 5.0	ug/L	PQL	5.0	67-66-3	12/26/2009	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	12/26/2009	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	12/26/2009	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	12/26/2009	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	12/26/2009	rbische
Trichloroethene	< 5.0	ug/L	PQL	5.0	79-01-6	12/26/2009	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	12/26/2009	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	12/26/2009	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	12/26/2009	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	12/26/2009	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	12/26/2009	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	12/26/2009	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	12/26/2009	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	12/26/2009	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	12/26/2009	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	12/26/2009	rbische
Ethylbenzene	< 5.0	ug/L	PQL	5.0	100-41-4	12/26/2009	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	12/26/2009	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	12/26/2009	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	12/26/2009	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	12/26/2009	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	12/26/2009	rbische
Dibromofluoromethane (Surr)	90	%			1868-53-7	12/26/2009	rbische
Toluene-d8 (Surr)	90	%			2037-26-5	12/26/2009	rbische
4-Bromofluorobenzene (Surr)	91	%			460-00-4	12/26/2009	rbische

Lab # 09015629-001 **Sample ID:** Southport Raw Grab

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Qualitative VOC Scan, GC/MS

	Analytical Method	Prep Method	Prep Date	By
	EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					12/26/2009	rblsche

Lab # 09015629-001 Sample ID: Southport Raw Grab

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 09015629-002		**Your Sample ID:**	Southport Raw Comp.
Your Project #		**Collection Date:**	12/23/09 13:30
Your Project Name: Southport		**Collected By:**	T. Rump
Sample Type: Wastewater		**Receipt Date:**	12/23/09 17:00

Base/Neutral/Acid Extractables	Analytical Method	Prep Method	Prep Date	By
	EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	12/30/2009	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	12/30/2009	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	12/30/2009	dmacdonald
Phenol	22	ug/L		10.0	108-95-2	12/30/2009	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	12/30/2009	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	12/30/2009	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	12/30/2009	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	12/30/2009	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	12/30/2009	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	12/30/2009	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	12/30/2009	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	12/30/2009	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	12/30/2009	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	12/30/2009	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	12/30/2009	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	12/30/2009	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	12/30/2009	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	12/30/2009	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	12/30/2009	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L	PQL	10.0	59-50-7	12/30/2009	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	12/30/2009	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	12/30/2009	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	12/30/2009	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	12/30/2009	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	12/30/2009	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	12/30/2009	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	12/30/2009	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	12/30/2009	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	12/30/2009	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	12/30/2009	dmacdonald
Diethyl phthalate	< 10.0	ug/L	PQL	10.0	84-66-2	12/30/2009	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	12/30/2009	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	12/30/2009	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	12/30/2009	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	12/30/2009	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	12/30/2009	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	12/30/2009	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	12/30/2009	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	12/30/2009	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	12/30/2009	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	12/30/2009	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	12/30/2009	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	12/30/2009	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	12/30/2009	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	12/30/2009	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	12/30/2009	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	12/30/2009	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	12/30/2009	dmacdonald
Bis(2-ethylhexyl) phthalate	85	ug/L	J	10.0	117-81-7	12/30/2009	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	12/30/2009	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	12/30/2009	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	12/30/2009	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	12/30/2009	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	12/30/2009	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	12/30/2009	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	12/30/2009	dmacdonald
2-Fluorophenol (Surr)	41	%			367-12-4	12/30/2009	dmacdonald
Phenol-d6 (Surr)	42	%			4165-62-2	12/30/2009	dmacdonald
Nitrobenzene-d5 (Surr)	53	%			4165-60-0	12/30/2009	dmacdonald
2-Fluorobiphenyl (Surr)	50	%			321-60-8	12/30/2009	dmacdonald
2,4,6-Tribromophenol (Surr)	50	%			118-79-6	12/30/2009	dmacdonald
Terphenyl-d14 (Surr)	66	%			1718-51-0	12/30/2009	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					12/30/2009	dmacdonald

Lab # 09015629-002 Sample ID: Southport Raw Comp.

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	12/29/2009	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	12/29/2009	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	12/29/2009	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	12/29/2009	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	12/29/2009	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	12/29/2009	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	12/29/2009	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	12/29/2009	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	117	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	12/29/2009	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	12/29/2009	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	12/29/2009	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	12/29/2009	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	12/29/2009	mglasheen
della-BHC	< 0.10	ug/L		0.10	319-86-8	12/29/2009	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	12/29/2009	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	12/29/2009	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	12/29/2009	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	12/29/2009	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	12/29/2009	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	12/29/2009	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	12/29/2009	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	12/29/2009	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	12/29/2009	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	12/29/2009	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	12/29/2009	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	12/29/2009	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	12/29/2009	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	117	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	91	%			2051-24-3	12/29/2009	mglasheen

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 09015629-003

Your Project #

Your Project Name: Southport

Sample Type: Wastewater

Your Sample ID: Southport Final Grab

Collection Date: 12/23/09 14:40

Collected By: T. Rump

Receipt Date: 12/23/09 17:00

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	12/26/2009	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	12/26/2009	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	12/26/2009	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	12/26/2009	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	12/26/2009	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	12/26/2009	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	12/26/2009	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	12/26/2009	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	12/26/2009	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	12/26/2009	rbische
Chloroform	< 5.0	ug/L		5.0	67-66-3	12/26/2009	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	12/26/2009	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	12/26/2009	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	12/26/2009	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	12/26/2009	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	12/26/2009	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	12/26/2009	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	12/26/2009	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	12/26/2009	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	12/26/2009	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	12/26/2009	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	12/26/2009	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	12/26/2009	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	12/26/2009	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	12/26/2009	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	12/26/2009	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	12/26/2009	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	12/26/2009	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	12/26/2009	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	12/26/2009	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	12/26/2009	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	12/26/2009	rbische
Dibromofluoromethane (Surr)	93	%			1868-53-7	12/26/2009	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	92	%			2037-26-5	12/26/2009	rbische
4-Bromofluorobenzene (Surr)	94	%			460-00-4	12/26/2009	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					12/26/2009	rbische

Lab # 09015629-003 Sample ID: Southport Final Grab

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab #	09015629-004	Your Sample ID:	Southport Final Composite
Your Project #		Collection Date:	12/23/09 13:30
Your Project Name:	Southport	Collected By:	T. Rump
Sample Type:	Wastewater	Receipt Date:	12/23/09 17:00

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	12/30/2009	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	12/30/2009	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	12/30/2009	dmacdonald
Phenol	< 10.0	ug/L		10.0	108-95-2	12/30/2009	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	12/30/2009	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	12/30/2009	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	12/30/2009	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	12/30/2009	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	12/30/2009	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	12/30/2009	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	12/30/2009	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	12/30/2009	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	12/30/2009	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	12/30/2009	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	12/30/2009	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	12/30/2009	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	12/30/2009	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	12/30/2009	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	12/30/2009	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L		10.0	59-50-7	12/30/2009	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	12/30/2009	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	12/30/2009	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	12/30/2009	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	12/30/2009	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	12/30/2009	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	12/30/2009	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	12/30/2009	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	12/30/2009	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	12/30/2009	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	12/30/2009	dmacdonald
Diethyl phthalate	< 10.0	ug/L		10.0	84-66-2	12/30/2009	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	12/30/2009	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	12/30/2009	dmacdonald

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

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Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	12/30/2009	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	12/30/2009	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	12/30/2009	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	12/30/2009	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	12/30/2009	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	12/30/2009	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	12/30/2009	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	12/30/2009	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	12/30/2009	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	12/30/2009	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	12/30/2009	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	12/30/2009	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	12/30/2009	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	12/30/2009	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	12/30/2009	dmacdonald
Bis(2-ethylhexyl) phthalate	< 10.0	ug/L		10.0	117-81-7	12/30/2009	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	12/30/2009	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	12/30/2009	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	12/30/2009	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	12/30/2009	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	12/30/2009	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	12/30/2009	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	12/30/2009	dmacdonald
2-Fluorophenol (Surr)	35	%			367-12-4	12/30/2009	dmacdonald
Phenol-d6 (Surr)	38	%			4165-62-2	12/30/2009	dmacdonald
Nitrobenzene-d5 (Surr)	50	%			4165-60-0	12/30/2009	dmacdonald
2-Fluorobiphenyl (Surr)	57	%			321-60-8	12/30/2009	dmacdonald
2,4,6-Tribromophenol (Surr)	56	%			118-79-6	12/30/2009	dmacdonald
Terphenyl-d14 (Surr)	50	%			1718-51-0	12/30/2009	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					12/30/2009	dmacdonald

ESG Laboratories
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Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	12/29/2009	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	12/29/2009	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	12/29/2009	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	12/29/2009	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	12/29/2009	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	12/29/2009	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	12/29/2009	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	12/29/2009	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	107	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	12/29/2009	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	12/29/2009	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	12/29/2009	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	12/29/2009	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	12/29/2009	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	12/29/2009	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	12/29/2009	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	12/29/2009	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	12/29/2009	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	12/29/2009	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	12/29/2009	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	12/29/2009	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	12/29/2009	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	12/29/2009	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	12/29/2009	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	12/29/2009	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	12/29/2009	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	12/29/2009	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	12/29/2009	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	107	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	12/29/2009	mglasheen

Lab # 09015629-004 Sample ID: Southport Final Composite

ESG Laboratories
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FAX (317) 290-1670

Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

12/30/2009

Lab Manager **Date**

Lab # 09015629-004 **Sample ID:** Southport Final Composite

ESG Laboratories
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INDIANAPOLIS, INDIANA 46278

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Southport
Raw Grab

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

09015629-001

Lab Name: Environmental Service Group Contract:

Lab Code: IN00042 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 09015629-001 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1226A.D

Level: (low/med) LOW Date Received: 12/23/09

% Moisture: not dec. Date Analyzed: 12/26/09

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 6

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	3.52	1	JN
2. 000064-17-5	Ethanol	4.60	0	JN
3. 000067-64-1	2-Propanone	5.14	97	JN ✓
4. 000112-60-7	Ethanol, 2,2'-[oxybis(2,1-ethanedi	5.50	0	JN
5. 000611-14-3	Benzene, 1-ethyl-2-methyl-	16.89	16	JN ✓
6.	column bleed	19.42	4	J

Southport
EFF Grab

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

09015629-003

Lab Name: Environmental Service Group Contract: ____

Lab Code: IN00042 Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 09015629-003 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1226B.D

Level: (low/med) LOW Date Received: 12/26/09

% Moisture: not dec. ____ Date Analyzed: 12/26/09

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	3.53	0	JN
2.	column bleed	19.42	12	J

Southport
Raw Comp

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 30 Dec 2009 00:49
Data File: D:\HPCHEM\1\DATA\1229A11A.D
Name: 09015629-02A UNITED WATER
Misc: 12/29/09 EX 12/28 400-0.4mL 0.4SR
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Ethanol, 2-butoxy-	7.23	35.8	ug/L	925849	ISTD01	10.81	1034230	40.0
2-Propanol, 1-(2-met	8.82	34.8	ug/L	898550	ISTD01	10.81	1034230	40.0
D-Limonene	8.99	49.0	ug/L	1266510	ISTD01	10.81	1034230	40.0
Benzenemethanol	9.11	99.1	ug/L	1139480	ISTD01	10.81	1034230	40.0
Ethanol, 2-phenoxy-	11.18	52.8	ug/L	1364030	ISTD01	10.81	1034230	40.0
Dodecanoic acid	14.20	41.7	ug/L	583623	ISTD02	13.64	560336	40.0
Tetradecanoic acid	15.67	37.9	ug/L	522192	ISTD03	15.98	551017	40.0
9-Octadecenoic acid	18.16	469.8	ug/L	1227000	ISTD04	20.21	104459	40.0
Octadecanoic acid	18.28	164.9	ug/L	430680	ISTD04	20.21	104459	40.0
unknown	21.77	69.7	ug/L	122658	ISTD05	22.33	70377	40.0

Southport
Eff. Composite

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 29 Dec 2009 23:41
Data File: D:\HPCHEM\1\DATA\1229A09A.D
Name: 09015629-04A UNITED WATER
Misc: 12/29/09 EX 12/28 400-0.4mL 0.4SR
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Ethane, 1,1'-oxybis[	7.90	16.0	ug/L	202706	ISTD01	8.74	506682	40.0

1229A09A.D CLP.M   Wed Dec 30 10:46:44 2009   RPT1

ESG Laboratories

5927 West 71st Street • Indianapolis, IN 46278
Phone (317) 290-1471 • Fax (317)290-1670

CHAIN OF CUSTODY RECORD

Client Name: United water

ESG Work Order #: 09-15629

Project Name: Southport

Project No:

Sampler(s) Signature:

Filtered (Y or N)
Preserv. Code
Analyses

Stat No.	DATE	TIME	COMP	GRAB	SAMPLE ID	Total Number of Containers	TTO-501	TTO-5001 Pest, PCB	Comments
	12/23	15:00		x	Raw	4	X		
		13:30	x		Raw	2		x	
		14:40		x	Final	4	x		
		13:30	x		Final	2		x	

TRANSFER OF CUSTODY

	Date/Time
Relinquished By:	12/23/09 17:00
Received By:	
Relinquished By:	Date/Time
Received By:	
Relinquished By:	Date/Time
Received By:	

SAMPLE CONDITION UPON RECEIPT

Sample Temp: 4.0 °C
Received on Ice: Y / N
Samples Intact: Y / N
Adequate Volume: Y / N
Appropriate Containers: Y / N
Appropriate Preservative: Y / N
Within Hold Time: Y / N
Head Space Absent: Y / N / NA

TURN AROUND TIME

Normal ________ Rush ________

Requested Due Date: ________

SAMPLE COMMENTS

Please note if sample(s) suspected to be hazardous, corrosive, or requires special handling for any reason.

pH METER CALIBRATION

4.00 ________ 7.00 ________ 10.00 ________

PRESERVATION CODES

$N = HNO_3$ / Nitric Acid
$S = H_2SO_4$ / Sulfuric Acid
$H = HCl$ / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
$OH = NaOH$ / Sodium Hydroxide
$SO = Na_2S_2O_3$ / Sodium Thiosulfate

- CERTIFICATE OF ANALYSIS -

Report Date: *30-Dec-09*

Client ID: UNITED_WATER

United Water
2700 S. Belmont Ave.
Indianapolis, Indiana 46221

Attn: Kim Cussen

Phone: (317) 639-7049
FAX: (317) 639-7602

Our Lab #	09015630-001	**Your Sample ID:**	Belmont Raw Grab
Your Project #		**Collection Date:**	12/23/09 14:00
Your Project Name:	Belmont	**Collected By:**	T. Rump
Sample Type:	Wastewater	**Receipt Date:**	12/23/09 17:00

ESG Laboratories
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FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	12/26/2009	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	12/26/2009	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	12/26/2009	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	12/26/2009	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	12/26/2009	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	12/26/2009	rbische
Carbon disulfide	< 5.0	ug/L		5.0	75-15-0	12/26/2009	rbische
Methylene chloride	< 5.0	ug/L	PQL	5.0	75-09-2	12/26/2009	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	12/26/2009	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	12/26/2009	rbische
Chloroform	< 5.0	ug/L	PQL	5.0	67-66-3	12/26/2009	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	12/26/2009	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	12/26/2009	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	12/26/2009	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	12/26/2009	rbische
Trichloroethene	< 5.0	ug/L	PQL	5.0	79-01-6	12/26/2009	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	12/26/2009	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	12/26/2009	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	12/26/2009	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	12/26/2009	rbische
Toluene	< 5.0	ug/L	PQL	5.0	108-88-3	12/26/2009	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	12/26/2009	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	12/26/2009	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	12/26/2009	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	12/26/2009	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	12/26/2009	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	12/26/2009	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	12/26/2009	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	12/26/2009	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	12/26/2009	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	12/26/2009	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	12/26/2009	rbische
Dibromofluoromethane (Surr)	91	%			1868-53-7	12/26/2009	rbische
Toluene-d8 (Surr)	92	%			2037-26-5	12/26/2009	rbische
4-Bromofluorobenzene (Surr)	93	%			460-00-4	12/26/2009	rbische

Lab # 09015630-001 **Sample ID:** Belmont Raw Grab

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	complete					12/26/2009	rbische

[redacted]

Lab # 09015630-001 Sample ID: Belmont Raw Grab

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 09015630-002

Your Project #

Your Project Name: Belmont

Sample Type: Wastewater

Your Sample ID: Belmont Raw Comp.

Collection Date: 12/23/09 13:30

Collected By: T. Romp

Receipt Date: 12/23/09 17:00

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	12/30/2009	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	12/30/2009	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	12/30/2009	dmacdonald
Phenol	61	ug/L		10.0	108-95-2	12/30/2009	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	12/30/2009	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	12/30/2009	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	12/30/2009	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	12/30/2009	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	12/30/2009	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	12/30/2009	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	12/30/2009	dmacdonald
Isophorone	< 10.0	ug/L	PQL	10.0	78-59-1	12/30/2009	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	12/30/2009	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	12/30/2009	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	12/30/2009	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	12/30/2009	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	12/30/2009	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	12/30/2009	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	12/30/2009	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L	PQL	10.0	59-50-7	12/30/2009	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	12/30/2009	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	12/30/2009	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	12/30/2009	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	12/30/2009	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	12/30/2009	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	12/30/2009	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	12/30/2009	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	12/30/2009	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	12/30/2009	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	12/30/2009	dmacdonald
Diethyl phthalate	< 10.0	ug/L	PQL	10.0	84-66-2	12/30/2009	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	12/30/2009	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	12/30/2009	dmacdonald

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	12/30/2009	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	12/30/2009	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	12/30/2009	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	12/30/2009	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	12/30/2009	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	12/30/2009	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	12/30/2009	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L	PQL	10.0	84-74-2	12/30/2009	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	12/30/2009	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	12/30/2009	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	12/30/2009	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	12/30/2009	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	12/30/2009	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	12/30/2009	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	12/30/2009	dmacdonald
Bis(2-ethylhexyl) phthalate	44	ug/L	J	10.0	117-81-7	12/30/2009	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	12/30/2009	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	12/30/2009	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	12/30/2009	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	12/30/2009	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	12/30/2009	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	12/30/2009	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	12/30/2009	dmacdonald
2-Fluorophenol (Surr)	50	%			367-12-4	12/30/2009	dmacdonald
Phenol-d6 (Surr)	62	%			4165-62-2	12/30/2009	dmacdonald
Nitrobenzene-d5 (Surr)	69	%			4165-60-0	12/30/2009	dmacdonald
2-Fluorobiphenyl (Surr)	71	%			321-60-8	12/30/2009	dmacdonald
2,4,6-Tribromophenol (Surr)	62	%			118-79-6	12/30/2009	dmacdonald
Terphenyl-d14 (Surr)	86	%			1718-51-0	12/30/2009	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	complete					12/30/2009	dmacdonald

Lab # 09015630-002 **Sample ID:** Belmont Raw Comp.

ESG Laboratories

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INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
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Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	12/29/2009	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	12/29/2009	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	12/29/2009	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	12/29/2009	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	12/29/2009	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	12/29/2009	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	12/29/2009	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	12/29/2009	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	105	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	12/29/2009	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	12/29/2009	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	12/29/2009	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	12/29/2009	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	12/29/2009	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	12/29/2009	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	12/29/2009	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	12/29/2009	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	12/29/2009	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	12/29/2009	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	12/29/2009	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	12/29/2009	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	12/29/2009	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	12/29/2009	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	12/29/2009	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	12/29/2009	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	12/29/2009	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	12/29/2009	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	12/29/2009	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	105	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	81	%			2051-24-3	12/29/2009	mglasheen

Lab # 09015630-002 **Sample ID:** Belmont Raw Comp.

ESG Laboratories
5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278
PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 09015630-003		**Your Sample ID:**	Belmont Final Grab
Your Project #		**Collection Date:**	12/23/09 13:45
Your Project Name:	Belmont	**Collected By:**	T. Rump
Sample Type:	Wastewater	**Receipt Date:**	12/23/09 17:00

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Chloromethane	< 10.0	ug/L		10.0	74-87-3	12/26/2009	rbische
Vinyl chloride	< 10.0	ug/L		10.0	75-01-4	12/26/2009	rbische
Bromomethane	< 10.0	ug/L		10.0	74-83-9	12/26/2009	rbische
Chloroethane	< 10.0	ug/L		10.0	75-00-3	12/26/2009	rbische
Trichlorofluoromethane	< 10.0	ug/L		10.0	75-69-4	12/26/2009	rbische
1,1-Dichloroethene	< 5.0	ug/L		5.0	75-35-4	12/26/2009	rbische
Carbon disulfide	< 5.0	ug/L	PQL	5.0	75-15-0	12/26/2009	rbische
Methylene chloride	< 5.0	ug/L		5.0	75-09-2	12/26/2009	rbische
trans-1,2-Dichloroethene	< 5.0	ug/L		5.0	156-60-5	12/26/2009	rbische
1,1-Dichloroethane	< 5.0	ug/L		5.0	75-34-3	12/26/2009	rbische
Chloroform	< 5.0	ug/L		5.0	67-66-3	12/26/2009	rbische
1,1,1-Trichloroethane	< 5.0	ug/L		5.0	71-55-6	12/26/2009	rbische
Carbon tetrachloride	< 5.0	ug/L		5.0	56-23-5	12/26/2009	rbische
Benzene	< 5.0	ug/L		5.0	71-43-2	12/26/2009	rbische
1,2-Dichloroethane	< 5.0	ug/L		5.0	107-06-2	12/26/2009	rbische
Trichloroethene	< 5.0	ug/L		5.0	79-01-6	12/26/2009	rbische
1,2-Dichloropropane	< 5.0	ug/L		5.0	78-87-5	12/26/2009	rbische
Bromodichloromethane	< 5.0	ug/L		5.0	75-27-4	12/26/2009	rbische
2-Chloroethyl vinyl ether	< 20	ug/L		20	110-75-8	12/26/2009	rbische
cis-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-01-5	12/26/2009	rbische
Toluene	< 5.0	ug/L		5.0	108-88-3	12/26/2009	rbische
trans-1,3-Dichloropropene	< 5.0	ug/L		5.0	10061-02-6	12/26/2009	rbische
1,1,2-Trichloroethane	< 5.0	ug/L		5.0	79-00-5	12/26/2009	rbische
Tetrachloroethene	< 5.0	ug/L		5.0	127-18-4	12/26/2009	rbische
Dibromochloromethane	< 5.0	ug/L		5.0	124-48-1	12/26/2009	rbische
Chlorobenzene	< 5.0	ug/L		5.0	108-90-7	12/26/2009	rbische
Ethylbenzene	< 5.0	ug/L		5.0	100-41-4	12/26/2009	rbische
Bromoform	< 5.0	ug/L		5.0	75-25-2	12/26/2009	rbische
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		5.0	79-34-5	12/26/2009	rbische
1,3-Dichlorobenzene	< 5.0	ug/L		5.0	541-73-1	12/26/2009	rbische
1,4-Dichlorobenzene	< 5.0	ug/L		5.0	106-46-7	12/26/2009	rbische
1,2-Dichlorobenzene	< 5.0	ug/L		5.0	95-50-1	12/26/2009	rbische
Dibromofluoromethane (Surr)	93	%			1868-53-7	12/26/2009	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Volatile Organics, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Toluene-d8 (Surr)	92	%			2037-26-5	12/26/2009	rbische
4-Bromofluorobenzene (Surr)	92	%			460-00-4	12/26/2009	rbische

Qualitative VOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 624			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative VOC Scan GC/MS	completed					12/26/2009	rbische

ESG Laboratories

5927 WEST 71ST STREET
INDIANAPOLIS, INDIANA 46278

PHONE (317) 290-1471
FAX (317) 290-1670

Our Lab # 09015630-004		Your Sample ID:	Belmont Final Comp.
Your Project #		Collection Date:	12/23/09 13:30
Your Project Name:	Belmont	Collected By:	T. Rump
Sample Type:	Wastewater	Receipt Date:	12/23/09 17:00

Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
N-Nitrosodimethylamine	< 10.0	ug/L		10.0	62-75-9	12/30/2009	dmacdonald
Bis(2-chloroethyl) ether	< 10.0	ug/L		10.0	111-44-4	12/30/2009	dmacdonald
2-Chlorophenol	< 10.0	ug/L		10.0	95-57-8	12/30/2009	dmacdonald
Phenol	< 10.0	ug/L		10.0	108-95-2	12/30/2009	dmacdonald
1,3-Dichlorobenzene	< 10.0	ug/L		10.0	541-73-1	12/30/2009	dmacdonald
1,4-Dichlorobenzene	< 10.0	ug/L		10.0	106-46-7	12/30/2009	dmacdonald
1,2-Dichlorobenzene	< 10.0	ug/L		10.0	95-50-1	12/30/2009	dmacdonald
Bis(2-chloroisopropyl) ether	< 10.0	ug/L		10.0	108-60-1	12/30/2009	dmacdonald
Hexachloroethane	< 10.0	ug/L		10.0	67-72-1	12/30/2009	dmacdonald
N-Nitrosodi-n-propylamine	< 10.0	ug/L		10.0	621-64-7	12/30/2009	dmacdonald
Nitrobenzene	< 10.0	ug/L		10.0	98-95-3	12/30/2009	dmacdonald
Isophorone	< 10.0	ug/L		10.0	78-59-1	12/30/2009	dmacdonald
2-Nitrophenol	< 10.0	ug/L		10.0	88-75-5	12/30/2009	dmacdonald
2,4-Dimethylphenol	< 10.0	ug/L		10.0	105-67-9	12/30/2009	dmacdonald
Bis(2-chloroethoxy) methane	< 10.0	ug/L		10.0	111-91-1	12/30/2009	dmacdonald
2,4-Dichlorophenol	< 10.0	ug/L		10.0	120-83-2	12/30/2009	dmacdonald
1,2,4-Trichlorobenzene	< 10.0	ug/L		10.0	120-82-1	12/30/2009	dmacdonald
Naphthalene	< 10.0	ug/L		10.0	91-20-3	12/30/2009	dmacdonald
Hexachlorobutadiene	< 10.0	ug/L		10.0	87-68-3	12/30/2009	dmacdonald
4-Chloro-3-methylphenol	< 10.0	ug/L		10.0	59-50-7	12/30/2009	dmacdonald
Hexachlorocyclopentadiene	< 20	ug/L		20	77-47-4	12/30/2009	dmacdonald
2,4,6-Trichlorophenol	< 10.0	ug/L		10.0	88-06-2	12/30/2009	dmacdonald
2-Chloronaphthalene	< 10.0	ug/L		10.0	91-58-7	12/30/2009	dmacdonald
Dimethyl phthalate	< 10.0	ug/L		10.0	131-11-3	12/30/2009	dmacdonald
2,6-Dinitrotoluene	< 10.0	ug/L		10.0	606-20-2	12/30/2009	dmacdonald
Acenaphthylene	< 10.0	ug/L		10.0	208-96-8	12/30/2009	dmacdonald
Acenaphthene	< 10.0	ug/L		10.0	83-32-9	12/30/2009	dmacdonald
2,4-Dinitrophenol	< 50	ug/L		50	51-28-5	12/30/2009	dmacdonald
4-Nitrophenol	< 20	ug/L		20	100-02-7	12/30/2009	dmacdonald
2,4-Dinitrotoluene	< 10.0	ug/L		10.0	121-14-2	12/30/2009	dmacdonald
Diethyl phthalate	< 10.0	ug/L		10.0	84-66-2	12/30/2009	dmacdonald
Fluorene	< 10.0	ug/L		10.0	86-73-7	12/30/2009	dmacdonald
4-Chlorophenyl phenyl ether	< 10.0	ug/L		10.0	7005-72-3	12/30/2009	dmacdonald

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Base/Neutral/Acid Extractables

Analytical Method	Prep Method	Prep Date	By
EPA 625	EPA 625	12/28/2009	amyers

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
4,6-Dinitro-2-methylphenol	< 20	ug/L		20	534-52-1	12/30/2009	dmacdonald
N-Nitrosodiphenylamine	< 10.0	ug/L		10.0	86-30-6	12/30/2009	dmacdonald
4-Bromophenyl phenyl ether	< 10.0	ug/L		10.0	101-55-3	12/30/2009	dmacdonald
Hexachlorobenzene	< 10.0	ug/L		10.0	118-74-1	12/30/2009	dmacdonald
Pentachlorophenol	< 20	ug/L		20	87-86-5	12/30/2009	dmacdonald
Phenanthrene	< 10.0	ug/L		10.0	85-01-8	12/30/2009	dmacdonald
Anthracene	< 10.0	ug/L		10.0	120-12-7	12/30/2009	dmacdonald
Di-n-butyl phthalate	< 10.0	ug/L		10.0	84-74-2	12/30/2009	dmacdonald
Fluoranthene	< 10.0	ug/L		10.0	206-44-0	12/30/2009	dmacdonald
Benzidine	< 50	ug/L		50	92-87-5	12/30/2009	dmacdonald
Pyrene	< 10.0	ug/L		10.0	129-00-0	12/30/2009	dmacdonald
Butyl benzyl phthalate	< 10.0	ug/L		10.0	85-68-7	12/30/2009	dmacdonald
Benzo[a]anthracene	< 10.0	ug/L		10.0	56-55-3	12/30/2009	dmacdonald
3,3'-Dichlorobenzidine	< 10.0	ug/L		10.0	91-94-1	12/30/2009	dmacdonald
Chrysene	< 10.0	ug/L		10.0	218-01-9	12/30/2009	dmacdonald
Bis(2-ethylhexyl) phthalate	20	ug/L		10.0	117-81-7	12/30/2009	dmacdonald
Di-n-octylphthalate	< 10.0	ug/L		10.0	117-84-0	12/30/2009	dmacdonald
Benzo[b]fluoranthene	< 10.0	ug/L		10.0	205-99-2	12/30/2009	dmacdonald
Benzo[k]fluoranthene	< 10.0	ug/L		10.0	207-08-9	12/30/2009	dmacdonald
Benzo[a]pyrene	< 10.0	ug/L		10.0	50-32-8	12/30/2009	dmacdonald
Indeno[1,2,3-cd]pyrene	< 10.0	ug/L		10.0	193-39-5	12/30/2009	dmacdonald
Dibenzo[a,h]anthracene	< 20	ug/L		20	53-70-3	12/30/2009	dmacdonald
Benzo[g,h,i]perylene	< 10.0	ug/L		10.0	191-24-2	12/30/2009	dmacdonald
2-Fluorophenol (Surr)	47	%			367-12-4	12/30/2009	dmacdonald
Phenol-d6 (Surr)	52	%			4165-62-2	12/30/2009	dmacdonald
Nitrobenzene-d5 (Surr)	60	%			4165-60-0	12/30/2009	dmacdonald
2-Fluorobiphenyl (Surr)	62	%			321-60-8	12/30/2009	dmacdonald
2,4,6-Tribromophenol (Surr)	75	%			118-79-6	12/30/2009	dmacdonald
Terphenyl-d14 (Surr)	76	%			1718-51-0	12/30/2009	dmacdonald

Qualitative SVOC Scan, GC/MS

Analytical Method	Prep Method	Prep Date	By
EPA 625			

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Qualitative SVOC Scan, GC/MS	completed					12/30/2009	dmacdonald

Lab # 09015630-004 Sample ID: Belmont Final Comp.

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Polychlorinated Biphenyls

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aroclor 1016	< 2.5	ug/L		2.5	12674-11-2	12/29/2009	mglasheen
Aroclor 1221	< 2.5	ug/L		2.5	11104-28-2	12/29/2009	mglasheen
Aroclor 1232	< 2.5	ug/L		2.5	11141-16-5	12/29/2009	mglasheen
Aroclor 1242	< 2.5	ug/L		2.5	53469-21-9	12/29/2009	mglasheen
Aroclor 1248	< 2.5	ug/L		2.5	12672-29-6	12/29/2009	mglasheen
Aroclor 1254	< 2.5	ug/L		2.5	11097-69-1	12/29/2009	mglasheen
Aroclor 1260	< 2.5	ug/L		2.5	11096-82-5	12/29/2009	mglasheen
Aroclor 1262	< 2.5	ug/L		2.5	37324-23-5	12/29/2009	mglasheen
Aroclor 1268	< 2.5	ug/L		2.5	11100-14-4	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	114	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	76	%			2051-24-3	12/29/2009	mglasheen

Organochlorine Pesticides

Analytical Method	Prep Method	Prep Date	By
EPA 608	EPA 608	12/28/2009	mglasheen

Parameter	Result	Units	Qual	Quant. Limit	CAS #	Analysis Date	By
Aldrin	< 0.10	ug/L		0.10	309-00-2	12/29/2009	mglasheen
alpha-BHC	< 0.10	ug/L		0.10	319-84-6	12/29/2009	mglasheen
beta-BHC	< 0.10	ug/L		0.10	319-85-7	12/29/2009	mglasheen
gamma-BHC (Lindane)	< 0.10	ug/L		0.10	58-89-9	12/29/2009	mglasheen
delta-BHC	< 0.10	ug/L		0.10	319-86-8	12/29/2009	mglasheen
4,4'-DDD	< 0.10	ug/L		0.10	72-54-8	12/29/2009	mglasheen
4,4'-DDE	< 0.10	ug/L		0.10	72-55-9	12/29/2009	mglasheen
4,4'-DDT	< 0.10	ug/L		0.10	50-29-3	12/29/2009	mglasheen
Dieldrin	< 0.10	ug/L		0.10	60-57-1	12/29/2009	mglasheen
Endosulfan I	< 0.10	ug/L		0.10	959-98-8	12/29/2009	mglasheen
Endosulfan II	< 0.10	ug/L		0.10	33213-65-9	12/29/2009	mglasheen
Endosulfan sulfate	< 0.10	ug/L		0.10	1031-07-8	12/29/2009	mglasheen
Endrin	< 0.10	ug/L		0.10	72-20-8	12/29/2009	mglasheen
Endrin aldehyde	< 0.10	ug/L		0.10	7421-93-4	12/29/2009	mglasheen
Heptachlor	< 0.10	ug/L		0.10	76-44-8	12/29/2009	mglasheen
Heptachlor epoxide	< 0.10	ug/L		0.10	1024-57-3	12/29/2009	mglasheen
Methoxychlor	< 0.10	ug/L		0.10	72-43-5	12/29/2009	mglasheen
Chlordane(Total)	< 1.0	ug/L		1.0	57-74-9	12/29/2009	mglasheen
Toxaphene	< 2.5	ug/L		2.5	8001-35-2	12/29/2009	mglasheen
Tetrachloro-m-xylene (Surr)	114	%			877-09-8	12/29/2009	mglasheen
Decachlorobiphenyl (Surr)	76	%			2051-24-3	12/29/2009	mglasheen

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Data Qualifiers:

Qualifier	Description
PQL	Value is between MDL & practical quantitation limit
J	Estimated result; value may not be accurate

12/30/2009

Lab Manager **Date**

Lab # 09015630-004 Sample ID: Belmont Final Comp.

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Belmont
Raw Grab

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
09015630-001

Lab Name: Environmental Service Group Contract:

Lab Code: IN00042 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 09015630-001 Unil

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1226C.D

Level: (low/med) LOW Date Received: 12/23/09

% Moisture: not dec. Date Analyzed: 12/26/09

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 11

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-07-0	Acetaldehyde	3.20	44	JN
2. 000064-17-5	Ethanol	4.63	31	JN
3. 000123-38-6	Propanal	4.98	6	JN
4. 000067-64-1	2-Propanone	5.15	7	JN
5. 000067-63-0	2-Propanol	5.52	2	JN
6. 001634-04-4	Methyl-tert-butyl ether	6.34	7	JN
7. 001184-60-7	1-Propene, 2-fluoro-	7.40	6	JN
8. 003266-23-7	Oxirane, 2,3-dimethyl-	8.08	2	JN
9. 000104-76-7	1-Hexanol, 2-ethyl-	18.56	3	JN
10. 003913-02-8	1-Octanol, 2-butyl-	18.84	2	JN
11.	column bleed	19.42	4	J

Belmont
EFF Grab

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

09015630-003

Lab Name: Environmental Service Group Contract: ______

Lab Code: IN00042 Case No.: ______ SAS No.: ______ SDG No.: ______

Matrix: (soil/water) WATER Lab Sample ID: 09015630-003 Unit

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 1226D.D

Level: (low/med) LOW Date Received: 12/23/09

% Moisture: not dec. ______ Date Analyzed: 12/26/09

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	2.09	0	J
2. 001634-04-4	Methyl-tert-butyl ether	6.34	3	JN

Belmont
Raw Comp

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald Date Acquired: 30 Dec 2009 1:23
Data File: D:\HPCHEM\1\DATA\1229A12A.D
Name: 09015630-02A UNITED WATER
Misc: 12/29/09 EX 12/28 400-0.4mL 0.4SR
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Pyridine, 3-methyl-	6.39	38.0	ug/L	2017410	ISTD01	10.81	2121850	40.0
Acetamide, N,N-dimet	6.64	84.3	ug/L	4470580	ISTD01	10.81	2121850	40.0
Ethanol, 2-butoxy-	7.33	79.5	ug/L	4215350	ISTD01	10.81	2121850	40.0
Benzenemethanol	9.17	425.8	ug/L	4955840	ISTD01	10.81	2121850	40.0
Hexanoic acid, 3,5,5	10.69	42.0	ug/L	2225840	ISTD01	10.81	2121850	40.0
Ethanol, 2-[2-(2-met	11.17	57.0	ug/L	3024310	ISTD01	10.81	2121850	40.0
Ethanol, 2-[2-(2-but	13.44	92.0	ug/L	2860240	ISTD02	13.65	1246390	40.0
Dodecanoic acid	14.23	31.0	ug/L	966909	ISTD02	13.65	1246390	40.0
3,6,9,12-Tetraoxahex	15.57	58.7	ug/L	979620	ISTD03	15.99	667940	40.0
Octadecanoic acid	18.29	95.7	ug/L	360381	ISTD04	20.21	150688	40.0

Belmont
EFF Comp.

Tentatively Identified Compound (LSC) summary

Operator ID: David Macdonald   Date Acquired: 30 Dec 2009 00:15
Data File: D:\HPCHEM\1\DATA\1229A10A.D
Name: 09015630-04A UNITED WATER
Misc: 12/29/09 EX 12/28 400-0.4mL 0.4SR
Method: D:\HPCHEM\1\METHODS\CLP.M (RTE Integrator)
Title: BNA/8270/625
Library Searched: D:\DATABASE\NBS49K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Ethane, 1,1'-oxybis[	7.89	15.2	ug/L	205596	ISTD01	8.73	539775	40.0
2-Propanol, 1-(2-met	8.60	5.1	ug/L	68782	ISTD01	8.73	539775	40.0
1-Hexanol, 2-ethyl-	8.97	8.4	ug/L	113866	ISTD01	8.73	539775	40.0
unknown	10.49	6.3	ug/L	89266	ISTD02	10.81	565580	40.0
4-Pyridinamine, N,N-	11.70	69.9	ug/L	988324	ISTD02	10.81	565580	40.0
unknown	11.97	4.7	ug/L	66780	ISTD02	10.81	565580	40.0
unknown	12.94	5.7	ug/L	92494	ISTD03	13.64	652749	40.0
Ethanol, 2-[2-(2-met	13.85	6.3	ug/L	103528	ISTD03	13.64	652749	40.0
Oxindole	14.01	5.3	ug/L	86376	ISTD03	13.64	652749	40.0
unknown	14.55	24.0	ug/L	392427	ISTD03	13.64	652749	40.0

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CHAIN OF CUSTODY RECORD

Client Name: United water

ESG Work Order #: 0901563 0

Project Name: Belmont

Project No:

Sampler(s) Signature:

Filtered (Y or N)

Preserv. Code

Analyses: TTO-001; TTO-sul post P25

Stat. No.	DATE	TIME	COMP.	GRAB	SAMPLE ID	Total Number of Containers	TTO-001	TTO-sul post P25							Comments
	12/23	1400		X	Raw	4	X								
		1330	X		Raw	2		X							
		1345		X	Final	4	X								
		1330	X		Final	2		X							

TRANSFER OF CUSTODY

	Date/Time
Relinquished By:	12/23/01 18:00
Received By:	
Relinquished By:	Date/Time
Received By:	
Relinquished By:	Date/Time
Received By:	

SAMPLE CONDITION UPON RECEIPT

Sample Temp: 4.0 °C
Received on Ice: Y / N
Samples Intact: Y / N
Adequate Volume: Y / N
Appropriate Containers: Y / N
Appropriate Preservative: Y / N
Within Hold Time: Y / N
Head Space Absent: Y / N / NA

TURN AROUND TIME

Normal ______ Rush ______

Requested Due Date: ______

SAMPLE COMMENTS

Please note if sample(s) suspected to be hazardous, corrosive, or requires special handling for any reason.

pH METER CALIBRATION

4.00 ______ 7.00 ______ 10.00 ______

PRESERVATION CODES

N = HNO_3 / Nitric Acid
S = H_2SO_4 / Sulfuric Acid
H = HCl / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
OH = NaOH / Sodium Hydroxide
SO = $Na_2S_2O_3$ / Sodium Thiosulfate

ATTACHMENT XIX

Organics Inventory and Ten Most Abundant Constituents

2009 Organics Inventory

All results are in micrograms per liter (ug/L)

Pollutant	Belmont Influent	Belmont Effluent	Southport Influent	Southport Effluent	Sludge
Bis (2-ethylhexyl) phthalate	44	20	85		7300
Methylene chloride			6.3		
Phenols	61		2.2		
Toluene					890
Trichloroethene					96

Pollutant	**Source**
Bis (2-ethylhexyl) phthalate	Plastizer used in PVC pipe. Domestic contaminant from plastic and household glue products.
Methylene chloride	Regulated industrial pollutant found in two permitted pharmaceutical facilities. Common laboratory extraction solvent.
Phenols	Regulated pollutant found in permitted cokemaking facility. Household pollutant found in ordinary domestic wastewater.
Toluene	Regulated pollutant found in three permitted CWT facilities, OCPSF plant, and several remediation sites. Frequent runoff constituent.
Trichloroethene (trichloroethylene)	Common industrial solvent and cleaner.

Ten Most Abundant Pollutants- Belmont AWT Plant

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the Belmont influent and effluent. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter (ug/L)

Influent Grab Sample Fraction

Pollutant	Result
Acetaldehyde	44
Ethanol	31
2-propanone (acetone)	7
Methyl tert-butyl ether (MTBE)	7
Propanal	6
2-fluoro-1-propene	6

Influent Composite Sample Fraction

Pollutant	Result
Benzene methanol	426
Octadecanoic acid	96
2-[2-(2-but)] ethanol	92
N,N-dimethyl acetamide	84
2-(2-butoxyethanol)	80
3,6,9,12-tetraoxa hex	59
2-[2-(2-met)] ethanol	57
3,5,5 hexanoic acid	42
3-methylpyridine	38
Dodecanoic acid	31

Effluent Grab Sample Fraction

Pollutant	Result
None found	

Effluent Composite Sample Fraction

Pollutant	Result
4-pyridinamine	70
Unknown compound	24
1,1-oxybis ethane	15

Pollutant	Source
Acetaldehyde	
Ethanol	Common ingredient in home, commercial, and industrial cleaning solutions.
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
Methyl tert-butyl ether (MTBE)	Gasoline additive. Found in stormwater runoff.
Propanal	Isomer of 2-propanone used in pharmaceutical facility.
2-fluoro-1-propene	Found in coal gas and petroleum products. Likely from cokemaking and CWTs.
Benzene methanol	Breakdown product of common residential and commercial pesticides.
Octadecanoic acid	Most common fatty acid found in animal and vegetable fats.
2-[2-(2-but)] ethanol	Common ingredient in home, commercial, and industrial cleaning solutions.
N,N-dimethyl acetamide	Common solvent in adhesives. Used in plastics and pharmaceutical industries.
2-(2-butoxyethanol)	Common ingredient in home, commercial, and industrial cleaning solutions.
3,6,9,12-tetraoxa hex	Possible breakdown product of pyridine manufacturing from OCPSF industry.
2-[2-(2-met)] ethanol	Common ingredient in home, commercial, and industrial cleaning solutions.
3,5,5 hexanoic acid	Fatty acid found in nearly all fats.
3-methylpyridine	Pollutant found in regulated OCPSF facility.
Dodecanoic acid	Lauric acid found in coconut oil and human and cow's milk.
4-pyridinamine	Pollutant found in regulated OCPSF facility.
Unknown compound	Source cannot be determined.
1,1-oxybis ethane (diethyl ether)	Industrial solvent used in analytical chemistry. Likely from laboratory waste.

Ten Most Abundant Pollutants- Southport AWT Plant

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the Southport influent and effluent. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter (ug/L)

Influent Grab Sample Fraction

Pollutant	Result
2-propanone (acetone)	97
1-ethyl-2-methylbenzene	16

Influent Composite Sample Fraction

Pollutant	Result
9-octadecenoic acid	470
Octadecanoic acid	165
Benzenemethanol	99
2-phenoxyethanol	53
Limonine	49
Dodecanoic acid	42
Tetradecanoic acid	38
2-butoxyethanol	36
2-propanol (isopropyl alcohol)	35

Effluent Grab Sample Fraction

Pollutant

None found

Effluent Composite Sample Fraction

Pollutant	
1,1-oxybisethane (diethyl ether)	16

Pollutant	Source
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
1-ethyl-2-methylbenzene	Solvent used in OCPSF and petroleum industries.
9-octadecenoic acid	Common fatty acid found in animal and vegetable fats.
Octadecanoic acid	Most common fatty acid found in animal and vegetable fats.
Benzenemethanol	Breakdown product of common residential and commercial pesticides.
2-phenoxyethanol	Used in dermatological products such as skin creams and sunscreen.
Limonine	Natural citrus compound, common industrial and commercial cleaner.
Dodecanoic acid	Lauric acid found in coconut oil, human and cow's milk.
Tetradecanoic acid	Common fatty acid used in topical medications and as a food ingredient.
2-butoxyethanol	Common ingredient in home, commercial, and industrial cleaning solutions.
2-propanol (isopropyl alcohol)	Solvent used extensively by permitted pharmaceutical facility.

Ten Most Abundant Pollutants- Sludge

Listed below are the ten most abundant constituents, excluding priority pollutants, found in each sample fraction at more than ten times the background noise collected from the AWT sludge. An attempt has been made to identify the source of each pollutant. The constituents are listed in order of highest concentration.

All results are in micrograms per liter- ug/L

Sludge Grab Sample Fraction

Pollutant	Result
2-propanone (acetone)	20000
2-butanone (MEK)	8500
Dimethyl disulfide	160
2-butyl-1-octanol	77

Sludge Composite Sample Fraction

Pollutant	Result
Hexadecanoic acid	95497
9-octadecenoic acid	73768
Tetradecanoic acid	23701
4-methylphenol (p-cresol)	18431
Octodecanoic acid	11633
Dodecanoic acid	6888
Molecular sulfur	6761
Butanoic acid	6359
2-methyl butanoic acid	5867
m-hexadecanoic acid	5087

Pollutant	Source
2-propanone (acetone)	Regulated pollutant found in two permitted pharmaceutical facilities.
2-butanone (MEK)	Natural vegetable constituent, paint and household glue ingredient.
Dimethyl disulfide	Food additive, naturally occurring food compound, treatment chemical.
2-butyl-1-octanol	Found in natural animal fats and oils.
Hexadecanoic acid	Fatty acid found in nearly all fats.
9-octadecenoic acid	Common fatty acid found in animal and vegetable fats.
Tetradecanoic acid	Common fatty acid used in topical medications and as food ingredient.
4-methylphenol (p-cresol)	Regulated pollutant from CWT industries.
Octodecanoic acid	Most common fatty acid found in animal and vegetable fats.
Dodecanoic acid	Lauric acid found in coconut oil, human and cow's milk.
Molecular sulfur	Common element of organic substances and their breakdown products.
Butanoic acid	Fatty acid occurring in animal fats and plant oils.
2-methyl butanoic acid	Fatty acid occurring in animal fats and plant oils.
m-hexadecanoic acid	Fatty acid found in nearly all fats.

APPENDIX

H-1

White River Data

Record Type tal2.j6
Currently Sampled

						CN-A	Phenol	As-T	Cd-T	Cr-T	Cu-T	Pb-T	Hg-T		Se-T	Ag-T	Zn-T
						GC	GC	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Metals
						X	X	X	X	X	X	X	X	X	X	X	X
QC'd	Date (mm/dd/yy)	Time (hh:mm:ss)	Month (#)	Stream	Location	(ug/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	Ni-T (ug/L)	(ug/L)	(ug/L)	(ug/L)
prw	02/22/07	10:25	2	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.00	2.0	1.0	0.50	1.5			12.8
prw	02/22/07	9:00	2	WR	03 - Harding St & WR	5.0		5.0	0.2	1.00	2.0	1.0	0.50	1.8			14.0
prw	05/02/07	10:30	5	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.5	3.9	1.0	0.50	1.8			9.7
prw	05/02/07	8:58	5	WR	03 - Harding St & WR	5.0		5.0	0.2	1.4	2.7	1.0	0.50	2.2			10.2
prw	06/06/07	11:10	6	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.0	2.6	1.0	0.50	2.6	5.0	1.0	8.8
prw	06/06/07	9:20	6	WR	03 - Harding St & WR	5.0	0.0050	5.0	0.2	1.0	2.0	1.0	0.50	2.4	5.0	1.0	6.5
prw	07/11/07	10:50	7	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.9	1.0	0.50	3.2			8.9
prw	07/11/07	9:05	7	WR	03 - Harding St & WR	5.0		5.0	0.2		2.0	1.0	0.50	2.3			5.1
prw	08/01/07	10:20	8	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.0	1.0	0.50	2.3			14.9
prw	08/01/07	9:00	8	WR	03 - Harding St & WR	5.0		5.0	0.2		2.8	1.0	0.50	2.1			11.3
prw	09/09/07	12:40	9	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.5	1.0	0.50	2.3			10.5
prw	10/03/07	11:15	10	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	2.0	1.0	0.50	2.8			10.1
prw	10/03/07	9:50	10	WR	03 - Harding St & WR	5.0		5.0	0.2	1.0	2.1	1.0	0.50	2.8			8.9
prw	11/07/07	10:40	11	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.0	2.0	1.0	0.50	2.1	5.0	1.0	12.1
PRW	09/03/08	11:20	9	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.1	1.0	0.50	2.9			13.6
PRW	11/05/08	11:10	11	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.0	3.7	1.0	0.50	2.1	5.0	1.0	7.6
PRW	11/05/08	9:40	11	WR	03 - Harding St & WR	5.0	0.0050	5.0	0.2	1.0	3.7	1.0	0.50	2.1	5.0	1.0	5.0
PRW	11/14/08	10:40	11	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.7	1.0	0.50	2.2			27.8
PRW	11/14/08	9:00	11	WR	03 - Harding St & WR	5.0		5.0	0.2		3.4	1.0	0.50	1.9			12.2
PRW	12/03/08	10:30	12	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.5	1.0	0.50	1.7			12.3
PRW	12/03/08	9:10	12	WR	03 - Harding St & WR	5.0		5.0	0.2		2.8	1.0	0.50	1.7			9.6
prw	01/07/09	10:50	1	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.1	1.0	0.50	1.3			9.9
prw	01/07/09	9:25	1	WR	03 - Harding St & WR	5.0		5.0	0.2		2.8	1.0	0.50	1.5			10.0
prw	03/03/09	10:20	3	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	3.6	1.0	0.50	1.8			8.1
prw	03/03/09	9:05	3	WR	03 - Harding St & WR	5.0		5.0	0.2	1.0	10.8	1.0	0.50	1.5			12.1
prw	04/01/09	11:35	4	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.7	1.0	0.50	1.7			11.3
prw	04/01/09	10:20	4	WR	03 - Harding St & WR	5.0		5.0	0.2		3.4	1.0	0.50	2.1			12.2
prw	07/08/09	10:15	7	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	2.0	1.0	0.50	2.5			7.5
prw	07/08/09	8:55	7	WR	03 - Harding St & WR	5.0		5.0	0.2	1.0	2.5	1.0	0.50	2.5			7.9
prw	09/01/09	10:55	9	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.7	1.0	0.50	2.7			14.5
prw	09/01/09	9:25	9	WR	03 - Harding St & WR	5.0		5.0	0.2		3.6	1.0	0.50	2.4			11.5
prw	10/07/09	11:05	10	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.0	1.0	0.50	2.3			11.8
prw	10/07/09	9:40	10	WR	03 - Harding St & WR	5.0		5.0	0.2		2.4	1.0	0.50	2.4			10.9
prw	11/04/09	10:50	11	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.5	2.0	1.0	0.50	1.7	5.0	1.0	7.7
prw	11/04/09	9:20	11	WR	03 - Harding St & WR	5.0	0.0050	5.0	0.2	2.0	3.2	1.0	0.50	1.7	5.0	1.0	8.9
PRW	01/06/10	10:55	1	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.0	1.0	0.50	1.5			9.7
PRW	01/06/10	9:45	1	WR	03 - Harding St & WR	5.0		5.0	0.2		2.0	1.0	0.50	1.1			9.5
PRW	02/03/10	10:45	2	WR	01 - 82nd St & WR	5.0		5.0	2.0		2.0	1.0	0.50	2.6			16.4
PRW	02/03/10	9:25	2	WR	03 - Harding St & WR	5.0		5.0	0.2		2.0	1.0	0.50	1.6			14.3
PRW	04/07/10	11:35	4	WR	01 - 82nd St & WR	5.0		5.0	0.2		4.0	1.0	0.50	1.8			5.1
PRW	05/05/10	11:00	5	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	3.7	1.0	0.50	1.6			7.6
PRW	07/07/10	11:30	7	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.3	1.0	0.50	1.8			9.2
PRW	07/07/10	9:40	7	WR	03 - Harding St & WR	5.0		5.0	0.2		3.1	1.0	0.50	1.6			8.0
PRW	08/04/10	10:55	8	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.2	1.0	0.50	1.4			6.1
PRW	08/04/10	9:20	8	WR	03 - Harding St & WR	5.0		5.0	0.2		2.8	1.0	0.50	2.0			6.9
PRW	10/06/10	10:50	10	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.2	1.0	0.50	1.4			7.7
PRW	10/06/10	9:05	10	WR	03 - Harding St & WR	5.0		5.0	0.2		2.3	1.0	0.50	1.6			5.9
PRW	11/03/10	11:05	11	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.0	2.4	1.0	0.50	1.6	5.0	1.0	11.7
PRW	11/03/10	9:25	11	WR	03 - Harding St & WR	5.0	0.0050	5.0	0.2	1.0	3.0	1.0	0.50	2.0	5.0	1.0	10.0
PRW	11/23/10	12:05	11	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	3.7	1.0	0.50	2.0			14.4
prw	01/05/11	11:10	1	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.9	1.0	0.50	1.7			10.5
prw	01/05/11	9:40	1	WR	03 - Harding St & WR	5.0		5.0	0.2		2.8	1.0	0.50	1.7			10.8
prw	02/15/11	11:05	2	WR	01 - 82nd St & WR	5.0		5.0	0.2		3.3	1.0	0.50	1.5			8.7
prw	02/15/11	9:35	2	WR	03 - Harding St & WR	5.0		5.0	0.2		3.5	1.0	0.50	1.3			10.4
prw	08/03/11	11:00	8	WR	01 - 82nd St & WR	5.0		5.0	0.2	1.0	2.2	1.0	0.50	2.6			10.3
prw	10/05/11	11:25	10	WR	01 - 82nd St & WR	5.0		5.0	0.2		2.6	1.0	0.50	1.8			17.9
prw	10/05/11	9:40	10	WR	03 - Harding St & WR	5.0		5.0	0.2		3.9	1.0	0.50	1.7			15.9
prw	11/02/11	10:50	11	WR	01 - 82nd St & WR	5.0	0.0050	5.0	0.2	1.0	4.2	1.0	0.50	1.7	5.0	1.0	17.4
prw	11/02/11	6:30	11	WR	03 - Harding St & WR	5.0	0.0050	5.0	0.2	1.0	3.1	1.0	0.50	2.0	5.0	1.0	17.4
					dAVE	5.00000	0.00500	5.00000	0.23051	1.10000	2.93898	1.00000	0.50000	1.97458	5.00000	1.00000	10.81356
					LOD	5	0.005	5	0.2	1	2	1	0.5		5	1	5
					#samples <LOD	59	11	59	52	20	22	54	59	0	11	11	1
					Total # samples	59	11	59	59	24	59	59	59	59	11	11	59
					Average	5.00000	0.00500	5.00000	0.23051	1.10000	2.93898	1.00000	0.50000	1.97458	5.00000	1.00000	10.81356
					Adj Average	2.5	0.0025	2.5	0.142373	0.683333	2.471301	0.542373	0.25	1.97458	2.5	0.5	10.73025
								use all	use all	use all	use 01&03	use 01&03	use all	use 01&03	use all	use all	use 01&03
										197.2							
										8.216667							
									88%	83%	37%	92%					2%

Date	Time	Site	As-T (ug/L)	Ag-T (ug/L)	Be-T (ug/L)	Cr-VI (mg/L)
02/15/12	11:25	01 - White River at 82nd St	<1.0	<1.00	<1.00	<0.005
02/15/12	10:00	03 - White River at Harding St	<1.0	<1.00	<1.00	<0.005
02/15/12	10:15	58 - White River at Southport Rd	<1.0	<1.00	<1.00	<0.005
02/15/12	10:35	06 - White River at Waverly (SR 144)	<1.0	<1.00	<1.00	<0.005
02/17/12	11:05	01 - White River at 82nd St	<1.0	<1.00	<1.00	<0.005
02/17/12	9:15	03 - White River at Harding St	<1.0	<1.00	<1.00	<0.005
02/17/12	9:35	58 - White River at Southport Rd	<1.0	<1.00	<1.00	<0.005
02/17/12	9:50	06 - White River at Waverly (SR 144)	<1.0	<1.00	<1.00	<0.005
02/20/12	11:25	01 - White River at 82nd St	<1.0	<1.00	<1.00	<0.005
02/20/12	9:35	03 - White River at Harding St	<1.0	<1.00	<1.00	<0.005
02/20/12	10:00	58 - White River at Southport Rd	<1.0	<1.00	<1.00	<0.005
02/20/12	10:20	06 - White River at Waverly (SR 144)	<1.0	<1.00	<1.00	<0.005
		Adjusted ave (ug/L	0.5	0.5	0.5	2.5

APPENDIX

H-2

April 2007 IDEM

Waste Load Allocation- Reasonable Potential to Exceed Evaluation

State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: April 10, 2007

To: Jason House
Municipal Permits Section

Thru: Catherine Hess, Chief cah 4/10/07
Permits Technical Support Section
John Elliott JE

From: Gurdeo Sondhe - GSondhe
Permits Technical Support Section

Subject: Combined WLA Report for the City of Indianapolis, Marion County
(IN0023183 & IN0031950, WLA 001488)

A reasonable potential analysis for free cyanide, total cyanide, cadmium, chloride, fluoride, mercury, and sulfate was done for the renewal of the NPDES permits for the City of Indianapolis. The City of Indianapolis owns two treatment plants. The first one is Belmont AWT Plant located at 2700 Belmont Avenue, which is a Class IV, 120 mgd facility. The second one is Southport AWT Plant located at 3800 West Southport Road, which is a Class IV, 125 mgd facility. Southport AWT Plant is downstream of the Belmont AWT Plant. The receiving stream of the facilities is the West Fork of White River, a tributary to the Wabash River, which has a Q7, 10 flow of 69 cfs. Both streams are designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. Both facilities are close to each other, therefore, a combined study for a total design flow of 245 mgd is conducted at given Q7,10 flow.

The reasonable potential analysis for pollutants of concern is included in Tables 1 and 2. The results of the analysis show that the facilities do not exhibit a reasonable potential to exceed a water quality criterion for several pollutants of concern (total cyanide, cadmium, mercury, fluoride and sulfate) in respective permit. However, the PEQs for chloride and free cyanide were greater than the respective preliminary effluent limitations (PELs), therefore, that water quality-based effluent limits should be for these parameters due to RPE.

Water quality-based effluent limitations for free cyanide, total cyanide, cadmium, chloride, fluoride, mercury, and sulfate for both facilities are included in Table 3, with loading according to their respective design flows. Table 4 shows WQBELs with loadings for a total combined design flow of 245 mgd. Preliminary effluent limitations for total cyanide are included in Table 5. The PELs for total cyanide were calculated using screening values instead of actual water quality criteria. Therefore, they cannot be used as effluent limitations in the permit, but they could be used to screen the discharge for potential water quality impacts. The documentation of the wasteload allocation analysis is included as an attachment.

GSS/gss
Attachments

TABLE 1
Calculation of Projected Effluent Quality
For Indianapolis Belmont+Southport AWT Plants (Combined) in Marion County
(IN0023183 & IN0031950, WLA001488)

INDIANAPOLIS - BELMONT AWT Plant DESIGN FLOW = 120 mgd

Parameter	Monthly Average PEQ					Daily Maximum PEQ				
	Maximum Monthly Average (mg/l)	Number of Monthly Averages	CV	Multiplying Factor	Monthly Average PEQ (mg/l)	Maximum Daily Sample (mg/l)	Number of Daily Samples	CV	Multiplying Factor	Daily Maximum PEQ (mg/l)
Mercury					0.000007	0.000005	14	0.4	1.4	0.000007
Chloride	281	36	0.2	1.0	281	440	155	0.2	1.0	440
Cyanide, Free	0.021	36	0.2	1.0	0.021	0.026	157	0.3	0.9	0.023
Cyanide, Total	0.035	36	0.2	1.0	0.035	0.047	157	0.3	0.9	0.042
Fluoride	1.2	36	0.2	1.0	1.2	1.36	154	0.2	1.0	1.4
Sulfate	592	36	0.3	1.1	651	1780	154	0.5	0.9	1602

INDIANAPOLIS - SOUTHPORT AWT Plant DESIGN FLOW = 125 mgd

Parameter	Monthly Average PEQ					Daily Maximum PEQ				
	Maximum Monthly Average (mg/l)	Number of Monthly Averages	CV	Multiplying Factor	Monthly Average PEQ (mg/l)	Maximum Daily Sample (mg/l)	Number of Daily Samples	CV	Multiplying Factor	Daily Maximum PEQ (mg/l)
Cadmium	0.0012	36	0.0	1.0	0.0012	0.002	154	0.1	1.0	0.002
Mercury					0.000004	0.000003	15	0.5	1.4	0.000004
Chloride	280	36	0.2	1.0	280	329	154	0.2	1.0	329
Cyanide, Free	0.017	36	0.3	1.1	0.019	0.024	154	0.4	0.9	0.022
Cyanide, Total	0.039	36	0.4	1.1	0.043	0.068	128	0.5	0.9	0.061
Fluoride	1.5	36	0.2	1.0	1.5	2.88	154	0.3	0.9	2.6
Sulfate	465	36	0.1	1.0	465	582	154	0.3	0.9	524

4/10/2007

TABLE 2
Results of Reasonable Potential Statistical Procedure
For Indianapolis Belmont+Southport AWT Plants (Combined) in Marion County
(IN0023183 & IN0031950, WLA001488)

INDIANAPOLIS - BELMONT AWT Plant DESIGN FLOW = 120 mgd

Parameter	Monthly Average Comparison			Daily Maximum Comparison			Reasonable Potential to Exceed?
	Monthly Average PEQ (mg/l)	Monthly Average PEL (mg/l)	PEQ > PEL?	Daily Maximum PEQ (mg/l)	Daily Maximum PEL (mg/l)	PEQ > PEL?	
Mercury	0.000007	0.000012	No	0.000007	0.00002	No	No
Chloride	281	201	Yes	440	404	Yes	Yes
Cyanide, Free	0.021	0.0096	Yes	0.023	0.019	Yes	Yes
Cyanide, Total	0.035	52	No	0.042	127	No	No
Fluoride	1.2	1.8	No	1.4	3.6	No	No
Sulfate	651	889	No	1602	1783	No	No

INDIANAPOLIS - SOUTHPORT AWT Plant DESIGN FLOW = 125 mgd

Parameter	Monthly Average Comparison			Daily Maximum Comparison			Reasonable Potential to Exceed?
	Monthly Average PEQ (mg/l)	Monthly Average PEL (mg/l)	PEQ > PEL?	Daily Maximum PEQ (mg/l)	Daily Maximum PEL (mg/l)	PEQ > PEL?	
Cadmium	0.0012	0.0026	No	0.002	0.0051	No	No
Mercury	0.000004	0.000012	No	0.000004	0.00002	No	No
Chloride	280	201	Yes	329	404	No	Yes
Cyanide, Free	0.019	0.0096	Yes	0.022	0.019	Yes	Yes
Cyanide, Total	0.043	52	No	0.061	127	No	No
Fluoride	1.5	1.8	No	2.6	3.6	No	No
Sulfate	465	889	No	524	1783	No	No

TABLE 3

Water Quality-based Effluent Limitations

For Indianapolis Belmont+Southport AWT Plants (Combined) in Marion County

(IN0023183 & IN0031950, WLA001488)

INDIANAPOLIS - BELMONT AWT Plant DESIGN FLOW							= 120 mgd
Parameter	Quality or Concentration Monthly Average	Daily Maximum	Units	Quantity or Loading* Monthly Average	Daily Maximum	Units	Monthly Sampling Frequency
Cadmium	0.0026	0.0051	mg/l	2.6	5.1	lbs/day	4
Mercury	0.000012	0.00002	mg/l	0.012	0.02	lbs/day	1
Chloride	201	404	mg/l	201281	404566	lbs/day	4
Cyanide, Free	0.0096	0.019	mg/l	10	19	lbs/day	4
Fluoride	1.8	3.6	mg/l	1803	3605	lbs/day	4
Sulfate	889	1783	mg/l	890245	1785496	lbs/day	4

*** Based on an effluent flow of 120 mgd. Quantity or Loading is based on the Design Flow of 120 mgd**

INDIANAPOLIS - SOUTHPORT AWT Plant DESIGN FLOW							= 125 mgd
Parameter	Quality or Concentration Monthly Average	Daily Maximum	Units	Quantity or Loading* Monthly Average	Daily Maximum	Units	Monthly Sampling Frequency
Cadmium	0.0026	0.0051	mg/l	2.7	5.3	lbs/day	4
Mercury	0.000012	0.00002	mg/l	0.013	0.021	lbs/day	1
Chloride	201	404	mg/l	209668	421423	lbs/day	4
Cyanide, Free	0.0096	0.019	mg/l	10	20	lbs/day	4
Fluoride	1.8	3.6	mg/l	1878	3755	lbs/day	4
Sulfate	889	1783	mg/l	927338	1859892	lbs/day	4

*** Based on an effluent flow of 125 mgd. Quantity or Loading is based on the Design Flow of 125 mgd**

4/10/2007

TABLE 4
Water Quality-based Effluent Limitations
For Indianapolis Belmont+Southport AWT Plants (Combined) in Marion County
(IN0023183 & IN0031950, WLA001488)

INDIANAPOLIS - SOUTHPORT & BELMONT WWTPS TOTAL FLOW	= 245 mgd
INDIANAPOLIS - BELMONT WWTP DESIGN FLOW	= 120 mgd
INDIANAPOLIS - SOUTHPORT WWTP DESIGN FLOW	= 125 mgd

Parameter	Quality or Concentration			Quantity or Loading*			Monthly Sampling Frequency
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	
Cadmium	0.0026	0.0051	mg/l	5.3	10	lbs/day	4
Mercury	0.000012	0.00002	mg/l	0.025	0.041	lbs/day	1
Chloride	201	404	mg/l	410950	825988	lbs/day	4
Cyanide, Free	0.0096	0.019	mg/l	20	39	lbs/day	4
Fluoride	1.8	3.6	mg/l	3680	7360	lbs/day	4
Sulfate	889	1783	mg/l	1817583	3645388	lbs/day	4

*** Based on an effluent flow of 245 mgd. Quantity or Loading is based on the Combined Total Flow**

4/10/2007

TABLE 5

Preliminary Effluent Limitations Based on Screening Values[1]
For Indianapolis Belmont+Southport AWT Plants (Combined) in Marion County
(IN0023183 & IN0031950, WLA001488)

Parameter	Quality or Concentration			Quantity or Loading[2]			Monthly Sampling Frequency
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	
Cyanide, Total	52	127	mg/l	106315	259655	lbs/day	4

[1] Preliminary effluent limitations based on screening values cannot be used as effluent limitations in NPDES permits. However, they can be used to screen discharges for monitoring purposes.
[2] Based on an effluent flow of 245 mgd.

4/10/2007

Documentation of Wasteload Allocation Analysis For Discharges in the Non-Great Lakes system

Analysis By: Gurdeo Sondhe
Date: April 10, 2007

Reviewed By: Catherine Hess and John Elliott JE
Permit Writer: Jason House
WLA Number: WLA001488

Previous WLA Reports: **October 1996 WLA Report**

Facility Information

- **Name:** Belmont AWT Plant
  Southport AWT Plant

  The City of Indianapolis owns above facilities and collection system, but White River Environmental Partnership (WREP) operates them in collaboration with the city.

- **NPDES Permit Number:** IN0023183 Belmont AWT Plant
  IN0031950 Southport AWT Plant

- **Permit Expiration Date:** September 30, 2006 (both facilities)

- **County:** Marion

- **Purpose of Analysis:** WLA analysis is for the renewal of the respective permits

- **Type of Treatment:** **The Belmont AWT Plant** one of two plants serving the City of Indianapolis, is a Class IV, 120 mgd nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing towers, oxygen nitrification reactors, secondary clarifiers, mixed media tertiary filters, effluent disinfection by chlorination/dechlorination and effluent flow monitoring. The permittee will be changing its primary method of disinfection to ozonation in accordance with the requirements of Part I.F of current NPDES permit. The plant has an average design flow of 120 mgd with a peak hourly design flow of 150 mgd. The mass limits for cBOD5 and TSS are based on the peak design flow of 150 mgd.

  The Southport AWT Plant serves the City of Indianapolis, is a Class IV, 125 mgd nitrification facility with screening, grit removal tanks, primary clarifiers, biological roughing towers, oxygen nitrification reactors, secondary clarifiers, mixed media tertiary filters, effluent disinfection by chlorination/dechlorination and effluent flow monitoring, and effluent pumping. The permittee will be changing its primary method of disinfection to ozonation in accordance with the requirements of Part I.F of current NPDES permit. The plant has an average design flow of 125 mgd with a peak hourly design flow of 150 mgd. The mass limits for cBOD5 and TSS are based on the average design flow of 125 mgd.

- **Outfall Number:** 006 Belmont AWT Plant
  001 Southport AWT Plant

- **Current Average Design Flow:** 120 mgd **Belmont AWT Plant**
- 125 mgd **Southport AWT Plant**

Current Effluent Limits: **Belmont AWT Plant** cBOD5 and TSS Mass effluent limits are based on the peak design flow of 150 mgd.

Parameter	Monthly Average		Daily Maximum		Daily Average
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)	(mg/l)
CBOD5 (summer)	10	12518	--	--	
CBOD5 (winter)	20	25035	--	--	
TSS (summer)	10	12518			
TSS (winter)	20	25035			
Ammonia-N (summer)	***3.0***	***3128***	--	--	
Ammonia-N (winter)	***5.9***	***6150***	--	--	
DO (summer)					8
DO (winter)					6
TRC	0.01		0.02		
E .coli	**125**	**c/100 ml**	**235**		

Parameter	Monthly Average		Daily Maximum	
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)
Cyanide, (total)	0.008		0.019	
Mercury	0.00001		0.00002	
Chloride	Report		Report	
Fluoride	Report		Report	
Sulfate	Report		Report	
TDS	Report		Report	

- **Current Effluent Limits:** **Southport AWT Plant** Mass effluent limits are based on the average design flow of 125 mgd.

Parameter	Monthly Average		Daily Maximum		Daily Average
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)	(mg/l)
CBOD5 (summer)	10	10431	--	--	
CBOD5 (winter)	25	26078	--	--	
TSS (summer)	10	10431			
TSS (winter)	30	31294			
Ammonia-N (summer) **	***3.0***	***3128***	--	-	
Ammonia-N (winter)	***5.9***	***6150***	--	--	
DO (summer)					8
DO (winter)					4
TRC	0.01		0.02		
E.coli	**125**	**c/100 ml**	**235**		

** Same as Belmont AWT Plant Loadings

Parameter	Monthly Average		Daily Maximum	
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)
Cadmium	0.004		0.009	
Cyanide, (total)	0.008		0.019	
Mercury	0.00001		0.00002	
Chloride	Report		Report	
Fluoride	Report		Report	
Sulfate	Report		Report	
TDS	Report		Report	

<u>Receiving Stream Information</u>

- **Receiving Stream:** West Fork of White River [an effluent (pH)dominated stream] (See Attachment 1)
- **Designated Stream Use:** The West Fork of White River is covered under Rule 327 IAC 2-1 and is designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community.

- **303(d) List:** The West Fork of White River is on the 2006 303(d) List for ***E. coli***, Impaired Biotic Communities and FCA for PCBs and mercury.

- **Q7, 10 (Outfall):** 69 cfs. **(Receiving Stream : West Fork of White River)**

  USGS Gaging Station 03353000 White River (Q7,10 = 69 cfs) at Indianapolis is used.

  The information for the gaging station for calculating Q7, 10 of the receiving stream was obtained from the book entitled Low-Flow Characteristics of Indiana Streams by Kathleen Fowler and John T. Wilson published in 1996 by the USGS..

- **Nearby Dischargers:** Upstream facilities (Cities of Noblesville, Fishers and Carmel) in the area which would not have a significant impact on this wasteload allocation.

Calculation of Water Quality-based Effluent Limitations

Upstream water quality data were obtained from fixed station WR-248, West Fork of White River at 86th Street Nora, Marion County. The ambient upstream concentration of a given pollutant was determined by calculating the geometric mean of the instream data for the pollutant. The survey data include values reported as less than the limit of quantitation (LOQ). If less than one-half the values in the data set were below the LOQ, the values below the LOQ were assigned the value (V) and then the geometric mean of the data set was calculated. The value (V) was determined as follows:

$$V = (LOQ) \times [1 - (\text{Number below LOQ}) / (\text{Total number of values})]$$

If one-half or more of the values in the data set were below the LOQ, the values below the LOQ were set equal to one-half the LOQ. The determination of ambient upstream concentrations is included in Attachment 2. The trace metal sampling data collected at 86th Street Nora by the IDEM was used to calculate ambient upstream concentration for cadmium and fluoride. The time periods chosen for the different data sets are based on the availability of data, improvement in the limit of detection for some pollutants and the desire to have data for whole years. The data sets were limited to the last five years (Year 2001 thru 2005) of available data. The required hardness values were obtained from downstream fixed monitoring station WR-210 West Fork of White River at SR 144 Bridge near Waverly, in Morgan County. A hardness value of 326 mg/l (actual d/s value) was used to determine the criteria for those metals whose criteria are dependent on hardness. Considering the downstream hardness and chloride at Station WR-210, the Indiana Sulfate criterion of 1000 mg/l is valid and used to calculate PELs for sulfate,

The coefficient of variation used to calculate monthly average and daily maximum PELs was set equal to the default value of 0.6. The number of samples per month used to calculate monthly average PELs was set equal to 4 for all of the requested toxics based on the expected monitoring frequency. The number of samples per month for mercury was set equal to 1. The spreadsheet used to calculate PELs is included in Attachment 3.

Reasonable Potential Analysis for Toxics

Calculation of Projected Effluent Quality

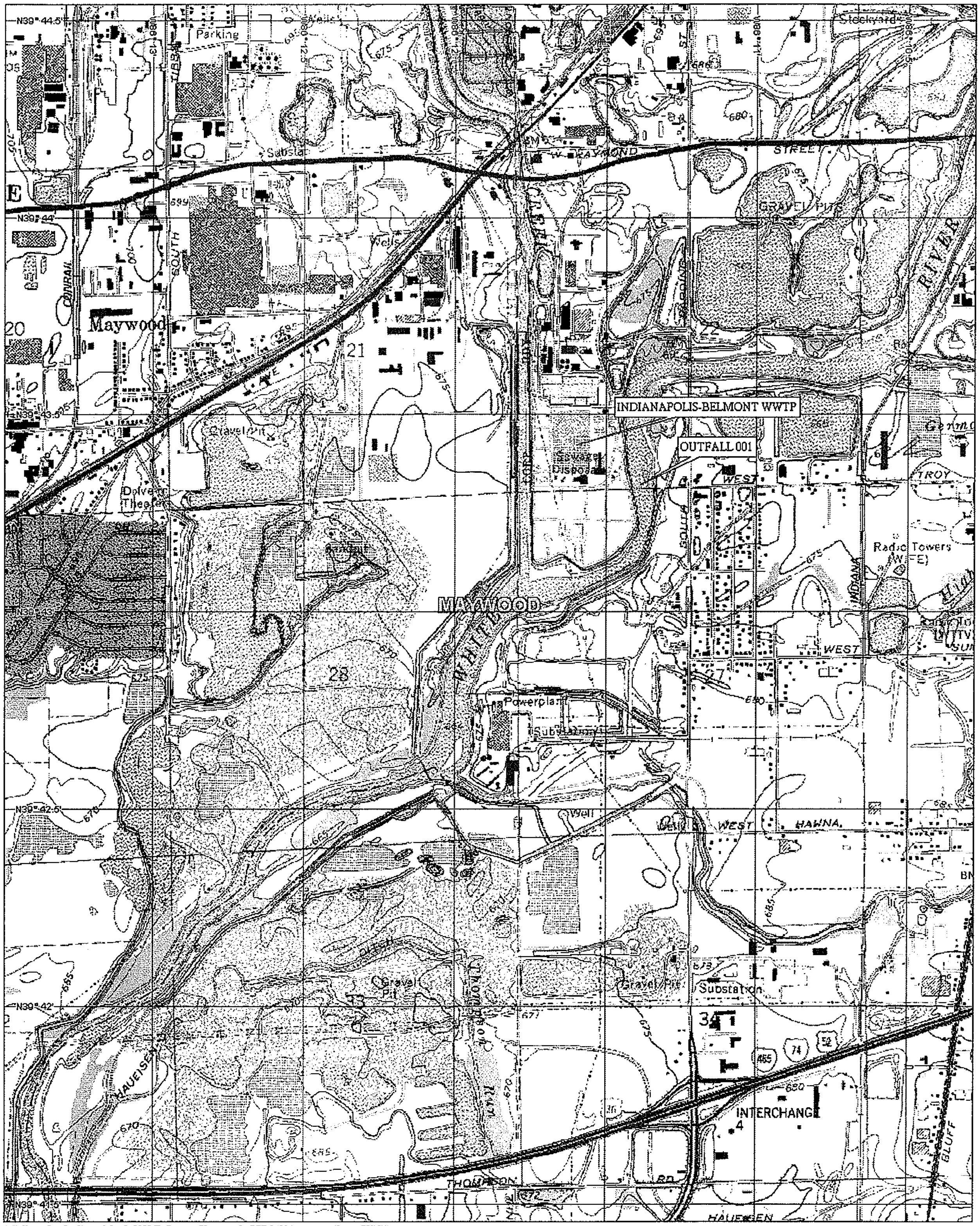
Effluent data (free cyanide, total cyanide, cadmium, chloride, fluoride, mercury, sulfate and total dissolved solids (TDS)) collected from January 2004 through December 2006 were obtained from the City of Indianapolis for Belmont WWTP and Southport WWTP in electronic format (Excel spreadsheet). The combined data are included in Attachments 4 through 6.

Comparison of PEQs to PELs

The reasonable potential analyses for Belmont WWTP and Southport WWTP are included in Attachments 7 and 8, respectively. The results of the analysis show that the facilities do not exhibit a reasonable potential to exceed a water quality criterion for several pollutants of concern (total cyanide, cadmium, mercury, fluoride and sulfate) in the permit. However, the PEQs for free cyanide and chloride were greater than the respective preliminary effluent limitations (PELs), therefore, that water quality-based effluent limits should be required for these parameters due to RPE.

ATTACHMENT 1

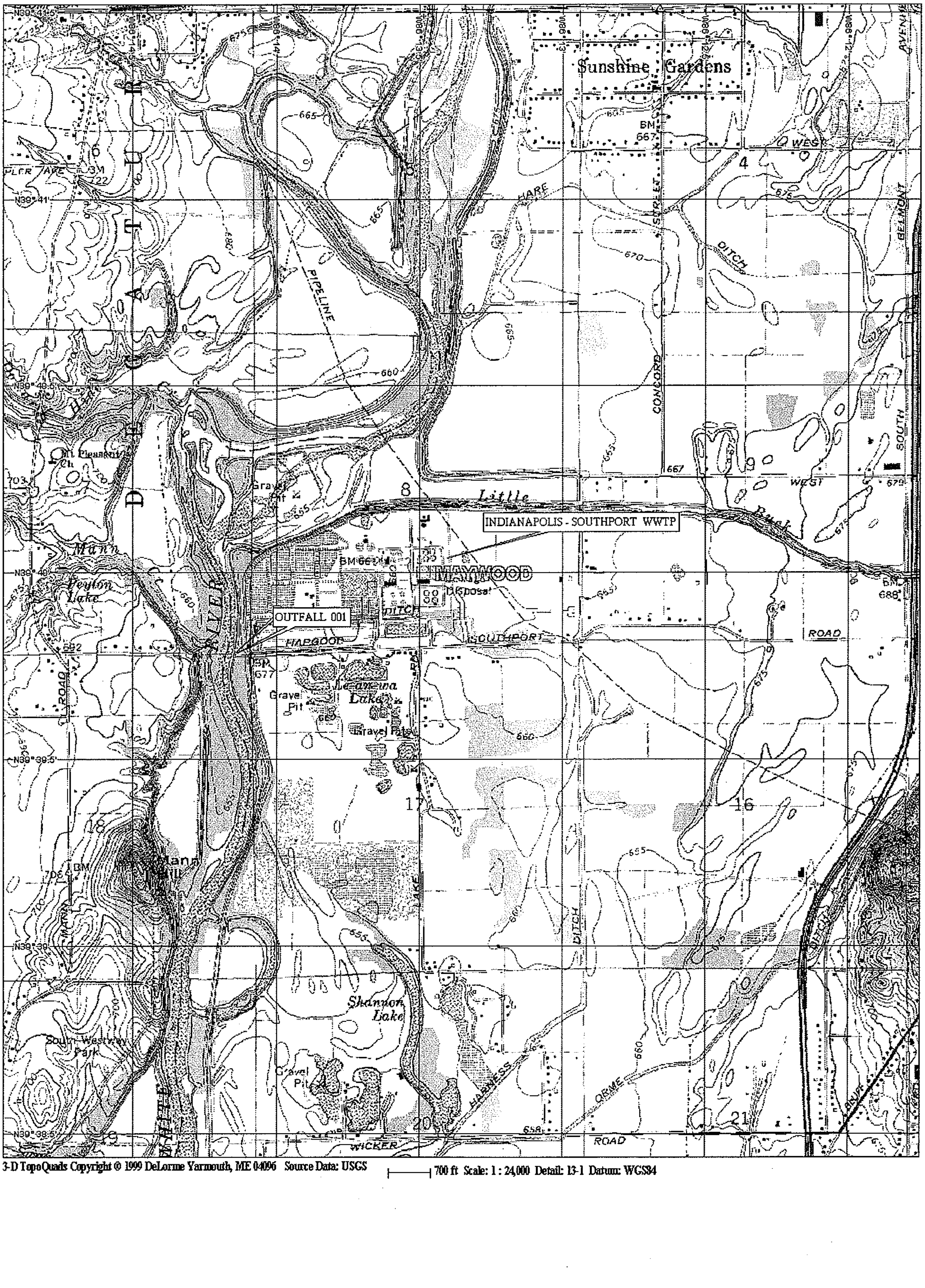
BELMONT AWT Plant



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS

700 ft Scale: 1 : 24,000 Detail: 13-1 Datum: WGS84

SOUTHPORT AWT Plant



700 ft Scale: 1 : 24,000 Detail: 13-1 Datum: WGS84

ATTACHMENT 2 Data From Fixed Stations

UPSTREAM STATION SITE SELECTED : WR-248 , W Fk White River , 86th St, Nora , Marion County *4/10/2007*

Chloride (mg/L)				Corrected	Sulfate (mg/L)				Corrected	TDS (mg/L)				Corrected
Sample Date	Season	<	Lab Test	Lab Result	Sample Date	Season	<	Lab Test	Lab Result	Sample Date	Season	<	Lab Test	Lab Result
1/25/2001	W		72.00	72.00	1/25/2001	W		89.00	89.00	1/25/2001	W		536.00	536.00
2/28/2001	W		47.00	47.00	2/28/2001	W		40.00	40.00	2/28/2001	W		397.00	397.00
3/22/2001	W		57.00	57.00	3/22/2001	W		59.00	59.00	3/22/2001	W		447.00	447.00
4/26/2001	W		61.00	61.00	4/26/2001	W		68.00	68.00	4/26/2001	W		486.00	486.00
5/31/2001	S		44.00	44.00	5/31/2001	S		48.00	48.00	5/31/2001	S		436.00	436.00
6/14/2001	S		52.00	52.00	6/14/2001	S		47.00	47.00	6/14/2001	S		447.00	447.00
7/26/2001	S		61.00	61.00	7/26/2001	S		62.00	62.00	7/26/2001	S		445.00	445.00
8/21/2001	S		84.00	84.00	8/21/2001	S		120.00	120.00	8/21/2001	S		565.00	565.00
9/11/2001	S		40.00	40.00	9/11/2001	S		49.00	49.00	9/11/2001	S		362.00	362.00
10/4/2001	S		75.00	75.00	10/4/2001	S		95.00	95.00	10/4/2001	S		590.00	590.00
11/1/2001	S		40.00	40.00	11/1/2001	S		46.00	46.00	11/1/2001	S		425.00	425.00
12/11/2001	W		50.00	50.00	12/11/2001	W		58.00	58.00	12/11/2001	W		479.00	479.00
1/8/2002	W		57.77	57.77	1/8/2002	W		66.08	66.08	1/8/2002	W		480.00	480.00
2/5/2002	W		34.70	34.70	2/5/2002	W		38.87	38.87	2/5/2002	W		363.00	363.00
3/5/2002	W		35.72	35.72	3/5/2002	W		32.40	32.40	3/5/2002	W		411.00	411.00
4/2/2002	W		29.97	29.97	4/2/2002	W		33.09	33.09	4/2/2002	W		333.00	333.00
5/29/2002	S		37.00	37.00	5/29/2002	S		40.00	40.00	5/29/2002	S		384.00	384.00
6/13/2002	S		47.00	47.00	6/13/2002	S		45.00	45.00	6/13/2002	S		422.00	422.00
7/23/2002	S		90.00	90.00	7/23/2002	S		69.00	69.00	7/23/2002	S		511.00	511.00
8/15/2002	S		80.00	80.00	8/15/2002	S		88.00	88.00	8/15/2002	S		526.00	526.00
9/3/2002	S		96.00	96.00	9/3/2002	S		80.00	80.00	9/3/2002	S		533.00	533.00
10/1/2002	S		104.00	104.00	10/1/2002	S		104.00	104.00	10/1/2002	S		593.00	593.00
11/25/2002	S		93.00	93.00	11/25/2002	S		107.00	107.00	11/25/2002	S		618.00	618.00
12/26/2002	W		65.00	65.00	12/26/2002	W		70.00	70.00	12/26/2002	W		468.00	468.00
1/30/2003	W		84.00	84.00	1/30/2003	W		90.00	90.00	1/30/2003	W		587.00	587.00
2/25/2003	W		75.00	75.00	2/25/2003	W		47.00	47.00	2/25/2003	W		375.00	375.00
3/26/2003	W		54.00	54.00	3/26/2003	W		40.00	40.00	3/26/2003	W		386.00	386.00
4/16/2003	W		64.00	64.00	4/16/2003	W		63.00	63.00	4/16/2003	W		445.00	445.00
5/1/2003	S		74.00	74.00	5/1/2003	S		72.00	72.00	5/1/2003	S		493.00	493.00
6/10/2003	S		66.00	66.00	6/10/2003	S		60.00	60.00	6/10/2003	S		484.00	484.00
7/17/2003	S		27.00	27.00	7/17/2003	S		32.00	32.00	7/17/2003	S		318.00	318.00
8/13/2003	S		43.00	43.00	8/13/2003	S		53.00	53.00	8/13/2003	S		397.00	397.00
10/1/2003	S		29.00	29.00	10/1/2003	S		34.00	34.00	10/1/2003	S		332.00	332.00
10/29/2003	S		51.00	51.00	10/29/2003	S		73.00	73.00	10/29/2003	S		477.00	477.00
11/24/2003	S		39.00	39.00	11/24/2003	S		41.00	41.00	11/24/2003	S		357.00	357.00
12/30/2003	W		41.00	41.00	12/30/2003	W		41.00	41.00	12/30/2003	W		387.00	387.00
1/20/2004	W		59.00	59.00	1/20/2004	W		61.00	61.00	1/20/2004	W		457.00	457.00
2/5/2004	W		92.00	92.00	2/5/2004	W		61.00	61.00	2/5/2004	W		521.00	521.00
3/11/2004	W		50.00	50.00	3/11/2004	W		44.00	44.00	3/11/2004	W		407.00	407.00
4/7/2004	W		51.00	51.00	4/7/2004	W		44.00	44.00	4/7/2004	W		412.00	412.00
5/12/2004	S		70.00	70.00	5/12/2004	S		80.00	80.00	5/12/2004	S		496.00	496.00
6/10/2004	S		55.00	55.00	6/10/2004	S		58.00	58.00	6/10/2004	S		455.00	455.00
7/1/2004	S		60.00	60.00	7/1/2004	S		56.00	56.00	7/1/2004	S		463.00	463.00
8/5/2004	S		72.00	72.00	8/5/2004	S		47.00	47.00	8/5/2004	S		428.00	428.00
9/7/2004	S		90.00	90.00	9/7/2004	S		71.00	71.00	9/7/2004	S		487.00	487.00
10/14/2004	S		80.00	80.00	10/14/2004	S		104.00	104.00	10/14/2004	S		486.00	486.00
11/8/2004	S		70.00	70.00	11/8/2004	S		87.00	87.00	11/8/2004	S		501.00	501.00
12/29/2004	W		76.00	76.00	12/29/2004	W		89.00	89.00	12/29/2004	W		541.00	541.00
1/20/2005	W		36.00	36.00	1/20/2005	W		41.00	41.00	1/20/2005	W		329.00	329.00
2/28/2005	W		54.00	54.00	2/28/2005	W		59.00	59.00	2/28/2005	W		432.00	432.00
3/23/2005	W		72.00	72.00	3/23/2005	W		77.00	77.00	3/23/2005	W		466.00	466.00
4/13/2005	W		64.00	64.00	4/13/2005	W		68.00	68.00	4/13/2005	W		440.00	440.00
5/26/2005	S		53.00	53.00	5/26/2005	S		51.00	51.00	5/26/2005	S		430.00	430.00
6/22/2005	S		69.00	69.00	6/22/2005	S		72.00	72.00	6/22/2005	S		499.00	499.00
7/7/2005	S		57.00	57.00	7/7/2005	S		54.00	54.00	7/7/2005	S		439.00	439.00
8/31/2005	S		68.00	68.00	8/31/2005	S		58.00	58.00	8/31/2005	S		392.00	392.00
9/8/2005	S		96.00	96.00	9/8/2005	S		76.00	76.00	9/8/2005	S		546.00	546.00
10/13/2005	S		86.00	86.00	10/13/2005	S		98.00	98.00	10/13/2005	S		592.00	592.00
11/3/2005	S		66.00	66.00	11/3/2005	S		74.00	74.00	11/3/2005	S		526.00	526.00
12/29/2005	W		41.00	41.00	12/29/2005	W		34.00	34.00	12/29/2005	W		320.00	320.00

Chloride (mg/L)			Corrected	Sulfate (mg/L)			Corrected	TDS (mg/L)			Corrected
MF For Lab Data		Lab Test	Lab Result	MF For Lab Data		Lab Test	Lab Result	MF For Lab Data		Lab Test	Lab Result
Samples		60		Samples		60		Samples		60	60
Minimum		27.0		Minimum		32		Minimum		318	318
Average		61.5		Average		63		Average		456	456
Maximum		104.0		Maximum		120		Maximum		618	618
STD_Deviation		19.1		STD_Deviation		21.3		STD_Deviation		74.0	74.0
CV		0.3		CV		0.3		CV		0.2	0.2
Geometeric MEAN		58		Geometeric MEAN		59		Geometeric MEAN		450	450

UPSTREAM STATION SITE SELECTED : WR-248 , W Fk White River , 86th St, Nora , Marion County

Cadmium (Total) (ug/L)				Corrected
Sample Date	Season	<	Lab Test	Lab Result
1/25/2001	W	*L*	0.70	0.35
2/28/2001	W	*L*	0.70	0.35
3/22/2001	W	*L*	0.70	0.35
4/26/2001	W	*L*	1.00	0.50
5/31/2001	S	*L*	1.00	0.50
6/14/2001	S	*L*	1.00	0.50
7/26/2001	S	*L*	1.00	0.50
8/21/2001	S	*L*	1.00	0.50
9/11/2001	S	*L*	1.00	0.50
10/4/2001	S	*L*	1.00	0.50
11/1/2001	S	*L*	1.00	0.50
12/11/2001	W	*L*	1.00	0.50
1/8/2002	W	*L*	1.00	0.50
2/5/2002	W	*L*	1.00	0.50
3/5/2002	W	*L*	1.00	0.50
4/2/2002	W	*L*	1.00	0.50
5/29/2002	S	*L*	1.00	0.50
6/13/2002	S	*L*	1.00	0.50
7/23/2002	S	*L*	1.00	0.50
8/15/2002	S	*L*	1.00	0.50
9/3/2002	S	*L*	1.00	0.50
10/1/2002	S	*L*	1.00	0.50
11/25/2002	S	*L*	1.00	0.50
12/26/2002	W	*L*	1.00	0.50
1/30/2003	W	*L*	1.00	0.50
2/25/2003	W	*L*	1.00	0.50
3/26/2003	W	*L*	1.00	0.50
4/16/2003	W	*L*	1.00	0.50
5/1/2003	S	*L*	1.00	0.50
6/10/2003	S	*L*	1.00	0.50
7/17/2003	S	*L*	1.00	0.50
8/13/2003	S	*L*	1.00	0.50
10/1/2003	S	*L*	1.00	0.50
10/29/2003	S	*L*	1.00	0.50
11/24/2003	S	*L*	1.00	0.50
12/30/2003	W	*L*	1.00	0.50
1/20/2004	W	*L*	1.00	0.50
2/5/2004	W	*L*	1.00	0.50
3/11/2004	W	*L*	1.00	0.50
4/7/2004	W	*L*	1.00	0.50
5/12/2004	S	*L*	1.00	0.50
6/10/2004	S	*L*	1.00	0.50
7/1/2004	S	*L*	1.00	0.50
8/5/2004	S	*L*	1.00	0.50
9/7/2004	S	*L*	1.00	0.50
10/14/2004	S	*L*	1.00	0.50
11/8/2004	S	*L*	1.00	0.50
12/29/2004	W	*L*	1.00	0.50
1/20/2005	W	*L*	1.00	0.50
2/28/2005	W	*L*	1.00	0.50
3/23/2005	W	*L*	1.00	0.50
4/13/2005	W	*L*	1.00	0.50
5/26/2005	S	*L*	1.00	0.50
6/22/2005	S	*L*	1.00	0.50
7/7/2005	S	*L*	1.00	0.50
8/31/2005	S	*L*	1.00	0.50
9/8/2005	S	*L*	1.00	0.50
10/13/2005	S	*L*	1.00	0.50
11/3/2005	S	*L*	1.00	0.50
12/29/2005	W	*L*	1.00	0.50

Trace Cd (ug/l)				Corrected
Sample Date	Season	<	Lab Test	Lab Result
2/13/2002			0.020	0.020
5/22/2002			0.045	0.045
8/15/2002			0.047	0.047
11/19/2002		*L*	0.037	0.019
3/11/2003			0.055	0.055
6/17/2003			0.033	0.033
9/23/2003			0.044	0.044
12/16/2003			0.023	0.023
3/23/2004			0.028	0.028
8/23/2004			0.069	0.069
10/12/2004			0.072	0.072
2/22/2005			0.043	0.043
6/27/2005			0.071	0.071
9/15/2005			0.065	0.065

Trace Fluoride (ug/l)				Corrected
Sample Date	Season	<	Lab Test	Lab Result
2/13/2002			240	
5/22/2002			190	
8/15/2002			330	
11/19/2002			330	
3/11/2003			150	
6/17/2003			250	
9/23/2003			190	
12/16/2003			210	
3/23/2004			220	

Cadmium (Total) (ug/L)			Corrected
MF For Lab Data	*0*	Lab Test	Lab Result
Samples	*60*	60	60
Minimum		0.699	0.3495
Average		1	0
Maximum		1	0.5
STD_Deviation		0.1	0.0
CV		0.1	0.1
Geometeric MEAN		1	0

Trace Cd (ug/l)			Corrected
MF For Lab Data	*0.93*	Lab Test	Lab Result
Samples	*1*	14	14
Minimum		0.02	0.0185
Average		0	0
Maximum		0.072	0.072
STD_Deviation		0.018	0.019
CV		0.380	0.422
Geometeric MEAN		0.043	0.041

Trace Fluoride (ug/l)			Corrected
MF For Lab Data		Lab Test	Lab Result
Samples		9	
Minimum		150	
Average		234	
Maximum		330	
STD_Deviation		61.667	
CV		0.263	
Geometeric MEAN		228	

ATTACHMENT 2 Data From Fixed Stations

DOWNSTREAM *STATION SITE SELECTED : WR-210 , W Fk White River , SR 144 Bridge, Near Waverly , Morgan County*

Hardness (as CaCO3) (mg/L)				Corrected	Chloride (mg/l)				Corrected
Sample Date	Season	<	Lab Test	Lab Result	Sample Date	Season	<	Lab Test	Lab Result
1/18/2001	W		351.00	351.00	1/18/2001	W		105.00	105.00
2/19/2001	W		279.00	279.00	2/19/2001	W		65.00	65.00
3/6/2001	W		331.00	331.00	3/6/2001	W		86.00	86.00
4/5/2001	W		352.00	352.00	4/5/2001	W		125.00	125.00
5/16/2001	S		345.00	345.00	5/16/2001	S		145.00	145.00
6/19/2001	S		305.00	305.00	6/19/2001	S		78.00	78.00
7/3/2001	S		279.00	279.00	7/3/2001	S		93.00	93.00
8/7/2001	S		279.00	279.00	8/7/2001	S		110.00	110.00
9/13/2001	S		233.00	233.00	9/13/2001	S		74.00	74.00
10/3/2001	S		314.00	314.00	10/3/2001	S		110.00	110.00
11/21/2001	S		373.00	373.00	11/21/2001	S		100.00	100.00
12/6/2001	W		316.00	316.00	12/6/2001	W		58.00	58.00
1/3/2002	W		373.00	373.00	1/3/2002	W		78.35	78.35
2/27/2002	W		294.00	294.00	2/27/2002	W		81.99	81.99
3/8/2002	W		304.00	304.00	3/8/2002	W		66.26	66.26
4/9/2002	W		294.00	294.00	4/9/2002	W		61.45	61.45
5/23/2002	S		307.00	307.00	5/23/2002	S		53.00	53.00
6/3/2002	S		300.00	300.00	6/3/2002	S		61.00	61.00
7/8/2002	S		327.00	327.00	7/8/2002	S		102.00	102.00
8/2/2002	S		345.00	345.00	8/2/2002	S		151.00	151.00
9/4/2002	S		319.00	319.00	9/4/2002	S		171.00	171.00
10/8/2002	S		342.00	342.00	10/8/2002	S		136.00	136.00
11/6/2002	S		340.00	340.00	11/6/2002	S		154.00	154.00
12/2/2002	W		374.00	374.00	12/2/2002	W		141.00	141.00
1/29/2003	W		382.00	382.00	1/29/2003	W		143.00	143.00
2/17/2003	W		370.00	370.00	2/17/2003	W		219.00	219.00
3/25/2003	W		307.00	307.00	3/25/2003	W		71.00	71.00
4/30/2003	W		364.00	364.00	4/30/2003	W		123.00	123.00
5/20/2003	S		313.00	313.00	5/20/2003	S		58.00	58.00
6/23/2003	S		351.00	351.00	6/23/2003	S		110.00	110.00
7/23/2003	S		294.00	294.00	7/23/2003	S		58.00	58.00
8/13/2003	S		313.00	313.00	8/13/2003	S		79.00	79.00
9/15/2003	S		302.00	302.00	9/15/2003	S		70.00	70.00
10/2/2003	S		262.00	262.00	10/2/2003	S		41.00	41.00
11/6/2003	S		325.00	325.00	11/6/2003	S		81.00	81.00
12/4/2003	W		334.00	334.00	12/4/2003	W		57.00	57.00
1/26/2004	W		348.00	348.00	1/26/2004	W		86.00	86.00
2/12/2004	W		336.00	336.00	2/12/2004	W		148.00	148.00
3/3/2004	W		316.00	316.00	3/3/2004	W		74.00	74.00
4/26/2004	W		327.00	327.00	4/26/2004	W		91.00	91.00
5/24/2004	S		310.00	310.00	5/24/2004	S		88.00	88.00
6/24/2004	S		263.00	263.00	6/24/2004	S		60.00	60.00
7/29/2004	S		331.00	331.00	7/29/2004	S		120.00	120.00
8/20/2004	S		371.00	371.00	8/20/2004	S		178.00	178.00
9/22/2004	S		346.00	346.00	9/22/2004	S		160.00	160.00
10/27/2004	S		314.00	314.00	10/27/2004	S		130.00	130.00
11/1/2004	S		366.00	366.00	11/1/2004	S		152.00	152.00
12/6/2004	W		301.00	301.00	12/6/2004	W		70.00	70.00
1/31/2005	W		340.00	340.00	1/31/2005	W		99.00	99.00
2/16/2005	W		261.00	261.00	2/16/2005	W		51.00	51.00
3/17/2005	W		346.00	346.00	3/17/2005	W		102.00	102.00
4/20/2005	W		337.00	337.00	4/20/2005	W		120.00	120.00
5/6/2005	S		334.00	334.00	5/6/2005	S		76.00	76.00
6/16/2005	S		268.00	268.00	6/16/2005	S		53.00	53.00
7/20/2005	S		264.00	264.00	7/20/2005	S		82.00	82.00
8/18/2005	S		332.00	332.00	8/18/2005	S		121.00	121.00
9/22/2005	S		251.00	251.00	9/22/2005	S		75.00	75.00
10/31/2005	S		293.00	293.00	10/31/2005	S		86.00	86.00
11/9/2005	S		338.00	338.00	11/9/2005	S		101.00	101.00
12/1/2005	W		341.00	341.00	12/1/2005	W		71.00	71.00

Hardness (as CaCO3) (mg/L)			Corrected	Chloride (mg/l)			Corrected
MF For Lab Data		Lab Test	Lab Result	MF For Lab Data		Lab Test	Lab Result
Samples		60		Samples		60	
Minimum		233		Minimum		41	
Average		320		Average		99	
Maximum		382		Maximum		219	
STD_Deviation		34.4		STD_Deviation		37.6	
CV		0.1		CV		0.4	
Percentile 50%		326		Geometeric MEAN		92	

ATTACHMENT 3

Calculation of Preliminary Effluent Limitations for Discharges in the Non-Great Lakes System (Excluding Discharges to the Ohio River)

4/9/07
12:39 PM

General Information	
Facility Name:	Indianapolis Belmont+Southport AWT Plants (Combined)
County:	Marion
NPDES Number:	IN0023183 & IN0031950
WLA Number:	001488
WLA Report Date:	4/10/2007
Receiving Stream:	WF of White River

Receiving Stream Questions (Yes or No)	
Acute Mixing Zone Allowed?	No
Public Water System (PWS) Intake Downstream?	No
Industrial Water Supply (IWS) Intake Downstream?	No
Interstate Wabash River Discharge?	No
Put-and-Take Trout Fishing?	No
Fish Early Life Stages Present?	Yes

Metals Translators (dissolved to total recoverable)	Acute	Chronic
Aluminum	1.000	1.000
Antimony	1.000	1.000
Arsenic	1.000	1.000
Barium	1.000	1.000
Beryllium	1.000	1.000
Cadmium	0.895	0.860
Chromium III	0.316	0.860
Chromium VI	0.982	0.962
Cobalt	1.000	1.000
Copper	0.960	0.960
Iron	1.000	1.000
Lead	0.619	0.619
Manganese	1.000	1.000
Molybdenum	1.000	1.000
Nickel	0.998	0.997
Silver	0.85	
Strontium	1.000	1.000
Thallium	1.000	1.000
Tin	1.000	1.000
Titanium	1.000	1.000
Vanadium	1.000	1.000
Zinc	0.978	0.986

Effluent Flow	=	245	mgd

Receiving Stream Design Flows			
Q7,10 (Outfall)	=	44.6	mgd
Q7,10 (Public Water System Intake)	=		mgd
Q7,10 (Industrial Water Supply Intake)	=		mgd
Q30,10 (Outfall)	=		mgd
Q50 (Outfall)	=	467.4	mgd
Q50 (Public Water System Intake)	=		mgd

Ambient Water Quality Characteristics			
Hardness (50th percentile)	=	326	mg/l
pH (50th percentile)	=		s.u.
Summer Temperature (75th percentile)	=		C
Summer pH (75th percentile)	=		s.u.
Winter Temperature (75th percentile)	=		C
Winter pH (75th percentile)	=		s.u.

Mixing Zone Dilution				
Dilution Factor (for acute mixing zone)	=			
		Dilution Fraction	Flow	Location
Chronic Aquatic Life (Except Ammonia)	=	50%	Q7,10	Outfall
Chronic Aquatic Life (Ammonia Only)	=	50%	Q30,10	Outfall
Chronic WET	=	25%	Q7,10	Outfall
Human Noncancer Drinking Water	=	100%	Q7,10	PWS Intake
Human Noncancer Nondrinking Water	=	50%	Q7,10	Outfall
Human Cancer Drinking Water	=	100%	Q50	PWS Intake
Human Cancer Nondrinking Water	=	25%	Q50	Outfall
Public Water Supply	=	100%	Q7,10	PWS Intake
Industrial Water Supply	=	100%	Q7,10	IWS Intake

Source of Criteria [1]							Ambient Upstream Conc. (Outfall)	Ambient Upstream Conc. (Intake)	Remove Mixing Zone?	Samples/		Facility Specific CV?	CAS		Indiana Water Quality Criteria for the Non-Great Lakes System (ug/l)							Preliminary Effluent Limitations					
															A	B	C	D	E	F	G						
															Aquatic Life Criteria		Human Health Noncancer Criteria		Human Health Cancer Criteria		Add. PWS Criteria	Concentration (ug/l)[3]		Mass (lbs/day)		Criteria	
A	B	C	D	E	F	G	(ug/l)	(ug/l)	(Yes or Blank)	Month	CV	(Yes or No)	Number	Parameters[2]	Acute (AAC)	Chronic (CAC)	Drinking (HNC-D)	Nondrinking (HNC-N)	Drinking (HCC-D)	Nondrinking (HCC-N)	(PWS)	Average	Maximum	Average	Maximum	Type [4]	Basis
1	1	1	8			8	0.0041			4	0.6	No	7440439	Cadmium[5]	13.31	2.47	10	1400			5	2.6	5.1	5.3	10	Tier I	CAC
1	1	1	1			8	0		YES	1	0.6	No	7439976	Mercury[6]	2.4	0.012	0.14	0.15			2	0.012	0.02	0.025	0.041	Tier I	CAC[7]
1	1					1	58000			4	0.6	No	1688706	Chloride	860000	230000					250000	201000	404000	410950	825988	Tier I	CAC
7	7					8	0			4	0.6	No	57125	Cyanide, Free	45.8	10.7					200	9.6	19	20	39	SSC	CAC
		1	8				0			4	0.6	No	57125	Cyanide, Total			200	48000				52000	127000	106315	259655	SV[8]	HNC-N[7]
8	2					8	228			4	0.6	No	16984488	Fluoride	12000	2000					4000	1800	3600	3680	7360	Tier I	SNE
	2					1	59000			4	0.6	No	14808798	Sulfate		1000000					250000	889000	1783000	1817583	3645388	Tier I	SNE
						1	450000			4	0.6	No		Total Dissolved Solids							750000	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

[1] Source of Criteria
1) Indiana numeric water quality criterion in 327 IAC 2-1-6(a)(3), Table 6-1 or Table 6-2, or in 327 IAC 2-1-6(e).
2) "Shall not exceed" (SNE) criterion in 327 IAC 2-1-6(a)(3), Table 6-1. This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
3) Industrial water supply (IWS) criterion in 327 IAC 2-1-6(f). This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
4) Acute (1-hour average) and chronic (30-day average) criteria for total ammonia nitrogen in "1999 Update of Ambient Water Quality Criteria for Ammonia," EPA-822-R-99-014, December 1999.
5) Tier I criterion calculated using the methodology in 327 IAC 2-1-8.2, 327 IAC 2-1-8.3, 327 IAC 2-1-8.4, 327 IAC 2-1-8.5 or 327 IAC 2-1-8.6.
6) Tier II value calculated using the methodology in 327 IAC 2-1-8.2 or 327 IAC 2-1-8.3.
7) Site-specific water quality criterion (SSC) in 327 IAC 2-1-8.9, Table 8.9-1 or developed under 327 IAC 2-1-8.9.
8) Screening value (SV).
9) Numeric interpretation of narrative criterion for toxicity using U.S. EPA recommended water quality criteria for whole effluent toxicity (WET).

[2] The aquatic life criteria for all metals except mercury and selenium are in the form of dissolved metal. The aquatic life criteria for mercury and selenium and the human health criteria for all the metals are in the form of total recoverable metal.
[3] The preliminary effluent limitations (PELs) for the metals are in the form of total recoverable metal (with the exception of Chromium (VI) which is in the form of dissolved metal).
[4] See the table "Indiana Water Quality Criteria for the Non-Great Lakes System" for information on the type and source of criteria.
[5] The above-noted substances are probable or known human carcinogens.
[6] The above-noted substances are bioaccumulative chemicals of concern (BCCs). Beginning January 1, 2004, the water quality criteria for a BCC shall be applied directly to the undiluted discharge for all discharges of a BCC. To apply the water quality criteria for a BCC directly to the undiluted discharge, enter "Yes" in the "Remove Mixing Zone?" column.
[7] The monthly average PEL was set equal to the most stringent WLA because the calculated monthly average PEL exceeded the most stringent WLA and a facility-specific CV was not determined.
[8] Limits based on screening values (as indicated by SV) ARE NOT to be used as water quality-based effluent limitations. These are solely to be used as preliminary effluent limitations.

Last revised: December 30, 2005

ATTACHMENT 4

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
1/7/2004	145		0.50		771		159					
1/16/2004	224		0.84		1,050		231					
1/22/2004	226		0.84		1,128		250					
1/26/2004	213		0.82		1,173		330					
Jan-04		*202.0*		*0.8*		*1030.5*		*242.5*				
2/4/2004	374		0.84		1,387		286					
2/12/2004	292		1.02		1,182		249					
2/13/2004											0.00382	
2/20/2004	222		1.18		997		199					
2/23/2004	237		0.96		1,038		217					
Feb-04		*281.3*		*1.0*		*1151.0*		*237.8*				*0.00382*
3/3/2004	235		0.80		841		283					
3/13/2004	225		0.88		1,174		306					
3/19/2004	272		0.82		1,195		310					
3/25/2004	272		0.94		1,162		234					
Mar-04		*251.0*		*0.9*		*1093.0*		*283.3*				
4/2/2004	183		0.62		852		160					
4/7/2004	213		0.94		1,112		266					
4/17/2004	215		1.24		1,162		234					
4/20/2004	235		1.10		1,151		257					
4/26/2004	198		0.80		1,000		243					
Apr-04		*208.8*		*0.9*		*1055.4*		*232.0*				
5/5/2004	250		0.92		1,183		349					
5/14/2004	247		0.92		1,040		236				0.00240	
5/20/2004	173		0.72		895		214					
5/25/2004	198		0.82		990		239					
May-04		*217.0*		*0.8*		*1027.0*		*259.5*				*0.00240*
6/2/2004	173		0.74		952		221					
6/12/2004	149		0.66		736		208					
6/18/2004	141		0.56		729		172					
6/24/2004	223		1.02		1,094		282					
6/28/2004	218		0.98		1,117		297					
Jun-04		*180.8*		*0.8*		*925.6*		*236.0*				
7/7/2004	223		0.98		1,192		323					
7/16/2004	225		0.98		1,039		281					
7/22/2004	176		0.74		794		176					
7/26/2004	197		0.86		1,056		280					
Jul-04		*205.3*		*0.9*		*1020.3*		*265.0*				
8/3/2004	252		0.88		1,130		270					
8/11/2004	270		1.08		1,221		324					
8/13/2004											0.00170	
8/20/2004	329		1.04		1,152		242					
8/26/2004	176		0.64		761		174					
Aug-04		*256.8*		*0.9*		*1066.0*		*252.5*				*0.00170*
9/2/2004	280		1.12		1,196		244					
9/11/2004	282		1.30		1,281		341					
9/17/2004	255		1.18		1,178		333					
9/21/2004	271		1.32		1,180		287					
9/27/2004	282		1.22		1,181		300					
Sep-04		*274.0*		*1.2*		*1203.2*		*301.0*				
10/6/2004	292		1.34		1,299		354					
10/15/2004	231		0.98		989		226					
10/21/2004	265		1.02		1,200		311					
10/25/2004	191		0.88		893		215					
10/29/2004											0.00237	
Oct-04		*244.8*		*1.1*		*1095.3*		*276.5*				*0.00237*
11/2/2004	168		0.88		866		250					
11/11/2004	245		1.08		1,260		379					
11/19/2004	218		0.96		997		255					
11/24/2004	208		0.94		1,136		289					
Nov-04	52.6	*209.8*		*1.0*		*1064.8*		*293.3*				
12/2/2004	156		0.72		737		151					
12/11/2004	183		0.78		883		255					
12/17/2004	210		1.08		979		270					
12/21/2004	243		1.06		1,142		284					
12/27/2004	260		0.86		1,261		312					
Dec-04		*210.4*		*0.9*		*1000.4*		*254.4*				

ATTACHMENT 4

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
1/5/2005	104		0.34		523		107					
1/7/2005											0.00499	
1/14/2005	106		0.38		538		101					
1/20/2005	183		0.60		913		216					
1/25/2005	218		0.90		930		183					
Jan-05		*152.8*		*0.6*		*726.0*		*151.8*				*0.00499*
2/3/2005	218		0.98		1,091		250					
2/11/2005	217		0.68		879		183					
2/17/2005											0.00335	
2/19/2005	181		0.70		890		203					
2/22/2005	184		0.62		907		248					
2/28/2005	188		0.88		1,038		258					
Feb-05		*197.6*		*0.8*		*961.0*		*228.4*				*0.00335*
3/9/2005	233		0.94		1,130		281					
3/17/2005	241		1.16		1,164		255					
3/22/2005	235		1.00		1,157		316					
3/28/2005	188		0.74		988		276					
Mar-05		*224.3*		*1.0*		*1109.8*		*282.0*				
4/6/2005	233		1.10		1,214		321					
4/11/2005	225		0.96		1,065		254				0.00180	
4/14/2005	199		0.78		892		241					
4/22/2005	186		0.64		879		186					
4/26/2005												
Apr-05		*210.8*		*0.9*		*1012.5*		*250.5*				*0.00180*
5/4/2005	212		1.02		1,090		291					
5/13/2005	238		1.02		1,084		262					
5/19/2005	238		1.06		1,093		273					
5/25/2005	223		1.12		1,052		302					
5/30/2005	218		1.10		1,044		252					
May-05		*225.8*		*1.1*		*1072.6*		*276.0*				
6/7/2005					1,477							
6/10/2005	252		1.14		1,235		330					
6/16/2005	230		0.90		1,112		284					
6/17/2005											0.00183	
6/22/2005	247		1.06		1,052		321					
6/27/2005	230		1.08		1,160		344					
Jun-05		*239.8*		*1.0*		*1207.2*		*319.8*				*0.00183*
7/5/2005	198		0.94		905		170					
7/15/2005	249		0.98		1,105		282					
7/21/2005	224		0.94		1,082		277					
7/27/2005	230		0.82		1,278		434					
Jul-05		*225.3*		*0.9*		*1092.5*		*290.8*				
8/4/2005	240		1.22		1,128		271					
8/12/2005	247		1.26		1,107		293				0.00266	
8/24/2005	254		1.28		1,192		309					
8/29/2005	225		1.04		1,063		271					
Aug-05		*241.5*		*1.2*		*1122.5*		*286.0*				*0.00266*
9/7/2005	228		1.12		1,027		244					
9/16/2005	217		0.80		1,022		302					
9/22/2005	197		0.82		1,016		324					
9/26/2005	92		0.36		492		130					
Sep-05		*183.5*		*0.8*		*889.3*		*250.0*				
10/6/2005	242		1.12		1,342		493					
10/14/2005											0.00172	
10/15/2005	265		1.17		1,330		368					
10/21/2005	176		0.83		892		257					
10/25/2005	215		0.92		1,148		323					
Oct-05		*224.5*		*1.0*		*1178.0*		*360.2*				*0.00172*
11/2/2005	**440**		0.96		3,873		1,780					
11/11/2005	252		1.06		1,287		361					
11/19/2005	204		0.76		1,010		291					
11/24/2005	229		0.86		1,068		255					
11/28/2005	212		0.98		1,079		271					
Nov-05		*267.4*		*0.9*		*1663.4*		*591.6*				

ATTACHMENT 4

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
12/7/2005	216		0.94		1,155		303					
12/17/2005	256		1.36		1,219		306					
12/22/2005	320		1.04		1,210		223					
12/28/2005	214		0.78		977		221					
Dec-05		*251.5*		*1.0*		*1140.3*		*263.3*				
1/5/2006	194		0.70		991		234					
1/14/2006	131		0.50		626		143					
1/18/2006	186		0.60		1,033		162					
1/27/2006	212		1.00		1,085		233					
1/30/2006	146		0.54		661		181					
Jan-06		*173.8*		*0.7*		*879.2*		*190.6*				
2/7/2006											0.00157	
2/8/2006	206		0.84		1,072		268					
2/17/2006	234		1.00		764		207					
2/23/2006	208		0.78		1,067		253					
2/27/2006	194		1.10		1,107		295					
Feb-06		*210.5*		*0.9*		*1002.5*		*255.8*				*0.00157*
3/9/2006	132		0.54		588		145					
3/15/2006	147		0.58		777		161					
3/24/2006	242		0.88		974		243					
3/27/2006	190		0.90		989		257					
Mar-06		*177.8*		*0.7*		*832.0*		*201.5*				
4/5/2006	165		0.64		963		225					
4/14/2006	169		0.78		912		220					
4/20/2006	165		0.70		899		221					
4/25/2006	120		0.92		985		203					
Apr-06		*154.8*		*0.8*		*939.8*		*217.3*				
5/3/2006	168		0.64		937		249					
5/11/2006	150		0.62		793		204					
5/15/2006	126		0.48		796		220				0.00397	
5/26/2006	164		0.64		816		241					
May-06		*152.0*		*0.6*		*835.5*		*228.5*				*0.00397*
6/2/2006	124		0.56		642		191					
6/7/2006	194		0.88		1,026		236					
6/13/2006	197		0.84		951		248					
6/18/2006	182		1.02		906		246					
6/26/2006	137		0.68		644		184					
Jun-06		*166.8*		*0.8*		*833.8*		*221.0*				
7/5/2006	186		0.88		1,015		271					
7/13/2006	179		0.76		864		240					
7/21/2006	230		0.96		997		241					
7/24/2006	197		0.90		1,028		309					
Jul-06		*198.0*		*0.9*		*976.0*		*265.3*				
8/4/2006	179		0.86		870		252				0.00377	
8/9/2006	223		1.06		1,220		338					
8/14/2006	204		1.02		985		266					
8/26/2006	271		1.14		1,179		309					
Aug-06		*219.3*		*1.0*		*1063.5*		*291.3*				*0.00377*
9/6/2006	231		1.08		998		241					
9/15/2006	219		0.98		999		265					
9/21/2006	212		1.00		1,087		304					
9/25/2006	176		0.86		841		257					
Sep-06		*209.5*		*1.0*		*981.3*		*266.8*				
10/4/2006	179		0.96		892		261					
10/12/2006	209		0.94		1,187		313					
10/20/2006	163		0.68		761		227					
10/23/2006	184		0.80		950		293					
Oct-06		*183.8*		*0.8*		*947.5*		*273.5*				
11/2/2006	196		0.88		1,078		291					
11/12/2006	156		0.88		934		263					
11/17/2006	119		0.52		689		185					
11/20/2006											0.00217	
11/21/2006	181		0.82		1,090		292					
11/27/2006	188		0.96		1,152		315					
Nov-06		*168.0*		*0.8*		*988.6*		*269.2*				*0.00217*
12/6/2006	173		0.72		926		228					
12/15/2006	162		0.80		826		167					
12/21/2006	140		0.74		765		192					
12/25/2006	135		0.70		795		204					
Dec-06		*152.5*		*0.7*		*828.0*		*197.8*				

ATTACHMENT 4

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
April 10, 2007	Chloride	Chloride	Fluoride	Fluoride	TDS	TDS	Sulfate	Sulfate	Cadmium	Cadmium	Mercury	Mercury
4/9/2007	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly
Count	155	36	154	36	155	36	154	36			14	14
Average	208.6	209.8	0.9	0.9	1031.3	1028.2	266.6	265.6			0.00272	0.00272
Maximum (mg/l)	440.0	281.3	1.4	1.2	3873.0	1663.4	1780.0	591.6			0.00499	0.00499
Maximum (ug/l)	440000	281250	1360	1228	3873000	1663400	1780000	591600			0.00499	0.00499
Minimum	52.6	152.0	0.3	0.6	492.0	726.0	101.0	151.8			0.00157	0.00157
Outliers												
Average + 3*STD	359.3	315.9	1.5	1.3	1904.9	1502.6	674.8	469.3			0.005941	0.005941
STD	50.2	35.4	0.2	0.1	291.2	158.1	136.1	67.9			0.001073	0.001073
Variance	2504.9	1216.2	0.0	0.0	84257.2	24313.1	18401.0	4482.9			0.000001	0.000002
CV	0.2	0.2	0.2	0.2	0.3	0.2	0.5	0.3			0.4	0.4

ATTACHMENT 5

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT WWTPS (COMBINED)

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
1/7/2004	135		0.52		763		160		1.0			
1/16/2004	205		0.90		949		214		1.0			
1/22/2004	230		0.32		1,343		376		1.0			
1/26/2004	209		0.80		975		225		1.0			
Jan-04		*194.8*		*0.6*		*1007.5*		*243.8*		*1.0*		
2/4/2004	329		0.82		1,366		338		1.0			
2/12/2004	267		1.10		1,245		369		1.0		0.00240	
2/13/2004												
2/20/2004	249		1.24		895		140		1.0			
2/23/2004	224		0.84		1,040		253		1.0			
Feb-04		*267.3*		*1.0*		*1136.5*		*275.0*		*1.0*		*0.00240*
3/3/2004	218		0.92		990		231		1.0			
3/13/2004	233		0.94		1,085		271		1.0			
3/19/2004	243		0.88		1,098		311		1.0			
3/25/2004	247		1.10		1,295		387		1.0			
Mar-04		*235.3*		*1.0*		*1117.0*		*300.0*		*1.0*		
4/2/2004	166		0.60		853		210		1.0			
4/7/2004	220		0.92		1,179		334		1.0			
4/17/2004	252		1.30		1,213		306		1.0			
4/20/2004	257		0.98		977		138		1.0			
4/26/2004	225		0.80		1,059		275		1.0			
Apr-04		*224.0*		*0.9*		*1056.2*		*252.6*		*1.0*		
5/5/2004	250		1.14		1,186		376		1.0		0.00643	
5/14/2004	252		1.10		1,116		299		1.0			
5/20/2004	168		0.70		928		244		1.0			
5/25/2004	217		0.98		957		217		1.0			
May-04		*221.8*		*1.0*		*1046.8*		*284.0*		*1.0*		*0.00643*
6/2/2004	168		0.70		969		285		1.0			
6/12/2004	178		0.76		922		284		1.0			
6/18/2004	134		0.56		716		164		1.0			
6/24/2004	213		1.08		1,088		295		1.0			
6/28/2004	245		1.28		1,003		210		1.0			
Jun-04		*187.6*		*0.9*		*939.6*		*247.6*		*1.0*		
7/7/2004	225		0.90		1,080		260		1.0			
7/16/2004	228		1.00		942		232		1.0			
7/22/2004	200		0.84		901		208		1.0			
7/26/2004	214		0.78				319		1.0			
Jul-04		*216.8*		*0.9*		*974.3*		*254.8*		*1.0*		
8/3/2004	238		0.82		1,089		285		1.0			
8/11/2004	272		1.10		1,276		376		1.0		0.00232	
8/13/2004	290		1.18		1,448		482					
8/20/2004	222		0.80		934		254		1.0			
8/26/2004	265		1.00		996		137		1.0			
Aug-04		*257.4*		*1.0*		*1148.6*		*306.8*		*1.0*		*0.00232*
9/2/2004	280		1.40		1,260		347		1.0			
9/11/2004	278		1.22		1,429		528		1.0			
9/17/2004	287		1.46		1,487		471		1.0			
9/21/2004	275		1.22		1,254		331		1.0			
9/27/2004									1.0			
Sep-04		*280.0*		*1.3*		*1357.5*		*419.3*		*1.0*		
10/6/2004	280		1.38		1,276		373		1.0			
10/15/2004	264		1.14		1,406		489		1.0			
10/21/2004	260		1.16		1,326		433		1.0			
10/25/2004	202		0.88		1,040		302		1.0		0.00151	
10/29/2004												
Oct-04		*251.5*		*1.1*		*1262.0*		*399.3*		*1.0*		*0.00151*
11/2/2004	225		0.94		1,259		458		1.0			
11/11/2004	250		1.20		1,200		348		1.0			
11/19/2004	235		1.16		1,136		332		1.0			
11/24/2004	228		1.02		1,297		411		1.0			
Nov-04		*234.5*		*1.1*		*1223.0*		*387.3*		*1.0*		
12/2/2004	149		0.88		885		261		1.0			
12/11/2004	183		0.78		944		264		1.0			
12/17/2004	205		1.18		1,047		332		1.0			
12/21/2004	220		1.02		1,137		321		1.0			
12/27/2004	238		0.84		1,093		220		1.0			
Dec-04		*199.0*		*0.9*		*1021.2*		*279.6*		*1.0*		

ATTACHMENT 5

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT WWTPS (COMBINED)

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
1/5/2005	102		0.40		570		138		1.0		0.00485	
1/7/2005												
1/14/2005	89		0.32		472		84		1.0			
1/20/2005	191		0.62		956		242		1.0			
1/25/2005	213		1.02		993		242		1.0			
Jan-05		*148.8*		*0.6*		*747.8*		*176.5*		*1.0*		*0.00485*
2/3/2005	243		1.02		1,273		414		1.0			
2/11/2005	209		0.70		1,057		322		1.0		0.00356	
2/17/2005	182		0.66		872		208					
2/19/2005	174		0.56		920		256		1.0			
2/22/2005	194		0.82		1,016		256		1.0			
2/28/2005									1.0			
Feb-05		*200.4*		*0.8*		*1027.6*		*291.2*		*1.0*		*0.00356*
3/9/2005	230		0.98		1,180		328		1.0			
3/17/2005	246		1.30		1,334		385		1.0			
3/22/2005	252		1.10		1,085		257		1.0			
3/28/2005	215		0.70		919		206		1.0			
Mar-05		*235.8*		*1.0*		*1129.5*		*294.0*		*1.0*		
4/6/2005	240		1.26		1,217		366		1.0		0.00139	
4/11/2005	241		1.06		1,235		372					
4/14/2005	200		0.86		846		208		1.0			
4/22/2005	166		0.68		903		248		1.0			
4/26/2005									1.0			
Apr-05		*211.8*		*1.0*		*1050.3*		*298.5*		*1.0*		*0.00139*
5/4/2005	218		2.88		1,072		291		1.0			
5/13/2005	235		1.30		693		369		1.0			
5/19/2005	223		1.16		1,097		313		1.0			
5/25/2005	241		1.20		1,070		274		1.0			
5/30/2005	226		1.02		1,104		303		1.0			
May-05		*228.6*		*1.5*		*1007.2*		*310.0*		*1.0*		
6/7/2005					1,477				1.0			
6/10/2005	264		1.26		1,365		365		1.0			
6/16/2005	220		0.90		1,229		420		1.0		0.00125	
6/17/2005												
6/22/2005	250		1.06		986		180		1.0			
6/27/2005	255		1.08		1,025		274		1.0			
Jun-05		*247.3*		*1.1*		*1216.4*		*309.8*		*1.0*		*0.00125*
7/5/2005	240		0.92		1,054		228		1.0			
7/15/2005	272		1.28		1,515		548		1.0			
7/21/2005	235		1.10		954		179		1.0			
7/27/2005	184		1.06		917		235		1.0			
Jul-05		*232.8*		*1.1*		*1110.0*		*297.5*		*1.0*		
8/4/2005	247		1.28		1,529		582		1.0		0.00263	
8/12/2005	259		1.32		1,480		523					
8/24/2005	270		1.44		1,351		485		1.0			
8/29/2005	255		1.14		1,097		271		1.0			
Aug-05		*257.8*		*1.3*		*1364.3*		*465.3*		*1.0*		*0.00263*
9/7/2005	231		1.22		1,008		232		1.0			
9/16/2005	247		1.20		1,302		433		1.0			
9/22/2005	230		0.88		1,033		303		1.0			
9/26/2005	115		0.38		545		104		1.0			
Sep-05		*205.8*		*0.9*		*972.0*		*268.0*		*1.0*		
10/6/2005	240		1.14		1,218		343		1.0		0.00242	
10/14/2005												
10/15/2005	266		1.26		1,400		453		1.0			
10/21/2005	236		1.12		1,490		572		1.0			
10/25/2005	236		0.86		1,125		268		1.0			
Oct-05		*244.5*		*1.1*		*1308.3*		*409.0*		*1.0*		*0.00242*
11/2/2005	250		0.98		1,235		411		1.0			
11/11/2005	238		1.26		1,382		455		1.0			
11/19/2005	208		0.82		1,117		340		1.0			
11/24/2005	262		0.88		1,206		336		1.0			
11/28/2005	223		0.84		1,163		310		1.0			
Nov-05		*236.2*		*1.0*		*1220.6*		*370.4*		*1.0*		
12/7/2005	199		0.94		1,314		430		1.0			
12/17/2005	261		1.40		1,228		326		1.0			
12/22/2005	268		1.06		1,255		335		1.0			
12/28/2005	186		0.72		900		215		1.0			
Dec-05		*228.5*		*1.0*		*1174.3*		*326.5*		*1.0*		

ATTACHMENT 5

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT WWTPS (COMBINED)

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
1/5/2006	170		0.78		1,017		268		1.0			
1/14/2006	156		0.64		780		207		1.0			
1/18/2006	170		0.64		830		206		2.0			
1/27/2006	218		1.04		1,238		364		1.0			
1/30/2006	162		0.66		821		223		1.0		0.00134	
Jan-06		*175.2*		*0.8*		*937.2*		*253.6*		*1.2*		*0.00134*
2/7/2006												
2/8/2006	218		0.78		1,083		280		1.0			
2/17/2006	226		1.02		1,000		284		1.0			
2/23/2006	241		0.86		1,197		352		1.0			
2/27/2006	211		1.14		997		223		1.0			
Feb-06		*224.0*		*1.0*		*1069.3*		*284.8*		*1.0*		
3/9/2006	190		0.70		866		239		1.0			
3/15/2006	143		0.58		719		158		1.0			
3/24/2006	245		0.94		971		248		1.0			
3/27/2006	196		0.86		912		231		1.0			
Mar-06		*193.5*		*0.8*		*867.0*		*219.0*		*1.0*		
4/5/2006	152		0.72		841		207		1.0			
4/14/2006	192		0.92		1,010		258		1.0			
4/20/2006	132		0.72		834		228		1.0			
4/25/2006	140		0.98		865		144		1.0			
Apr-06		*154.0*		*0.8*		*887.5*		*209.3*		*1.0*		
5/3/2006	178		0.76		915		238		1.0		0.00320	
5/11/2006	182		0.88		943		258		1.0			
5/15/2006	134		0.48		840		244		1.0			
5/26/2006	193		0.78		908		287		1.0			
May-06		*171.8*		*0.7*		*901.5*		*256.8*		*1.0*		*0.00320*
6/2/2006	177		0.78		878		260		1.0			
6/7/2006	197		1.06		1,075		307		1.0			
6/13/2006	196		0.92		916		243		1.0			
6/18/2006	214		1.20		899		210		1.0			
6/26/2006	159		0.76		845		238		1.0			
Jun-06		*188.6*		*0.9*		*922.6*		*251.6*		*1.0*		
7/5/2006	211		0.98		1,092		316		1.0			
7/13/2006	191		0.86		1,056		355		1.0			
7/21/2006	229		1.04		1,008		242		1.0			
7/24/2006	184		0.92		976		298		1.0		0.00331	
Jul-06		*203.8*		*1.0*		*1033.0*		*302.8*		*1.0*		*0.00331*
8/4/2006	216		1.00		1,021		248		1.0			
8/9/2006	247		1.20		1,159		264		1.0			
8/14/2006	230		1.08		991		215		1.0			
8/26/2006	266		1.56		1,396		450		1.0			
Aug-06		*239.8*		*1.2*		*1141.8*		*294.3*		*1.0*		
9/6/2006	255		1.06		1,301		439		1.0			
9/15/2006	236		1.20		1,382		512		1.0		0.00251	
9/21/2006	225		1.26		1,309		415		1.0			
9/25/2006	188		0.86		801		183		1.0			
Sep-06		*226.0*		*1.1*		*1198.3*		*387.3*		*1.0*		*0.00251*
10/4/2006	224		1.06		1,051		273		1.0			
10/12/2006	232		1.10		1,275		376		1.0		0.00129	
10/20/2006	203		0.74		989		304		1.0			
10/23/2006	189		0.82		924		274		1.0			
Oct-06		*212.0*		*0.9*		*1059.8*		*306.8*		*1.0*		*0.00129*

ATTACHMENT 5

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT WWTPS (COMBINED)

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Chloride DAILY mg/l	Chloride Monthly AVE	Fluoride DAILY mg/l	Fluoride Monthly AVE	TDS DAILY mg/l	TDS Monthly AVE	Sulfate DAILY mg/l	Sulfate Monthly AVE	Cadmium DAILY ug/l	Cadmium Monthly AVE	Mercury DAILY ug/l	Mercury Monthly AVE
11/2/2006	183		0.90		1,061		350		1.0			
11/12/2006	155		1.04		871		226		1.0			
11/17/2006	119		0.54		653		152		1.0			
11/20/2006												
11/21/2006	167		0.88		977		266		1.0			
11/27/2006	190		0.94		882		164		1.0			
Nov-06		*162.8*		*0.9*		*888.8*		*231.6*		*1.0*		
12/6/2006	153		0.74		867		211		1.0			
12/15/2006	167		0.78		856		188		1.0			
12/21/2006	203		0.88		1,102		356		1.0			
12/25/2006	130		0.64		650		126		1.0			
Dec-06		*163.3*		*0.8*		*868.8*		*220.3*		*1.0*		

April 10, 2007	Chloride	Chloride	Fluoride	Fluoride	TDS	TDS	Sulfate	Sulfate	Cadmium	Cadmium	Mercury	Mercury
4/9/2007	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly	DAILY	Monthly
Count	154	36	154	36	154	36	154	36	154	36	15	15
Average	215.0	215.6	1.0	1.0	1064.8	1066.5	295.7	296.8	1.0	1.0	0.00269	0.00269
Maximum (mg/l)	329.0	280.0	2.9	1.5	1529.0	1364.3	582.0	465.3				
Maximum (ug/l)	329000	280000	2880	1512	1529000	1364250	582000	465250	2.0	1.2	0.006	0.006
Minimum	89.0	148.8	0.3	0.6	472.0	747.8	84.1	176.5	1.0	1.0	0.001250	0.001250
Outliers												
Average + 3*STD	340.62	313.28	1.82	1.53	1689.19	1505.70	590.38	489.50	1.25	1.11	0.007036	0.007036
STD	41.87	32.56	0.28	0.19	208.12	146.40	98.24	64.24	0.080582	0.033333	0.001447	0.001447
Variance	1742.07	1030.40	0.08	0.03	43031.16	20838.72	9588.49	4011.83	0.006451	0.001080	0.000002	0.000003
CV	0.2	0.2	0.3	0.2	0.2	0.1	0.3	0.2	0.1	0.0	0.5	0.5

ATTACHMENT 6

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP						INDIANAPOLIS - SOUTHPORT WWTP				
	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
1	1/6/2004	0.004		0.003			0.005		0.003	
2	1/16/2004	0.011		0.009			0.026		0.007	
3	1/22/2004	0.020		0.013			0.007		0.004	
4	1/26/2004	0.021		0.018			0.025		0.006	
	Jan-04		*0.014*		*0.011*			*0.016*		*0.005*
1	2/4/2004	0.020		0.019			0.019		0.007	
2	2/12/2004	0.016		0.014			0.024		0.005	
3	2/20/2004	0.017		0.017			0.018		0.011	
4	2/23/2004	0.023		0.010			0.015		0.004	
	Feb-04		*0.019*		*0.015*			*0.019*		*0.007*
1	3/3/2004	0.020		0.014			0.013		0.005	
2	3/13/2004	0.031		0.019			0.034		0.005	
3	3/19/2004	0.017		0.006			0.018		0.005	
4	3/25/2004	0.027		0.015			0.019		0.006	
	Mar-04		*0.024*		*0.014*			*0.021*		*0.005*
1	4/2/2004	0.021		0.024			0.009		0.010	
2	4/7/2004	0.021		0.015			0.024		0.012	
3	4/17/2004	0.016		0.013			0.020		0.004	
4	4/20/2004	0.032		0.026			0.021		0.010	
5	4/26/2004	0.025		0.019			0.016		0.004	
	Apr-04		*0.023*		*0.019*			*0.018*		*0.008*
1	5/5/2004	0.022		0.022			0.037		0.020	
2	5/14/2004	0.026		0.014			0.068		0.020	
3	5/18/2004	0.023		0.022			0.034		0.015	
4	5/19/2004	0.022		0.014			0.015		0.013	
5	5/20/2004	0.028		0.022						
6	5/25/2004	0.026		0.020						
	May-04		*0.025*		*0.019*			*0.039*		*0.017*
1	6/2/2004	0.018		0.015			0.017		0.010	
2	6/12/2004	0.021		0.011			0.024		0.016	
3	6/18/2004	0.023		0.018			0.027		0.021	
4	6/24/2004	0.019		0.015			0.029		0.011	
5	6/28/2004	0.017		0.014			0.025		0.012	
	Jun-04		*0.020*		*0.015*			*0.024*		*0.014*
1	7/7/2004	0.021		0.005			0.022		0.010	
2	7/16/2004	0.023		0.017			0.026		0.013	
3	7/22/2004	0.020		0.014			0.025		0.010	
4	7/26/2004	0.023		0.013			0.022		0.007	
	Jul-04		*0.022*		*0.012*			*0.024*		*0.010*
1	8/3/2004	0.022		0.017			0.019		0.015	
2	8/11/2004	0.019		0.016			0.016		0.012	
3	8/20/2004	0.020		0.011			0.023		0.008	
4	8/26/2004	0.020		0.015			0.019		0.017	
	Aug-04		*0.020*		*0.015*			*0.019*		*0.013*
1	9/2/2004	0.018		0.012			0.022		0.015	
2	9/11/2004	0.021		0.017			0.025		0.010	
3	9/17/2004	0.040		0.024			0.020		0.012	
4	9/21/2004	0.035		0.022			0.020		0.015	
5	9/27/2004	0.023		0.020			0.025		0.017	
	Sep-04		*0.027*		*0.019*			*0.022*		*0.014*
1	10/6/2004	0.014		0.012			0.025		0.010	
2	10/15/2004	0.031		0.021			0.024		0.018	
3	10/21/2004	0.024		0.004			0.027		0.014	
4	10/25/2004	0.020		0.011			0.034		0.024	
	Oct-04		*0.022*		*0.012*			*0.028*		*0.017*
1	11/2/2004	0.018		0.006			0.019		0.005	
2	11/11/2004	0.043		0.025			0.040		0.012	
3	11/19/2004	0.040		0.025			0.035		0.010	
4	11/24/2004	0.040		0.020			0.034		0.008	
	Nov-04		*0.035*		*0.019*			*0.032*		*0.009*
1	12/2/2004	0.034		0.015			0.030		0.005	
2	12/11/2004	0.035		0.017			0.028		0.010	
3	12/17/2004	0.020		0.013			0.030		0.014	
4	12/21/2004	0.042		0.026			0.049		0.017	
5	12/27/2004	0.025		0.013			0.050		0.012	
	Dec-04		*0.031*		*0.017*			*0.037*		*0.012*

ATTACHMENT 6

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP						INDIANAPOLIS - SOUTHPORT WWTP				
	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
1	1/4/2005						0.019		0.005	
2	1/5/2005	0.030		0.016			0.013		0.006	
3	1/14/2005	0.025		0.009			0.017		0.005	
4	1/20/2005	0.020		0.007			0.033		0.013	
5	1/25/2005	0.035		0.011						
	Jan-05		*0.028*		*0.011*			*0.021*		*0.007*
1	2/2/2005						0.023		0.007	
2	2/3/2005	0.028		0.009			0.020		0.015	
3	2/11/2005	0.022		0.021			0.034		0.011	
4	2/19/2005	0.029		0.020			0.026		0.008	
5	2/22/2005	0.028		0.017			0.024		0.015	
6	2/28/2005	0.031		0.021						
	Feb-05		*0.028*		*0.018*			*0.025*		*0.011*
1	3/8/2005						0.032		0.011	
2	3/9/2005	0.035		0.015			0.032		0.014	
3	3/17/2005	0.018		0.013			0.034		0.016	
4	3/22/2005	0.047		0.018			0.024		0.023	
5	3/28/2005	0.028		0.021						
	Mar-05		*0.032*		*0.017*			*0.031*		*0.016*
1	4/4/2005						0.022		0.012	
2	4/6/2005	0.017		0.016			0.016		0.010	
3	4/14/2005	0.018		0.014			0.017		0.013	
4	4/22/2005	0.022		0.019			0.014		0.009	
5	4/26/2005	0.022		0.020						
	Apr-05		*0.020*		*0.017*			*0.017*		*0.011*
1	5/3/2005						0.015		0.007	
2	5/4/2005	0.020		0.018			0.024		0.012	
3	5/13/2005	0.029		0.021			0.017		0.013	
4	5/19/2005	0.026		0.025			0.018		0.009	
5	5/25/2005	0.028		0.022			0.013		0.009	
6	5/30/2005	0.026		0.020						
	May-05		*0.026*		*0.021*			*0.017*		*0.010*
1	6/7/2005						0.011		0.009	
2	6/10/2005	0.034		0.021			0.011		0.009	
3	6/16/2005	0.022		0.015			0.012		0.006	
4	6/22/2005	0.015		0.013			0.013		0.007	
5	6/27/2005	0.015		0.009						
	Jun-05		*0.022*		*0.015*			*0.012*		*0.008*
1	7/4/2005						0.016		0.008	
2	7/5/2005	0.022		0.013			0.015		0.003	
3	7/15/2005	0.010		0.009			0.015		0.009	
4	7/21/2005	0.015		0.011			0.020		0.016	
5	7/27/2005	0.013		0.010						
	Jul-05		*0.015*		*0.011*			*0.017*		*0.009*
1	8/2/2005						0.006		0.003	
2	8/3/2005						0.014		0.007	
3	8/4/2005	0.014		0.008			0.009		0.004	
4	8/13/2005	0.028		0.016			0.013		0.011	
5	8/19/2005	0.025		0.017			0.016		0.009	
6	8/24/2005	0.012		0.010						
7	8/29/2005	0.018		0.014			0.009		0.006	
	Aug-05		*0.019*		*0.013*			*0.011*		*0.007*
1	9/6/2005						0.009		0.003	
2	9/7/2005	0.020		0.010			0.018		0.010	
3	9/16/2005	0.009		0.007			0.013		0.006	
4	9/22/2005	0.015		0.013						
5	9/26/2005	0.013		0.008			0.015		0.005	
	Sep-05		*0.014*		*0.010*			*0.014*		*0.006*
1	10/5/2005						0.020		0.009	
2	10/6/2005	0.010		0.010			0.018		0.009	
3	10/15/2005	0.025		0.014						
4	10/21/2005	0.014		0.005						
5	10/25/2005	0.023		0.016			0.018		0.010	
	Oct-05		*0.018*		*0.011*			*0.019*		*0.009*
1	11/1/2005									
2	11/2/2005	0.006		0.005			0.026		0.006	
2	11/11/2005	0.027		0.013			0.036		0.007	
3	11/19/2005	0.026		0.017			0.026		0.007	
4	11/24/2005	0.027		0.017			0.029		0.010	
5	11/28/2005	0.015		0.010			0.025		0.007	
	Nov-05		*0.020*		*0.012*			*0.028*		*0.007*

ATTACHMENT 6

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
1	12/6/2005				
2	12/7/2005	0.035		0.018	
3	12/17/2005	0.021		0.015	
4	12/22/2005	0.026		0.021	
5	12/28/2005	0.015		0.014	
	Dec-05		*0.024*		*0.017*
1	01/03/06				
2	01/05/06	0.014		0.011	
3	01/14/06	0.026		0.021	
4	01/18/06	0.022		0.012	
5	01/27/06	0.020		0.012	
6	01/30/06	0.023		0.013	
	01/05/06		*0.021*		*0.014*
1	02/06/06				
2	02/08/06	0.031		0.019	
3	02/17/06	0.021		0.016	
4	02/23/06	0.016		0.012	
5	02/27/06	0.027		0.017	
	02/06/06		*0.024*		*0.016*
1	03/07/06				
2	03/09/06	0.020		0.016	
3	03/15/06	0.023		0.020	
4	03/24/06	0.020		0.015	
5	03/27/06	0.023		0.016	
	03/07/06		*0.022*		*0.017*
1	04/02/06				
2	04/05/06	0.019		0.015	
3	04/14/06	0.020		0.016	
4	04/20/06	0.016		0.015	
5	04/25/06	0.016		0.015	
	04/02/06		*0.018*		*0.015*
1	05/02/06				
2	05/03/06	0.018		0.015	
3	05/11/06	0.010		0.007	
4	05/15/06	0.020		0.018	
5	05/26/06	0.014		0.013	
	05/02/06		*0.016*		*0.013*
1	06/01/06				
2	06/02/06	0.013		0.009	
3	06/07/06	0.013		0.013	
4	06/13/06	0.015		0.014	
5	06/18/06	0.015		0.011	
6	06/26/06	0.017		0.013	
	06/01/06		*0.015*		*0.012*
1	07/04/06				
2	07/05/06	0.017		0.013	
3	07/13/06	0.008		0.007	
4	07/21/06	0.010		0.008	
5	07/24/06	0.016		0.013	
	07/04/06		*0.013*		*0.010*
1	08/03/06				
2	08/04/06	0.017		0.007	
3	08/09/06	0.019		0.012	
4	08/14/06	0.020		0.013	
5	08/26/06	0.014		0.011	
	08/03/06		*0.018*		*0.011*
1	09/05/06				
2	09/06/06	0.017		0.015	
3	09/15/06	0.013		0.011	
4	09/21/06	0.018		0.017	
5	09/25/06	0.010		0.008	
	09/05/06		*0.015*		*0.013*
1	10/03/06				
2	10/04/06	0.015		0.014	
3	10/12/06	0.017		0.015	
4	10/20/06	0.024		0.017	
5	10/23/06	0.022		0.017	
	10/03/06		*0.020*		*0.016*

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
	0.015		0.012	
	0.019		0.010	
	0.020		0.015	
	0.011		0.008	
		0.016		*0.011*
	0.010			
	0.010		0.006	
			0.015	
			0.008	
			0.010	
			0.008	
		0.010		*0.009*
	0.012			
	0.011		0.010	
			0.009	
			0.009	
			0.009	
		0.012		*0.009*
	0.019			
	0.007		0.005	
			0.008	
			0.007	
			0.007	
		0.013		*0.007*
	0.015			
	0.014		0.008	
			0.009	
			0.012	
			0.012	
		0.015		*0.010*
	0.010			
	0.017		0.013	
			0.005	
			0.010	
			0.010	
		0.014		*0.010*
	0.010			
	0.009		0.007	
			0.007	
			0.007	
			0.010	
			0.009	
		0.010		*0.008*
	0.012			
	0.010		0.008	
			0.008	
			0.006	
			0.010	
		0.011		*0.008*
	0.009			
	0.007		0.005	
			0.007	
			0.010	
			0.010	
		0.008		*0.008*
	0.017			
	0.021		0.012	
			0.011	
			0.012	
			0.005	
		0.019		*0.010*
	0.014			
	0.015		0.013	
			0.012	
			0.016	
			0.015	
		0.015		*0.014*

ATTACHMENT 6

EFFLUENT DATA (MRO) FOR INDIANAPOLIS BELMONT+SOUTHPORT AWT PLANTS (COMBINED)

INDIANAPOLIS - BELMONT WWTP

	MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
1	11/01/06				
2	11/02/06	0.027		0.015	
3	11/12/06	0.021		0.017	
4	11/17/06	0.018		0.015	
5	11/21/06	0.020		0.013	
6	11/27/06	0.020		0.014	
	11/01/06		*0.021*		*0.015*
1	12/05/06				
2	12/06/06	0.020		0.015	
3	12/15/06	0.025		0.013	
4	12/21/06	0.020		0.015	
5	12/25/06	0.016		0.011	
	12/05/06		*0.020*		*0.014*

INDIANAPOLIS - SOUTHPORT WWTP

MONTH	Total CN DAILY mg/l	Total CN Monthly AVE	Amenable CN DAILY mg/l	Amenable CN Monthly AVE
	0.017			
	0.018		0.013	
			0.011	
			0.011	
			0.011	
			0.010	
		0.018		*0.011*
	0.008			
	0.011		0.008	
			0.009	
			0.010	
			0.007	
		0.010		*0.009*

Belmont statistics

	Total CN DAILY	Total CN Monthly	Amenable CN DAILY	Amenable CN Monthly
Count	157	36	157	36
Average	0.021	0.021	0.015	0.015
Maximum (mgl)	0.047	0.035	0.026	0.021
Maximum (ug/l)	47	35	26	21
Minimum	0.004	0.013	0.003	0.010
Outliers				
Average + 3*STD	0.04	0.04	0.03	0.02
STD	0.01	0.01	0.00	0.00
Variance	0.00	0.00	0.00	0.00
CV	0.3	0.2	0.3	0.2

Southport statistics

	Total CN DAILY	Total CN Monthly	Amenable CN DAILY	Amenable CN Monthly
Count	128	36	155	36
Average	0.020	0.019	0.010	0.010
Maximum (mgl)	0.068	0.039	0.024	0.017
Maximum (ug/l)	68	39	24	17
Minimum	0.005	0.008	0.003	0.005
Outliers				
Average + 3*STD	0.05	0.04	0.02	0.02
STD	0.01	0.01	0.004037	0.003060
Variance	0.00	0.00	0.000016	0.000009
CV	0.5	0.4	0.4	0.3

ATTACHMENT 7

Reasonable Potential Statistical Procedure for Discharges in the Non-Great Lakes System (Excluding Discharges to the Ohio River)

INDIANAPOLIS - BELMONT AWT Plant DESIGN FLOW = 120 mgd

		Monthly Average Determination							Daily Maximum Determination						
Parameters	Reasonable Potential to Exceed? (Yes or No)*	Maximum Monthly Average (ug/l)	Number of Monthly Averages	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?	Maximum Daily Sample (ug/l)	Number of Daily Samples	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?
Cadmium															
Mercury	No					0.007	0.012	No	0.005	14	0.4	1.4	0.007	0.02	No
Chloride	Yes I	281250	36	0.2	1.0	280000	201000	Yes	440000	155	0.2	1.0	440000	404000	Yes
Cyanide, Free	Yes SSC	21	36	0.2	1.0	21	10	Yes	26	157	0.3	0.9	23	19	Yes
Cyanide, Total	No	35	36	0.2	1.0	35	52000	No	47	157	0.3	0.9	42	127000	No
Fluoride	No	1228	36	0.2	1.0	1200	1800	No	1360	154	0.2	1.0	1400	3600	No
Sulfate	No	591600	36	0.3	1.1	651000	889000	No	1780000	154	0.5	0.9	1602000	1783000	No
Total Dissolved Solids	#N/A	1663400	36	0.2	1.0	1663000	#N/A	#N/A	3873000	155	0.3	0.9	3486000	#N/A	#N/A

* Reasonable Potential to Exceed:

1) "Yes I" means that a projected effluent quality (PEQ) exceeded a preliminary effluent limitation (PEL) based on a Tier I criterion.
2) "Yes II" means that a PEQ exceeded a PEL based on a Tier II value.
3) "Yes SSC" means that a PEQ exceeded a PEL based on a site-specific criterion.
4) "No" means that a PEQ did not exceed a PEL.
5) "Evaluate Criteria" means that a PEQ exceeded a PEL based on a screening value.

4/10/2007

ATTACHMENT 8

Reasonable Potential Statistical Procedure for Discharges in the Non-Great Lakes System (Excluding Discharges to the Ohio River)

INDIANAPOLIS - SOUTHPORT AWT Plant DESIGN FLOW = 125 mgd

		Monthly Average Determination							Daily Maximum Determination						
Parameters	Reasonable Potential to Exceed? (Yes or No)*	Maximum Monthly Average (ug/l)	Number of Monthly Averages	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?	Maximum Daily Sample (ug/l)	Number of Daily Samples	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?
Cadmium	No	1.2	36	0	1	1.2	2.6	No	2	154	0.1	1	2	5.1	No
Mercury	No					0.004	0.012	No	0.0030	15	0.5	1.4	0.004	0.02	No
Chloride	Yes I	280000	36	0.2	1	280000	201000	Yes	329000	154	0.2	1	329000	404000	No
Cyanide, Free	Yes SSC	17	36	0.3	1.1	18.7	9.6	Yes	24	154	0.4	0.9	22	19.0	Yes
Cyanide, Total	No	39	36	0.4	1.1	43	52000	No	68	128	0.5	0.9	61	127000	No
Fluoride	No	1512	36	0.2	1	1500	1800	No	2880	154	0.3	0.9	2600	3600	No
Sulfate	No	465250	36	0.1	1	465000	889000	No	582000	154	0.3	0.9	524000	1783000	No
Total Dissolved Solids	#N/A	1365250	36	0.1	1	1365000	#N/A	#N/A	1529000	154	0.2	1	1529000	#N/A	#N/A

* Reasonable Potential to Exceed:

1) "Yes I" means that a projected effluent quality (PEQ) exceeded a preliminary effluent limitation (PEL) based on a Tier I criterion.
2) "Yes II" means that a PEQ exceeded a PEL based on a Tier II value.
3) "Yes SSC" means that a PEQ exceeded a PEL based on a site-specific criterion.
4) "No" means that a PEQ did not exceed a PEL.
5) "Evaluate Criteria" means that a PEQ exceeded a PEL based on a screening value.

4/10/2007

APPENDIX

I

Hauled Waste Data

Total Metals Data

	Totals	January	February	March	April	May	June	July	August	September	October	November	December
Non-domestic Approvals	84	14	9	6	11	9	7	4	9	3	5	2	5
Gallons of Septage Disposed	3386084	143626	219365	373046	331135	373725	331211	250919	307311	235907	244700	260472	314667
Gallons of Grease Disposed	48500	1500	6100	2750	8150	2750	9250	3250	1750	1000	0	9000	3000
Gallons of Special Waste Disposed	752510	52400	115980	114000	143200	131390	81900	8820	24500	7320	9000	30460	33540
	4187094	197526	341,445	489796	482485	507865	422361	262989	333561	244227	253700	299932	351207

0.0114715

APPENDIX

J-1

Historic Incinerator Performance Data

Table 1. Indianapolis Multiple Hearth Sludge Furnace Particulate and Metals Emission Test Data

		Three (3) Test Run Average Values																	
		Dry Ton Per Hour	Percent Sludge	Scrubber Differential	Total Method 5 Filterable Particulate		Mercury Emissions	Beryllium Emissions	503 Risk Based Metals Emission Rates Grams Per Dry Ton and Overall Control Efficiency (%)										Exhaust Gas
Unit	Test	Feed	Cake	Pressure	(Lbs per	Grains	Grams per	Grams Per	Arsenic		Cadmium		Chromium		Lead		Nickel		Flow
No.	Date	Rate	Solids	(in. of w.c.)	Dry Ton)	Gr/DCSF	Dry Ton	Dry Ton	g/DT	%CE	g/DT	%CE	g/DT	%CE	g/DT	%CE	g/DT	%CE	DSCFM
Indianapolis AWT Plant 8 Hearth No Afterburner With Multiple Venturi-Pak Scrubber																			
4	12/8/93	1.87	22.5	24.6	0.20	0.005													8,830
4	12/9/93	1.9	20.9	23.7	0.30	0.008													8,410
4	12/10/93	1.8	22.0	25.9	0.24	0.006		0.002	0.12	97.00	0.45	96.80	0.08	99.80	0.61	99.40	0.07	99.70	8,460
4	2/6/96	2.33	22.1	24.7	0.12	0.004	0.12	0.003	0.10	98.00	0.44	96.30	0.03	99.90	1.15	98.30	0.03	99.90	9,000
4	7/1/04	2.1	22.9	18.9	0.30	0.001	1.33	0.0002											7,900
4	5/16/05	1.97	23.5	21.5	0.28	0.008	0.95	0.001											7,700
4	5/22/06	2.23	25.1	22.4	0.26	0.009	0.75	0.0037											7,160
4	5/15/07	2.10	24.0	22.3	0.37	0.012	0.84	0.0003											7,510
4	6/17/08	2.09	23.9	21.6	0.25	0.008	0.65												7,570
								Ave		97.50		96.55		99.85		98.85		99.80	
Indianapolis AWT Plant 8 Hearth No Afterburner With Venturi + Impingement Tray Scrubber																			
3	2/1/96	2.4	24.0	27.6	0.33	0.011	0.42	0.003	0.40	92.2	1.24	91.6	0.04	99.9	3.84	96.9	0.03	99.9	8,480
3	7/3/04	2.1	24.1	27.9	0.57	0.002	1.38	0.0002											8,158
3	5/17/05	1.95	22.5	29.5	0.44	0.013	0.77	0.0006											7,680
3	5/23/06	2.3	26.1	31.5	0.67	0.021	0.69	0.0036											8,520
3	5/16/07	2.1	24.9	32.7	0.61	0.020	0.93	0.0004											7,530
3	6/17/08	2.12	25.1	32.1	0.48	0.015	0.54												8,010
Indianapolis AWT Plant 8 Hearth No Afterburner With Venturi + Impingement Tray Scrubber																			
2	2/15/96	2.4	22.8	28.4	0.45	0.010	0.78	0.003	0.35	93.3	1.70	88	0.22	99.8	4.40	96.9	0.04	99.9	12,200
2	7/2/04	2.2	24.1	28.6	0.46	0.002	1.25	0.0002											8,731
2	5/19/05	1.84	21.9	27.3	0.54	0.014	0.86	0.0006											8,000
2	5/24/06	2.23	25.3	26.7	0.73	0.024	0.77	0.0039											8,070
2	5/17/07	2.09	24.8	31.8	0.69	0.021	0.92	0.0003											8,000
2	6/18/08	2.15	24.8	31.5	0.66	0.021	0.77												7,920
Indianapolis AWT Plant 8 Hearth No Afterburner With Venturi + Impingement Tray Scrubber																			
1	1/30/96	2.47	29.0	28.2	0.22	0.008	0.47	0.003	0.160	89.8	0.81	93.2	0.19	99.6	2.63	96.2	0.10	99.7	8,020
1	6/30/04	2.0	22.8	28.5	0.48	0.005	1.42	0.0003											8,021
1	5/18/05	1.88	21.3	28.1	0.62	0.018	0.86	0.0006											7,640
1	5/25/06	2.21	24.8	28.1	0.63	0.021	0.91	0.0038											7,750
1	5/18/07	2.16	25.5	28.5	0.62	0.020	0.89	0.0003											7,710
1	6/19/08	2.03	23.7	27.3	0.59	0.019	0.73												7,240

APPENDIX

J-2

2010 Incinerator Air Emissions Data

Be & Hg

Table 2
Particulate Emissions Data
Belmont Advanced Wastewater Treatment Plant, Indianapolis, Indiana
(Shaw PN 141166-01)

Incinerator	Run No.	Date (2010)	Concentration (gr/dscf)[a] Filterable	Concentration (gr/dscf)[a] Condensible	Emission Rate[b] Filterable lb/h	Emission Rate[b] Filterable lb/ton	Emission Rate[b] Condensible lb/h	Emission Rate[b] Condensible lb/ton
4	4-P-1	12/6	0.014	0.005	1.00	0.46	0.35	0.16
	4-P-2		0.009	0.008	0.57	0.31	0.54	0.29
	4-P-3		0.012	0.003	0.76	0.39	0.17	0.09
	Average		0.011	0.005	0.78	0.38	0.35	0.18
2	2-P-1	12/7	0.021	0.012	1.34	0.68	0.75	0.38
	2-P-2		0.027	0.012	1.77	0.84	0.78	0.37
	2-P-3		0.020	0.012	1.33	0.71	0.78	0.42
	Average		0.023	0.012	1.48	0.74	0.77	0.39
3	3-P-1	12/8	0.018	0.017	1.14	0.57	1.07	0.53
	3-P-2		0.018	0.016	1.09	0.55	0.96	0.49
	3-P-3		0.021	0.015	1.27	0.63	0.92	0.45
	Average		0.019	0.016	1.17	0.58	0.98	0.49
1	1-P-1	12/9	0.019	0.012	1.33	0.53	0.80	0.32
	1-P-2		0.018	0.016	1.25	0.58	1.15	0.53
	1-P-3		0.018	0.014	1.10	0.51	0.87	0.40
	Average		0.018	0.014	1.23	0.54	0.94	0.42

a gr/dscf = Grains per dry standard cubic foot; standard conditions are 68°F and 29.92 in.Hg.

b lb/h = Pounds per hour; lb/ton = pounds per ton of dry sludge feed.

Table 3
Beryllium and Mercury Emissions Data
Belmont Advanced Wastewater Treatment Plant, Indianapolis, Indiana
(Shaw PN 141166-01)

Incin-erator	Run No.	Date (2010)	Concentration (µg/dscm)[a] Beryllium	Concentration (µg/dscm)[a] Mercury	Emission Rate[b] Beryllium lb/h	Emission Rate[b] Beryllium lb/ton	Emission Rate[b] Beryllium g/day	Emission Rate[b] Mercury lb/h	Emission Rate[b] Mercury lb/ton	Emission Rate[b] Mercury g/day
4	4-M-1	12/6	0.88	51	2.7×10^{-5}	1.3×10^{-5}	0.298	0.0016	0.0007	17.3
	4-M-2		0.96	64	2.9×10^{-5}	1.5×10^{-5}	0.310	0.0019	0.0010	20.8
	4-M-3		0.66	58	2.0×10^{-5}	1.0×10^{-5}	0.214	0.0017	0.0009	18.9
	Average		0.83	58	2.5×10^{-5}	1.3×10^{-5}	[illegible]74	0.0017	0.0009	19.0
2	2-M-1	12/7	0.14	100	4.0×10^{-6}	2.0×10^{-6}	0.044	0.0029	0.0014	31.1
	2-M-2		0.14	68	3.9×10^{-6}	1.8×10^{-6}	0.042	0.0019	0.0009	20.4
	2-M-3		0.14	50	3.9×10^{6}	2.1×10^{-6}	0.042	0.0014	0.0007	15.2
	Average		0.14	73	3.9×10^{-6}	2.0×10^{-6}	0.043	0.0020	0.0010	22.2
3	3-M-1	12/8	0.17	77	4.7×10^{-6}	2.3×10^{-6}	0.051	0.0021	0.0011	23.4
	3-M-2		0.15	78	4.1×10^{-6}	2.1×10^{-6}	0.045	0.0021	0.0011	22.9
	3-M-3		0.14	83	3.7×10^{-6}	1.8×10^{-6}	0.040	0.0022	0.0011	24.5
	Average		0.15	79	4.2×10^{-6}	2.1×10^{-6}	0.045	0.0022	0.0011	23.6
1	1-M-1	12/9	0.14	89	4.5×10^{-6}	1.8×10^{-6}	0.049	0.0028	0.0011	30.6
	1-M-2		0.14	89	4.4×10^{-6}	2.1×10^{-6}	0.048	0.0028	0.0013	29.9
	1-M-3		0.11	75	3.2×10^{-6}	1.5×10^{-6}	0.035	0.0022	0.0010	24.3
	Average		0.13	84	4.1×10^{-6}	1.8×10^{-6}	0.044	0.0026	0.0012	28.3

a µg/dscm = Micrograms per dry standard cubic meter.

b lb/h = Pounds per hour; lb/ton = pounds per ton of dry sludge feed; g/day = grams per day

APPENDIX

K

Literature Review Source

for Chromium (VI) Removal Rate

The Effects and Processes for Removal of Chromium in Activated Sludge Treatment

Jennifer Merical

ABSTRACT
The presence of chromium in wastewater can impact the efficiency of activated sludge treatment plants that do not usually treat chromium contaminated wastewater. Pretreatment regulations have been passed by the United States Environmental Protection Agency (EPA) for industries who produce chromium contaminated wastewater. Two forms of chromium exist: trivalent chromium (Cr(III)) and hexavalent chromium (Cr(VI)), which is more toxic than Cr(III). Activated sludge that has acclimated to chromium can efficiently remove chromium from wastewater. An increased concentration of suspended solids and a decreased activated sludge age can aid in the removal efficiency; however, a higher concentration of chromium present in wastewater can lead to decreased filamentous bulking and nitrification. Chromium's toxicity decreases the diversity of microorganisms, but low doses of chromium do not affect microorganisms such as γ-Protebacteria and free swimming ciliates that are present in activated sludge. These microorganisms aid in the chromium removal process provided by activated sludge.

KEYWORDS
Activated Sludge, chromium, removal, biosolids, toxicity

INTRODUCTION
Activated sludge treatment is a biological solution to wastewater treatment. Municipal wastewater treatment plants not only receive wastewater from residential areas, but also from industrial and commercial establishments. Influent can contain compounds or metals that the treatment plant does not usually treat and can have potentially negative effects on the efficiency and quality of treatment achieved by the plant.

Chromium is a naturally occurring metal and is often found in rocks, plants, soil, volcanic dust and gases, animals and humans. Chromium can have negative impacts on activated sludge systems if high enough concentrations of the metal are present in wastewater. Leather tanning, electroplating, wood preservation, textile manufacturing, and pulp processing facilities are most frequently the source of chromium contaminated wastewater.

The United State Environmental Protection Agency (EPA) has established the National Pretreatment Program, which requires industries who discharge chromium containing wastewater to remove most of the toxic metal with pretreatment. The municipal wastewater treatment plants can then proceed in treating the water to ensure that chromium does not affect the aquatic life or drinking water sources (U.S. EPA, 1999). The main concern for municipal treatment plants is receiving chromium contaminated wastewater that can interfere with the activated sludge process.

In order to fully understand the effects and processes for removal of chromium in activated sludge, a brief background on the behavior of chromium and the regulations regarding chromium removal will be discussed. The method of chromium removal and the toxic effect of chromium on activated sludge will also be discussed. Finally, chromium's effect on the activated sludge microbiology will be addressed.

CHROMIUM STATES
Chromium is commonly found in the most stable states of hexavalent chromium (Cr(VI)) and trivalent chromium (Cr(III)). Cr(VI) is more toxic than Cr(III) and less common in the natural environment. One aspect of the removal process is to ensure that aquatic life, animals, and humans are not exposed to chromium. According the EPA Technology Transfer Network (2007), humans consume about 2.0 μg/L of chromium in water per day and about 60 μg/L of chromium in food a day. The human body has the ability to reduce Cr(VI) to Cr(III) via metabolic processes. Upon exposure to large concentrations of chromium, humans can develop health problems, which include acute respiratory effects, cancer, reproductive and developmental effects (US EPA Technology Transfer Network, 2007).

WASTEWATER TREATMENT REGULATIONS

Municipal wastewater treatment plants are generally not able to treat large concentrations of heavy metals, such as chromium, that come from industrial effluents (US EPA, 1999). Hence, pretreatment is required of industrial wastewater sources by Title 40 of the Code of Federal Regulations (CFR) in an effort to limit or eliminate chromium loading in municipal treatment plants (US EPA, 1999). Chromium can negatively affect the efficiency of activated sludge treatment processes and increase the chance of emitting chromium into the environment. A lack of pretreatment would also reduce the ability of the wastewater to be recycled or reused.

CHROMIUM REMOVAL WITH ACTIVATED SLUDGE

Traditional methods of chromium removal from wastewater usually require chemical processes; however, biological processes like activated sludge have also been proven to be efficient in chromium removal. In order to fully understand the importance and impact that chromium can have on an activated sludge treatment plant, the following topics are discussed:

- Removal mechanisms,
- Reduction of Cr(VI) to Cr(III),
- Absorption capacity of activated sludge,
- Suspended solids affect on absorption,
- Activated sludge age affect on removal, and
- Chromium effect on biomass acclimation.

Removal mechanisms

For the reasons stated above, removal of chromium during pretreatment is important. Traditional processes such as chemical precipitation, electrochemical treatment, and ion exchange have been used for pretreatment of industrial wastewater. Another approach to chromium removal is the use of activated sludge. According to Koçberber and Dönmez (2006), the microorganisms in activated sludge can be an effective tool in the removal of heavy metals from wastewater. The efficiency of biological removal resides in the microorganisms' tolerance and ability to absorb chromium. Three methods of biological Cr(VI) removal with activated sludge exist (Koçberber and Dönmez, 2006; Imai and Gloyna, 1988):

1. Positively charged Cr(VI) is attracted to the negatively charged cell wall of the microorganisms;
2. Adsorption of Cr(VI) into microorganisms; and
3. Reduction of Cr(VI) to Cr(III), which is then settled.

Reduction of Cr(VI) to Cr(III)

The most common removal mechanism of chromium is the reduction of Cr(VI) to Cr(III). The Cr(III) is then adsorbed by the activated sludge and precipitated as $Cr(OH)_3$ (Imai and Gloyna, 1988; Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003). Figure 1 represents the phases of Cr(III) in an activated sludge wastewater sample after 12 hours of agitation with (a.) a 1mg/L initial Cr(III) concentration and (b.) a 10 mg/L Cr(III) initial concentration. As shown by the chart, a majority of the Cr(III) is absorbed by the activated sludge, while only 1% of the Cr(III) remained in solution. Figure 2 shows the phases of Cr(VI) in an activated sludge wastewater sample with (a.) a 1 mg/L of Cr(VI) initial concentration and (b.) a 10 mg/L of Cr(VI) initial concentration. Contrary to the Cr(III), the Cr(VI) mostly remained in a dissolved state. This observation shows that the ability of activated sludge to remove Cr(III) is greater than Cr(VI).

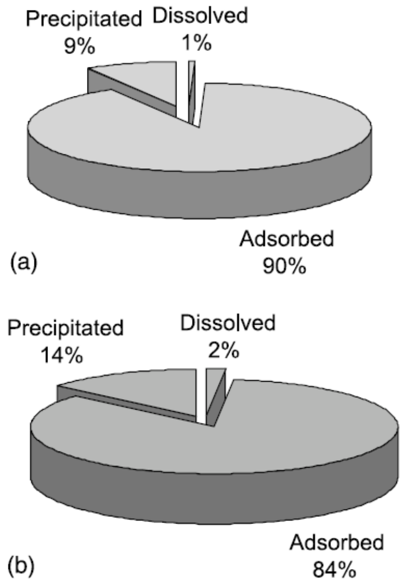


Fig. 1. Metal distribution for: (a) 1 mg/L of Cr(III) initial concentration; (b) 10 mg/L of Cr(III) initial concentration. (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003)

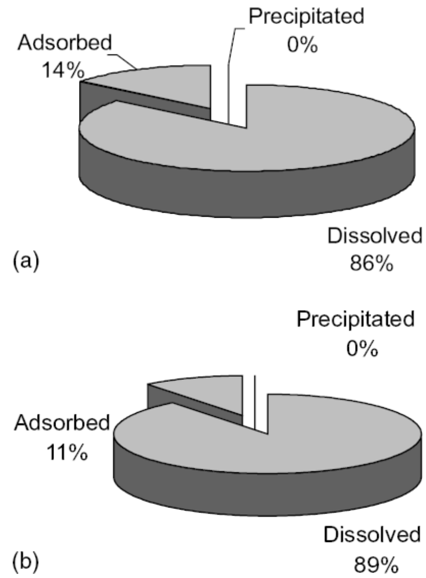


Fig. 2. Metal distribution for: (a) 1 mg l_1 of Cr(VI) initial concentration; (b) 10 mgl_1 of Cr(IV) initial concentration. (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003)

The rate of Cr(VI) reduction by activated sludge is also important to ensure proper removal. Cr(VI) reduction has been shown to be a function of both the initial concentration of Cr(VI) present in the wastewater and the activated sludge concentration. The Cr(VI) reduction rate tends to increase with an increased initial Cr(VI) concentration and lower activated sludge concentration (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003).

The oxidation of Cr(III) to Cr(VI) has also been investigated. Studies show that the oxidation of Cr(III) generally does not take place in activated sludge (Imai and Gloyna, 1988; Stasinakis et al., 2003 chemosphere). However, the oxidation of Cr(III) at very slow rates has been observed in the presence of dissolved oxygen (DO). The reason for not observing Cr(III) oxidation under standard activated sludge conditions is that Cr(III) is absorbed before the oxidation reaction is facilitated (Imai and Gloyna, 1988).

Absorption Capacity of Activated Sludge

Activated sludge has the ability to achieve a Cr(III) removal efficiency of 95 percent (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003). A longer solids retention time (SRT) and higher pH increase the absorption capacity of activated sludge (Imai and Gloyna, 1988). Cr(III) is more efficiently removed due to being less toxic than Cr(VI). In the presence of an anoxic tank proceeded by an aerobic activated sludge tank, as shown in Figure 3 below, approximately 96 to 99 percent of the chromium present is in the form of Cr(III) (Stasinakis et al., 2004). This finding indicates that the anoxic reactor aids in reducing the Cr(VI) to Cr(III), which is important in increasing the chromium absorption by the activated sludge bacteria.

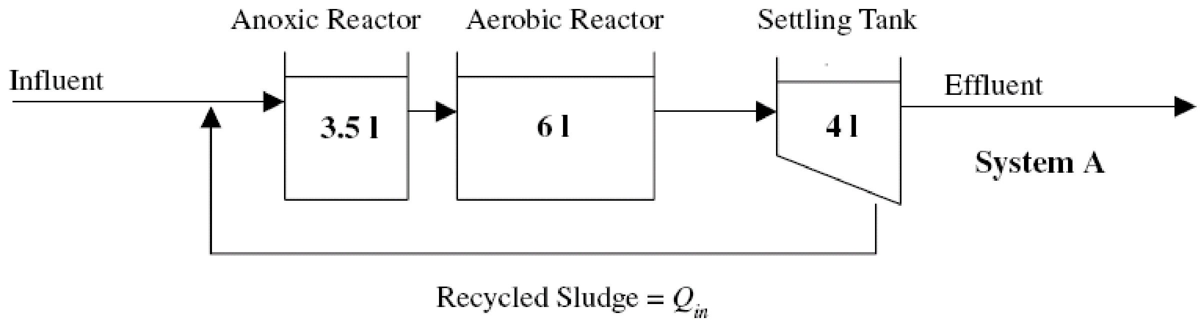


Figure 3. Anoxic-Aerobic System for Chromium removal (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003).

Studies show that despite the fact Cr(III) is more efficiently removed, Cr(VI) removal by activated sludge is possible. An activated sludge process can remove about 40 percent of Cr(VI) in solution but is dependent upon sludge acclimation and a longer hydraulic retention time (HRT) (Stasinakis et al., 2004). Despite the ability of activated sludge to remove Cr(VI), Cr(VI) reduction to Cr(III) presents ideal absorption capacity.

Suspended Solids Effect on Absorption
Stasinakis, Thomaidis, Mamais, and Karivali et al. (2003) have shown that an increased suspended solids (SS) concentration leads to increased removal of Cr(III). The removal efficiency correlated with SS was based on the idea that higher SS concentrations allowed for more surface area for adsorption of Cr(III). Alternatively, no correlation between Cr(VI) and SS concentration was found (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003).

Activated Sludge Age Effect on Removal
The affect of activated sludge age on the removal efficiency of both Cr(III) and Cr(VI) was also considered. While Cr(III) is the ideal chromium state for activated sludge removal, the removal efficiency decreases as the age of the activated sludge increases (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003). Stasinakis, Thomaidis, Mamais, and Karivali et al. (2003) theorize that Cr(III) fills the absorption sites and reduces the adsorption capacity of the sludge. To further support this theory, the adsorption of Cr(III) in chromium acclimated sludge was found to be less than that of un-acclimated sludge (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003).

The removal efficiency of Cr(VI) was not affected by whether or not the activated sludge was acclimated (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003). Additionally, the activated sludge age also has no effect on the removal efficiency of Cr(VI) (Stasinakis, Thomaidis, Mamais, and Karivali et al., 2003).

Chromium Effect on Biomass Acclimation
Cr(VI) and Cr(III) affect the rate of biomass accumulation. While Cr(VI) has been established as more toxic than Cr(III), Cr(VI) has shown less inhibition on the activated sludge growth rate than Cr(III) at concentrations less than 70 mg/L (Gikas and Romanos, 2006). At concentrations greater than 70 mg/L Cr(VI) is more inhibitive than Cr(III) (Gikas and Romanos, 2006). One of the main indicators of chromium's effect on biomass growth is the presence of an increased lag time. As the concentration of Cr(III) and Cr(VI) increase, the lag time also increases (Gikas and Romanos, 2006). This trend can be seen in Figure 4 and 5 for Cr(VI) and Cr(III), respectively. The optimum biomass growth rate contains 10 mg/L Cr(VI) or 10 mg/L Cr(III) when the HRT is greater than about 17 hours and 11 hours, respectively.

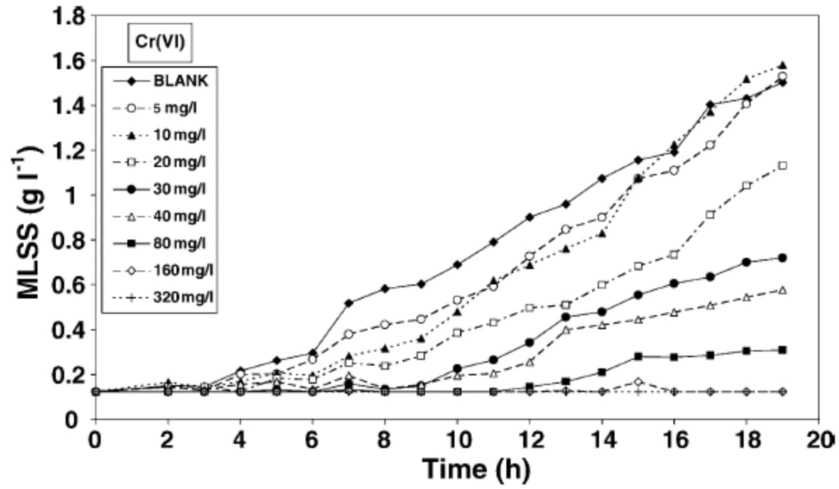


Figure 4. Cr(VI) lag time for concentrations 5 mg/L to 320 mg/L (Gikas and Romanos, 2006)

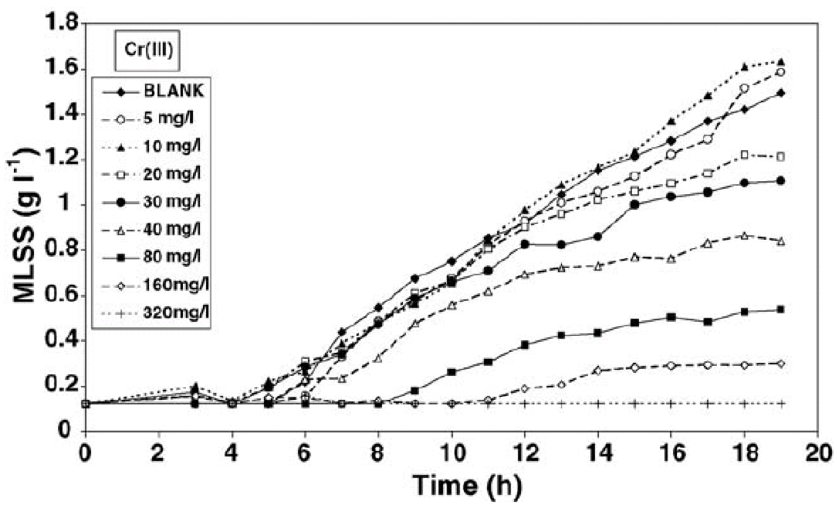


Figure 5. Cr(III) lag time for concentrations 5 mg/L to 320 mg/L (Gikas and Romanos, 2006)

Cr(VI) and Cr(III) have been shown to stimulate biomass growth up to 25 mg/L and 15 mg/L, respectively (Gikas and Romanos, 2006). As shown in Figure 6, the exposure of biomass to heavy metals actually increases the growth rate up to an optimum concentration at which point the addition of more metal has a reverse reaction. The observation that chromium stimulates growth is supported by this theory. Figure 6 also demonstrates that an increasing concentration of metal can lead to biomass degeneration and eventually to zero growth. According to Gikas and Romanos (2006), biomass growth is no longer supported at Cr(VI) and Cr(III) concentrations of 320 mg/L and 160 mg/L, respectively.

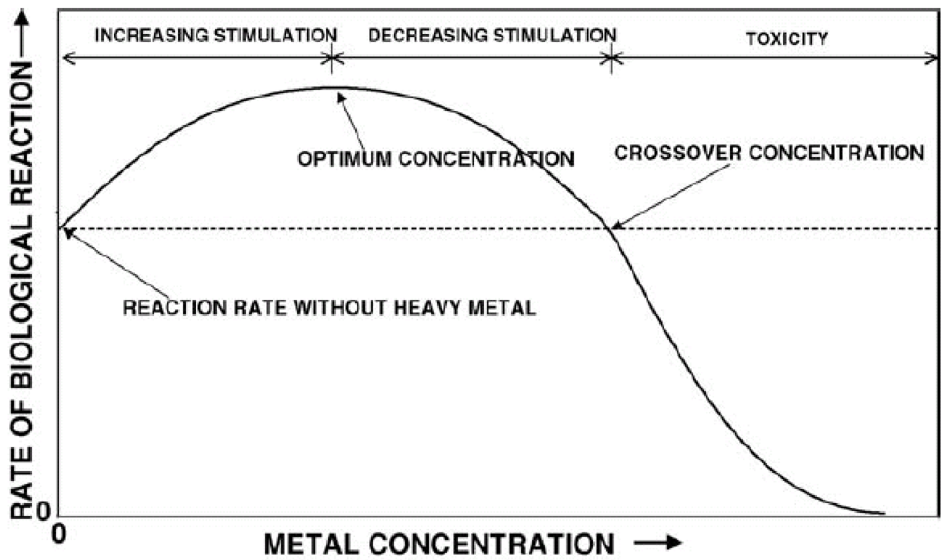


Figure 6. Biomass growth rate as a function of increasing metal concentration (Gikas and Romanos, 2006)

CHROMIUM EFFECTS ON ACTIVATED SLUDGE PROCESSES

While the activated sludge process is adequate for chromium removal, the toxicity of chromium can have a negative impact on the efficiency of the processes that occur in activated sludge. Chromium can interfere with the nitrification, chemical oxygen demand (COD) removal, and filamentous bulking.

Nitrification

Ammonium removal by wastewater treatment plants is essential in preventing eutrophication, preventing toxicity in receiving waters, and to limiting the chorine demand. Nitrification can be disturbed by Cr(VI) (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Cr(VI) increases the ammonium concentration while decreasing the nitrate concentration. An anoxic-aerobic activated sludge system improves the ability of microorganisms to perform nitrification (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Stasinakis, Thomaidis, Mamais, and Papanikolaou et al. (2003) found that a treatment system exposed to continuous loading of 5 mg/L of Cr(VI) was able to slowly recover from the toxic effects of Cr(VI). Over 12 days the testing system's ammonium removal rate increased from 30% to 57%. Shock loading also inhibited the nitrification process by decreasing the ammonium removal, which achieved no more than 45% removal (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Adversely, ammonium can affect Cr(VI) removal, but nitrate present in wastewater does not affect the process of Cr(VI) reduction (Stasinakis et al., 2004).

The nitrification process can also be disturbed by the presence of Cr(III). Considering that Cr(III) is not as toxic as Cr(VI), a concentration of up to 20 mg/L of Cr(III) continuous loading does not inhibit the nitrification process (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Concentrations of Cr(III) greater than 25 mg/L has the potential to inhibit ammonium removal (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Compared to Cr(VI), nitrification in the presence of Cr(III) is able to achieve pre-loading conditions in about 7days (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Shock loading of Cr(III) has been shown to not impact nitrification (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003).

COD Removal

The toxicity of Cr(VI) can also impact the efficiency of COD removal. An increased concentration of Cr(VI) decreases the COD removal efficiency (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). While 1 to 3 mg/L of Cr(VI) does not have an significant impact on COD removal, decreased efficiency occurs with Cr(VI) concentrations greater than 5 mg/L; however, 5 mg/L of Cr(VI) decreased COD removal by less than 10 percent (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003).

Under shock loading conditions with a concentration of 5 mg/L of Cr(VI), no reduction in COD removal efficiency is observed (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Ertugrul et al. (2006) also observed little to no impact on microorganisms during the first day of shock loading of 5 mg/L and 10 mg/L Cr(VI). Shock loading of 5 mg/L and 10 mg/L Cr(VI) decreases COD removal efficiency during the second day, and requires 3 and 5 days, respectively, to recover to a steady state condition (Ertugrul et al., 2006). As the concentration of Cr(VI) increases, a more pronounced effect of Cr(VI) on microorganisms is observed. A high concentration of MLSS and SRT aids the microorganisms' Cr(VI) tolerance and decreases the effect of Cr(VI) on COD removal capacity (Ertugrul et al., 2006).

Filamentous Bulking

Sludge bulking properties are negatively correlated with an increased concentration of chromium (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Cr(VI) decreases the size of the activated sludge flocs and deteriorates bulking. Deteriorated bulking takes several days to observe and is more prevalent with Cr(VI) concentrations greater than 3 mg/L (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). Cr(VI) attacks the floc forming bacteria's extensions beyond the floc and reduces floc sizes. At the same time, shock loading of Cr(VI) does not affect settling characteristics (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003).

CHROMIUM EFFECTS ON ACTIVATED SLUDGE MICROBIOLOGY

The microorganisms in the activated sludge can also be affected by chromium. Some microorganisms are not able to survive when exposed to chromium but others help in reduction and removal of chromium. Additionally, the rate of loading and concentration of chromium exposure can have different impacts on the biological life in activated sludge.

Toxicity

Besides having an effect on the processes which occur within activated sludge, chromium also affects activated sludge microorganisms by causing decreased biomass, activity, and microbial density (Francisco et al.,2002). Cr(VI) is about 100 times more toxic than Cr(III), since Cr(III) is less soluble. (Francisco et al., 2002). The toxicity of chromium interferes with the oxidation reactions that occur in microorganisms (Imai and Gloyna, 1988). According to Dilek and Yetis (1992) as sited by Madoni et al. (1995), 50 mg/L of Cr(VI) is toxic to bacterial communities.

A study evaluated the activated sludge removal efficiency of Cr(VI) from wastewater that contained 8 percent salt ion and determined that microbial growth was able to occur at concentrations less than 400 mg/L of Cr(VI) (Koçberber and Dönmez, 2006). The presence of salt also decreased the toxicity of Cr(VI) at higher Cr(VI) concentrations (Koçberber and Dönmez, 2006).

Chromium Reducing Bacteria

Studies have determined the common bacteria found in chromium contaminated wastewater. Francisco et al. (2002) identified several bacteria presented in Figure 7, which were mostly γ-Protebacteria, in a tanning facility chromium contaminated wastewater sample. Mainly strains of *Acinetobacter* were identified by culture samples. The culture may not have identified all the strains of bacteria in the sample, which implies that additional bacteria strains could be present and resistant to chromium. The fact that the bacteria presented below were found suggests that they are resistant to Cr(VI). Some *Acinetobacter* also partially reduce Cr(VI) to Cr(III) and assist in chromium removal (Francisco et al., 2002). Partial reduction of Cr(VI) implies that bacteria work together to reduce Cr(VI).

Protein cluster	No. of isolates	FAME cluster	MIDI identification	Isolates
I	6	A	*Ochrobactrum anthropi*	5-bvl-2b, 5-pte, 5-bvlme-b1, 5-bvl-2a, 5-bvl-1, 5-bvlme-a
II	2	B	*Ochrobactrum anthropi*	6-btpll, 12B-c2
III	4	F	*Aureobacterium esteroaromaticum*	12B-a1, 3′b-1, 3b-b1
		Un-a	*Corynebacterium mediolanum* or *Aureobacterium esteroaromaticum*	3′-a
IV	4	H	*Cellulomonas flavigena* or *Aureobacterium barkeri*	3b-a, 3′b-2a, 3ba, 3a
Un-b	1	Un-b	*Hydrogenophaga pseudoflava*	8
V	3	D	*Acinetobacter lwoffii*	3b-b2, 5-bvlme-b2, 3′b-2b
VI	4	C	*Acinetobacter lwoffii*	2, 1′-G, cas3-d, 12B-b
VII	4	E	Unknown	12B-d, 7, 6-bo-1, 6-abat
VIII	10	E	Unknown	4′-X, 4′-Xb, cas3-c1, cas3-c2, 12A-b, 4′-a2, 4, cas3-a1, cas3-b, 12A-a2
IX	2	D	*Acinetobacter* sp.	2′-P
		Un-c	Unknown	12B-c1
X	6	G	*Clavibacter michiganense* insidiosum	Bran3-a2, bran3-b, 9, 12A-a1
		Un-d	*Clavibacter michiganense* insidiosum	Bran3-a1
		Un-e	*Clavibacter michiganense* insidiosum	Cas3-a2
Un-f	1	Un-f	Unknown	6-bo-2
Un-g	1	Un-g	Unknown	1

Un, Unclustered.

Figure 7. Common bacteria identified in tanning facility chromium contaminated wastewater (Francisco et al., 2002)

The impact of chromium on protozoan communities is also important considering the role protozoa have in improving the effluent quality and indicating the effectiveness of the wastewater treatment process. *Vorticella, Opercularia*, stalked ciliates, free swimming ciliates, and rotifers have all been identified as common microorganisms in wastewater. Additional common protozoa identified in a wastewater sample by Madoni et al. (1995) are presented in Table 1. Chromium exposure tends to decrease the diversity of protozoa within activated sludge. Stasinakis, Thomaidis, Mamais, and Papanikolaou et al. (2003) found that with exposure to 1 mg/L of Cr(VI), free swimming ciliates increase while rotifers decrease. A concentration of 3 mg/L of Cr(VI) impacts filamentous bulking, and free swimming ciliates dominate due to an increased bacteria food source available. Ultimately at a concentration of 5 mg/L of Cr(VI), chromium is completely toxic to the protozoa in activated sludge to the point were no protozoa are present (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003).

Table 1. Common protozoa identified in a mixed liquor activated sludge sample (Madoni et al., 1995)

	Cell number 25 μ/L			%
Taxa	**Min**	**Max**	**Mean**	
Free-Swimming Ciliates				
Drepanomonas revoluta	9	19	13	<1
Crawling Ciliates				
Aspidisca cicada	158	186	168	7.6
Aspidisca lynceus	1422	1672	1507	67.8
Chilodonella uncinata	39	76	64	2.9
Euplotes sp.	28	53	38	1.7
Trochilia minuta	39	142	94	4.2
Attached ciliates				
Carchesium sp.	4	9	7	<1
Episylis sp.	1	8	4	<1
Opercularia coarctata	45	53	50	2.3
Opercularia minima	131	233	179	8.1
Vorticella convallaria	43	72	60	2.7
Vorticella octava	27	57	39	1.8
Suctoria				
Podophrya sp.	1	1	1	<1
Tokophrya quadripartita	1	1	1	<1
Testate amoeba	2	8	4	<1
Total microfauna	1950	2590	2229	100

Chromium Loading Effect on Microorganisms

During continuous loading of chromium, nitrifying bacteria have been determined to be more sensitive to chromium exposure than bacteria involved with COD removal due to the longer recovery time required by the nitrifying bacteria (Stasinakis, Thomaidis, Mamais, and Papanikolaou et al., 2003). The impact of chromium on nitrifying bacteria compared to COD reducing bacteria can be attributed to the smaller quantity of nitrifying bacteria present in the system. COD reducing bacteria consist of many different types of bacteria that work together; therefore, Cr(VI) has to be toxic to several species to impact COD removal.

Shock loading of chromium can be lethal to biological communities. Madoni et al. (1995) determined lethal doses of Cr(VI) for different strains of ciliates, which are presented in Table 2. The difference in toxicity levels indicates that certain strains of ciliates are more resistant to chromium than others.

Table 2. Toxic LC_{50} 24-hour concentrations (mg/L) of Cr(VI) to ciliate strands (Madoni et al., 1995)

Metal Ciliate Species	Cr(VI) (mg/L)	Cr(VI) (mg/L) 95% Confidence Limits
Aspidisca cicada	138	124-151
Aspidisca lynceus	145	121-170
Chilodonella uncinata	10.6	8.37-13.1
Euplotes sp.	38.6	27.7-57.5
Opercularia coarctata	211	166-269
Opercularia minima	164	130-200
Trochilia minuta	9.25	4.52-13.7
Vorticella convallaria	101	78-122
Vorticella octava	80	68.4-92.5

CONCLUSION

Traditional treatment methods for chromium removal have been proven to be effective, but the use of activated sludge has also been proven to be an efficient method of chromium removal. The reduction of Cr(VI) to Cr(III) in combination with activated sludge can achieve 95 percent removal efficiency by adsorption. Additionally, a lower activated sludge age will also ensure a higher removal rate. Microorganisms such as γ-Protebacteria and free swimming ciliates tend to be resistant to chromium, and aid in the removal process. Chromium inhibits activated sludge processes by limiting nitrification and filamentous bulking.

A substantial amount of research has been recently completed concerning the effect chromium on activated sludge and the ability of activated sludge to remove chromium from wastewater. The research provides a basis from which the use activated sludge for chromium removal can grow. Biological chromium removal could possibly be more economical than traditional methods of chromium removal considering that the activated sludge communities are mostly self sufficient after establishment. In municipal wastewater treatment facilities, an activated sludge system may need to be coupled with a process to ensure nitrification. The activated sludge would also need to be monitored to ensure the reduction of Cr(VI) to Cr(III), proper bulking, and settlement. Activated sludge treatment has the ability to be a promising method of chromium removal.

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APPENDIX

L

Local Limits Calculation

USEPA Region V Template,

as modified

TABLE 1

Local Limits Determination Based on NPDES Daily Effluent Limits

	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE							MAXIMUM LOADING		INDUSTRIAL				
Pollutant	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rpotw)	NPDES Daily Limit (mg/l) (Ccrit1)	Domestic an Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	86.44		0.00100	187.59	-	1.564	-	0.014	4.86	-	10
Beryllium	0.001	0	188	50		0.00200	188.00	-	3.136	-		0.00	-	10
Cadmium	1.153	1.2205	188	96.65		0.00038	185.63	-	0.581	-	0.002	6.37	-	10
Chromium	0.035	1.4075	188	91.97		0.00590	186.56	-	9.180	-	0.010	40.47	-	10
Hex. Chrom.	0.022	0	188	40		0.00100	187.98	-	1.568	-		0.00	-	10
Copper	1.053	1.3805	188	89.8		0.10940	185.57	-	169.310	-	1.088	34.98	-	10
Cyanide (a)	0.225	0.849	188	54.3	0.019	0.01525	186.93	65.18704595	23.774	34.89415805	0.045	1.78	17.62	10
Lead	0.803	1.6405	188	99.46		0.00701	185.56	-	10.848	-	0.030	7.72	-	10
Mercury	0.3301	0.03	188	90		0.000030	187.64	-	0.047	-	0.0005	0.0006	-	10
Nickel	0.035	1.2055	188	46.7		0.01000	186.76	-	15.576	-	0.0208	37.6160	-	10
Phenol	0.03	0	188	94.12		0.00500	187.97	-	7.838	-		0.00	-	10
Pentachlorop henol	0.001	0	188	99.99		0.01000	188.00	-	15.679	-		0.00	-	10
Selenium	0.25	0.004	188	82.4		0.00500	187.75	-	7.829	-	0.009	0.053	-	10
Silver	0.001	0.9365	188	82.88		0.00500	187.06	-	7.801	-	0.010	3.12	-	10
Zinc	0.577	2.0825	188	88.2		0.26000	185.34	-	401.892	-	1.080	46.31	-	10

(Qind) Non Categorical Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains pollutant. No known non-Categorical discharges of Be, Pentachlorophenol & Ag: assume 0.001 MGD to avoid "divide by 0" error.
(Qcatind) Categorical Industrial User total plant discharge in MGD that contains pollutant.
(Qpotw) POTW's average influent flow in MGD. 2011 Average
(Rpotw) Removal efficiency across POTW as percent. EPA Median or Literature Value. All others from 1983 PILOT and/or 2010 AWT data.
(Ccrit1) NPDES daily maximum permit limit for a particular pollutant in mg/l.
(Qdom) Domestic/commercial background flow in MGD.
(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.
(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).
(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).
(Lind) Maximum allowable industrial loading to the POTW in pounds per day.
(Lwh) Load allocation to Liquid Waste Haulers in punds per day.
(Lcatind) Load allocation to Categorical Industries based on all Flow @ National Categorical Limit for each affected industry.
(Cind) Industrial allowable local limit for a given pollutant in mg/l.
(SF) Safety factor as a percent.
8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rpotw}$$

TABLE 2

Local Limits Determination Based on NPDES Monthly Effluent Limits

	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL					
Pollutant	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rpotw)	NPDES Monthly Limit (mg/l) (Ccrit2)	Domestic an Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	86.44		0.00100	187.59	-	1.564	-	0.014	4.857	-	10
Beryllium	0.001	0	188	50		0.00200	188.00	-	3.136	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	96.65		0.00038	185.63	-	0.581	-	0.002	6.374	-	10
Chromium	0.035	1.4075	188	91.97		0.00590	186.56	-	9.180	-	0.010	40.472	-	10
Hex. Chrom.	0.022	0	188	40		0.00100	187.98	-	1.568	-	0.000	0.000	-	10
Copper	1.053	1.3805	188	89.8		0.10940	185.57	-	169.310	-	1.088	34.982	-	10
Cyanide (a)	0.225	0.849	188	54.3	0.01	0.01525	186.93	34.30897155	23.774	7.103891088	0.045	1.784	2.81	10
Lead	0.803	1.6405	188	99.46		0.00701	185.56	-	10.848	-	0.030	7.723	-	10
Mercury	0.3301	0.03	188	90		0.000030	187.64	-	0.047	-	0.0005	0.0006	-	10
Nickel	0.035	1.2055	188	46.7		0.01000	186.76	-	15.576	-	0.021	37.616	-	10
Phenol	0.03	0	188	94.12		0.00500	187.97	-	7.838	-	0.000	0.000	-	10
Pentachlorop henol	0.001	0	188	99.99		0.01000	188.00	-	15.679	-	0.000	0.000	-	10
Selenium	0.25	0.004	188	82.4		0.00500	187.75	-	7.829	-	0.009	0.053	-	10
Silver	0.001	0.9365	188	82.88		0.00500	187.06	-	7.801	-	0.010	3.119	-	10
Zinc	0.577	2.0825	188	88.2		0.26000	185.34	-	401.892	-	1.080	46.313	-	10

(Ccrit2) NPDES monthly maximum permit limit for a particular pollutant in mg/l.
Others as above

TABLE 3

Local Limits Determination Based on Activated Sludge Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL					
	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rprim)	Activated Sludge Inhibition Level (mg/l) (Ccrit3)	Domestic a Commercial Conc. (mg/l) (Cdom)	Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	63	0.27	0.00100	187.59	1144.16	1.56	1028.18	0.014	4.857	943.11	10
Beryllium	0.001	0	188	0		0.00200	188.00	-	3.14	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	15	5.5	0.00038	185.63	10145.36	0.58	9130.25	0.002	6.374	948.82	10
Chromium	0.035	1.4075	188	29	50.5	0.00590	186.56	111521.07	9.18	100359.78	0.010	40.472	343,676.95	10
Hex. Chrom.	0.022	0	188	0	1	0.00100	187.98	1567.92	1.57	1409.56	0.000	0.000	7,682.36	10
Copper	1.053	1.3805	188	38	1	0.10940	185.57	2528.90	169.31	2106.70	1.088	34.982	235.78	10
Cyanide (a)	0.225	0.849	188	0	2.55	0.01525	186.93	3998.20	23.77	3574.60	0.045	1.784	1,903.96	10
Lead	0.803	1.6405	188	51	55	0.00701	185.56	175991.02	10.85	158381.07	0.030	7.723	23,648.33	10
Mercury	0.3301	0.03	188	10	0.55	0.000030	187.64	958.17	0.05	862.31	0.0005	0.0006	313.22	10
Nickel	0.035	1.2055	188	0	1.75	0.01000	186.76	2743.86	15.58	2453.90	0.021	37.616	8,277.70	10
Phenol	0.03	0	188	8	125	0.00500	187.97	213032.61	7.84	191721.51	0.000	0.000	766,273.02	10
Pentachlorophenol	0.001	0	188	0	75.5	0.01000	188.00	118377.96	15.68	106524.48	0.000	0.000	12,772,720	10
Selenium	0.25	0.004	188	0		0.00500	187.75	-	7.83	-	0.009	0.053	-	10
Silver	0.001	0.9365	188	20	2.6	0.00500	187.06	5095.74	7.80	4578.37	0.010	3.119	548,589.57	10
Zinc	0.577	2.0825	188	42	7.5	0.26000	185.34	20274.83	401.89	17845.45	1.080	46.313	3,698.54	10

(Rprim) Removal efficiency across across primary treatment as percent.
(Ccrit3) Activated sludge threshold inhibition level, mg/l. Arsenic from 1983 Pilot Plant Spiking studies. All others from EPA Guidance.
Others as above

TABLE 4

Local Limits Determination Based on Nitrification Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL					
	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rprim)	Nitrification Inhibition Level (mg/l) (Ccrit4)	Domestic an Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	63	1.5	0.00100	187.59	6356	1.564	5719	0.014	4.857	5,266.52	10
Beryllium	0.001	0	188	0		0.00200	188.00	-	3.136	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	15	5.2	0.00038	185.63	9592	0.581	8632	0.002	6.374	897.03	10
Chromium	0.035	1.4075	188	29	1.075	0.00590	186.56	2374	9.180	2127	0.010	40.472	7,149.39	10
Hex. Chrom.	0.022	0	188	0	5.5	0.00100	187.98	8624	1.568	7760	0.000	0.000	42,291.46	10
Copper	1.053	1.3805	188	38	0.48	0.10940	185.57	1214	169.310	923	1.088	34.982	101.01	10
Cyanide (a)	0.225	0.849	188	0	0.6	0.01525	186.93	941	23.774	823	0.045	1.784	437.56	10
Lead	0.803	1.6405	188	51	0.7	0.00701	185.56	2240	10.848	2005	0.030	7.723	298.24	10
Mercury	0.3301	0.03	188	10		0.000030	187.64	-	0.047	-	0.0005	0.0006	-	10
Nickel	0.035	1.2055	188	0	2.6	0.01000	186.76	4077	15.576	3653	0.021	37.616	12,386.85	10
Phenol	0.03	0	188	8	7	0.00500	187.97	11930	7.838	10729	0.000	0.000	42,881.72	10
Pentachlorophenol	0.001	0	188	0	0.03	0.01000	188.00	47	15.679	27	0.000	0.000	3,196.01	10
Selenium	0.25	0.004	188	0		0.00500	187.75	-	7.829	-	0.009	0.053	-	10
Silver	0.001	0.9365	188	20	5	0.00500	187.06	9800	7.801	8812	0.010	3.119	1,056,189.57	10
Zinc	0.577	2.0825	188	42	0.9	0.26000	185.34	2433	401.892	1788	1.080	46.313	361.66	10

(Ccrit4) Nitrification threshold inhibition level, mg/l. CN(a), Pb & Zn from 1983 Pilot Plant Spiking studies. All others from EPA Guidance.
Others as above
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TABLE 5

Local Limits Determination Based Incinerator Air Emmissions Regulations

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL					
	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Sludge Flow (MGD) (Qsldg)	Percent Solids (%) (PS)	Removal Efficiency (%) (Rpotw)	Sludge Criteria (mg/kg) (Ccrit5)	Domestic and Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	0.695	5	86.44	262.7	0.00100	187.59	88.13	1.564	77.76	0.014	4.857	67.17	10
Beryllium	0.001	0	188	0.695	5	50	12.5	0.00200	188.00	7.25	3.136	3.39	0.000	0.000	406.38	10
Cadmium	1.153	1.2205	188	0.695	5	96.65	471.8	0.00038	185.63	141.56	0.581	126.83	0.002	6.374	12.53	10
Chromium	0.035	1.4075	188	0.695	5	91.97	12185	0.00590	186.56	3842.18	9.180	3448.78	0.010	40.472	11676.25	10
Hex. Chrom.	0.022	0	188	0.695	5	40		0.00100	187.98	-	1.568	-	0.000	0.000	-	10
Copper	1.053	1.3805	188	0.695	5	89.8		0.10940	185.57	-	169.310	-	1.088	34.982	-	10
Cyanide (a)	0.225	0.849	188	0.695	5	54.3		0.01525	186.93	-	23.774	-	0.045	1.784	-	10
Lead	0.803	1.6405	188	0.695	5	99.46	372.5	0.00701	185.56	108.61	10.848	86.90	0.030	7.723	11.82	10
Mercury	0.3301	0.03	188	0.695	5	90	97.3	0.000030	187.64	31.35	0.047	28.17	0.0005	0.0006	10.23	10
Nickel	0.035	1.2055	188	0.695	5	46.7	285580	0.01000	186.76	177340.90	15.576	159591.23	0.021	37.616	546603.62	10
Phenol	0.03	0	188	0.695	5	94.12		0.00500	187.97	-	7.838	-	0.000	0.000	-	10
Pentachlorophenol	0.001	0	188	0.695	5	99.99		0.01000	188.00	-	15.679	-	0.000	0.000	-	10
Selenium	0.25	0.004	188	0.695	5	82.4		0.00500	187.75	-	7.829	-	0.009	0.053	-	10
Silver	0.001	0.9365	188	0.695	5	82.88		0.00500	187.06	-	7.801	-	0.010	3.119	-	10
Zinc	0.577	2.0825	188	0.695	5	88.2		0.26000	185.34	-	401.892	-	1.080	46.313	-	10

(Qsldg) Sludge flow to disposal in MGD.
(PS) Percent solids of sludge to disposal.
(Ccrit5) Emmissions limits in equivalent sludge concentration criteria in mg/kg dry sludge.
Others as above

TABLE 6

Local Limits Determination Based on Landfill Disposal TCLP Limits for Sludge

	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE										MAXIMUM LOADING		INDUSTRIAL					
										Domestic and Commercial								
Pollutant	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Sludge Flow (MGD) (Qsldg)	Percent Solids (%) (PS)	Removal Efficiency (%) (Rpotw)	Ratio TCLP/TotMetal ((mg/L)/(mg/kg)) (ratio)	TCLP Limit (mg/L) (Ctclp)	Max Sludge (mg/kg) (Ccrit6)	Conc. (mg/l) (Cdom)	Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	0.695	5	86.44	0.0054	5.0	931	0.00100	187.59	312.26	1.564	279.47	0.014	4.857	253.08	10
Beryllium	0.001	0	188	0.695	5	50			-	0.00200	188.00	-	3.136	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	0.695	5	96.65	0.0033	1.0	304	0.00038	185.63	91.31	0.581	81.60	0.002	6.374	7.82	10
Chromium	0.035	1.4075	188	0.695	5	91.97	0.0019	5.0	2636	0.00590	186.56	831.10	9.180	738.81	0.010	40.472	2392	10
Hex. Chrom.	0.022	0	188	0.695	5	40			-	0.00100	187.98	-	1.568	-	0.000	0.000	-	10
Copper	1.053	1.3805	188	0.695	5	89.8			-	0.10940	185.57	-	169.310	-	1.088	34.982	-	10
Cyanide (a)	0.225	0.849	188	0.695	5	54.3			-	0.01525	186.93	-	23.774	-	0.045	1.784	-	10
Lead	0.803	1.6405	188	0.695	5	99.46	0.0016	5.0	3075	0.00701	185.56	896.60	10.848	796.09	0.030	7.723	117.72	10
Mercury	0.3301	0.03	188	0.695	5	90	0.0095	0.2	21	0.000030	187.64	6.78	0.047	6.06	0.0005	0.0006	2.20	10
Nickel	0.035	1.2055	188	0.695	5	46.7			-	0.01000	186.76	-	15.576	-	0.021	37.616	-	10
Phenol	0.03	0	188	0.695	5	94.12			-	0.00500	187.97	-	7.838	-	0.000	0.000	-	10
Pentachlorophenol	0.001	0	188	0.695	5	99.99			-	0.01000	188.00	-	15.679	-	0.000	0.000	-	10
Selenium	0.25	0.004	188	0.695	5	82.4	0.0008	1.0	1331	0.00500	187.75	468.32	7.829	413.66	0.009	0.053	198.37	10
Silver	0.001	0.9365	188	0.695	5	82.88	0.0250	1.0	40	0.00500	187.06	14.00	7.801	4.80	0.010	3.119	199.94	10
Zinc	0.577	2.0825	188	0.695	5	88.2			-	0.26000	185.34	-	401.892	-	1.080	46.313	-	10

(%ratio) Ratio of Sludge TCLP Metals concentration (mg/L) to Sludge Total Metals Concentration (mg/Kg)
(Ctclp) Maximum pollutant concentration limit from TCLP test for Landfill Disposal.
(Ccrit6) Maximum sludge concentration to meet TCLP test for Landfill Disposal of sludge, based on TCLP Limit and Ratio.
Others as above

TABLE 7

Local Limits Determination Based on Landfill Disposal TCLP Limits for Ash

	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE										MAXIMUM LOADING		INDUSTRIAL					
										Domestic and Commercial								
Pollutant	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Sludge Flow (MGD) (Qsldg)	Percent Solids (%) (PS)	Removal Efficiency (%) (Rpotw)	Ratio TCLP/TotMetal ((mg/L)/(mg/kg)) (ratio)	TCLP Limit (mg/L) (Ctclp)	Max Sludge (mg/kg) (Ccrit7)	Conc. (mg/l) (Cdom)	Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	0.695	5	86.44	0.0107	5.0	465	0.00100	187.59	156.13	1.564	138.95	0.014	4.857	123.57	10
Beryllium	0.001	0	188	0.695	5	50			-	0.00200	188.00	-	3.136	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	0.695	5	96.65	0.0016	1.0	609	0.00038	185.63	182.62	0.581	163.78	0.002	6.374	16.37	10
Chromium	0.035	1.4075	188	0.695	5	91.97	0.0009	5.0	5274	0.00590	186.56	1663.08	9.180	1487.59	0.010	40.472	4957.56	10
Hex. Chrom.	0.022	0	188	0.695	5	40			-	0.00100	187.98	-	1.568	-	0.000	0.000	-	10
Copper	1.053	1.3805	188	0.695	5	89.8			-	0.10940	185.57	-	169.310	-	1.088	34.982	-	10
Cyanide (a)	0.225	0.849	188	0.695	5	54.3			-	0.01525	186.93	-	23.774	-	0.045	1.784	-	10
Lead	0.803	1.6405	188	0.695	5	99.46	0.0004	5.0	12285	0.00701	185.56	3582.00	10.848	3212.95	0.030	7.723	478.60	10
Mercury	0.3301	0.03	188	0.695	5	90	0.0076	0.2	26	0.000030	187.64	8.44	0.047	7.54	0.0005	0.0006	2.74	10
Nickel	0.035	1.2055	188	0.695	5	46.7			-	0.01000	186.76	-	15.576	-	0.021	37.616	-	10
Phenol	0.03	0	188	0.695	5	94.12			-	0.00500	187.97	-	7.838	-	0.000	0.000	-	10
Pentachloroph	0.001	0	188	0.695	5	99.99			-	0.01000	188.00	-	15.679	-	0.000	0.000	-	10
Selenium	0.25	0.004	188	0.695	5	82.4	0.0060	1.0	166	0.00500	187.75	58.54	7.829	44.86	0.009	0.053	21.48	10
Silver	0.001	0.9365	188	0.695	5	82.88	0.0250	1.0	40	0.00500	187.06	14.00	7.801	4.80	0.010	3.119	199.94	10
Zinc	0.577	2.0825	188	0.695	5	88.2			-	0.26000	185.34	-	401.892	-	1.080	46.313	-	10

(%ratio) Ratio of Ash TCLP Metals concentration (mg/L) to Sludge Total Metals Concentration (mg/Kg)
(Ctclp) Maximum pollutant concentration limit from TCLP test for Landfill Disposal.
(Ccrit7) Maximum sludge concentration to meet TCLP test for Landfill Disposal of ash, based on TCLP Limit and Ratio.
Others as above

TABLE 8

Local Limits Determination Based on Chronic Water Quality Standards

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL					
	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Upstream Flow (MGD) (Qstr)	Upstream Conc. (mg/l) (Cstr)	Removal Efficiency (%) (Rpotw)	Chronic WQS (mg/l) (Ccrit8)	Domestic and Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	44.5	0.0005	86.44	0.190	0.00100	187.59	2716	1.56	2442	0.014	4.857	2,246.56	10
Beryllium	0.001	0	188	44.5	0.0005	50		0.00200	188.00	-	3.14	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	44.5	0.000142	96.65	0.0029	0.00038	185.63	164	0.58	147	0.002	6.374	14.67	10
Chromium	0.035	1.4075	188	44.5	0.000683	91.97	0.545	0.00590	186.56	13153	9.18	11829	0.010	40.472	40,384.14	10
Hex. Chrom.	0.022	0	188	44.5	0.000683	40	0.011	0.00100	187.98	35	1.57	30	0.000	0.000	163.76	10
Copper	1.053	1.3805	188	44.5	0.00247	89.8	0.032	0.10940	185.57	608	169.31	378	1.088	34.982	38.92	10
Cyanide (a)	0.225	0.849	188	44.5		54.3		0.01525	186.93	-	23.77	-	0.045	1.784	-	10
Lead	0.803	1.6405	188	44.5	0.0005424	99.46	0.014	0.00701	185.56	5105	10.85	4584	0.030	7.723	683.29	10
Mercury	0.3301	0.03	188	44.5	0.000012	90	0.000012	0.000030	187.64	0.19	0.05	0.12	0.0005	0.0006	0.044	10
Nickel	0.035	1.2055	188	44.5	0.00198	46.7	0.428	0.01000	186.76	1557	15.58	1386	0.021	37.616	4,619.50	10
Phenol	0.03	0	188	44.5	0.0025	94.12		0.00500	187.97	-	7.84	-	0.000	0.000	-	10
Pentachlorop henol	0.001	0	188	44.5	0.01	99.99	0.013	0.01000	188.00	210975	15.68	189862	0.000	0.000	22,765,199	10
Selenium	0.25	0.004	188	44.5	0.0025	82.4	0.035	0.00500	187.75	380	7.83	334	0.009	0.053	160.39	10
Silver	0.001	0.9365	188	44.5	0.0005	82.88		0.00500	187.06	-	7.80	-	0.010	3.119	-	10
Zinc	0.577	2.0825	188	44.5	0.0107	88.2	0.288	0.26000	185.34	4707	401.89	3834	1.080	46.313	786.94	10

(Qstr) Receiving stream (upstream) 7Q10 flow in MGD.
(Cstr) Receiving stream background level in mg/l. Use Chronic Limit for Hg- Bioaccumulative
(Ccrit8) State chronic water quality standard for a particular pollutant in mg/l (total recoverable). 326 Hardness from IDEM 2007 WLA RPE Analy 7.8 pH
CN(a) has a site specific water quality criteria included in NPDES Permit Limit. Not included in this section.
Others as above

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TABLE 9

Local Limits Determination Based on Acute Water Quality Standards

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING			INDUSTRIAL					
	IU Pollut. Flow (MGD) (Qind)	Cat. IU Flow (MGD) (Qcatind)	POTW Flow (MGD) (Qpotw)	Upstream Flow (MGD) (Qstr)	Upstream Conc. (mg/l) (Cstr)	Removal Efficiency (%) (Rpotw)	Acute WQS (mg/l) (Ccrit9)	Domestic and Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Allowable Headworks (lbs/day) (Lhw) 2x AAC	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Waste Hauler (lbs/day) (Lwh)	Categorical Industries (lbs/day) (Lcatind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1301	0.28	188	44.5	0.0005	86.44	0.360	0.00100	187.59	5146.55	8325	1.564	4630.3	0.014	4.857	4262.96	10
Beryllium	0.001	0	188	44.5	0.0005	50		0.00200	188.00	-	-	3.136	-	0.000	0.000	-	10
Cadmium	1.153	1.2205	188	44.5	0.00014	96.65	0.015	0.00038	185.63	859.37	1392	0.581	772.9	0.002	6.374	79.71	10
Chromium	0.035	1.4075	188	44.5	0.000683	91.97	4.571	0.00590	186.56	110373.37	178501	9.180	99326.9	0.010	40.472	340138.31	10
Hex. Chrom.	0.022	0	188	44.5	0.000683	40	0.016	0.00100	187.98	51.29	84	1.568	44.6	0.000	0.000	243.02	10
Copper	1.053	1.3805	188	44.5	0.00247	89.8	0.054	0.10940	185.57	1016.98	1659	169.310	746.0	1.088	34.982	80.84	10
Cyanide (a)	0.225	0.849	188	44.5		54.3		0.01525	186.93	-	-	23.774	-	0.045	1.784	-	10
Lead	0.803	1.6405	188	44.5	0.0005424	99.46	0.367	0.00701	185.56	131925.46	213411	10.848	118722.1	0.030	7.723	17726.44	10
Mercury	0.3301	0.03	188	44.5	0.000012	90	0.002400	0.000030	187.64	46.49	75	0.047	41.8	0.0005	0.0006	15.18	10
Nickel	0.035	1.2055	188	44.5	0.00198	46.7	3.854	0.01000	186.76	14020.12	22676	15.576	12602.5	0.021	37.616	43045.21	10
Phenol	0.03	0	188	44.5	0.0025	94.12		0.00500	187.97	-	-	7.838	-	0.000	0.000	-	10
Pentachlorop henol	0.001	0	188	44.5	0.01	99.99	20.27	0.01000	188.00	392952529	635544539	15.679	353657260.5	0.000	0.000	42404947298	10
Selenium	0.25	0.004	188	44.5	0.0025	82.4	0.130	0.00500	187.75	1426.98	2316	7.829	1276.5	0.009	0.053	612.18	10
Silver	0.001	0.9365	188	44.5	0.0005	82.88	0.015	0.00500	187.06	174.38	284	7.801	149.1	0.010	3.119	17507.63	10
Zinc	0.577	2.0825	188	44.5	0.0107	88.2	0.319	0.26000	185.34	5200.22	8464	401.892	4278.3	1.080	46.313	879.21	10

(Cstr) Receiving stream background level in mg/l. Use Acute Limit Hg: Bioaccumulative *Data from 2009 IDEM WLA RPE Evaluation*
(Ccrit9) State acute water quality standard for a particular pollutant in mg/l. 326 Hardness from IDEM 2007 WLA RPE Analy 7.8 pH
CN(a) has a site specific water quality criteria included in NPDES Permit Limit. Not included in this section.
Others as above

COMPARISON OF LOCAL LIMITS

	NDPES Daily (mg/l)	NPDES Monthly (mg/l)	Activated Sludge Inhibition (mg/l)	Nitrification Inhibition (mg/l)	Incinerator Emmissions (mg/l)	Sludge Landfill Disposal (mg/L)	Ash Landfill Disposal (mg/L)	Indiana Chronic WQS (mg/l)	Indiana Acute WQS (mg/l)	Current Local Limit (mg/l)	New Calc. Local Limit (mg/l)	Comments		Current Local Limit ok (Y/N)
Arsenic	-	-	943.11	5266.52	67.17	253.08	123.57	2246.56	4262.96	4.00	67.17	Current LL ok	67.174	Y
Beryllium	-	-	-	-	406.38	-	-	-	-		406.38	Need new LL	406.376	Y
Cadmium	-	-	948.82	897.03	12.53	7.82	16.37	14.67	79.71	1.20	7.82	Current LL ok	7.822	Y
Chromium	-	-	343676.95	7149.39	11676.25	2392.36	4957.56	40384.14	340138.31	24.00	2392.36	Current LL ok	2392.362	N/A
Hex. Chrom.	-	-	7682.36	42291.46	-	-	-	163.76	243.02	3.40	163.76	Current LL ok	163.758	Y
Copper	-	-	235.78	101.01	-	-	-	38.92	80.84	2.20	38.92	Current LL ok	38.925	Y
Cyanide (a)	17.62	2.81	1903.96	437.56	-	-	-	-	-	0.40	2.81	Current LL ok	2.811	Y
Lead	-	-	23648.33	298.24	11.82	117.72	478.60	683.29	17726.44	4.70	11.82	Current LL ok	11.819	Y
Mercury	-	-	313.22	-	10.23	2.20	2.74	0.044	15.18	0.025	0.044	Current LL ok	0.044	Y
Nickel	-	-	8277.70	12386.85	546603.62	-	-	4619.50	43045.21	7.30	4619.50	Current LL ok	4619.501	Y
Phenol	-	-	766273.02	42881.72	-	-	-	-	-	46.00	42881.72	Current LL ok	42881.715	N/A
Pentachloro phenol	-	-	12772720.01	3196.01	-	-	-	22765199.21	42404947298	0.01	3196.01	Current LL ok	3196.010	N/A
Selenium	-	-	-	-	-	198.37	21.48	160.39	612.18		21.48	HW ok, No LL N	21.484	
Silver	-	-	548589.57	1056189.57	-	199.94	199.94	-	17507.63	4.20	199.94	Current LL ok	199.942	
Zinc	-	-	3698.54	361.66	-	-	-	786.94	879.21	38.00	361.66	Current LL ok	361.665	Y

Controlling Local Limit

New Local Limit Lower than Current Local Limit

COMPARISON OF MAXIMUM ALLOWABLE HEADWORKS LIMITS (MAHL)

	NDPES Daily lbs/day	NPDES Monthly lbs/day	Activated Sludge Inhibition lbs/day	Nitrification Inhibition lbs/day	Incinerator Emmissions lbs/day	Sludge Landfill Disposal lbs/day	Ash Landfill Disposal lbs/day	Chronic WQS lbs/day	Acute WQS lbs/day
Arsenic	-	-	1144.2	6356.4	88.1	312.3	156.1	2715.6	8325.2
Beryllium	-	-	-	-	7.3	-	-	-	-
Cadmium	-	-	10145.4	9592.0	141.6	91.3	182.6	164.5	1392.3
Chromium	-	-	111521.1	2374.0	3842.2	831.1	1663.1	13153.1	178501.4
Hex. Chrom.	-	-	1567.9	8623.6	-	-	-	35.1	83.6
Copper	-	-	2528.9	1213.9	-	-	-	608.0	1659.2
Cyanide (a)	65.2	34.3	3998.2	940.8	-	-	-	-	-
Lead	-	-	175991.0	2239.9	108.6	896.6	3582.0	5105.1	213410.7
Mercury	-	-	958.2	-	31.4	6.8	8.4	0.2	75.3
Nickel	-	-	2743.9	4076.6	177340.9	-	-	1557.4	22675.6
Phenol	-	-	213032.6	11929.8	-	-	-	-	-
Pentachloro phenol	-	-	118378.0	47.0	-	-	-	210974.9	635544539.4
Selenium	-	-	-	-	-	468.3	58.5	380.3	2316.2
Silver	-	-	5095.7	9799.5	-	14.0	14.0	-	283.8
Zinc	-	-	20274.8	2433.0	-	-	-	4706.9	8464.2

POC	MAHL (lbs/day)	MAHC (mg/L)	2011 Data Actual Concentrations Max HW [C]	% MAHC	Ave HW [C]	% MAHC
Arsenic	88.13	0.0562	**0.0015**	2.7%	**0.0015**	2.7%
Beryllium	7.25	0.0046	**0.002**	43.3%	**0.002**	43.3%
Cadmium	91.31	0.0582	0.00123	2.1%	0.00036	0.6%
Chromium	831.10	0.5301	0.0285	5.4%	0.0064	1.2%
Hex. Chrom.	35.13	0.0224	**0.005**	22.3%	**0.005**	22.3%
Copper	608.02	0.3878	0.226	58.3%	0.09290	24.0%
Cyanide (a)	34.31	0.0219	0.044	201.1%	0.01050	48.0%
Lead	108.61	0.0693	0.0308	44.5%	0.00670	9.7%
Mercury	0.19	0.000120	0.000057	47.5%	0.000038	31.7%
Nickel	1557.38	0.9933	0.0391	3.9%	0.0131	1.3%
Phenol	11929.83	7.6087	0.066	0.9%	0.05200	0.7%
Pentachlorop henol	47.04	0.0300	**0.010**	33.3%	**0.010**	33.3%
Selenium	58.54	0.0373	0.0171	45.8%	0.01080	28.9%
Silver	14.00	0.0089	**0.005**	56.0%	**0.005**	56.0%
Zinc	2432.98	1.5517	1.419	91.4%	0.593	38.2%
				0.8		0.6

Local Limit Warranted if > 80% Local Limit Warranted if > 60%

Bold Indicates Data < LOD