AECOM

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Skana Aluminum
Manitowoc, Wisconsin

Submitted by:
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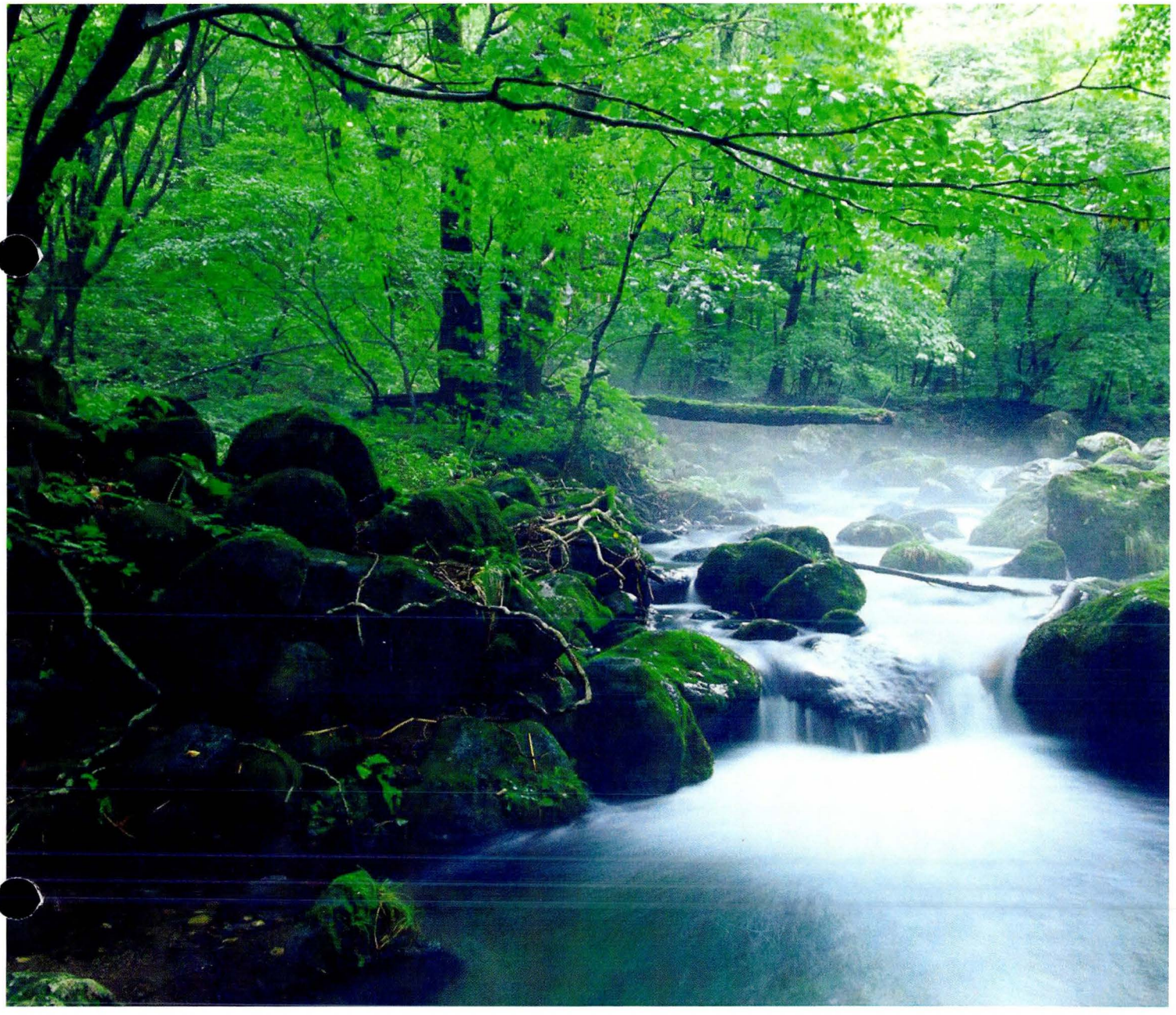
Focused Phase II Environmental Site Assessment

Former Koenig & Vits, Inc. Property
2015 Mirro Drive – City of Manitowoc, Manitowoc County, Wisconsin 53027



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1.0 Introduction

AECOM Environment (AECOM) was retained by Skana Aluminum to conduct a Focused Phase II Environmental Site Assessment (ESA) of the Former Koening and Vits, Inc. facility located at 2015 Mirro Drive in the City of Manitowoc, Manitowoc County, Wisconsin (subject property). The location of the Subject Property is illustrated on Figure 1. The subject property consists of approximately 131.1 acres of land developed with approximately 575,000 square feet of manufacturing, warehousing, and office space.

This Phase II ESA presents an evaluation of the current subsurface conditions related to the select areas of potential concern identified in AECOM's December 2009 Phase I ESA report. The recognized environmental conditions identified in AECOM's Phase I ESA and the proposed investigative scope for this Phase II ESA include the following:

Area #	ESA Findings	Proposed Investigative Scope
1.	A lead porcelain setting pond and mixing area existed on the property from 1954 until the late 1970's. The settling pond was located northeast of Plant 5-C. This Wisconsin Environmental Repair Program (WI ERP) listing (BRRTS No. 02-35-550138) is currently open. Koenig & Vits submitted a Supplemental Site Investigation Work Plan on July 11, 2008, that called for five additional groundwater monitoring wells and three additional rounds of sampling. It was expected that completion of the supplemental work will allow closure of the site under appropriate industrial land-use restrictions. The WDNR issued a notice of noncompliance to Koenig & Vits, Inc. on January 26, 2009 for failing to proceed with the supplemental work.	Response actions necessary to address this concern have been outlined (and agreed to) by the WDNR. As such, no Phase II investigation is proposed.
2.	Contamination of soil and groundwater from polynuclear aromatic hydrocarbons, chlorinated solvents, arsenic, chromium, and other metals exists on the south-side of the building complex. The source is presumably from sump pits located in the basement of Plant 5-C. This WI ERP listing (BRRTS No. 02-36-544601) is currently open. Koenig & Vits submitted a Supplemental Site Investigation Work Plan on July 11, 2008, that called for five additional groundwater	Response actions necessary to address this concern have been outlined (and agreed to) by the WDNR. As such, no Phase II investigation is proposed.

	monitoring wells and three additional rounds of sampling. It was expected that completion of the supplemental work will allow closure of the site under appropriate industrial land-use restrictions. The WDNR issued a notice of noncompliance to Koenig & Vits, Inc. on January 26, 2009 for failing to proceed with the supplemental work.	
3.	Reportedly PCB-contaminated materials were buried to the north of the building complex in the late 1970s. This area has not been assessed for possible soil/groundwater contamination.	a. Evaluate extent of burial area using a b. magnetometer. Install two groundwater monitoring c. wells, approximately 10-15 feet east and south of the burial area. d. Analyze soil samples from depths of 4' and immediately above the groundwater table for PAHs, DRO, and PCBs. Collect one groundwater sample from each monitoring well for analysis of PCBs and VOCs.
4.	PCBs from formerly used hydraulic oils have reportedly absorbed into the concrete walls of the oil collection and sump system under the scalper/re-heat oven conveyors. Historically, used oil that resided in the sump for extended periods (greater than one year) would have PCB concentrations exceeding 50 ppm. The sump was pressured washed in 2000. Since 2000, the facility has implemented a plan to remove used oil from the sump every six months. The used oil has reportedly not been analyzed for PCBs since 2000, prior to transport off-site. Remnant hydraulic oil contaminated with PCBs may also exist in other locations within the older portions of the buildings.	a. Use an oil-water interface probe to evaluate the potential for oil collection in existing groundwater monitoring wells b. located immediately surrounding Areas A and B of the building (MW-06.18, MW-06.12, MW-03.01). Install three groundwater monitoring wells, approximately 5-10 feet from the building walls, as follows: - North of the building (Area A), near c. the groundwater restriction area and the hot mill exhaust stain d. - East of the building (Area B) - South of the building (Area B), near the truck bay Analyze soil samples from depths of 4' and immediately above the groundwater table for PAHs, DRO, and PCBs. Collect one groundwater sample from each new and existing monitoring well for analysis of PCBs and VOCs.

5.	In May 2002, a chemical washing solution (caustic) leaked under the foundation and discharged to a drainage ditch located along the north side of Plant 5-E (Activity No. 04-36-364051). Contaminated soil from the ditch was removed and placed on the ground surface to the southeast of Plant 5-E. The activity was closed by the WDNR in October 2002. The soil has not been analyzed since deposition in 2002 and has not been removed off-site.	a. Collect one composite soil sample for pH analysis.
6.	AECOM observed that large portions of the concrete floor and walls of the basement beneath the hot mill are coated with cooling oil and cooling oil sludge. If there are any cracks in the concrete, the sub-surface could be contaminated.	Evaluation of potential impacts beneath the building will be evaluated in the scope for Item 4., above.
7.	AECOM observed that portions of the concrete floor of the basement beneath the cold mill are coated with cooling oil. If there are any cracks in the concrete, the sub-surface could be contaminated.	Evaluation of potential impacts beneath the building will be evaluated in the scope for Item 4., above.
8.	AECOM observed staining on the ground beneath the air exhaust vents in the vicinity of the hot roll mill. It is likely that the staining was caused by condensation of hot mill coolant vapor and may also contain metals that may have vaporized during the hot milling process. The stained area was approximately 5 feet by 12 feet and 0.5 inches deep and had stressed the grass (i.e., bare ground was present below the vent).	a. Analyze one soil sample from a depth of 6" for PAHs, DRO, and PCBs. Note that this soil sample will be collected from a boring outlined in Item 4., above.
9.	AECOM observed staining on the ground beneath the air exhaust vents located on the north side of Plant 2 to the far west. It is likely that the staining was caused by kerosene associated with the cold mill cooling process. The stained area was approximately 3 feet by 7 feet and had stressed the grass (i.e., bare ground was present below the vent). Mr. Hetland indicated that kerosene had likely been "released" to this area for over 22 years.	a. Analyze one soil sample from a depth of 6" for PAHs, DRO, and PCBs. Note that this soil sample will be collected from a boring outlined in Item 4., above.
10.	AECOM observed a clay-like sludge material approximately 30 feet west of the hot mill stains. The material covered an area of	a. Analyze one soil sample from a depth of 6" for PAHs, DRO, and PCBs.

approximately 2 feet by 2 feet.

11.	Remnants of the anodizing system remain in the basement at the south end of Plant 5-C. These tanks contained a variety of chemicals, including phosphoric acid, and were cleaned out in April 2003, but may have released chemicals to the underlying soil and groundwater prior to that date.	Evaluation of potential impacts beneath the building will be evaluated in the scope for item 2., above.
12.	A partially-flooded vault, located beneath a service elevator within the basement area of Plant 5-C, was identified in a site investigation conducted on December 14, 2005. Hydraulic oil may have been released to the subsurface.	Evaluation of potential impacts beneath the building will be evaluated in the scope for item 2., above.
13.	Antifreeze (ethylene and propylene glycol) was used in an underground pipe system to heat the truck docks located at the southwest end of Plants 5-B and 5-F. The use of this system was discontinued several years ago, but deterioration of the pipelines may have resulted in releases to the soil and groundwater in these areas.	a. Install one groundwater monitoring well, approximately 10-15 feet southeast of b. the antifreeze circulation system Analyze soil samples from depths of 4' c. and immediately above the groundwater table for ethylene glycol. Collect one groundwater sample from the monitoring well for analysis of ethylene glycol.

1.1 Subject property Location

The subject property is located at 2140 Mirro Drive in the City of Manitowoc, Manitowoc County, Wisconsin and consists of approximately 131.1 acres of land (3 parcels total) developed with approximately 575,000 square feet of manufacturing, warehousing, and office space. The subject property is located east of Mirro Drive and north of Wisconsin Central railroad tracks and is located in a semi-rural area mixed with agricultural, industrial, and residential properties, in the northwest portion of the City of Manitowoc. The location of the Subject Property is illustrated on Figure 1.

The subject property is currently owned by Koenig & Vits, Inc. who recently operated an aluminum rolling mill on a portion of the property. The rolling mill has been shut down since May 2009. A portion of the property is leased to an aluminum cookware manufacturing company (Tramontina U.S. Cookware, Inc.).

1.2 Subject property History

According to the December 2009 Phase I ESA, the subject property has historically consisted of agricultural land since at least 1873. Aluminum Goods Manufacturing Company originally developed the property in 1956 and changed its name to Mirro Aluminum Company in 1957 (Mirrow). Koenig & Vits, Inc. acquired the Mirro manufacturing facility in 2003 and closed its rolling mill operations in May 2009. The facility operated as an aluminum rolling mill during Mirro's and Kowning and Vit's operations. On-

subject property operations included press machines, painting/coating processes, paint lines, buffing processes and warehousing.

In 2006, Tramontina U.S. Cookware (Tramontina) began leasing portions of the larger building on the subject property. Tramontina manufactures aluminum cooking utensils and operates presses, porcelain, silverstone, and Teflon coating lines. Tramontina was present on-site during the Phase II ESA.

1.3 Physical Setting Information

The subject property is located in the City of Manitowoc located northeast of the intersection of Mirro Street and an existing railroad crossing at an elevation of approximately 600 feet above mean sea level. The United States Geological Survey (USGS) 7.5-minute quadrangle map was used to determine general land features in the area of the subject property, to evaluate the local topography, and to estimate shallow groundwater flow direction. The 7.5-minute topographic map of the Two Rivers, Wisconsin, quadrangle (dated 1978) shows the local area topography and surface water features in and around the subject property.

1.3.1 Subject Property Physiography

The topographic map shows the subject property as gently sloping with an approximate elevation of 610 feet above mean sea level (MSL) on the north side of the property and 600 feet above MSL on the southeast side of the property. The local area is generally sloping to the southeast towards Lake Michigan, located approximately 0.5 miles southeast of the subject property.

1.3.2 Geology

The native surficial soils in the vicinity of the subject property consist mainly of the Grandby-Oakville-Tedrow Association. The Grandby-Oakville-Tedrow Association consists of nearly level to sloping, well-drained to poorly drained soils that are dominantly sandy throughout. Specifically, the subject property is mapped as Manawa Silt Loam described as nearly level and gently sloping and somewhat poorly drained (USDA Soil Conservation Service, 1978).

Glacial till deposits found below the surficial soils in the subject property vicinity are mapped as the Valders Member of the Kewaunee Formation. The Valders Member of the Kewaunee Formation contains a pebbly and cobbly, sandy, silty till. The Valders till contains basal glacial till deposited by ice of the Lake Michigan Lobe and associated fluvial and lacustrine deposits (Mickelson, 1984). The underlying bedrock formation is dolomite. The depth to bedrock is anticipated to range between 50 and 100 feet below ground surface. (Trotta,1973).

1.3.3 Hydrogeology

Regional bedrock groundwater flow in the area is to the east toward Lake Michigan (Skinner and Borman, 1973). In general, the shallow groundwater table is usually a reflection of surface topography, with the flow direction coinciding with the general subject property topography. Groundwater at the subject property is encountered at approximately 3 to 7 feet below grade. Shallow groundwater flow in the area of the subject property is likely to the south-southeast toward Lake Michigan, based on topography and previous investigations reviewed by AECOM. Lake Michigan is located approximately 0.5 miles southeast of the subject property.

2.0 Investigative Scope of Services

2.1 Objective

The purpose of the Focused Phase II ESA investigation was to address the RECs identified in AECOM's December 2009 Phase I ESA report and to evaluate the subsurface conditions in the areas of potential concern. The subsurface investigation was conducted to assess potential impacts to the subject property as part of a potential property transaction.

2.2 Field Activities

A site-specific Health and Safety Plan (in accordance with the Occupational Safety and Health Administration, OSHA 29 CFR 1910) was prepared for the field activities. AECOM reviewed the Health and Safety Plan with all field personnel prior to commencing the field activities. Diggers Hotline was contacted to locate public utilities.

2.2.1 Soil Borings and Groundwater Monitoring Well Installation

On January 4 and 5, 2009, six soil borings (ACM MW-3.1, ACM MW-3.2, ACM MW-4.1, ACM MW-4.2, ACM MW-4.3 and ACM MW-13.1) were advanced on the property, using an all terrain vehicle (ATV) mounted drilling rig. One hand auger (soil boring 9.1) and one composite soil sample were also collected. The boring locations are depicted on Figure 2. The six soil boring, hand auger sample and composite sample were advanced in the vicinity of the areas of concern identified AECOM's December 2009 Phase I ESA report. These areas were identified as follows:

- Area 3 – Suspect PCB Mound (ACM MW-3.1 and 3.2)
- Area 4 - Hot Mill exhaust stain (ACM MW-4.1)
- Area 4 - East side of building (ACM MW-4.2)
- Area 4 - South side of building near truck bay (ACM MW-4.3)
- Area 5 - Composite soil sample from soil stockpile (caustic wash solution spill – composite soil sample)
- Area 9 - Shallow soil sample from below exhaust vent (Soil Boring 9.1 - hand auger sample)
- Area 10 Shallow soil sample from clay-sludge west of Hot Mill stain area (Soil Boring 10.1 – hand auger sample)
- Area 13 - Dock 26 abandoned underground heating system (ACM MW-13.1)

The six soil borings were converted into groundwater monitoring wells in accordance with the WAC Ch. NR 141. The wells were installed to depths of approximately 13.5 feet below grade using 2-inch diameter, Schedule 40 PVC slotted well screen and riser. Soil boring logs are included in Appendix A. Soil boring/groundwater monitoring locations are depicted in Figure 2.

The monitoring wells were developed in accordance with the WAC Ch. NR 141. The purpose of development is to remove residual materials remaining in the wells after installation, and to establish the natural hydraulic flow conditions of the formations that may have been disturbed by the well construction. Each well was purged to remove as much sediment as possible and facilitate a hydraulic connection with the surrounding aquifer. The well construction and development forms are included in Appendix B.

Soil and groundwater samples were collected from the newly installed borings/monitoring wells. Two to three soil samples were collected from each soil boring including a surface sample (0-0.5 feet), one soil sample within the top four feet of the ground surface (direct contact evaluation) and one soil sample from the apparent soil/water table interface.

The existing groundwater monitoring wells were redeveloped by pumping dry several times and allowed to recover prior to collection of groundwater samples.

2.2.2 Magnetic Locator Survey

AECOM used a Chicago Steel Tape (CST) Magna-Trak 100 metal locator to conduct a survey of the reported suspect PCB moved area located northeast of the building. AECOM traversed the suspect drum burial area in approximate 5 foot spacings across the mound area.

2.2.3 Interface Probe Well Survey

AECOM used a Herron H-OIL interface probe to detect the presence of floating or sinking (heavy oils) in four existing monitoring wells (MW-03.03, MW-03.01, MW-06.18 and MW-06.12).

2.3 Sampling and Analysis

2.3.1 Soil

Soil samples collected from each boring were divided for field screening, laboratory analysis, and in-field classification (soil types, moisture, and staining or odors, if any). The portion of each soil sample collected for field-screening was screened for volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with a 10.6 electron volt (eV) electrodeless discharge lamp, calibrated using 100 parts per million (ppm) isobutylene in air span gas.

One to three soil samples were collected from each boring for laboratory analysis. Soil samples were collected from the ground surface (0-0.5 feet),the interval exhibiting the highest concentration (based on PID screening) and/or from immediately above the saturated zone (to assess the potential for groundwater risk). The borings were advanced to depths of approximately 13.5 feet below grade. Copies of the boring logs are included in Appendix A.

Selected soil samples were placed in laboratory-provided containers and submitted to Pace Analytical, a Wisconsin-certified laboratory, for the chemical analysis of polycyclic aromatic hydrocarbons (PAHs, SW-846 Method 8310), diesel-range organics (DRO, Wisconsin Modified Method) and polychlorinated

biphenyls (PCBs, SW-846 Method 8082) (refer to table in Section 1.0). All samples were transferred to the laboratory under standard chain of custody control. Copies of all laboratory analytical reports are included in Appendix C.

2.3.2 Groundwater

Groundwater samples were collected from the six newly installed groundwater monitoring wells (ACM MW-3.1, ACM MW-3.2, ACM MW-4.1, ACM MW-4.2, ACM MW-4.3 and ACM MW-13.1) and from four existing wells installed by others (MW-03.03, MW-03.01, MW-06.18 and MW-06.12).

Ten groundwater samples were collected during this event. The groundwater samples were collected using a peristaltic pump and disposable tubing (low-flow sampling techniques) and were submitted to Pace Analytical, a Wisconsin-certified laboratory for the chemical analysis of VOCs by Method 8260 and PCBs by Method 8082. For quality control purposes, one trip blank sample was analyzed for VOCs, in accordance with the Wisconsin Administrative Code (WAC) Ch. NR 716. No equipment blanks were collected, as only dedicated sampling equipment was utilized for sample collection. All samples were transferred to the laboratory under standard chain of custody control. Copies of laboratory analytical reports are included in Appendix C.

3.0 Investigation Results

3.1.1 Field Observations

Generally, the soil observed during the field investigation consisted of silty clay fill over silty clay and silt to a maximum depth of approximately 13.5 feet below grade (borings termini). Saturated soils were encountered at depths of approximately 4 to 6 feet below grade. Visual or olfactory evidence of contamination (outside of the stained soil areas) was not noted during sample collection or classification. Elevated PID readings were not recorded during field activities.

3.1.2 Analytical Results

3.1.2.1 Soil

The soil analytical results are summarized in Table 1. The concentrations of the constituent of concerns (COCs) detected in the soil samples were compared to the Residual Contaminant Levels (RCLs) listed in the Wisconsin Administrative Code (WAC) NR Ch. 720. RCLs not listed in the WAC NR Ch. 720 were calculated using the United States Environmental Protection Agency (USEPA) Soil Screening Level (SSL) Guidance (with the industrial Wisconsin default values) for the direct contact and the soil to groundwater pathways. The subject property is currently zoned for industrial use.

Area 3 - Based on the laboratory results, soil analytical results from the suspect buried drum area (Area 3) indicate concentrations of DRO at two surface sample locations in that area above laboratory detection limits but generally less than 2.1 mg/kg. PAHs were not detected above laboratory detection limits with the exception of chrysene reported at an estimated concentration of 1.4 ug/kg. There were no detections of PCBs above laboratory detection limits.

Area 4 - Surface soil staining in the area of the Hot Mill exhaust stain (Area 4.1) reported concentrations of DRO at 5,270 mg/kg which exceeds the 250 mg/kg soil to groundwater pathway RCL. Seven PAH compounds were detected above laboratory detection limits but flagged by the laboratory (J flag) as being above the method detection limit and below the reporting limit. Two PCB aroclors were detected above laboratory detection limits including Aroclor 1248 (639 ug/kg) and Aroclor 1254 (1,300 ug/kg).

Deeper soil samples collected from Area 4.1 show a reduction in DRO concentration (33 mg/kg) and PCB concentrations (175 ug/kg and 115 ug/kg, respectively) DRO, PAHs and DRO were not detected in a soil sample collected from the apparent soil/water table interface (ACM MW 4.1, 4-6').

Soil samples collected from the surface and soil/water interface from MW 4.2 show similar results to MW 4.1 in that low concentrations of PCBs, DRO and PAHs were detected in the surface soils but no laboratory detections were present in the deeper, soil/groundwater interface soil sample analyzed.

There were no detections of PCBs, DRO or PAHs reported in the soil samples collected from MW 4.3.

Area 9 – One shallow hand auger collected from an area of surface staining reported concentrations of DRO at 54,800 mg/kg. Three PAH compounds were detected at estimated concentrations above

laboratory detection limits. Only phenanthrene, with a reported concentration of 7,210 ug/kg exceeded it's respective soil to groundwater pathway RCL (1,800 ug/kg). One PCB aroclor (Aroclor 1248) was detected above laboratory detection limits (1,260 ug/kg).

Area 10 – Based on observations made during field activities, it was determined that the clay-like sludge observed during the Phase I ESA site reconnaissance was actually bentonite from a past soil boring. As such this material was not sampled as part of this Phase II ESA.

Area 13 – Two soil samples were collected from the surface soil (0-0.5') and the apparent soil/water table interface and analyzed for ethylene glycol. Ethylene glycol was not detected above laboratory detection limits.

Soil Stockpile – One composite soil sample was collected from three sub-soil samples collected from the soil stockpile generated from a cleanup of a caustic spill. The results of the composite sampling indicate the pH of the soil is 7.4.

Copies of the laboratory analytical reports are provided in Appendix C.

3.1.2.2 Groundwater

The groundwater analytical results are summarized in Table 2. Following receipt of laboratory analytical results, the parameter detected in the groundwater samples were compared to the WAC Ch. NR 140 preventive action limits (PAL) and enforcement standards (ES) criteria.

Area 3 Groundwater Wells – PCBs or VOCs were not detected in the groundwater samples collected from ACM MW 3.1 and 3.1 with the exception methylene chloride reported at 0.68 and 0.48 ug/l, respectively. Each sample was "J" flagged by the laboratory as being above the method detection limit and below the reporting limit. Additionally, methylene chloride is a common laboratory artifact.

Area 4 Groundwater Wells – PCBs or VOCs were not detected in the groundwater samples collected from ACM 4.1 and 4.3. Trichloroethene was detected in ACM MW 4.2 above laboratory detection limits (0.75 ug/l) and was "J" flagged by the laboratory. The detection of trichloroethene slightly exceeds the PAL, but is less than the ES. Cis-1,2-dichloroethene was detected in ACM MW 4.2 at a concentration of 5.1 ug/l which is below the PAL of 7.0 ug/l.

As part of Area 4, AECOM collected groundwater samples from four existing monitoring wells (MW-03.03, MW-03.01, MW-06.18 and MW-06.12) present on the subject property. PCBs and VOCs were not detected in existing well MW 03.01. 1-1, dichloroethane was detected in MW 06.18 just above the laboratory detection limit at a reported concentration of 0.78 ug/l ("J" flagged by the laboratory) and is well below the PAL of 85 ug/l.

PCBs were not detected in existing well MW-06.18, however, two VOC compounds (ethylbenzene and xylene) were detected above laboratory detection limits at concentrations of 1.5 and 3.0 ug/l, respectively. The reported concentrations are well below each of the compounds respective PAL.

Area 13 – One groundwater was sampled from ACM MW13.1 and an existing groundwater sample from existing well (MW-South) located south of Plant 5C building. Ethylene glycol was not detected at either well location.

3.1.3 Magnetic Locator Survey

The results of the magnetic locator survey indicate metallic anomalies in an area north of the northeast corner of the Rolling Mill building that corresponds with an area of mounded soil. The metallic anomalies were found in an estimated area of 40 feet by 60 feet.

3.1.4 Interface Probe Well Survey

Existing wells (MW-03.03, MW-03.01, MW-06.18 and MW-06.12) present on the subject property were measured for the presence of floating or heavy oil with an interface probe. Free product was not detected in the existing monitoring wells. In addition, free product was not observed during the installation or sampling of the wells installed as part of the current scope of work.

4.0 Conclusions and Recommendations

Area 3: Low concentrations of diesel range organics (DRO) and one polynuclear aromatic hydrocarbon (PAH) compound were detected in one of four soil samples each. These detections were well below NR 700 WAC Residual Contaminant Levels (RCLs). Groundwater was not impacted above NR140 WAC state groundwater standards (Enforcement Standards or Preventive Action Limits). Based on this data, it does not appear that the suspect PCB-mound area has adversely affected groundwater or soil outside the footprint of the mound. The magnetometer survey identified a metallic anomaly of approximately 40 feet by 60 feet, which coincided with the "mound" observed in the suspect area. Test pits would be required to confirm the source of the anomalies. The contents of the buried materials are unknown.

Area 4: Soil impacted with PCBs was detected in the shallow soil (locations 4.1 and 4.2) near the northeast corner of the building. The deeper soil samples at 4-6 feet below ground surface (bgs) were not impacted indicating the staining was related to a surface release. The soil sample at 4.3 had very low detections of DRO below RCLs. Groundwater was not impacted above state groundwater standards. A limited soil excavation and post-excavation confirmation soil sampling would be required in the two areas around 4.1 and 4.2.

Area 5: The pH in the soil stockpile was 7.4 and no further action is recommended.

Area 9: A shallow soil sample at the northwest corner of the building had elevated concentrations of DRO and PCBs. A limited soil excavation and post-excavation confirmation soil sampling would be required in the two stained areas around 9.1. Groundwater was not impacted above state groundwater standards.

Area 10: Based on visual observations it was apparent that this residual material was bentonite from former soil boring operations. No further action is recommended.

Area 13: Based on analytical test results, ethylene glycol was not detected in soil or groundwater in the two areas tested. Therefore, no further action is recommended.

5.0 General Qualifications

The purpose of this environmental assessment is to investigate possible soil and/or groundwater impacts, and related liabilities, associated with past and current property uses. The extent of the investigation is limited to the area and location described in this report.

The scope of the investigation described in this report was selected based upon available information regarding site operations, conditions, and test data. This information was obtained, in part, from the client, outside agents and third parties, including utility locations and record drawings. AECOM has assumed this information to be correct and complete. This report reflects the conditions, operations, and practices as observed on the date of the site investigation. Changes or modifications to these conditions, operations, and practices made after the site investigation have the potential to affect the conclusions of this report, and should therefore be brought to the attention of AECOM when they become known by the client.

AECOM has prepared this report at the request of its client. AECOM assumes responsibility for the accuracy of the report's content, subject to what is stated elsewhere in this section. AECOM recommends the report be used only for the purpose intended by the client and AECOM, as stated in the report. AECOM disclaims responsibility for the application or interpretation of the results by anyone other than the client. Reliance on the contents of this report by anyone other than the client, without the prior expressed written consent of AECOM, is done at the sole risk of the user.

The results, conclusions, and recommendations presented in this report are based on the data obtained from a limited number of soil boring locations and at the soil sample and groundwater sample locations as indicated in this report. Variations in conditions can occur between these boring, soil sample, and groundwater sample locations. In addition, seasonal and annual fluctuations of the groundwater table, which may influence the distribution of contaminants, can occur. Actual groundwater flow rates may vary from those estimated in this report based on soil conditions.

All opinions of cost are based on estimates from our experience with similar projects, subject to the limitations and accuracy identified in this report. Actual costs may vary depending on site conditions, weather, monitoring requirements, and changes in regulatory standards.

This report has been prepared in conformance with the care and skill ordinarily exercised by reputable members of the professional engineering community practicing under similar conditions at the same time in the same or similar locality. No other warranty of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended.

Compliance with the recommendations and/or suggestions contained in this report in no way assures the elimination of hazards or the fulfillment of a property owner's obligation under local, state, or federal laws or any modifications or changes thereto. It is the responsibility of the property owner to notify authorities of any conditions that are in violation of current regulatory standards, laws or regulations. Your decision regarding the regulatory agency you notify and the selection of the cleanup program you enter, if appropriate, may affect your ability to seek cost recovery from responsible parties or to benefit from the proceeds of insurance policies. We recommend you contact legal counsel to obtain professional legal advice related to reporting.

Tables

Table 1 – Soil Sampling

Table 2 – Groundwater Sampling

Figures

Figure 1 – Site Location Map

Figure 2 – Boring Location Diagram

TABLE 1
LABORATORY ANALYTICAL RESULTS FOR SOIL SAMPLING
KOENING VITTS
AECOM PROJECT NO. 60142656

AECOM

				Area 3				Area 4							Area 9	Area 13		Caustic Spill
	Generic RCLs			ACM MW 3.1	ACM MW 3.1	ACM MW 3.2	ACM MW 3.2	ACM MW 4.1	ACM MW 4.1	ACM MW 4.1	ACM MW 4.2	ACM MW 4.2	ACM MW 4.3	ACM MW 4.3	ACM SB 9.1	ACM MW 13.1	ACM MW 13.1	Stockpile Comp
	Direct Contact Pathway		Groundwater	2-4'	4-6'	2-4'	6-8'	0-0.5'	2-4'	4-6'	0-2'	4-6'	0-2'	4-6'	0-0.5'	2-4'	6-8'	
Parameters	Non-Industrial	Industrial	Pathway	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	1/6/2010	
PID	–	–	–	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DRO (mg/kg)	–	–	100/250	2.1	<1.3	<1.1	1.2J	**5,270**	33	<0.98	5.9	<0.91	3.3	6.9	**54,800**	–	–	–
pH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7.4
PAHs (µg/kg)																		
Acenaphthene	900,000	60,000,000	38,000	<5.3	<6.3	<5.2	<5.1	<92.1	<5.1	<5.2	<5.1	<5.2	<5.1	<5.7	<840	–	–	–
Acenaphthylene	18,000	350,000	700	<4.0	<4.8	<4.0	<3.9	<70.6	<3.9	<4.0	<3.9	<4.0	<3.9	<4.4	<644	–	–	–
Anthracene	5,000,000	300,000,000	3,000,000	<2.5	<2.9	<2.4	<2.4	<42.9	<2.4	<2.4	<2.4	<2.4	<2.4	<2.7	1,290J	–	–	–
Benzo(a)anthracene	88	3,900	17,000	<1.4	<1.6	<1.4	<1.3	29.4J	<1.3	<1.4	3.2J	<1.4	<1.3	<1.5	<220	–	–	–
Benzo(a)pyrene	8.8	390	48,000	<2.3	<2.7	<2.2	<2.2	<39.5	<2.2	<2.2	3.9J	<2.2	<2.2	<2.5	<360	–	–	–
Benzo(b)fluoranthene	88	3,900	350,000	<3.7	<4.5	<3.7	<3.6	<65.4	<3.6	<3.7	4.6J	<3.7	<3.6	<4.1	<597	–	–	–
Benzo(g,h,I)perylene	1,800	39,000	6,800,000	<1.2	<1.4	<1.1	<1.1	24.4J	<1.1	<1.1	4.7J	<1.2	<1.1	<1.3	<184	–	–	–
Benzo(k)fluoranthene	880	39,000	870,000	<2.7	<3.2	<2.6	<2.6	66.8J	<2.6	<2.6	3.7J	<2.6	<2.6	<2.9	<424	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	<1.3	<1.5	<1.2	<1.2	22.0J	<1.2	<1.2	3.0J	<1.3	<1.2	<1.4	<201	–	–	–
Chrysene	8,800	390,000	37,000	<1.5	<1.8	<1.5	1.4J	84.2J	<1.4	<1.5	5.1J	<1.5	<1.4	<1.6	<235	–	–	–
Dibenzo(a,h)anthracene	8.8	390	38,000	<1.3	<1.6	<1.3	<1.3	<22.9	<1.3	<1.3	<1.3	<1.3	<1.4	<1.4	<209	–	–	–
Fluoranthene	600,000	40,000,000	500,000	<2.5	<3.0	<2.5	<2.4	120J	<2.4	<2.5	9.2J	<2.5	<2.5	<2.8	<404	–	–	–
Fluorene	600,000	40,000,000	100,000	<5.3	<6.3	<5.2	<5.1	<92.0	<5.1	<5.2	<5.1	<5.2	<5.1	<5.7	1,670J	–	–	–
1-Methylnaphthalene	–	–	–	<3.0	<3.5	<2.9	<2.9	<51.9	<2.8	<2.9	<2.9	<3.0	<2.9	<3.2	<473	–	–	–
2-Methylnaphthalene	–	–	–	<4.0	<4.8	<3.9	<3.8	<69.5	<3.8	<3.9	<3.9	<4.0	<3.8	<4.3	<634	–	–	–
Naphthalene	20,000	110,000	400	<10.4	<12.5	<10.3	<10.1	<182	<10	<10.3	<10.1	<10.4	<10.1	<11.3	<1,660	–	–	–
Phenanthrene	18,000	390,000	1,800	<6.7	<8.0	<6.6	<6.4	<116	<6.4	<6.6	<6.5	<6.6	<6.4	<7.2	7210[C]	–	–	–
Pyrene	500,000	30,000,000	8,700,000	<1.5	<1.7	<1.4	<1.4	66.8J	<1.4	<1.4	6.4J	<1.5	<1.4	<1.6	<233	–	–	–
PCBs (µg/kg)																		
Aroclor 1016	–	–	–	<29.7	<35.5	<29.3	<28.6	<130	<28.5	<29.3	<28.8	<29.6	<28.7	<32.2	<148	–	–	–
Aroclor 1221	–	–	–	<29.7	<35.5	<29.3	<28.6	<130	<28.5	<29.3	<28.8	<29.6	<28.7	<32.2	<148	–	–	–
Aroclor 1232	–	–	–	<29.7	<35.5	<29.3	<28.6	<130	<28.5	<29.3	<28.8	<29.6	<28.7	<32.2	<148	–	–	–
Aroclor 1242	–	–	–	<29.7	<35.5	<29.3	<28.6	<130	<28.5	<29.3	<28.8	<29.6	<28.7	<32.2	<148	–	–	–
Aroclor 1248	–	–	–	<29.7	<35.5	<29.3	<28.6	639	175	<29.3	81.3J	<29.6	<28.7	<32.2	1,260	–	–	–
Aroclor 1254	–	–	–	<29.7	<35.5	<29.3	<28.6	1,300	115J	<29.3	54.7J	<29.6	<28.7	<32.2	<148	–	–	–
Aroclor 1260	–	–	–	<29.7	<35.5	<29.3	<28.6	<130	<28.5	<29.3	<28.8	<29.6	<28.7	<32.2	<148	–	–	–
Ethylene Glycol (mg/kg)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	<13.1	<12.7	–

Notes:

DRO = Diesel Range Organics

PAHs = Polynuclear Aromatic Hydrocarbons

PCBs = PolyChlorinated Biphenyls

[A] Parameter exceeds NR 720 Generic RCL for Non-Industrial Direct Contact.

[B] Parameter exceeds NR 720 Generic RCL for Industrial Direct Contact.

[C] Parameter exceeds NR 720 Generic RCL for Groundwater Pathway.

[D] Generic RCL is established under NR 720 or NR 746

[E] Generic RCLs provided in *Soil Cleanup Levels for PAHs Interim Guidance*, WDNR RR-5 1997

– No Generic RCL established.

Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in *Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site* WDNR PUB-RR-682 on May 12, 2006

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

TABLE 2
LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLING
KOENING VITTS
AECOM PROJECT NO. 60142656

AECOM

			Area 3		Aera 4			Existing Wells			Ethylene Glycol Areas	
	NR 140 Standards		MW 3.1	MW 3.2	MW 4.1	MW 4.2	MW 4.3	MW 03.01	MW 06.12	MW 06.18	MW 13.1	MW South
Parameters	**ES**	*PAL*	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010	1/7/2010
VOCs (µg/L)												
Benzene	**5**	*0.5*	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	--	--
Bromobenzene	--	--	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	--	--
Bromochloromethane	--	--	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	--	--
Bromodichloromethane	**0.6**	*0.06*	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	--	--
Bromoform	**4.4**	*0.44*	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	--	--
Bromomethane	**10**	*1*	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91	--	--
sec-Butylbenzene	--	--	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	--	--
tert-Butylbenzene	--	--	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	--	--
n-Butylbenzene	--	--	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	--	--
Carbon tetrachloride	**5**	*0.5*	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	--	--
Chloroform	**6**	*0.6*	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	--	--
Chlorobenzene	**100**	*20*	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	--	--
Chloroethane	**400**	*80*	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	--	--
Chloromethane	**3**	*0.3*	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	--	--
2-Chlorotoluene	--	--	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	--	--
4-Chlorotoluene	--	--	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	--	--
1,2-Dibromo-3-chloropropane	**0.2**	*0.02*	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	--	--
1,2-Dibromoethane	**0.05**	*0.005*	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	--	--
Dibromochloromethane	--	--	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	--	--
Dibromomethane	--	--	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	--	--
1,3-Dichlorobenzene	**1250**	*125*	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87	--	--
1,4-Dichlorobenzene	**75**	*15*	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	--	--
1,2-Dichloroethane	**5**	*0.5*	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	--	--
1,2-Dichlorobenzene	**600**	*60*	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	--	--
1,1-Dichloroethene	**7**	*0.7*	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	--	--
cis-1,2-Dichloroethene	**70**	*7*	<0.83	<0.83	<0.83	**5.1**	<0.83	<0.83	<0.83	<0.83	--	--
Dichlorodifluoromethane	**1000**	*200*	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	--	--
trans-1,2-Dichloroethene	**100**	*20*	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	--	--
1,2-Dichloropropane	**5**	*0.5*	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	--	--
1,1-Dichloroethane	**850**	*85*	<0.75	<0.75	<0.75	<0.57	<0.75	<0.75	**0.78J**	<0.75	--	--
1,3-Dichloropropane	--	--	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	--	--
2,2-Dichloropropane	--	--	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	--	--
1,1-Dichloropropene	--	--	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	--	--
cis-1,3-Dichloropropene [4]	**0.2**	*0.02*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--
trans-1,3-Dichloropropene [4]	**0.2**	*0.02*	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	--	--
Diisopropyl ether	--	--	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	--	--
Ethylbenzene	**700**	*140*	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	**1.5**	--	--
Hexachlorobutadiene	--	--	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	--	--
Isopropylbenzene	--	--	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	--	--
p-Isopropyltoluene	--	--	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	--	--
Methylene chloride	**5**	*0.5*	**0.68J**	**0.48J**	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	--	--
Methyl-tert-butyl-ether	**60**	*12*	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	--	--
Naphthalene	**100**	*10*	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	--	--
n-Propylbenzene	--	--	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	--	--
Styrene	**100**	*10*	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	--	--
1,1,2,2-Tetrachloroethane	**0.2**	*0.02*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--
1,1,1,2-Tetrachloroethane	**70**	*7*	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	--	--
Tetrachloroethene	**5**	*0.5*	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	--	--
Toluene	**1000**	*200*	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	--	--
Trichlorofluoromethane	--	--	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79	--	--
1,2,3-Trichlorobenzene	--	--	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	--	--
1,2,4-Trichlorobenzene	**70**	*14*	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	--	--
1,1,1-Trichloroethane	**200**	*40*	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	--	--
1,1,2-Trichloroethane	**5**	*0.5*	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	--	--
1,2,4-Trimethylbenzene[1]	**480**	*96*	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	--	--
Trichloroethene	**5**	*0.5*	<0.48	<0.48	<0.48	**0.75J**	<0.48	<0.48	<0.48	<0.48	--	--
1,2,3-Trichloropropane	**60**	*12*	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	--	--
1,3,5-Trimethylbenzene[1]	**480**	*96*	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	--	--
Vinyl chloride	**0.2**	*0.02*	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	--	--
Xylenes, -m & -p[2]	**10,000**	*1000*	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	3	--	--
Xylene, -o[2]	**10,000**	*1000*	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	--	--
PCBs												
Aroclor 1016[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1221[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1232[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1242[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1248[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1254[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Aroclor 1260[3]	**0.03**	*0.003*	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	--	--
Ethylene Glycol	--	--	--	--	--	--	--	--	--	--	<10.0	<10.0

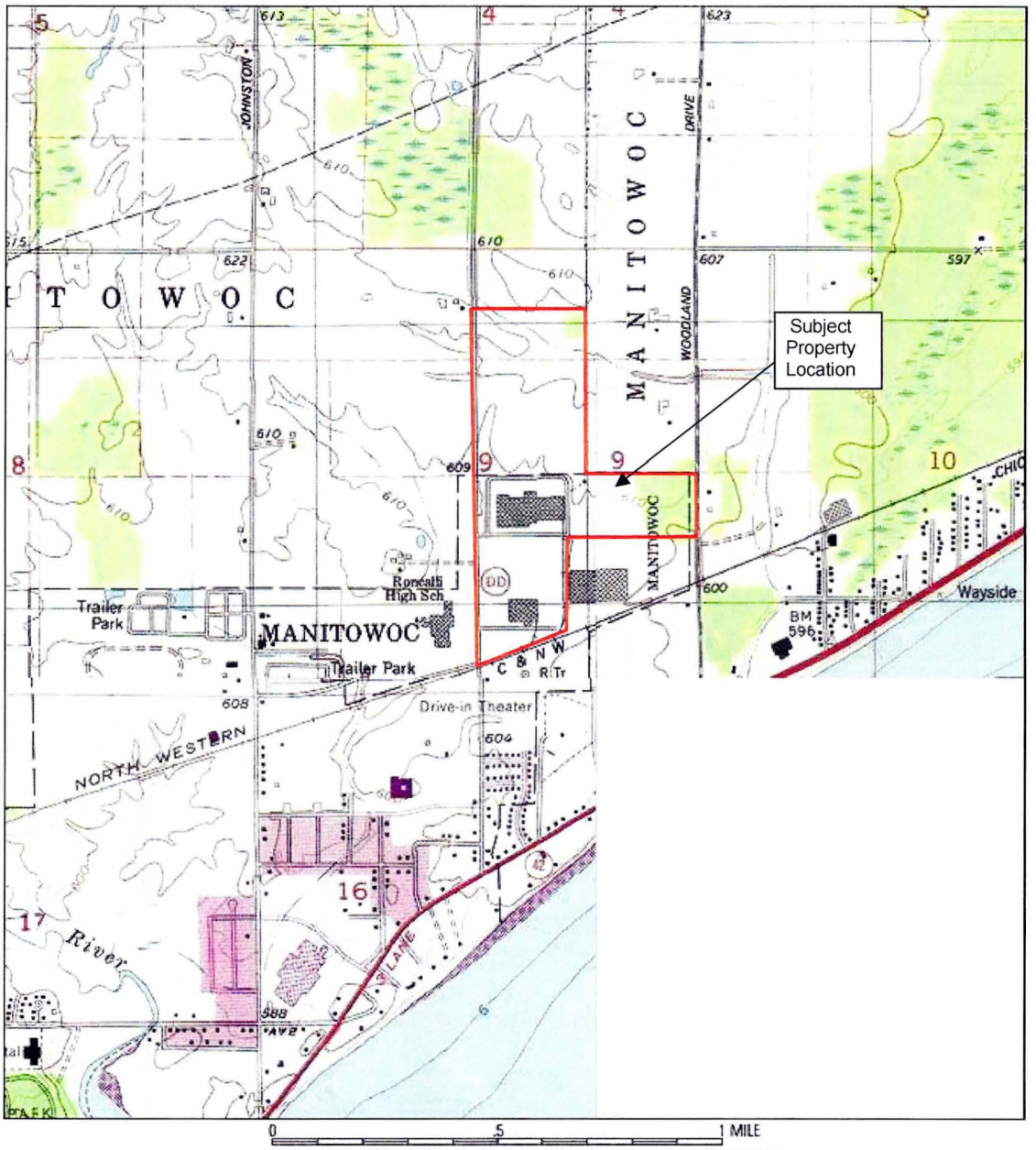
Notes:
VOCs = Volatile Organic Compounds
PCBs = PolyChlorinated Biphenyls
[1] Standards are for 1,2,4- and 1,3,5-Trimethylbenzene combined.
[2] Standards are for Total Xylenes (-m, -p and -o).
[3] Standards are for Total PCBs.
[4] Standards are for cis and trans 1,3-dichloropropene.
Bold value = NR 140 Enforcement Standard Exceedance
Italic value = NR 140 WAC Preventive Action Limit Exceedance
-- No NR 140 ES or PAL established.
NA = Not analyzed
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Figures

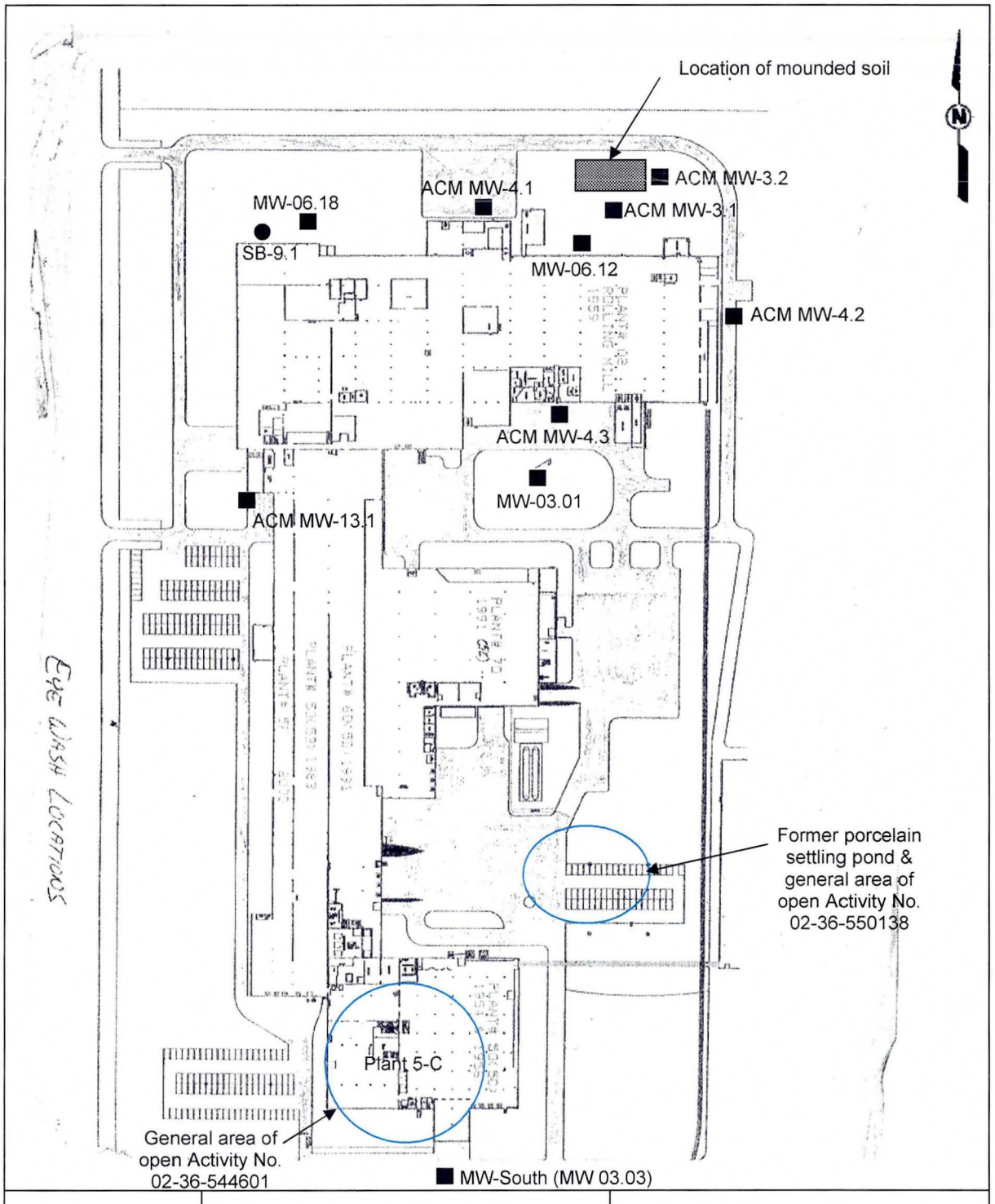
Figure 1 – Site Location Map

Figure 2 – Boring Location Diagram

Figure 1 - Site Location Map



AECOM	Former Koenig & Vits Property 2015 Mirro Drive Manitowoc, WI	Site Location Map Figure 1



AECOM	**Former Koening and Vits Facility** **Manitowoc, WI**	Boring Location Diagram **Figure 2**

K:\projects\13140 - Godfrey & Kahn\60142656_Godfrey&Kahn_Skana\08_ProjectDocuments\PhaseII\Figure 2.docx

January 2010

Appendix A

Boring Logs

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW3.1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/5/2010	1/5/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT763		ACM-MW3.1	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 6	23	1.5	Fill: Base course fine to coarse sand and gravel				<0.1						
2 SS	24 15	9	3.0	Brown silty clay (CL) - trace fine to medium sand - moist	CL			<0.1						
3 SS	24 24	12	4.5					<0.1						
4 SS	24 24	13	6.0	Brown silty clay (CL) - fine sand - moist	CL			<0.1						
5 SS	24 24	33	7.5	Gray silt (SM) - some sand - moist to saturated	SM			<0.1						
6 SS	24 24	26	9.0	Gray silt (SM) - some fine sand - moist	SM			<0.1						
			10.5											
			12.0											
			13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoring well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W Lake Park Drive, Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW3.2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/5/2010	1/5/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT765		ACM-MW3.2	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 12	9	1.5	Fill: Fine to coarse silty sandy gravel - silty clay in tip				<0.1						
2 SS	24 24	13	3.0	Brown silty clay (CL) - trace fine to medium sand - moist	CL			<0.1						
3 SS	24 24	15	4.5					<0.1						
4 SS	24 24	31	6.0	Brown to gray silty clay (CL) - some fine to medium sand seams - moist	CL			<0.1						
5 SS	24 24	46	7.5	Gray silt (SM) - some clay - trace fine to meduim sand - moist	SM			<0.1						
6 SS	24 18	30	9.0					<0.1						
			10.5											
			12.0											
			13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoring well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW4.1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/4/2010	1/4/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT764		ACM-MW4.1	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 12	56	1.5	Fill: Brown gravel - surface stained				<0.1						
2 SS	24 12	7	3.0	Fill: Brown silty clayey sandy gravel mix - moist				<0.1						
3 SS	24 18	9	4.5	Reddish-brown silty clay - trace fine to medium sand - moist	CL			<0.1						
4 SS	24 18	12	6.0					<0.1						
5 SS	24 12	8	7.5	Gray silty clay (CL) - trace fine to medium sand - moist - soft	CL			<0.1						
6 SS	24 18	10	9.0	Gray silt (SM) - some fine to medium sand - wet	SM			<0.1						
			10.5											
			12.0											
			13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoring well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW4.2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/4/2010	1/4/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT762		ACM-MW4.2	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 8	15	1.5	Topsoil Fill: Brown silty clay - trace fine to medium sand - trace fine metal shavings				<0.1						
2 SS	24 18	9	3.0					<0.1						
3 SS	24 24	16	4.5	Brown silty clay (CL) - trace fine to medium sand - occassional sand seams - moist to saturated	CL			<0.1						
4 SS	24 24	16	6.0 7.5	Reddish-brown silty clay (CL) - trace fine to medium sand - moist	CL			<0.1						
5 SS	24 24	17	9.0	Reddish-brown to gray silty sandy clay (CL) - fine to medium sand	CL			<0.1						
6 SS	24 18	38	10.5 12.0	Gray sandy silt (SM) - moist to saturated	SM			<0.1						
			13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoring well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 414-359-3030
	AECOM 11425 W Lake Park Drive, Milwaukee, WI 53224	Fax: 414-359-0822

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW4.3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/4/2010	1/4/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT761		ACM-MW4.3	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 18	10	1.5	Topsoil Fill: Brown clayey silt (SM) - trace fine to medium sand - little gravel - moist	SM			<0.1						
2 SS	24 24	21	3.0	Fill: Brown clayey silt (SM) - trace fine to medium sand - moist to saturated	SM			<0.1						
3 SS	24 24	6	4.5	Brown silty clay (CL) - trace fine to medium sand - moist to saturated	CL			<0.1						
4 SS	24 24	17	6.0	Brown to reddish-brown silty clay (CL) - trace fine to medium sand - moist - soft	CL			<0.1						
5 SS	24 24	12	7.5 9.0					<0.1						
6 SS	24 24	10	10.5	Brown silt (SM) - some clay - moist to saturated	SM			<0.1						
			12.0 13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoring well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Skana Aluminuim		ACM-MW13.1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
AECOM - J. Denneau AECOM Project No. 60142656	1/5/2010	1/5/2010	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
VT766		ACM-MW13.1	Feet MSL	Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N,R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Manitowoc	36	Manitowoc

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 12	6	1.5	Topsoil				<0.1						
				Fill: Brown silty clay - trace fine to medium sand - moist										
2 SS	24 18	12	3.0	Brown silty clay (CL) - trace fine to medium sand - moist				<0.1						
3 SS	24 18	10	4.5		CL			<0.1						
4 SS	24 18	16	6.0					<0.1						
			7.5											
5 SS	24 24	17	9.0	Brown silt (SM) - some clay - moist				<0.1						
6 SS	24 24	14	10.5		SM			<0.1						
			12.0											
			13.5	End of Boring. Boring advanced from 0.0 feet to 13.5 feet with hollow-stem auger. Installed monitoirng well at 13.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

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Appendix B

Well Construction and Development Forms

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: ACM-MW3.1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT763 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/05/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐E ☐W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL
B. Well casing, top elevation ____ ft. MSL
C. Land surface elevation ____ ft. MSL
D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

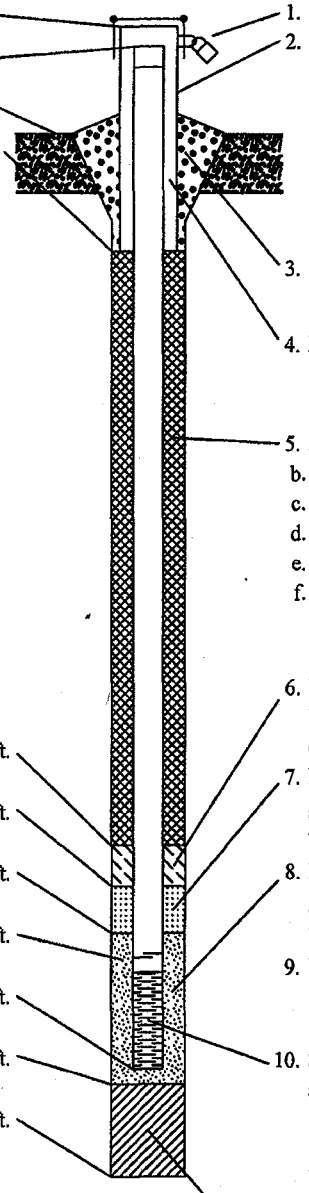
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐ ____

15. Drilling fluid used: Water ☐ 0 2 / Air ☐ 0 1 / Drilling Mud ☐ 0 3 / None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 2.0 ft.
F. Fine sand, top ____ ft. MSL or 2.0 ft.
G. Filter pack, top ____ ft. MSL or 2.0 ft.
H. Screen joint, top ____ ft. MSL or 2.5 ft.
I. Well bottom ____ ft. MSL or 13.0 ft.
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.
K. Borehole, bottom ____ ft. MSL or 13.5 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 4.0 ft.
c. Material: Steel ☐ 0 4 / Other ☒ ____
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Other ☒ ____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____% Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☒ 3 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 3 2
c. ____ Other ☐ ____
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐ ____
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐ ____
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐ ____

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Signature	Firm	
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Green Bay Certification IDs

California Certification #: 09268CA
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11887
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
1241 Bellevue Street Green Bay, WI 54302

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4027159001	ACM MW 3.2 (2-4')	Solid	01/05/10 10:23	01/06/10 12:40
4027159002	ACM MW 3.2 (6-8')	Solid	01/05/10 10:40	01/06/10 12:40
4027159003	ACM MW 13.1 (2-4')	Solid	01/05/10 10:00	01/06/10 12:40
4027159004	ACM MW 13.1 (6-8')	Solid	01/05/10 13:15	01/06/10 12:40
4027159005	STOCKPILE COMP	Solid	01/05/10 14:15	01/06/10 12:40
4027159006	ACM-MW-4.3 (0-2')	Solid	01/04/10 10:30	01/06/10 12:40
4027159007	ACM-MW-4.3 (4-6')	Solid	01/04/10 10:40	01/06/10 12:40
4027159008	ACM-MW-4.2 (0-2')	Solid	01/04/10 12:30	01/06/10 12:40
4027159009	ACM-MW-4.2 (4-6')	Solid	01/04/10 12:50	01/06/10 12:40
4027159010	ACM SB 9.1 (0-0.5')	Solid	01/04/10 14:15	01/06/10 12:40
4027159011	ACM MW 4.1 (0-0.5')	Solid	01/04/10 14:55	01/06/10 12:40
4027159012	ACM MW 4.1 (2-4')	Solid	01/04/10 15:00	01/06/10 12:40
4027159013	ACM MW 4.1 (4-6')	Solid	01/04/10 15:17	01/06/10 12:40
4027159014	ACM MW 3.1 (2-4')	Solid	01/05/10 08:35	01/06/10 12:40
4027159015	ACM MW 3.1 (4-6')	Solid	01/05/10 08:45	01/06/10 12:40

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4027159001	ACM MW 3.2 (2-4')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159002	ACM MW 3.2 (6-8')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159005	STOCKPILE COMP	ASTM D2974-87	AME	1	PASI-G
		EPA 9040	MY	1	PASI-G
4027159006	ACM-MW-4.3 (0-2')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159007	ACM-MW-4.3 (4-6')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159008	ACM-MW-4.2 (0-2')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159009	ACM-MW-4.2 (4-6')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159010	ACM SB 9.1 (0-0.5')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159011	ACM MW 4.1 (0-0.5')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159012	ACM MW 4.1 (2-4')	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	AME	1	PASI-G
4027159013	**ACM MW 4.1 (4-6')**	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159014	**ACM MW 3.1 (2-4')**	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G
4027159015	**ACM MW 3.1 (4-6')**	EPA 8082	CAH	10	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	AME	1	PASI-G

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 3.2 (2-4') **Lab ID: 4027159001** Collected: 01/05/10 10:23 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	12674-11-2	
PCB-1221 (Aroclor 1221)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	11104-28-2	
PCB-1232 (Aroclor 1232)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	11141-16-5	
PCB-1242 (Aroclor 1242)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	53469-21-9	
PCB-1248 (Aroclor 1248)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	12672-29-6	
PCB-1254 (Aroclor 1254)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	11097-69-1	
PCB-1260 (Aroclor 1260)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	11096-82-5	
PCB, Total	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 14:07	1336-36-3	
Tetrachloro-m-xylene (S)	77	%	50-137		1	01/07/10 09:52	01/08/10 14:07	877-09-8	
Decachlorobiphenyl (S)	82	%	56-130		1	01/07/10 09:52	01/08/10 14:07	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**<1.1**	mg/kg	2.2	1.1	1	01/07/10 12:42	01/08/10 12:31		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.2**	ug/kg	20.7	5.2	1	01/07/10 11:38	01/07/10 18:54	83-32-9	
Acenaphthylene	**<4.0**	ug/kg	20.7	4.0	1	01/07/10 11:38	01/07/10 18:54	208-96-8	
Anthracene	**<2.4**	ug/kg	20.7	2.4	1	01/07/10 11:38	01/07/10 18:54	120-12-7	
Benzo(a)anthracene	**<1.4**	ug/kg	20.7	1.4	1	01/07/10 11:38	01/07/10 18:54	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.7	2.2	1	01/07/10 11:38	01/07/10 18:54	50-32-8	
Benzo(b)fluoranthene	**<3.7**	ug/kg	20.7	3.7	1	01/07/10 11:38	01/07/10 18:54	205-99-2	
Benzo(g,h,i)perylene	**<1.1**	ug/kg	20.7	1.1	1	01/07/10 11:38	01/07/10 18:54	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.7	2.6	1	01/07/10 11:38	01/07/10 18:54	207-08-9	
Chrysene	**<1.5**	ug/kg	20.7	1.5	1	01/07/10 11:38	01/07/10 18:54	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.7	1.3	1	01/07/10 11:38	01/07/10 18:54	53-70-3	
Fluoranthene	**<2.5**	ug/kg	20.7	2.5	1	01/07/10 11:38	01/07/10 18:54	206-44-0	
Fluorene	**<5.2**	ug/kg	20.7	5.2	1	01/07/10 11:38	01/07/10 18:54	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/kg	20.7	1.2	1	01/07/10 11:38	01/07/10 18:54	193-39-5	
1-Methylnaphthalene	**<2.9**	ug/kg	20.7	2.9	1	01/07/10 11:38	01/07/10 18:54	90-12-0	
2-Methylnaphthalene	**<3.9**	ug/kg	20.7	3.9	1	01/07/10 11:38	01/07/10 18:54	91-57-6	
Naphthalene	**<10.3**	ug/kg	20.7	10.3	1	01/07/10 11:38	01/07/10 18:54	91-20-3	
Phenanthrene	**<6.6**	ug/kg	20.7	6.6	1	01/07/10 11:38	01/07/10 18:54	85-01-8	
Pyrene	**<1.4**	ug/kg	20.7	1.4	1	01/07/10 11:38	01/07/10 18:54	129-00-0	
2-Fluorobiphenyl (S)	73	%	38-130		1	01/07/10 11:38	01/07/10 18:54	321-60-8	
Terphenyl-d14 (S)	76	%	41-130		1	01/07/10 11:38	01/07/10 18:54	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.5**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 3.2 (6-8') **Lab ID: 4027159002** Collected: 01/05/10 10:40 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	12674-11-2	
PCB-1221 (Aroclor 1221)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	11104-28-2	
PCB-1232 (Aroclor 1232)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	11141-16-5	
PCB-1242 (Aroclor 1242)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	53469-21-9	
PCB-1248 (Aroclor 1248)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	12672-29-6	
PCB-1254 (Aroclor 1254)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	11097-69-1	
PCB-1260 (Aroclor 1260)	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	11096-82-5	
PCB, Total	**<28.6**	ug/kg	121	28.6	1	01/07/10 09:52	01/08/10 14:25	1336-36-3	
Tetrachloro-m-xylene (S)	79	%	50-137		1	01/07/10 09:52	01/08/10 14:25	877-09-8	
Decachlorobiphenyl (S)	85	%	56-130		1	01/07/10 09:52	01/08/10 14:25	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**1.2J**	mg/kg	2.1	1.0	1	01/07/10 12:42	01/08/10 12:40		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.1**	ug/kg	20.2	5.1	1	01/07/10 11:38	01/07/10 19:11	83-32-9	
Acenaphthylene	**<3.9**	ug/kg	20.2	3.9	1	01/07/10 11:38	01/07/10 19:11	208-96-8	
Anthracene	**<2.4**	ug/kg	20.2	2.4	1	01/07/10 11:38	01/07/10 19:11	120-12-7	
Benzo(a)anthracene	**<1.3**	ug/kg	20.2	1.3	1	01/07/10 11:38	01/07/10 19:11	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.2	2.2	1	01/07/10 11:38	01/07/10 19:11	50-32-8	
Benzo(b)fluoranthene	**<3.6**	ug/kg	20.2	3.6	1	01/07/10 11:38	01/07/10 19:11	205-99-2	
Benzo(g,h,i)perylene	**<1.1**	ug/kg	20.2	1.1	1	01/07/10 11:38	01/07/10 19:11	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.2	2.6	1	01/07/10 11:38	01/07/10 19:11	207-08-9	
Chrysene	**1.4J**	ug/kg	20.2	1.4	1	01/07/10 11:38	01/07/10 19:11	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.2	1.3	1	01/07/10 11:38	01/07/10 19:11	53-70-3	
Fluoranthene	**<2.4**	ug/kg	20.2	2.4	1	01/07/10 11:38	01/07/10 19:11	206-44-0	
Fluorene	**<5.1**	ug/kg	20.2	5.1	1	01/07/10 11:38	01/07/10 19:11	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/kg	20.2	1.2	1	01/07/10 11:38	01/07/10 19:11	193-39-5	
1-Methylnaphthalene	**<2.9**	ug/kg	20.2	2.9	1	01/07/10 11:38	01/07/10 19:11	90-12-0	
2-Methylnaphthalene	**<3.8**	ug/kg	20.2	3.8	1	01/07/10 11:38	01/07/10 19:11	91-57-6	
Naphthalene	**<10.1**	ug/kg	20.2	10.1	1	01/07/10 11:38	01/07/10 19:11	91-20-3	
Phenanthrene	**<6.4**	ug/kg	20.2	6.4	1	01/07/10 11:38	01/07/10 19:11	85-01-8	
Pyrene	**<1.4**	ug/kg	20.2	1.4	1	01/07/10 11:38	01/07/10 19:11	129-00-0	
2-Fluorobiphenyl (S)	81	%	38-130		1	01/07/10 11:38	01/07/10 19:11	321-60-8	
Terphenyl-d14 (S)	76	%	41-130		1	01/07/10 11:38	01/07/10 19:11	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.5**	%	0.10	0.10	1		01/07/10 07:41		

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: ACM-MW3.2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT765 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/05/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____ T. ____ N, R. ____ ☐E ☐W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL
B. Well casing, top elevation ____ ft. MSL
C. Land surface elevation ____ ft. MSL
D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

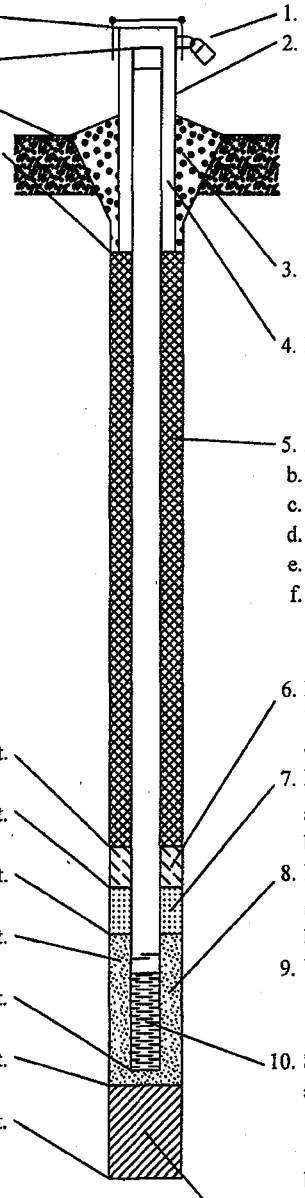
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐ ____

15. Drilling fluid used: Water ☐ 0 2 / Air ☐ 0 1 / Drilling Mud ☐ 0 3 / None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 2.0 ft.
F. Fine sand, top ____ ft. MSL or 2.0 ft.
G. Filter pack, top ____ ft. MSL or 2.0 ft.
H. Screen joint, top ____ ft. MSL or 2.5 ft.
I. Well bottom ____ ft. MSL or 13.0 ft.
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.
K. Borehole, bottom ____ ft. MSL or 13.5 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 4.0 ft.
c. Material: Steel ☐ 0 4 / Other ☒ ____
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Other ☒ ____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☒ 3 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 3 2
c. ____ Other ☐ ____
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐ ____
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐ ____
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: ACM-MW4.1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT764 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/04/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐E ☐W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL
B. Well casing, top elevation ____ ft. MSL
C. Land surface elevation ____ ft. MSL
D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / ____ Other ☐

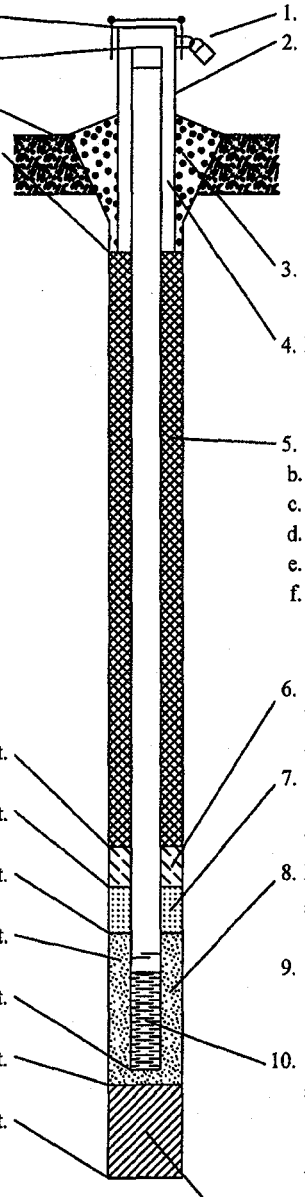
15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 2.0 ft.
F. Fine sand, top ____ ft. MSL or 2.0 ft.
G. Filter pack, top ____ ft. MSL or 2.0 ft.
H. Screen joint, top ____ ft. MSL or 2.5 ft.
I. Well bottom ____ ft. MSL or 13.0 ft.
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.
K. Borehole, bottom ____ ft. MSL or 13.5 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☐ 04 / ____ Other ☒
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / ____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / ____ Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / ____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11 / Continuous slot ☐ 01 / ____ Other ☐
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14 / ____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature | Firm: AECOM, 11425 W Lake Park Drive Milwaukee, WI 53224 | Tel: 414-359-3030 Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: ACM-MW4.2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT762 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/04/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐E ☐W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL
B. Well casing, top elevation ____ ft. MSL
C. Land surface elevation ____ ft. MSL
D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

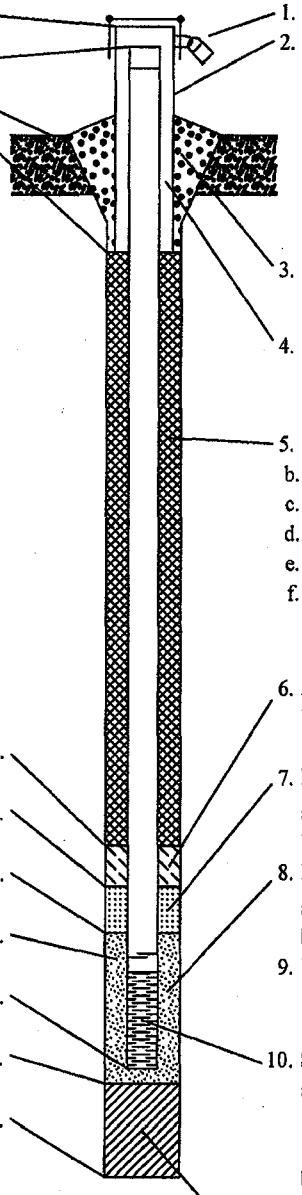
13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / ____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):
____



E. Bentonite seal, top ____ ft. MSL or 2.0 ft.
F. Fine sand, top ____ ft. MSL or 2.0 ft.
G. Filter pack, top ____ ft. MSL or 2.0 ft.
H. Screen joint, top ____ ft. MSL or 2.5 ft.
I. Well bottom ____ ft. MSL or 13.0 ft.
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.
K. Borehole, bottom ____ ft. MSL or 13.5 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☐ 04 / ____ Other ☒
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / ____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / ____ Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____% Bentonite . . . Bentonite-cement grout ☐ 50
e. ____Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / ____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11 / Continuous slot ☐ 01 / ____ Other ☐
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14 / ____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 414-359-3030
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: ACM-MW4.3
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT761 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/04/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐E ☐W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL
B. Well casing, top elevation ____ ft. MSL
C. Land surface elevation ____ ft. MSL
D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

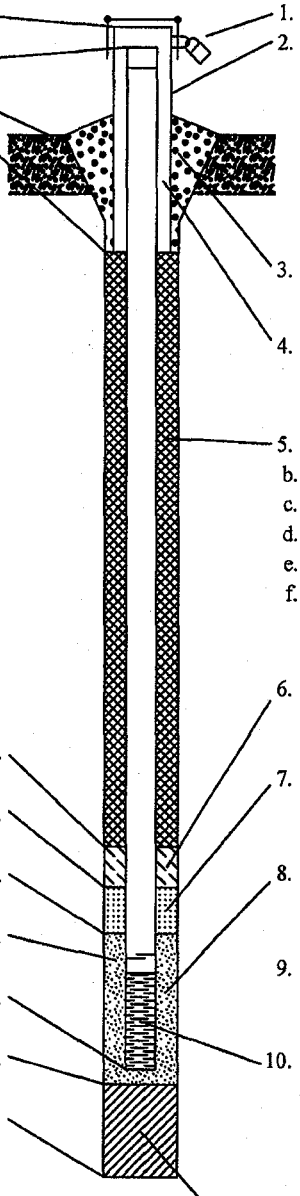
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / ____ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 2.0 ft.
F. Fine sand, top ____ ft. MSL or 2.0 ft.
G. Filter pack, top ____ ft. MSL or 2.0 ft.
H. Screen joint, top ____ ft. MSL or 2.5 ft.
I. Well bottom ____ ft. MSL or 13.0 ft.
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.
K. Borehole, bottom ____ ft. MSL or 13.5 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 4.0 ft.
c. Material: Steel ☐ 0 4 / ____ Other ☒
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / ____ Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / ____ Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☒ 3 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 3 2
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / ____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / ____ Other ☐
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / ____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm: AECOM
11425 W Lake Park Drive Milwaukee, WI 53224
Tel: 414-359-3030
Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Skana Aluminuim	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: ACM-MW13.1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VT766 / DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 01/05/2010
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐ E ☐ W	Well Installed By: (Person's Name and Firm): John Denneau / AECOM
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis, if required):
____

E. Bentonite seal, top ____ ft. MSL or 2.0 ft.

F. Fine sand, top ____ ft. MSL or 2.0 ft.

G. Filter pack, top ____ ft. MSL or 2.0 ft.

H. Screen joint, top ____ ft. MSL or 2.5 ft.

I. Well bottom ____ ft. MSL or 13.0 ft.

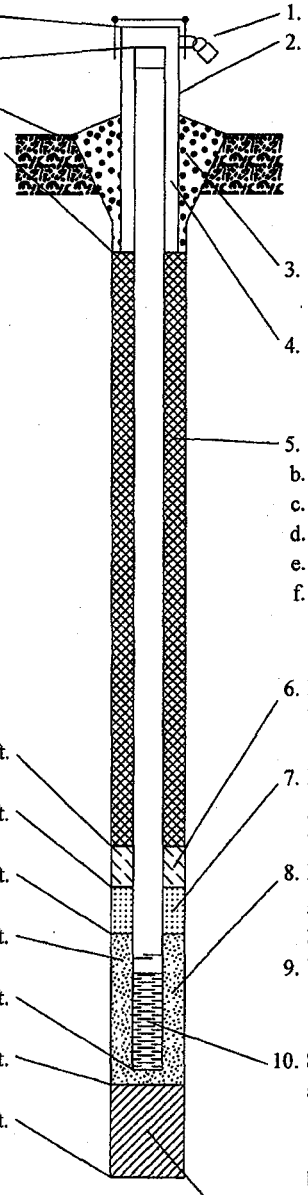
J. Filter pack, bottom ____ ft. MSL or 13.5 ft.

K. Borehole, bottom ____ ft. MSL or 13.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.37 in.

N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☐ 04
____ Other ☒
d. Additional protection? ☒ Yes ☐ No
If yes, describe: PVC cap
3. Surface seal: Bentonite ☒ 30
Concrete ☐ 01
____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☐ 30
____ Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger 40/70
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Badger 45/55
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11
Continuous slot ☐ 01
____ Other ☐
b. Manufacturer Hole plug
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14
____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW3.1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT763	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 0 min.

4. Depth of well (from top of well casing): 15.4 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 5.0 gal.

7. Volume of water removed from well: 11.0 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	6.59 ft.	7.20 ft.
Date b.	1/6/2010	1/6/2010
Time c.	09:10 ☒ a.m. ☐ p.m.	01:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.0 inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
9:10 to 9:22 - removed 5 gallons, bailed dry, clear
9:30 to 9:34 - removed 2 gallons, bailed dry, clear
10:40 to 10:45 - removed 2 gallons, bailed dry, clear
1:00 to 1:02 - removed 2 gallons, bailed dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW3.2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT765	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 0 min.

4. Depth of well (from top of well casing): 15.4 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 5.0 gal.

7. Volume of water removed from well: 12.0 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	5.10 ft.	5.84 ft.
Date	b.	1/6/2010	1/6/2010
Time	c.	09:00 ☒ a.m. ☐ p.m.	01:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		0.0 inches	inches
13. Water clarity		Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
9:00 to 9:07 - removed 5 gallons, bailed dry, clear
9:24 to 9:28 - removed 2.5 gallons, bailed dry, clear
10:30 to 10:36 - removed 2.5 gallons, bailed dry, clear
1:04 to 1:06 - removed 2 gallons, bailed dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW4.1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT764	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well 0 min.

4. Depth of well (from top of well casing) 13.1 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 5.0 gal.

7. Volume of water removed from well 0.0 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	12.65 ft.	12.22 ft.
Date b.	1/5/2010	1/6/2010
Time c.	☐ a.m. 04:10 ☒ p.m.	☐ a.m. 08:10 ☒ p.m.
12. Sediment in well bottom	0.0 inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
1-5-10 - 4:10 pm bailed dry - removed 0.5 gallons, clear
1-6-10 - 8:00 am removed, 0.5 gallons, dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW4.2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT762	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 0 min.

4. Depth of well (from top of well casing): 13.0 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 5.0 gal.

7. Volume of water removed from well: 0.0 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	3.30 ft.	3.30 ft.
Date	b.	1/5/2010	1/6/2010
Time	c.	03:50 ☒ p.m. ☐ a.m.	08:10 ☐ p.m. ☒ a.m.
12. Sediment in well bottom		0.0 inches	inches

13. Water clarity

Before Development	After Development
Clear ☒ 10	Clear ☐ 20
Turbid ☐ 15	Turbid ☐ 25
(Describe)	(Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
3:50 to 4:00 - removed 5 gallons, bailed dry, clear
1/5/2010 - 4:30 pm - removed 3 gallons, bailed dry, clear
1/6/2010 - 8:00 am - removed 3 gallons, bailed dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW4.3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT761	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 0 min.

4. Depth of well (from top of well casing): 15.2 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 2.0 gal.

7. Volume of water removed from well: 8.0 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	9.51 ft.	10.44 ft.
Date	b.	1/5/2010	1/6/2010
Time	c.	03:30 ☒ p.m. ☐ a.m.	08:00 ☐ p.m. ☒ a.m.
12. Sediment in well bottom		0.0 inches	inches
13. Water clarity		Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
1/5/10 - 3:30 pm - bailed dry twice, removed 4 gallons, clear
1/5/10 - 4:24 pm - removed 2 gallons, bailed dry, clear
1/6/10 - 7:45 am - removed 2 gallons, bailed dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Skana Aluminuim	Manitowoc	ACM-MW13.1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	36	VT766	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 0 min.

4. Depth of well (from top of well casing): 13.0 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 5.0 gal.

7. Volume of water removed from well: 13.0 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	2.72 ft.	3.44 ft.
Date	b.	1/6/2010	1/6/2010
Time	c.	08:30 ☒ a.m. ☐ p.m.	01:15 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		0.0 inches	inches
13. Water clarity		Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Person's Name and Firm
David Markelz
AECOM

17. Additional comments on development:
8:30 to 8:40 - removed 7 gallons, bailed dry after 5, clear
9:47 to 9:52 - removed 2 gallons, bailed dry, clear
10:10 to 10:12 - removed 2 gallons, bailed dry, clear
1:15 to 1:17 - removed 2 gallons, bailed dry, clear

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: David Markelz

Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes.

Appendix C

Laboratory Analytical Reports

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 13, 2010

Dave Markelz
AECOM, Inc.- MILWAUKEE
11425 W. Lake Park Drive
Milwaukee, WI 53224

RE: Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Dear Dave Markelz:
Enclosed are the analytical results for sample(s) received by the laboratory on January 06, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: STOCKPILE COMP **Lab ID: 4027159005** Collected: 01/05/10 14:15 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**25.2**	%	0.10	0.10	1		01/07/10 07:41		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		01/07/10 11:45		H1

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM-MW-4.3 (0-2') **Lab ID: 4027159006** Collected: 01/04/10 10:30 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	12674-11-2	
PCB-1221 (Aroclor 1221)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	11104-28-2	
PCB-1232 (Aroclor 1232)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	11141-16-5	
PCB-1242 (Aroclor 1242)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	53469-21-9	
PCB-1248 (Aroclor 1248)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	12672-29-6	
PCB-1254 (Aroclor 1254)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	11097-69-1	
PCB-1260 (Aroclor 1260)	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	11096-82-5	
PCB, Total	**<28.7**	ug/kg	122	28.7	1	01/07/10 09:52	01/08/10 14:42	1336-36-3	
Tetrachloro-m-xylene (S)	80	%	50-137		1	01/07/10 09:52	01/08/10 14:42	877-09-8	
Decachlorobiphenyl (S)	86	%	56-130		1	01/07/10 09:52	01/08/10 14:42	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**3.3**	mg/kg	2.0	0.97	1	01/07/10 12:42	01/08/10 12:49		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.1**	ug/kg	20.3	5.1	1	01/07/10 11:38	01/07/10 14:23	83-32-9	
[illegible]cenaphthylene	**<3.9**	ug/kg	20.3	3.9	1	01/07/10 11:38	01/07/10 14:23	208-96-8	
[illegible]nthracene	**<2.4**	ug/kg	20.3	2.4	1	01/07/10 11:38	01/07/10 14:23	120-12-7	
Benzo(a)anthracene	**<1.3**	ug/kg	20.3	1.3	1	01/07/10 11:38	01/07/10 14:23	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.3	2.2	1	01/07/10 11:38	01/07/10 14:23	50-32-8	
Benzo(b)fluoranthene	**<3.6**	ug/kg	20.3	3.6	1	01/07/10 11:38	01/07/10 14:23	205-99-2	
Benzo(g,h,i)perylene	**<1.1**	ug/kg	20.3	1.1	1	01/07/10 11:38	01/07/10 14:23	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.3	2.6	1	01/07/10 11:38	01/07/10 14:23	207-08-9	
Chrysene	**<1.4**	ug/kg	20.3	1.4	1	01/07/10 11:38	01/07/10 14:23	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.3	1.3	1	01/07/10 11:38	01/07/10 14:23	53-70-3	
Fluoranthene	**<2.5**	ug/kg	20.3	2.5	1	01/07/10 11:38	01/07/10 14:23	206-44-0	
Fluorene	**<5.1**	ug/kg	20.3	5.1	1	01/07/10 11:38	01/07/10 14:23	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/kg	20.3	1.2	1	01/07/10 11:38	01/07/10 14:23	193-39-5	
1-Methylnaphthalene	**<2.9**	ug/kg	20.3	2.9	1	01/07/10 11:38	01/07/10 14:23	90-12-0	
2-Methylnaphthalene	**<3.8**	ug/kg	20.3	3.8	1	01/07/10 11:38	01/07/10 14:23	91-57-6	
Naphthalene	**<10.1**	ug/kg	20.3	10.1	1	01/07/10 11:38	01/07/10 14:23	91-20-3	
Phenanthrene	**<6.4**	ug/kg	20.3	6.4	1	01/07/10 11:38	01/07/10 14:23	85-01-8	
Pyrene	**<1.4**	ug/kg	20.3	1.4	1	01/07/10 11:38	01/07/10 14:23	129-00-0	
2-Fluorobiphenyl (S)	84	%	38-130		1	01/07/10 11:38	01/07/10 14:23	321-60-8	
Terphenyl-d14 (S)	87	%	41-130		1	01/07/10 11:38	01/07/10 14:23	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.7**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM-MW-4.3 (4-6') **Lab ID: 4027159007** Collected: 01/04/10 10:40 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	12674-11-2	
PCB-1221 (Aroclor 1221)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	11104-28-2	
PCB-1232 (Aroclor 1232)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	11141-16-5	
PCB-1242 (Aroclor 1242)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	53469-21-9	
PCB-1248 (Aroclor 1248)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	12672-29-6	
PCB-1254 (Aroclor 1254)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	11097-69-1	
PCB-1260 (Aroclor 1260)	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	11096-82-5	
PCB, Total	**<32.2**	ug/kg	136	32.2	1	01/07/10 09:52	01/08/10 15:00	1336-36-3	
Tetrachloro-m-xylene (S)	85	%	50-137		1	01/07/10 09:52	01/08/10 15:00	877-09-8	
Decachlorobiphenyl (S)	92	%	56-130		1	01/07/10 09:52	01/08/10 15:00	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**6.9**	mg/kg	2.0	1.0	1	01/07/10 12:42	01/08/10 12:58		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.7**	ug/kg	22.7	5.7	1	01/07/10 11:38	01/07/10 19:28	83-32-9	
[redacted]cenaphthylene	**<4.4**	ug/kg	22.7	4.4	1	01/07/10 11:38	01/07/10 19:28	208-96-8	
[redacted]nthracene	**<2.7**	ug/kg	22.7	2.7	1	01/07/10 11:38	01/07/10 19:28	120-12-7	
Benzo(a)anthracene	**<1.5**	ug/kg	22.7	1.5	1	01/07/10 11:38	01/07/10 19:28	56-55-3	
Benzo(a)pyrene	**<2.5**	ug/kg	22.7	2.5	1	01/07/10 11:38	01/07/10 19:28	50-32-8	
Benzo(b)fluoranthene	**<4.1**	ug/kg	22.7	4.1	1	01/07/10 11:38	01/07/10 19:28	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/kg	22.7	1.3	1	01/07/10 11:38	01/07/10 19:28	191-24-2	
Benzo(k)fluoranthene	**<2.9**	ug/kg	22.7	2.9	1	01/07/10 11:38	01/07/10 19:28	207-08-9	
Chrysene	**<1.6**	ug/kg	22.7	1.6	1	01/07/10 11:38	01/07/10 19:28	218-01-9	
Dibenz(a,h)anthracene	**<1.4**	ug/kg	22.7	1.4	1	01/07/10 11:38	01/07/10 19:28	53-70-3	
Fluoranthene	**<2.8**	ug/kg	22.7	2.8	1	01/07/10 11:38	01/07/10 19:28	206-44-0	
Fluorene	**<5.7**	ug/kg	22.7	5.7	1	01/07/10 11:38	01/07/10 19:28	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/kg	22.7	1.4	1	01/07/10 11:38	01/07/10 19:28	193-39-5	
1-Methylnaphthalene	**<3.2**	ug/kg	22.7	3.2	1	01/07/10 11:38	01/07/10 19:28	90-12-0	
2-Methylnaphthalene	**<4.3**	ug/kg	22.7	4.3	1	01/07/10 11:38	01/07/10 19:28	91-57-6	
Naphthalene	**<11.3**	ug/kg	22.7	11.3	1	01/07/10 11:38	01/07/10 19:28	91-20-3	
Phenanthrene	**<7.2**	ug/kg	22.7	7.2	1	01/07/10 11:38	01/07/10 19:28	85-01-8	
Pyrene	**<1.6**	ug/kg	22.7	1.6	1	01/07/10 11:38	01/07/10 19:28	129-00-0	
2-Fluorobiphenyl (S)	68	%	38-130		1	01/07/10 11:38	01/07/10 19:28	321-60-8	
Terphenyl-d14 (S)	63	%	41-130		1	01/07/10 11:38	01/07/10 19:28	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.7**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM-MW-4.2 (0-2') **Lab ID: 4027159008** Collected: 01/04/10 12:30 Received: 01/06/10 12:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<28.8**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	12674-11-2	
PCB-1221 (Aroclor 1221)	**<28.8**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	11104-28-2	
PCB-1232 (Aroclor 1232)	**<28.8**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	11141-16-5	
PCB-1242 (Aroclor 1242)	**<28.8**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	53469-21-9	
PCB-1248 (Aroclor 1248)	**81.3J**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	12672-29-6	
PCB-1254 (Aroclor 1254)	**54.7J**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	11097-69-1	
PCB-1260 (Aroclor 1260)	**<28.8**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	11096-82-5	
PCB, Total	**136**	ug/kg	122	28.8	1	01/07/10 09:52	01/08/10 15:17	1336-36-3	
Tetrachloro-m-xylene (S)	81	%	50-137		1	01/07/10 09:52	01/08/10 15:17	877-09-8	
Decachlorobiphenyl (S)	83	%	56-130		1	01/07/10 09:52	01/08/10 15:17	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**5.9**	mg/kg	2.0	0.98	1	01/07/10 12:42	01/08/10 13:07		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.1**	ug/kg	20.3	5.1	1	01/11/10 13:43	01/12/10 12:16	83-32-9	
[redacted]cenaphthylene	**<3.9**	ug/kg	20.3	3.9	1	01/11/10 13:43	01/12/10 12:16	208-96-8	
[redacted]nthracene	**<2.4**	ug/kg	20.3	2.4	1	01/11/10 13:43	01/12/10 12:16	120-12-7	
Benzo(a)anthracene	**3.2J**	ug/kg	20.3	1.3	1	01/11/10 13:43	01/12/10 12:16	56-55-3	
Benzo(a)pyrene	**3.9J**	ug/kg	20.3	2.2	1	01/11/10 13:43	01/12/10 12:16	50-32-8	
Benzo(b)fluoranthene	**4.6J**	ug/kg	20.3	3.6	1	01/11/10 13:43	01/12/10 12:16	205-99-2	
Benzo(g,h,i)perylene	**4.7J**	ug/kg	20.3	1.1	1	01/11/10 13:43	01/12/10 12:16	191-24-2	
Benzo(k)fluoranthene	**3.7J**	ug/kg	20.3	2.6	1	01/11/10 13:43	01/12/10 12:16	207-08-9	
Chrysene	**5.1J**	ug/kg	20.3	1.4	1	01/11/10 13:43	01/12/10 12:16	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.3	1.3	1	01/11/10 13:43	01/12/10 12:16	53-70-3	
Fluoranthene	**9.2J**	ug/kg	20.3	2.5	1	01/11/10 13:43	01/12/10 12:16	206-44-0	
Fluorene	**<5.1**	ug/kg	20.3	5.1	1	01/11/10 13:43	01/12/10 12:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**3.0J**	ug/kg	20.3	1.2	1	01/11/10 13:43	01/12/10 12:16	193-39-5	
1-Methylnaphthalene	**<2.9**	ug/kg	20.3	2.9	1	01/11/10 13:43	01/12/10 12:16	90-12-0	
2-Methylnaphthalene	**<3.9**	ug/kg	20.3	3.9	1	01/11/10 13:43	01/12/10 12:16	91-57-6	
Naphthalene	**<10.1**	ug/kg	20.3	10.1	1	01/11/10 13:43	01/12/10 12:16	91-20-3	
Phenanthrene	**<6.5**	ug/kg	20.3	6.5	1	01/11/10 13:43	01/12/10 12:16	85-01-8	
Pyrene	**6.4J**	ug/kg	20.3	1.4	1	01/11/10 13:43	01/12/10 12:16	129-00-0	
2-Fluorobiphenyl (S)	67	%	38-130		1	01/11/10 13:43	01/12/10 12:16	321-60-8	
Terphenyl-d14 (S)	64	%	41-130		1	01/11/10 13:43	01/12/10 12:16	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.9**	%	0.10	0.10	1		01/07/10 07:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM-MW-4.2 (4-6') **Lab ID: 4027159009** Collected: 01/04/10 12:50 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	12674-11-2	
PCB-1221 (Aroclor 1221)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	11104-28-2	
PCB-1232 (Aroclor 1232)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	11141-16-5	
PCB-1242 (Aroclor 1242)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	53469-21-9	
PCB-1248 (Aroclor 1248)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	12672-29-6	
PCB-1254 (Aroclor 1254)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	11097-69-1	
PCB-1260 (Aroclor 1260)	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	11096-82-5	
PCB, Total	**<29.6**	ug/kg	125	29.6	1	01/07/10 09:52	01/08/10 15:35	1336-36-3	
Tetrachloro-m-xylene (S)	87	%	50-137		1	01/07/10 09:52	01/08/10 15:35	877-09-8	
Decachlorobiphenyl (S)	95	%	56-130		1	01/07/10 09:52	01/08/10 15:35	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**<0.91**	mg/kg	1.8	0.91	1	01/07/10 12:42	01/08/10 13:16		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.2**	ug/kg	20.8	5.2	1	01/07/10 11:38	01/07/10 19:45	83-32-9	
cenaphthylene	**<4.0**	ug/kg	20.8	4.0	1	01/07/10 11:38	01/07/10 19:45	208-96-8	
nthracene	**<2.4**	ug/kg	20.8	2.4	1	01/07/10 11:38	01/07/10 19:45	120-12-7	
Benzo(a)anthracene	**<1.4**	ug/kg	20.8	1.4	1	01/07/10 11:38	01/07/10 19:45	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.8	2.2	1	01/07/10 11:38	01/07/10 19:45	50-32-8	
Benzo(b)fluoranthene	**<3.7**	ug/kg	20.8	3.7	1	01/07/10 11:38	01/07/10 19:45	205-99-2	
Benzo(g,h,i)perylene	**<1.2**	ug/kg	20.8	1.2	1	01/07/10 11:38	01/07/10 19:45	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.8	2.6	1	01/07/10 11:38	01/07/10 19:45	207-08-9	
Chrysene	**<1.5**	ug/kg	20.8	1.5	1	01/07/10 11:38	01/07/10 19:45	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.8	1.3	1	01/07/10 11:38	01/07/10 19:45	53-70-3	
Fluoranthene	**<2.5**	ug/kg	20.8	2.5	1	01/07/10 11:38	01/07/10 19:45	206-44-0	
Fluorene	**<5.2**	ug/kg	20.8	5.2	1	01/07/10 11:38	01/07/10 19:45	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.3**	ug/kg	20.8	1.3	1	01/07/10 11:38	01/07/10 19:45	193-39-5	
1-Methylnaphthalene	**<3.0**	ug/kg	20.8	3.0	1	01/07/10 11:38	01/07/10 19:45	90-12-0	
2-Methylnaphthalene	**<4.0**	ug/kg	20.8	4.0	1	01/07/10 11:38	01/07/10 19:45	91-57-6	
Naphthalene	**<10.4**	ug/kg	20.8	10.4	1	01/07/10 11:38	01/07/10 19:45	91-20-3	
Phenanthrene	**<6.6**	ug/kg	20.8	6.6	1	01/07/10 11:38	01/07/10 19:45	85-01-8	
Pyrene	**<1.5**	ug/kg	20.8	1.5	1	01/07/10 11:38	01/07/10 19:45	129-00-0	
2-Fluorobiphenyl (S)	73	%	38-130		1	01/07/10 11:38	01/07/10 19:45	321-60-8	
Terphenyl-d14 (S)	77	%	41-130		1	01/07/10 11:38	01/07/10 19:45	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.0**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM SB 9.1 (0-0.5') **Lab ID: 4027159010** Collected: 01/04/10 14:15 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	12674-11-2	
PCB-1221 (Aroclor 1221)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	11104-28-2	
PCB-1232 (Aroclor 1232)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	11141-16-5	
PCB-1242 (Aroclor 1242)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	53469-21-9	
PCB-1248 (Aroclor 1248)	**1260**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	12672-29-6	
PCB-1254 (Aroclor 1254)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	11097-69-1	
PCB-1260 (Aroclor 1260)	**<148**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	11096-82-5	
PCB, Total	**1260**	ug/kg	626	148	5	01/07/10 09:52	01/08/10 15:52	1336-36-3	
Tetrachloro-m-xylene (S)	58	%	50-137		5	01/07/10 09:52	01/08/10 15:52	877-09-8	
Decachlorobiphenyl (S)	72	%	56-130		5	01/07/10 09:52	01/08/10 15:52	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**54800**	mg/kg	4470	2220	500	01/07/10 12:42	01/08/10 13:25		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<840**	ug/kg	3340	840	40	01/07/10 11:38	01/08/10 09:36	83-32-9	
Acenaphthylene	**<644**	ug/kg	3340	644	40	01/07/10 11:38	01/08/10 09:36	208-96-8	
Anthracene	**1290J**	ug/kg	3340	391	40	01/07/10 11:38	01/08/10 09:36	120-12-7	
Benzo(a)anthracene	**<220**	ug/kg	3340	220	40	01/07/10 11:38	01/08/10 09:36	56-55-3	
Benzo(a)pyrene	**<360**	ug/kg	3340	360	40	01/07/10 11:38	01/08/10 09:36	50-32-8	
Benzo(b)fluoranthene	**<597**	ug/kg	3340	597	40	01/07/10 11:38	01/08/10 09:36	205-99-2	
Benzo(g,h,i)perylene	**<184**	ug/kg	3340	184	40	01/07/10 11:38	01/08/10 09:36	191-24-2	
Benzo(k)fluoranthene	**<424**	ug/kg	3340	424	40	01/07/10 11:38	01/08/10 09:36	207-08-9	
Chrysene	**<235**	ug/kg	3340	235	40	01/07/10 11:38	01/08/10 09:36	218-01-9	
Dibenz(a,h)anthracene	**<209**	ug/kg	3340	209	40	01/07/10 11:38	01/08/10 09:36	53-70-3	
Fluoranthene	**<404**	ug/kg	3340	404	40	01/07/10 11:38	01/08/10 09:36	206-44-0	
Fluorene	**1670J**	ug/kg	3340	839	40	01/07/10 11:38	01/08/10 09:36	86-73-7	
Indeno(1,2,3-cd)pyrene	**<201**	ug/kg	3340	201	40	01/07/10 11:38	01/08/10 09:36	193-39-5	
1-Methylnaphthalene	**<473**	ug/kg	3340	473	40	01/07/10 11:38	01/08/10 09:36	90-12-0	
2-Methylnaphthalene	**<634**	ug/kg	3340	634	40	01/07/10 11:38	01/08/10 09:36	91-57-6	
Naphthalene	**<1660**	ug/kg	3340	1660	40	01/07/10 11:38	01/08/10 09:36	91-20-3	
Phenanthrene	**7210**	ug/kg	3340	1060	40	01/07/10 11:38	01/08/10 09:36	85-01-8	
Pyrene	**<233**	ug/kg	3340	233	40	01/07/10 11:38	01/08/10 09:36	129-00-0	
2-Fluorobiphenyl (S)	0	%	38-130		40	01/07/10 11:38	01/08/10 09:36	321-60-8	S4
Terphenyl-d14 (S)	0	%	41-130		40	01/07/10 11:38	01/08/10 09:36	1718-51-0	S4
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.1**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 4.1 (0-0.5') **Lab ID: 4027159011** Collected: 01/04/10 14:55 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<130**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	12674-11-2	
PCB-1221 (Aroclor 1221)	**<130**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	11104-28-2	
PCB-1232 (Aroclor 1232)	**<130**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	11141-16-5	
PCB-1242 (Aroclor 1242)	**<130**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	53469-21-9	
PCB-1248 (Aroclor 1248)	**639**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	12672-29-6	
PCB-1254 (Aroclor 1254)	**1300**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	11097-69-1	
PCB-1260 (Aroclor 1260)	**<130**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	11096-82-5	
PCB, Total	**1940**	ug/kg	549	130	5	01/07/10 09:52	01/08/10 16:10	1336-36-3	
Tetrachloro-m-xylene (S)	72	%	50-137		5	01/07/10 09:52	01/08/10 16:10	877-09-8	
Decachlorobiphenyl (S)	77	%	56-130		5	01/07/10 09:52	01/08/10 16:10	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**5270**	mg/kg	380	189	100	01/07/10 12:42	01/08/10 13:34		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<92.1**	ug/kg	366	92.1	10	01/07/10 11:38	01/08/10 11:43	83-32-9	
___cenaphthylene	**<70.6**	ug/kg	366	70.6	10	01/07/10 11:38	01/08/10 11:43	208-96-8	
___nthracene	**<42.9**	ug/kg	366	42.9	10	01/07/10 11:38	01/08/10 11:43	120-12-7	
Benzo(a)anthracene	**29.4J**	ug/kg	366	24.1	10	01/07/10 11:38	01/08/10 11:43	56-55-3	
Benzo(a)pyrene	**<39.5**	ug/kg	366	39.5	10	01/07/10 11:38	01/08/10 11:43	50-32-8	
Benzo(b)fluoranthene	**<65.4**	ug/kg	366	65.4	10	01/07/10 11:38	01/08/10 11:43	205-99-2	
Benzo(g,h,i)perylene	**24.4J**	ug/kg	366	20.2	10	01/07/10 11:38	01/08/10 11:43	191-24-2	
Benzo(k)fluoranthene	**66.8J**	ug/kg	366	46.5	10	01/07/10 11:38	01/08/10 11:43	207-08-9	
Chrysene	**84.2J**	ug/kg	366	25.8	10	01/07/10 11:38	01/08/10 11:43	218-01-9	
Dibenz(a,h)anthracene	**<22.9**	ug/kg	366	22.9	10	01/07/10 11:38	01/08/10 11:43	53-70-3	
Fluoranthene	**120J**	ug/kg	366	44.3	10	01/07/10 11:38	01/08/10 11:43	206-44-0	
Fluorene	**<92.0**	ug/kg	366	92.0	10	01/07/10 11:38	01/08/10 11:43	86-73-7	
Indeno(1,2,3-cd)pyrene	**22.0J**	ug/kg	366	22.0	10	01/07/10 11:38	01/08/10 11:43	193-39-5	
1-Methylnaphthalene	**<51.9**	ug/kg	366	51.9	10	01/07/10 11:38	01/08/10 11:43	90-12-0	
2-Methylnaphthalene	**<69.5**	ug/kg	366	69.5	10	01/07/10 11:38	01/08/10 11:43	91-57-6	
Naphthalene	**<182**	ug/kg	366	182	10	01/07/10 11:38	01/08/10 11:43	91-20-3	D3
Phenanthrene	**<116**	ug/kg	366	116	10	01/07/10 11:38	01/08/10 11:43	85-01-8	
Pyrene	**66.8J**	ug/kg	366	25.5	10	01/07/10 11:38	01/08/10 11:43	129-00-0	
2-Fluorobiphenyl (S)	0	%	38-130		10	01/07/10 11:38	01/08/10 11:43	321-60-8	S4
Terphenyl-d14 (S)	0	%	41-130		10	01/07/10 11:38	01/08/10 11:43	1718-51-0	S4
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.9**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 4.1 (2-4') **Lab ID: 4027159012** Collected: 01/04/10 15:00 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<28.5**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	12674-11-2	
PCB-1221 (Aroclor 1221)	**<28.5**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	11104-28-2	
PCB-1232 (Aroclor 1232)	**<28.5**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	11141-16-5	
PCB-1242 (Aroclor 1242)	**<28.5**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	53469-21-9	
PCB-1248 (Aroclor 1248)	**175**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	12672-29-6	
PCB-1254 (Aroclor 1254)	**115J**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	11097-69-1	
PCB-1260 (Aroclor 1260)	**<28.5**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	11096-82-5	
PCB, Total	**290**	ug/kg	121	28.5	1	01/07/10 09:52	01/08/10 16:27	1336-36-3	
Tetrachloro-m-xylene (S)	68	%	50-137		1	01/07/10 09:52	01/08/10 16:27	877-09-8	
Decachlorobiphenyl (S)	74	%	56-130		1	01/07/10 09:52	01/08/10 16:27	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**33.0**	mg/kg	1.9	0.92	1	01/07/10 12:42	01/11/10 12:26		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.1**	ug/kg	20.1	5.1	1	01/08/10 12:17	01/08/10 15:26	83-32-9	
▬cenaphthylene	**<3.9**	ug/kg	20.1	3.9	1	01/08/10 12:17	01/08/10 15:26	208-96-8	
▬nthracene	**<2.4**	ug/kg	20.1	2.4	1	01/08/10 12:17	01/08/10 15:26	120-12-7	
Benzo(a)anthracene	**<1.3**	ug/kg	20.1	1.3	1	01/08/10 12:17	01/08/10 15:26	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.1	2.2	1	01/08/10 12:17	01/08/10 15:26	50-32-8	
Benzo(b)fluoranthene	**<3.6**	ug/kg	20.1	3.6	1	01/08/10 12:17	01/08/10 15:26	205-99-2	
Benzo(g,h,i)perylene	**<1.1**	ug/kg	20.1	1.1	1	01/08/10 12:17	01/08/10 15:26	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.1	2.6	1	01/08/10 12:17	01/08/10 15:26	207-08-9	
Chrysene	**<1.4**	ug/kg	20.1	1.4	1	01/08/10 12:17	01/08/10 15:26	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.1	1.3	1	01/08/10 12:17	01/08/10 15:26	53-70-3	
Fluoranthene	**<2.4**	ug/kg	20.1	2.4	1	01/08/10 12:17	01/08/10 15:26	206-44-0	
Fluorene	**<5.1**	ug/kg	20.1	5.1	1	01/08/10 12:17	01/08/10 15:26	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/kg	20.1	1.2	1	01/08/10 12:17	01/08/10 15:26	193-39-5	
1-Methylnaphthalene	**<2.8**	ug/kg	20.1	2.8	1	01/08/10 12:17	01/08/10 15:26	90-12-0	
2-Methylnaphthalene	**<3.8**	ug/kg	20.1	3.8	1	01/08/10 12:17	01/08/10 15:26	91-57-6	
Naphthalene	**<10**	ug/kg	20.1	10	1	01/08/10 12:17	01/08/10 15:26	91-20-3	
Phenanthrene	**<6.4**	ug/kg	20.1	6.4	1	01/08/10 12:17	01/08/10 15:26	85-01-8	
Pyrene	**<1.4**	ug/kg	20.1	1.4	1	01/08/10 12:17	01/08/10 15:26	129-00-0	
2-Fluorobiphenyl (S)	66	%	38-130		1	01/08/10 12:17	01/08/10 15:26	321-60-8	
Terphenyl-d14 (S)	64	%	41-130		1	01/08/10 12:17	01/08/10 15:26	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.0**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 4.1 (4-6') **Lab ID: 4027159013** Collected: 01/04/10 15:17 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	12674-11-2	
PCB-1221 (Aroclor 1221)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	11104-28-2	
PCB-1232 (Aroclor 1232)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	11141-16-5	
PCB-1242 (Aroclor 1242)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	53469-21-9	
PCB-1248 (Aroclor 1248)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	12672-29-6	
PCB-1254 (Aroclor 1254)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	11097-69-1	
PCB-1260 (Aroclor 1260)	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	11096-82-5	
PCB, Total	**<29.3**	ug/kg	124	29.3	1	01/07/10 09:52	01/08/10 16:45	1336-36-3	
Tetrachloro-m-xylene (S)	81	%	50-137		1	01/07/10 09:52	01/08/10 16:45	877-09-8	
Decachlorobiphenyl (S)	83	%	56-130		1	01/07/10 09:52	01/08/10 16:45	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**<0.98**	mg/kg	2.0	0.98	1	01/07/10 12:42	01/11/10 12:35		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.2**	ug/kg	20.7	5.2	1	01/08/10 12:17	01/08/10 15:42	83-32-9	
[illegible]cenaphthylene	**<4.0**	ug/kg	20.7	4.0	1	01/08/10 12:17	01/08/10 15:42	208-96-8	
[illegible]nthracene	**<2.4**	ug/kg	20.7	2.4	1	01/08/10 12:17	01/08/10 15:42	120-12-7	
Benzo(a)anthracene	**<1.4**	ug/kg	20.7	1.4	1	01/08/10 12:17	01/08/10 15:42	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	20.7	2.2	1	01/08/10 12:17	01/08/10 15:42	50-32-8	
Benzo(b)fluoranthene	**<3.7**	ug/kg	20.7	3.7	1	01/08/10 12:17	01/08/10 15:42	205-99-2	
Benzo(g,h,i)perylene	**<1.1**	ug/kg	20.7	1.1	1	01/08/10 12:17	01/08/10 15:42	191-24-2	
Benzo(k)fluoranthene	**<2.6**	ug/kg	20.7	2.6	1	01/08/10 12:17	01/08/10 15:42	207-08-9	
Chrysene	**<1.5**	ug/kg	20.7	1.5	1	01/08/10 12:17	01/08/10 15:42	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.7	1.3	1	01/08/10 12:17	01/08/10 15:42	53-70-3	
Fluoranthene	**<2.5**	ug/kg	20.7	2.5	1	01/08/10 12:17	01/08/10 15:42	206-44-0	
Fluorene	**<5.2**	ug/kg	20.7	5.2	1	01/08/10 12:17	01/08/10 15:42	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/kg	20.7	1.2	1	01/08/10 12:17	01/08/10 15:42	193-39-5	
1-Methylnaphthalene	**<2.9**	ug/kg	20.7	2.9	1	01/08/10 12:17	01/08/10 15:42	90-12-0	
2-Methylnaphthalene	**<3.9**	ug/kg	20.7	3.9	1	01/08/10 12:17	01/08/10 15:42	91-57-6	
Naphthalene	**<10.3**	ug/kg	20.7	10.3	1	01/08/10 12:17	01/08/10 15:42	91-20-3	
Phenanthrene	**<6.6**	ug/kg	20.7	6.6	1	01/08/10 12:17	01/08/10 15:42	85-01-8	
Pyrene	**<1.4**	ug/kg	20.7	1.4	1	01/08/10 12:17	01/08/10 15:42	129-00-0	
2-Fluorobiphenyl (S)	63	%	38-130		1	01/08/10 12:17	01/08/10 15:42	321-60-8	
Terphenyl-d14 (S)	67	%	41-130		1	01/08/10 12:17	01/08/10 15:42	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.5**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 3.1 (2-4') **Lab ID: 4027159014** Collected: 01/05/10 08:35 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	12674-11-2	
PCB-1221 (Aroclor 1221)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	11104-28-2	
PCB-1232 (Aroclor 1232)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	11141-16-5	
PCB-1242 (Aroclor 1242)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	53469-21-9	
PCB-1248 (Aroclor 1248)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	12672-29-6	
PCB-1254 (Aroclor 1254)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	11097-69-1	
PCB-1260 (Aroclor 1260)	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	11096-82-5	
PCB, Total	**<29.7**	ug/kg	126	29.7	1	01/07/10 09:52	01/08/10 17:02	1336-36-3	
Tetrachloro-m-xylene (S)	82	%	50-137		1	01/07/10 09:52	01/08/10 17:02	877-09-8	
Decachlorobiphenyl (S)	88	%	56-130		1	01/07/10 09:52	01/08/10 17:02	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**2.1**	mg/kg	2.1	1.0	1	01/07/10 12:42	01/11/10 12:44		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<5.3**	ug/kg	20.9	5.3	1	01/08/10 12:17	01/08/10 15:59	83-32-9	
Acenaphthylene	**<4.0**	ug/kg	20.9	4.0	1	01/08/10 12:17	01/08/10 15:59	208-96-8	
Anthracene	**<2.5**	ug/kg	20.9	2.5	1	01/08/10 12:17	01/08/10 15:59	120-12-7	
Benzo(a)anthracene	**<1.4**	ug/kg	20.9	1.4	1	01/08/10 12:17	01/08/10 15:59	56-55-3	
Benzo(a)pyrene	**<2.3**	ug/kg	20.9	2.3	1	01/08/10 12:17	01/08/10 15:59	50-32-8	
Benzo(b)fluoranthene	**<3.7**	ug/kg	20.9	3.7	1	01/08/10 12:17	01/08/10 15:59	205-99-2	
Benzo(g,h,i)perylene	**<1.2**	ug/kg	20.9	1.2	1	01/08/10 12:17	01/08/10 15:59	191-24-2	
Benzo(k)fluoranthene	**<2.7**	ug/kg	20.9	2.7	1	01/08/10 12:17	01/08/10 15:59	207-08-9	
Chrysene	**<1.5**	ug/kg	20.9	1.5	1	01/08/10 12:17	01/08/10 15:59	218-01-9	
Dibenz(a,h)anthracene	**<1.3**	ug/kg	20.9	1.3	1	01/08/10 12:17	01/08/10 15:59	53-70-3	
Fluoranthene	**<2.5**	ug/kg	20.9	2.5	1	01/08/10 12:17	01/08/10 15:59	206-44-0	
Fluorene	**<5.3**	ug/kg	20.9	5.3	1	01/08/10 12:17	01/08/10 15:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.3**	ug/kg	20.9	1.3	1	01/08/10 12:17	01/08/10 15:59	193-39-5	
1-Methylnaphthalene	**<3.0**	ug/kg	20.9	3.0	1	01/08/10 12:17	01/08/10 15:59	90-12-0	
2-Methylnaphthalene	**<4.0**	ug/kg	20.9	4.0	1	01/08/10 12:17	01/08/10 15:59	91-57-6	
Naphthalene	**<10.4**	ug/kg	20.9	10.4	1	01/08/10 12:17	01/08/10 15:59	91-20-3	
Phenanthrene	**<6.7**	ug/kg	20.9	6.7	1	01/08/10 12:17	01/08/10 15:59	85-01-8	
Pyrene	**<1.5**	ug/kg	20.9	1.5	1	01/08/10 12:17	01/08/10 15:59	129-00-0	
2-Fluorobiphenyl (S)	61	%	38-130		1	01/08/10 12:17	01/08/10 15:59	321-60-8	
Terphenyl-d14 (S)	61	%	41-130		1	01/08/10 12:17	01/08/10 15:59	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.4**	%	0.10	0.10	1		01/07/10 07:41		

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Sample: ACM MW 3.1 (4-6') **Lab ID: 4027159015** Collected: 01/05/10 08:45 Received: 01/06/10 12:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	12674-11-2	
PCB-1221 (Aroclor 1221)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	11104-28-2	
PCB-1232 (Aroclor 1232)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	11141-16-5	
PCB-1242 (Aroclor 1242)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	53469-21-9	
PCB-1248 (Aroclor 1248)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	12672-29-6	
PCB-1254 (Aroclor 1254)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	11097-69-1	
PCB-1260 (Aroclor 1260)	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	11096-82-5	
PCB, Total	**<35.5**	ug/kg	150	35.5	1	01/07/10 09:52	01/08/10 17:19	1336-36-3	
Tetrachloro-m-xylene (S)	85	%	50-137		1	01/07/10 09:52	01/08/10 17:19	877-09-8	
Decachlorobiphenyl (S)	89	%	56-130		1	01/07/10 09:52	01/08/10 17:19	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**<1.3**	mg/kg	2.6	1.3	1	01/07/10 12:42	01/11/10 12:52		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<6.3**	ug/kg	25.0	6.3	1	01/08/10 12:17	01/08/10 16:16	83-32-9	
Acenaphthylene	**<4.8**	ug/kg	25.0	4.8	1	01/08/10 12:17	01/08/10 16:16	208-96-8	
Anthracene	**<2.9**	ug/kg	25.0	2.9	1	01/08/10 12:17	01/08/10 16:16	120-12-7	
Benzo(a)anthracene	**<1.6**	ug/kg	25.0	1.6	1	01/08/10 12:17	01/08/10 16:16	56-55-3	
Benzo(a)pyrene	**<2.7**	ug/kg	25.0	2.7	1	01/08/10 12:17	01/08/10 16:16	50-32-8	
Benzo(b)fluoranthene	**<4.5**	ug/kg	25.0	4.5	1	01/08/10 12:17	01/08/10 16:16	205-99-2	
Benzo(g,h,i)perylene	**<1.4**	ug/kg	25.0	1.4	1	01/08/10 12:17	01/08/10 16:16	191-24-2	
Benzo(k)fluoranthene	**<3.2**	ug/kg	25.0	3.2	1	01/08/10 12:17	01/08/10 16:16	207-08-9	
Chrysene	**<1.8**	ug/kg	25.0	1.8	1	01/08/10 12:17	01/08/10 16:16	218-01-9	
Dibenz(a,h)anthracene	**<1.6**	ug/kg	25.0	1.6	1	01/08/10 12:17	01/08/10 16:16	53-70-3	
Fluoranthene	**<3.0**	ug/kg	25.0	3.0	1	01/08/10 12:17	01/08/10 16:16	206-44-0	
Fluorene	**<6.3**	ug/kg	25.0	6.3	1	01/08/10 12:17	01/08/10 16:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<1.5**	ug/kg	25.0	1.5	1	01/08/10 12:17	01/08/10 16:16	193-39-5	
1-Methylnaphthalene	**<3.5**	ug/kg	25.0	3.5	1	01/08/10 12:17	01/08/10 16:16	90-12-0	
2-Methylnaphthalene	**<4.8**	ug/kg	25.0	4.8	1	01/08/10 12:17	01/08/10 16:16	91-57-6	
Naphthalene	**<12.5**	ug/kg	25.0	12.5	1	01/08/10 12:17	01/08/10 16:16	91-20-3	
Phenanthrene	**<8.0**	ug/kg	25.0	8.0	1	01/08/10 12:17	01/08/10 16:16	85-01-8	
Pyrene	**<1.7**	ug/kg	25.0	1.7	1	01/08/10 12:17	01/08/10 16:16	129-00-0	
2-Fluorobiphenyl (S)	68	%	38-130		1	01/08/10 12:17	01/08/10 16:16	321-60-8	
Terphenyl-d14 (S)	67	%	41-130		1	01/08/10 12:17	01/08/10 16:16	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**33.4**	%	0.10	0.10	1		01/07/10 07:41		

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: OEXT/6529 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159008, 4027159009, 4027159010, 4027159011, 4027159012, 4027159013, 4027159014, 4027159015

METHOD BLANK: 252907 Matrix: Solid
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159008, 4027159009, 4027159010, 4027159011, 4027159012, 4027159013, 4027159014, 4027159015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1221 (Aroclor 1221)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1232 (Aroclor 1232)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1242 (Aroclor 1242)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1248 (Aroclor 1248)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1254 (Aroclor 1254)	ug/kg	<23.6	100	01/08/10 12:23	
PCB-1260 (Aroclor 1260)	ug/kg	<23.6	100	01/08/10 12:23	
Decachlorobiphenyl (S)	%	84	56-130	01/08/10 12:23	
Tetrachloro-m-xylene (S)	%	78	50-137	01/08/10 12:23	

LABORATORY CONTROL SAMPLE: 252908

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<23.6			
PCB-1221 (Aroclor 1221)	ug/kg		<23.6			
PCB-1232 (Aroclor 1232)	ug/kg		<23.6			
PCB-1242 (Aroclor 1242)	ug/kg		<23.6			
PCB-1248 (Aroclor 1248)	ug/kg		<23.6			
PCB-1254 (Aroclor 1254)	ug/kg		<23.6			
PCB-1260 (Aroclor 1260)	ug/kg	500	411	82	53-109	
Decachlorobiphenyl (S)	%			88	56-130	
Tetrachloro-m-xylene (S)	%			83	50-137	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 252909 252910

Parameter	Units	4027159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1221 (Aroclor 1221)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1232 (Aroclor 1232)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1242 (Aroclor 1242)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1248 (Aroclor 1248)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1254 (Aroclor 1254)	ug/kg	<29.3			<29.3	<29.3					21	
PCB-1260 (Aroclor 1260)	ug/kg	<29.3	621	621	511	524	82	84	38-110	3	21	
Decachlorobiphenyl (S)	%						86	87	56-130			
Tetrachloro-m-xylene (S)	%						81	83	50-137			

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: OEXT/6527 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159008, 4027159009, 4027159010, 4027159011, 4027159012, 4027159013, 4027159014, 4027159015

METHOD BLANK: 252873 Matrix: Solid
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159008, 4027159009, 4027159010, 4027159011, 4027159012, 4027159013, 4027159014, 4027159015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.99	2.0	01/08/10 11:29	

LABORATORY CONTROL SAMPLE & LCSD: 252874 252875

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	15.8	17.0	79	85	70-120	8	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: OEXT/6528 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159009, 4027159010, 4027159011

METHOD BLANK: 252876 Matrix: Solid
Associated Lab Samples: 4027159001, 4027159002, 4027159006, 4027159007, 4027159009, 4027159010, 4027159011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	01/07/10 13:44	
2-Methylnaphthalene	ug/kg	<3.2	16.7	01/07/10 13:44	
Acenaphthene	ug/kg	<4.2	16.7	01/07/10 13:44	
Acenaphthylene	ug/kg	<3.2	16.7	01/07/10 13:44	
Anthracene	ug/kg	<2.0	16.7	01/07/10 13:44	
Benzo(a)anthracene	ug/kg	<1.1	16.7	01/07/10 13:44	
Benzo(a)pyrene	ug/kg	<1.8	16.7	01/07/10 13:44	
Benzo(b)fluoranthene	ug/kg	<3.0	16.7	01/07/10 13:44	
Benzo(g,h,i)perylene	ug/kg	<0.92	16.7	01/07/10 13:44	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	01/07/10 13:44	
Chrysene	ug/kg	<1.2	16.7	01/07/10 13:44	
Dibenz(a,h)anthracene	ug/kg	<1.0	16.7	01/07/10 13:44	
Fluoranthene	ug/kg	<2.0	16.7	01/07/10 13:44	
Fluorene	ug/kg	<4.2	16.7	01/07/10 13:44	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.0	16.7	01/07/10 13:44	
Naphthalene	ug/kg	<8.3	16.7	01/07/10 13:44	
Phenanthrene	ug/kg	<5.3	16.7	01/07/10 13:44	
Pyrene	ug/kg	<1.2	16.7	01/07/10 13:44	
2-Fluorobiphenyl (S)	%	72	38-130	01/07/10 13:44	
Terphenyl-d14 (S)	%	83	41-130	01/07/10 13:44	

LABORATORY CONTROL SAMPLE: 252877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	281	84	50-130	
2-Methylnaphthalene	ug/kg	333	283	85	48-130	
Acenaphthene	ug/kg	333	289	87	51-130	
Acenaphthylene	ug/kg	333	288	86	51-130	
Anthracene	ug/kg	333	293	88	55-130	
Benzo(a)anthracene	ug/kg	333	295	88	37-130	
Benzo(a)pyrene	ug/kg	333	288	86	56-130	
Benzo(b)fluoranthene	ug/kg	333	315	94	55-130	
Benzo(g,h,i)perylene	ug/kg	333	322	97	49-130	
Benzo(k)fluoranthene	ug/kg	333	302	91	61-130	
Chrysene	ug/kg	333	301	90	43-130	
Dibenz(a,h)anthracene	ug/kg	333	311	93	51-130	
Fluoranthene	ug/kg	333	311	93	57-130	
Fluorene	ug/kg	333	297	89	51-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	313	94	52-130	
Naphthalene	ug/kg	333	277	83	49-130	
Phenanthrene	ug/kg	333	295	88	52-130	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

LABORATORY CONTROL SAMPLE: 252877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	282	85	35-130	
2-Fluorobiphenyl (S)	%			78	38-130	
Terphenyl-d14 (S)	%			87	41-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 252878 252879

Parameter	Units	4027159006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<2.9	405	405	331	331	82	82	38-130	.1	42	
2-Methylnaphthalene	ug/kg	<3.8	405	405	332	332	82	82	20-139	.06	39	
Acenaphthene	ug/kg	<5.1	405	405	334	320	82	79	42-130	4	32	
Acenaphthylene	ug/kg	<3.9	405	405	335	340	83	84	47-130	1	31	
Anthracene	ug/kg	<2.4	405	405	333	341	82	84	33-134	2	30	
Benzo(a)anthracene	ug/kg	<1.3	405	405	330	331	81	82	27-130	.2	25	
Benzo(a)pyrene	ug/kg	<2.2	405	405	329	331	81	82	35-132	.5	33	
Benzo(b)fluoranthene	ug/kg	<3.6	405	405	344	360	85	89	27-141	5	39	
Benzo(g,h,i)perylene	ug/kg	<1.1	405	405	379	382	94	94	13-146	.8	47	
Benzo(k)fluoranthene	ug/kg	<2.6	405	405	332	328	82	81	18-155	1	31	
Chrysene	ug/kg	<1.4	405	405	343	343	85	85	30-130	.02	24	
Dibenz(a,h)anthracene	ug/kg	<1.3	405	405	364	366	90	90	33-130	.5	39	
Fluoranthene	ug/kg	<2.5	405	405	332	337	82	83	37-138	2	31	
Fluorene	ug/kg	<5.1	405	405	340	347	84	86	42-130	2	32	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.2	405	405	364	367	90	91	25-134	.8	39	
Naphthalene	ug/kg	<10.1	405	405	319	314	79	77	39-130	2	43	
Phenanthrene	ug/kg	<6.4	405	405	333	340	82	84	32-135	2	32	
Pyrene	ug/kg	<1.4	405	405	329	319	81	79	31-130	3	26	
2-Fluorobiphenyl (S)	%						74	80	38-130			
Terphenyl-d14 (S)	%						77	82	41-130			

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: OEXT/6531 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4027159012, 4027159013, 4027159014, 4027159015

METHOD BLANK: 253279 Matrix: Solid
Associated Lab Samples: 4027159012, 4027159013, 4027159014, 4027159015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	01/08/10 12:36	
2-Methylnaphthalene	ug/kg	<3.2	16.7	01/08/10 12:36	
Acenaphthene	ug/kg	<4.2	16.7	01/08/10 12:36	
Acenaphthylene	ug/kg	<3.2	16.7	01/08/10 12:36	
Anthracene	ug/kg	<2.0	16.7	01/08/10 12:36	
Benzo(a)anthracene	ug/kg	<1.1	16.7	01/08/10 12:36	
Benzo(a)pyrene	ug/kg	<1.8	16.7	01/08/10 12:36	
Benzo(b)fluoranthene	ug/kg	<3.0	16.7	01/08/10 12:36	
Benzo(g,h,i)perylene	ug/kg	<0.92	16.7	01/08/10 12:36	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	01/08/10 12:36	
Chrysene	ug/kg	<1.2	16.7	01/08/10 12:36	
Dibenz(a,h)anthracene	ug/kg	<1.0	16.7	01/08/10 12:36	
Fluoranthene	ug/kg	<2.0	16.7	01/08/10 12:36	
Fluorene	ug/kg	<4.2	16.7	01/08/10 12:36	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.0	16.7	01/08/10 12:36	
Naphthalene	ug/kg	<8.3	16.7	01/08/10 12:36	
Phenanthrene	ug/kg	<5.3	16.7	01/08/10 12:36	
Pyrene	ug/kg	<1.2	16.7	01/08/10 12:36	
2-Fluorobiphenyl (S)	%	68	38-130	01/08/10 12:36	
Terphenyl-d14 (S)	%	75	41-130	01/08/10 12:36	

LABORATORY CONTROL SAMPLE: 253280

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	244	73	50-130	
2-Methylnaphthalene	ug/kg	333	244	73	48-130	
Acenaphthene	ug/kg	333	267	80	51-130	
Acenaphthylene	ug/kg	333	257	77	51-130	
Anthracene	ug/kg	333	255	76	55-130	
Benzo(a)anthracene	ug/kg	333	253	76	37-130	
Benzo(a)pyrene	ug/kg	333	255	76	56-130	
Benzo(b)fluoranthene	ug/kg	333	299	90	55-130	
Benzo(g,h,i)perylene	ug/kg	333	183	55	49-130	
Benzo(k)fluoranthene	ug/kg	333	247	74	61-130	
Chrysene	ug/kg	333	237	71	43-130	
Dibenz(a,h)anthracene	ug/kg	333	219	66	51-130	
Fluoranthene	ug/kg	333	284	85	57-130	
Fluorene	ug/kg	333	270	81	51-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	211	63	52-130	
Naphthalene	ug/kg	333	253	76	49-130	
Phenanthrene	ug/kg	333	267	80	52-130	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

LABORATORY CONTROL SAMPLE: 253280

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	228	69	35-130	
2-Fluorobiphenyl (S)	%			72	38-130	
Terphenyl-d14 (S)	%			69	41-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 253281 253282

Parameter	Units	4027034004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	19.0	365	365	296	336	76	87	38-130	13	42	
2-Methylnaphthalene	ug/kg	27.0	365	365	280	323	69	81	20-139	14	39	
Acenaphthene	ug/kg	11.2J	365	365	304	331	80	87	42-130	9	32	
Acenaphthylene	ug/kg	34.3	365	365	326	347	80	85	47-130	6	31	
Anthracene	ug/kg	16.6J	365	365	279	290	72	75	33-134	4	30	
Benzo(a)anthracene	ug/kg	<1.2	365	365	256	288	70	79	27-130	12	25	
Benzo(a)pyrene	ug/kg	<2.0	365	365	257	309	70	84	35-132	19	33	
Benzo(b)fluoranthene	ug/kg	<3.3	365	365	373	373	101	101	27-141	.09	39	
Benzo(g,h,i)perylene	ug/kg	3.6J	365	365	149	155	40	42	13-146	4	47	
Benzo(k)fluoranthene	ug/kg	<2.3	365	365	201	285	54	77	18-155	35	31	R1
Chrysene	ug/kg	2.3J	365	365	248	290	67	79	30-130	16	24	
Dibenz(a,h)anthracene	ug/kg	<1.1	365	365	194	212	53	58	33-130	9	39	
Fluoranthene	ug/kg	<2.2	365	365	284	320	77	87	37-138	12	31	
Fluorene	ug/kg	10.3J	365	365	318	350	84	93	42-130	10	32	
Indeno(1,2,3-cd)pyrene	ug/kg	1.5J	365	365	185	201	50	55	25-134	8	39	
Naphthalene	ug/kg	<9.1	365	365	251	283	68	77	39-130	12	43	
Phenanthrene	ug/kg	6.0J	365	365	278	310	74	83	32-135	11	32	
Pyrene	ug/kg	3.0J	365	365	212	230	57	62	31-130	8	26	
2-Fluorobiphenyl (S)	%						72	79	38-130			
Terphenyl-d14 (S)	%						58	66	41-130			

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: OEXT/6538
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4027159008

METHOD BLANK: 254001
Matrix: Solid
Associated Lab Samples: 4027159008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	01/11/10 14:19	
2-Methylnaphthalene	ug/kg	<3.2	16.7	01/11/10 14:19	
Acenaphthene	ug/kg	<4.2	16.7	01/11/10 14:19	
Acenaphthylene	ug/kg	<3.2	16.7	01/11/10 14:19	
Anthracene	ug/kg	<2.0	16.7	01/11/10 14:19	
Benzo(a)anthracene	ug/kg	<1.1	16.7	01/11/10 14:19	
Benzo(a)pyrene	ug/kg	<1.8	16.7	01/11/10 14:19	
Benzo(b)fluoranthene	ug/kg	<3.0	16.7	01/11/10 14:19	
Benzo(g,h,i)perylene	ug/kg	<0.92	16.7	01/11/10 14:19	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	01/11/10 14:19	
Chrysene	ug/kg	<1.2	16.7	01/11/10 14:19	
Dibenz(a,h)anthracene	ug/kg	<1.0	16.7	01/11/10 14:19	
Fluoranthene	ug/kg	<2.0	16.7	01/11/10 14:19	
Fluorene	ug/kg	<4.2	16.7	01/11/10 14:19	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.0	16.7	01/11/10 14:19	
Naphthalene	ug/kg	<8.3	16.7	01/11/10 14:19	
Phenanthrene	ug/kg	<5.3	16.7	01/11/10 14:19	
Pyrene	ug/kg	<1.2	16.7	01/11/10 14:19	
2-Fluorobiphenyl (S)	%	73	38-130	01/11/10 14:19	
Terphenyl-d14 (S)	%	72	41-130	01/11/10 14:19	

LABORATORY CONTROL SAMPLE: 254002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	289	87	50-130	
2-Methylnaphthalene	ug/kg	333	290	87	48-130	
Acenaphthene	ug/kg	333	291	87	51-130	
Acenaphthylene	ug/kg	333	283	85	51-130	
Anthracene	ug/kg	333	278	83	55-130	
Benzo(a)anthracene	ug/kg	333	289	87	37-130	
Benzo(a)pyrene	ug/kg	333	279	84	56-130	
Benzo(b)fluoranthene	ug/kg	333	319	96	55-130	
Benzo(g,h,i)perylene	ug/kg	333	316	95	49-130	
Benzo(k)fluoranthene	ug/kg	333	270	81	61-130	
Chrysene	ug/kg	333	304	91	43-130	
Dibenz(a,h)anthracene	ug/kg	333	311	93	51-130	
Fluoranthene	ug/kg	333	299	90	57-130	
Fluorene	ug/kg	333	298	90	51-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	311	93	52-130	
Naphthalene	ug/kg	333	280	84	49-130	
Phenanthrene	ug/kg	333	275	82	52-130	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

LABORATORY CONTROL SAMPLE: 254002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	326	98	35-130	
2-Fluorobiphenyl (S)	%			71	38-130	
Terphenyl-d14 (S)	%			95	41-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 254003 254004

Parameter	Units	4027202014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<18.6	371	371	327	322	88	87	38-130	1	42	
2-Methylnaphthalene	ug/kg	<18.6	371	371	297	313	80	84	20-139	5	39	
Acenaphthene	ug/kg	<18.6	371	371	305	327	82	88	42-130	7	32	
Acenaphthylene	ug/kg	<18.6	371	371	299	320	80	86	47-130	7	31	
Anthracene	ug/kg	<18.6	371	371	290	301	78	81	33-134	4	30	
Benzo(a)anthracene	ug/kg	<18.6	371	371	293	305	79	82	27-130	4	25	
Benzo(a)pyrene	ug/kg	<18.6	371	371	287	300	77	81	35-132	4	33	
Benzo(b)fluoranthene	ug/kg	<18.6	371	371	321	346	86	93	27-141	7	39	
Benzo(g,h,i)perylene	ug/kg	<18.6	371	371	328	333	88	90	13-146	2	47	
Benzo(k)fluoranthene	ug/kg	<18.6	371	371	282	288	76	77	18-155	2	31	
Chrysene	ug/kg	<18.6	371	371	315	328	85	88	30-130	4	24	
Dibenz(a,h)anthracene	ug/kg	<18.6	371	371	318	330	86	89	33-130	4	39	
Fluoranthene	ug/kg	<18.6	371	371	282	315	76	85	37-138	11	31	
Fluorene	ug/kg	<18.6	371	371	308	332	83	89	42-130	7	32	
Indeno(1,2,3-cd)pyrene	ug/kg	<18.6	371	371	321	330	86	89	25-134	3	39	
Naphthalene	ug/kg	<18.6	371	371	286	298	77	80	39-130	4	43	
Phenanthrene	ug/kg	<18.6	371	371	285	296	77	80	32-135	4	32	
Pyrene	ug/kg	<18.6	371	371	293	337	79	91	31-130	14	26	
2-Fluorobiphenyl (S)	%						72	75	38-130			
Terphenyl-d14 (S)	%						76	88	41-130			

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: PMST/3486 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4027159001, 4027159002, 4027159005, 4027159006, 4027159007, 4027159008, 4027159009, 4027159010, 4027159011, 4027159012, 4027159013, 4027159014, 4027159015

SAMPLE DUPLICATE: 252767

Parameter	Units	4027126001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.9	5.5	8	10	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

QC Batch: WET/5310
QC Batch Method: EPA 9040
Analysis Method: EPA 9040
Analysis Description: 9040 pH
Associated Lab Samples: 4027159005

SAMPLE DUPLICATE: 253232

Parameter	Units	4027159005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.4	7.3	1	20	H1

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QUALIFIERS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H1 Analysis conducted outside the recognized method holding time.

R1 RPD value was outside control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4027159001	ACM MW 3.2 (2-4')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159002	ACM MW 3.2 (6-8')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159006	ACM-MW-4.3 (0-2')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159007	ACM-MW-4.3 (4-6')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159008	ACM-MW-4.2 (0-2')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159009	ACM-MW-4.2 (4-6')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159010	ACM SB 9.1 (0-0.5')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159011	ACM MW 4.1 (0-0.5')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159012	ACM MW 4.1 (2-4')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159013	ACM MW 4.1 (4-6')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159014	ACM MW 3.1 (2-4')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159015	ACM MW 3.1 (4-6')	EPA 3541	OEXT/6529	EPA 8082	GCSV/3870
4027159001	ACM MW 3.2 (2-4')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159002	ACM MW 3.2 (6-8')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159006	ACM-MW-4.3 (0-2')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159007	ACM-MW-4.3 (4-6')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159008	ACM-MW-4.2 (0-2')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159009	ACM-MW-4.2 (4-6')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159010	ACM SB 9.1 (0-0.5')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159011	ACM MW 4.1 (0-0.5')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159012	ACM MW 4.1 (2-4')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159013	ACM MW 4.1 (4-6')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159014	ACM MW 3.1 (2-4')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159015	ACM MW 3.1 (4-6')	WI MOD DRO	OEXT/6527	WI MOD DRO	GCSV/3871
4027159001	ACM MW 3.2 (2-4')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159002	ACM MW 3.2 (6-8')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159006	ACM-MW-4.3 (0-2')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159007	ACM-MW-4.3 (4-6')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159008	ACM-MW-4.2 (0-2')	EPA 3546	OEXT/6538	EPA 8270 by SIM	MSSV/2348
4027159009	ACM-MW-4.2 (4-6')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159010	ACM SB 9.1 (0-0.5')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159011	ACM MW 4.1 (0-0.5')	EPA 3546	OEXT/6528	EPA 8270 by SIM	MSSV/2344
4027159012	ACM MW 4.1 (2-4')	EPA 3546	OEXT/6531	EPA 8270 by SIM	MSSV/2346
4027159013	ACM MW 4.1 (4-6')	EPA 3546	OEXT/6531	EPA 8270 by SIM	MSSV/2346
4027159014	ACM MW 3.1 (2-4')	EPA 3546	OEXT/6531	EPA 8270 by SIM	MSSV/2346
4027159015	ACM MW 3.1 (4-6')	EPA 3546	OEXT/6531	EPA 8270 by SIM	MSSV/2346
4027159001	ACM MW 3.2 (2-4')	ASTM D2974-87	PMST/3486		
4027159002	ACM MW 3.2 (6-8')	ASTM D2974-87	PMST/3486		
4027159005	STOCKPILE COMP	ASTM D2974-87	PMST/3486		
4027159006	ACM-MW-4.3 (0-2')	ASTM D2974-87	PMST/3486		
4027159007	ACM-MW-4.3 (4-6')	ASTM D2974-87	PMST/3486		
4027159008	ACM-MW-4.2 (0-2')	ASTM D2974-87	PMST/3486		
4027159009	ACM-MW-4.2 (4-6')	ASTM D2974-87	PMST/3486		
4027159010	ACM SB 9.1 (0-0.5')	ASTM D2974-87	PMST/3486		
4027159011	ACM MW 4.1 (0-0.5')	ASTM D2974-87	PMST/3486		
4027159012	ACM MW 4.1 (2-4')	ASTM D2974-87	PMST/3486		

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027159

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4027159013	**ACM MW 4.1 (4-6')**	ASTM D2974-87	PMST/3486		
4027159014	**ACM MW 3.1 (2-4')**	ASTM D2974-87	PMST/3486		
4027159015	**ACM MW 3.1 (4-6')**	ASTM D2974-87	PMST/3486		
4027159005	**STOCKPILE COMP**	EPA 9040	WET/5310		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

January 12, 2010

Client:
PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Attn: Kang Khang

Work Order: CTA0204
Project Name: Ethylene Glycol
Project Number: WO #4027159

Date Received: 01/07/10

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
ACM MW 13.1 2-4'	CTA0204-01	01/05/10 10:00
ACM MW 13.1 6-8'	CTA0204-02	01/05/10 13:15

Samples were received into laboratory at a temperature of 3.10 °C.

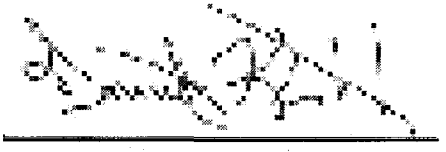
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:



TestAmerica Cedar Falls
Derrick Klinkenberg
Organics Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CTA0204-01 (ACM MW 13.1 2-4' - Soil)					**Sampled: 01/05/10 10:00**			**Recvd: 01/07/10 10:15**	
General Chemistry Parameters									
% Solids	**76.3**		%	0.100	1	01/08/10 09:28	sas	10A0171	SM 2540 G
Alcohols/Gycols by GC									
Ethylene Glycol	<13.1		mg/kg dry	13.1	0.971	01/08/10 15:19	tjt	10A0167	SW 8015m
Sample ID: CTA0204-02 (ACM MW 13.1 6-8' - Soil)					**Sampled: 01/05/10 13:15**			**Recvd: 01/07/10 10:15**	
General Chemistry Parameters									
% Solids	**78.6**		%	0.100	1	01/08/10 09:28	sas	10A0171	SM 2540 G
Alcohols/Gycols by GC									
Ethylene Glycol	<12.7		mg/kg dry	12.7	0.968	01/08/10 15:54	tjt	10A0167	SW 8015m

TestAmerica Cedar Falls
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Organics Manager

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1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Alcohols/Gycols by GC							
SW 8015m	10A0167	CTA0204-01	10.30	10.00	01/08/10 08:30	TJT	Direct Inject Prep
SW 8015m	10A0167	CTA0204-02	10.33	10.00	01/08/10 08:30	TJT	Direct Inject Prep

PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
Ethylene Glycol	10A0167			mg/kg wet	N/A	10.0	<10.0							

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Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: CTA0167-02													
% Solids	10A0171	65.6		%	N/A	0.100	69.0				5	10	
QC Source Sample: CTA0214-01													
% Solids	10A0171	25.6		%	N/A	0.100	25.8				1	10	

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Derrick Klinkenberg
Organics Manager

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PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
Ethylene Glycol	10A0167		182	mg/kg wet	N/A	10.0	173		95		80-120			

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PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0204
Project: Ethylene Glycol
Project Number: WO #4027159

Received: 01/07/10
Reported: 01/12/10 16:03

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
QC Source Sample: CTA0204-01														
Ethylene Glycol	10A0167	<13.1	231	mg/kg dry	N/A	13.1	194	192	84	82	80-120	1	20	

TestAmerica Cedar Falls
Derrick Klinkenberg
Organics Manager

PACE ANALYTICAL SERVICES, INC. - GREEN BAY	Work Order:	CTA0204	Received: 01/07/10
1241 Bellevue Street, Suite 9			Reported: 01/12/10 16:03
Green Bay, WI 54302	Project:	Ethylene Glycol	
Kang Khang	Project Number:	WO #4027159	

DATA QUALIFIERS AND DEFINITIONS

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 4027159 **Workorder Name:** 60142656 KOENING & VITTS **Results Requested** 1/13/2010

Report To/Invoice To	Subcontract To	Requested Analysis
Kang Khang Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436 Email: kang.khang@pacelabs.com	Test America 204 Enterprise Dr. Cedar Falls, IA 50613 319-277-2401 P.O. _____	Ethylene Glycol % moisture

Item	Sample ID	Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						Ethylene Glycol	% moisture													LAB USE ONLY
1	ACM MW 13.1 (2-4')	1/5/2010 10:00	4027159003	Solid	1						X	X													
2	ACM MW 13.1 (6-8')	1/5/2010 13:15	4027159004	Solid	1						X	X													
3																									
4																									
5																									

Transfers	Released By	Date/Time	Received By	Date/Time
1	Ash for PACE	1/6/10 4:30	FedEx	
2			Helena Pacheco	1/7/10 10:15
3				
4				
5				

Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613
800-750-2401 • 319-277-2425 FAX

Sample Receipt and Temperature Log Form

Client: Pace Analytical Project: _____

City: _____

Date: 1-7-10 Receiver's Initials: CF Time (Delivered): 10:15

Temperature Record:

Cooler ID# (If Applicable)
Client

3.1 °C / On Ice

2 NO Temp Blank Samples Bath Temp

☐ Temp Blank

☐ Temperature out of compliance

Thermometer:

☐ IR - 90876942 'C'
☑ IR - 61997671 'B'
☐ IR - 61854108
☐ 22126775

Courier:

☐ UPS ☐ TA Courier
☑ FedEx ☐ TA Field Services
☐ FedEx Ground ☐ Client
☐ US Postal Service ☐ Other
☐ Spee-Dee _____

Custody seals present?
☐ Yes
Custody seals intact?
☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

☐ Sample(s) not received in a cooler.
☐ Samples(s) received same day of sampling.
☐ Evidence of a chilling process
☐ Temperature not taken:
_____

***Refer to SOP CF-SS-01 for Temperature Criteria**

P:\QA Forms & Log Book pgs\Cooler Receipt rev15.doc

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www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

4027159

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Dave Markel
Phone:	414 577 1315
Project Number:	60142656
Project Name:	Koenig + Vitts
Project State:	WI
Sampled By (Print):	David Markel
Sampled By (Sign):	Dmar
PO #:	Regulatory Program:

Quote #:	KSK 122909.01
Mail To Contact:	Dave Markel
Mail To Company:	Aecom
Mail To Address:	11425 W. Lake Park Dr Milwaukee, WI 53224
Invoice To Contact:	Same
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: PCB	PAH	8120	Ethylene Glycol	pH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter								
001	Acm mw 3.2 (2-4')	1/5/10	10:23	Soil			X	X	X				3-4oz A	
002	Acm mw 3.2 (6-8')	1/5/10	10:40	Soil			X	X	X				↓	
003	Acm mw 13.1 (2-4')	1/5/10	1000p	Soil						X			1-4oz A	
004	Acm mw 13.1 (6-8')	1/5/10	1:15p	Soil						X			↓	
005	Stockpile comp	1/5/10	2:15p	Soil							X			

*Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 DAY TAT

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
D Mar	1/6/09		1-6-10 12:40
	1-6-10 12:40		1/6/10 1240
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
4027159

Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal Present / Not Present
Intact / Not Intact

C01 n2006)

Version 6.0 06/14/

ORIGINAL

4027159

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Dave Markeiz
Phone:	414 511 1315
Project Number:	60142656
Project Name:	Koenig + Vitas
Project State:	WI
Sampled By (Print):	David Markeiz
Sampled By (Sign):	Dave Mar
PO #:	Regulatory Program:

Quote #:	KSK 122909.01
Mail To Contact:	Dave Markeiz
Mail To Company:	Aecom
Mail To Address:	11425 W. Lake Park Dr. Milwaukee, WI
Invoice To Contact:	Dave Markeiz
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: 2CB	24H	D20	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
006	Acm-mw-4.3 (0-2')	1/4/10	10:30	Soil			X	X	X		3-4 on K	
007	Acm-mw 4.3 (4-6')	1/4/10	10:40	Soil			X	X	X			
008	Acm-mw 4.2 (0-2)	1/4/10	12:30	Soil			X	X	X			
009	Acm mw 4.2 (4-6)	1/4/10	12:50	Soil			X	X	X			
010	Acm SB 9.1 (0-0.5)	1/4/10	2:15	Soil			X	X	X			
~~—~~	~~Acm SB 10.1 (0-0.5)~~	~~1/4/10~~	~~2:20~~	~~Soil~~			~~X~~	~~X~~	~~X~~	Rcm		
011	Acm mw 4.1 (0-0.5)	1/4/10	2:55	Soil			X	X	X			
012	Acm mw 4.1 (2-4')	1/4/10	3:00	Soil			X	X	X			
013	Acm mw 4.1 (4-6')	1/4/10	3:17	Soil			X	X	X			
014	Acm mw 3.1 (2-4')	1/5/10	8:35	Soil			X	X	X			
015	Acm mw 3.1 (4-6')	1/5/10	8:45	Soil			X	X	X			

* Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 DAY TAT

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
D. Mar	1/6/09		
	1-6-10 12:40	1-6-10	9:40
		1/6/10	1240

PACE Project No.

Receipt Temp = 2.01 °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/

C01 (n2006)

ORIGINAL

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: AECOM Project # 4027159

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None Other

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.0 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Optional
Proj. Due Date:
Proj. Name:

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 1/6/10
Initials: AE

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☒Yes ☐No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☒No ☐N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☒Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed: _____ Lot # of added preservative: _____
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

oject Manager Review: _____ **Date:** 1/6/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 14, 2010

Dave Markelz
AECOM, Inc.- MILWAUKEE
11425 W. Lake Park Drive
Milwaukee, WI 53224

RE: Project: 60142656 KOENING & VITTS
Pace Project No.: 4027173

Dear Dave Markelz:
Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027173

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4027173001	**MW-SOUTH**	Solid	01/06/10 14:00	01/07/10 08:40
4027173003	**MW 13.1**	Solid	01/06/10 14:30	01/07/10 08:40

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

January 12, 2010

Client:
PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Attn: Kang Khang

Work Order: CTA0263
Project Name: Ethylene Glycol
Project Number: 4027173

Date Received: 01/08/10

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
MW-South	CTA0263-01	01/06/10 14:00
MW 13.1	CTA0263-02	01/06/10 14:30

Samples were received into laboratory at a temperature of 2.10 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:

TestAmerica Cedar Falls
Derrick Klinkenberg
Organics Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0263
Project: Ethylene Glycol
Project Number: 4027173

Received: 01/08/10
Reported: 01/12/10 16:05

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CTA0263-01 (MW-South - Ground Water)					**Sampled: 01/06/10 14:00**			**Recvd: 01/08/10 10:10**	
Alcohols/Gycols by GC									
Ethylene Glycol	<10.0		mg/L	10.0	1	01/08/10 19:04	tjt	10A0207	SW 8015m
Sample ID: CTA0263-02 (MW 13.1 - Ground Water)					**Sampled: 01/06/10 14:30**			**Recvd: 01/08/10 10:10**	
Alcohols/Gycols by GC									
Ethylene Glycol	<10.0		mg/L	10.0	1	01/08/10 19:38	tjt	10A0207	SW 8015m

TestAmerica Cedar Falls
Derrick Klinkenberg
Organics Manager

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1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0263
Project: Ethylene Glycol
Project Number: 4027173

Received: 01/08/10
Reported: 01/12/10 16:05

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Alcohols/Gycols by GC							
SW 8015m	10A0207	CTA0263-01	1.00	1.00	01/08/10 15:00	TJT	Direct Inject Prep
SW 8015m	10A0207	CTA0263-02	1.00	1.00	01/08/10 15:00	TJT	Direct Inject Prep

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Kang Khang

Work Order: CTA0263
Project: Ethylene Glycol
Project Number: 4027173

Received: 01/08/10
Reported: 01/12/10 16:05

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
Ethylene Glycol	10A0207			mg/L	N/A	10.0	<10.0							

PACE ANALYTICAL SERVICES, INC. - GREEN BAY
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Green Bay, WI 54302
Kang Khang

Work Order: CTA0263
Project: Ethylene Glycol
Project Number: 4027173

Received: 01/08/10
Reported: 01/12/10 16:05

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
Ethylene Glycol	10A0207		182	mg/L	N/A	10.0	148		81		80-120			

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PACE ANALYTICAL SERVICES, INC. - GREEN BAY
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Kang Khang

Work Order: CTA0263
Project: Ethylene Glycol
Project Number: 4027173

Received: 01/08/10
Reported: 01/12/10 16:05

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Alcohols/Gycols by GC														
QC Source Sample: CTA0263-01														
Ethylene Glycol	10A0207	7.54	182	mg/L	N/A	10.0	182	187	96	99	80-120	3	20	

Chain of Custody

Pace Analytical® www.pacelabs.com

Workorder: 4027173 **Workorder Name:** 60142656 KOENING & VITTS **Results Requested** 1/14/2010

Report / Invoice To	Subcontract To	Requested Analysis
Kang Khang Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436 Email: kang.khang@pacelabs.com	Test America 704 Enterprise Dr. Cedar fall, IA 50613 319-277-2401 P.O.	Ethylene Glycols; Ammonia

Item	Sample ID	Collect Date/time	Lab ID	Matrix	Unpreserved						Ethylene Glycols	Ammonia	LAB USE ONLY
1	MW-SOUTH	1/6/2010 14:00	4027173001	~~Solid~~ H_2O							X	X	
2	DOCK 26 ANIT-FREEZE	1/6/2010 14:15	4027173002	Water							X	X	
3	MW 13.1	1/6/2010 14:30	4027173003	~~Solid~~ H_2O							X	X	
4													
5													

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] 1-7-10	1700	[signature]	1/8/10 10[illegible]
2				
3				
4				
5				

Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613
800-750-2401 • 319-277-2425 Fax

Sample Receipt and Temperature Log Form

Client: Pace Project: _____

City: Green Bay

Date: 1-8-16 Receiver's Initials: CH Time (Delivered): 10:10

Temperature Record:

Cooler ID# (If Applicable)
Client

2.1 °C / On Ice

NO
☐ Temp Blank

☐ Temperature out of compliance

Thermometer:

☐ IR - 90876942 'C'
☐ IR - 61997671 'B'
☐ IR - 61854108
☑ 22126775

MW 13.1 vial

Courier:

☐ UPS	☐ TA Courier
☑ ~~FedEx~~	☐ TA Field Services
☐ FedEx Ground	☐ Client
☐ US Postal Service	☐ Other
☐ Spee-Dee	

Custody seals present?
☐ Yes
Custody seals intact?
☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

☐ Sample(s) not received in a cooler.
☐ Samples(s) received same day of sampling.
☐ Evidence of a chilling process
☐ Temperature not taken:
_____

***Refer to SOP CF-SS-01 for Temperature Criteria**

(Please Print Clearly)

Company Name:	Aecom
Branch/Location:	milwaukee, WI
Project Contact:	Dave Markelz
Phone:	414 577 1319
Project Number:	60142656
Project Name:	Koening + Vitts
Project State:	WI
Sampled By (Print):	David Markelz
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	

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CHAIN OF CUSTODY

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO) Y/N
PRESERVATION (CODE)* Pick Letter
Analyses Requested: Ethylene Glycol

Quote #:	
Mail To Contact:	Dave Markelz
Mail To Company:	Aecom
Mail To Address:	11425 W. lake Park Dr milwaukee WI 53224
Invoice To Contact:	Same
Invoice To Company:	↓
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Ethylene Glycol	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW-South	1/6/10	2:00p	GW	X	3-40mL no pres	3-40mL A	
002	Dock 26 Anti-Freeze	1/6/10	2:15p		X	2-40mL no pres	2-40mL A	
003	MW 13.1	1/6/10	2:30p	GW	X	3 40mL no pres	3-40mL A	

*Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 DAY TAT

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dave Markelz	1/7/2010	[signature]	1/7/10 0840

PACE Project No. 4027173
Receipt Temp = RO7 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14

C0...Jun2006) ORIGINAL

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Aecom Project # 4027173

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None Other

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature RO1 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Optional
Proj. Due Date:
Proj. Name:

Person examining contents:
Date: 1/7/10
Initials: MEH

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 1/7/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 14, 2010

Dave Markelz
AECOM, Inc.- MILWAUKEE
11425 W. Lake Park Drive
Milwaukee, WI 53224

RE: Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Dear Dave Markelz:
Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

ACCREDITED IN ACCORDANCE WITH nelac

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Green Bay Certification IDs

California Certification #: 09268CA
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11887
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
1241 Bellevue Street Green Bay, WI 54302

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4027175001	**MW 03.01**	Water	01/06/10 15:00	01/07/10 08:40
4027175002	**ACM MW 4.3**	Water	01/06/10 15:30	01/07/10 08:40
4027175003	**ACM MW 4.2**	Water	01/06/10 15:45	01/07/10 08:40
4027175004	**MW 06.18**	Water	01/06/10 16:15	01/07/10 08:40
4027175005	**MW 06.12**	Water	01/06/10 16:45	01/07/10 08:40
4027175006	**ACM MW 3.1**	Water	01/07/10 06:40	01/07/10 08:40
4027175007	**ACM MW 3.2**	Water	01/07/10 07:10	01/07/10 08:40
4027175008	**ACM MW 4.1**	Water	01/07/10 07:30	01/07/10 08:40
4027175009	**TRIP BLANK**	Water	01/07/10 00:00	01/07/10 08:40

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4027175001	**MW 03.01**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175002	**ACM MW 4.3**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175003	**ACM MW 4.2**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175004	**MW 06.18**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175005	**MW 06.12**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175006	**ACM MW 3.1**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175007	**ACM MW 3.2**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
4027175008	**ACM MW 4.1**	EPA 8082	BDS	10	PASI-G
		EPA 8260	SMT	64	PASI-G
[redacted]027175009	**TRIP BLANK**	EPA 8260	SMT	64	PASI-G

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 03.01 **Lab ID: 4027175001** Collected: 01/06/10 15:00 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:21	1336-36-3	
Tetrachloro-m-xylene (S)	75	%	51-130		1	01/12/10 10:00	01/13/10 17:21	877-09-8	
Decachlorobiphenyl (S)	92	%	18-150		1	01/12/10 10:00	01/13/10 17:21	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:34	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 12:34	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:34	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:34	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 12:34	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 12:34	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 12:34	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:34	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:34	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:34	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:34	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:34	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 12:34	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 12:34	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 12:34	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:34	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 12:34	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:34	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:34	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 12:34	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:34	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 12:34	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 12:34	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:34	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:34	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 12:34	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 12:34	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:34	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 12:34	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:34	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:34	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 12:34	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:34	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:34	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 03.01 **Lab ID: 4027175001** Collected: 01/06/10 15:00 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 12:34	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 12:34	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 12:34	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 12:34	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 12:34	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:34	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 12:34	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:34	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:34	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:34	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 12:34	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 12:34	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:34	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 12:34	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:34	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:34	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:34	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 12:34	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 12:34	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 12:34	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 12:34	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:34	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:34	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 12:34	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 12:34	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:34	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		01/08/10 12:34	460-00-4	
Dibromofluoromethane (S)	85	%	70-130		1		01/08/10 12:34	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		01/08/10 12:34	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.3 **Lab ID: 4027175002** Collected: 01/06/10 15:30 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:39	1336-36-3	
Tetrachloro-m-xylene (S)	112	%	51-130		1	01/12/10 10:00	01/13/10 17:39	877-09-8	
Decachlorobiphenyl (S)	116	%	18-150		1	01/12/10 10:00	01/13/10 17:39	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:57	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 12:57	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:57	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:57	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 12:57	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 12:57	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 12:57	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:57	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:57	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:57	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:57	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:57	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 12:57	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 12:57	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 12:57	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:57	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 12:57	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:57	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:57	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 12:57	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:57	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 12:57	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 12:57	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:57	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:57	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 12:57	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 12:57	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:57	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 12:57	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:57	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:57	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 12:57	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:57	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:57	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.3 **Lab ID: 4027175002** Collected: 01/06/10 15:30 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 12:57	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 12:57	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 12:57	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 12:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 12:57	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:57	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 12:57	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:57	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:57	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:57	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 12:57	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 12:57	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:57	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 12:57	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:57	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:57	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:57	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 12:57	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 12:57	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 12:57	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 12:57	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:57	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:57	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:57	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 12:57	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 12:57	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:57	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		01/08/10 12:57	460-00-4	
Dibromofluoromethane (S)	84	%	70-130		1		01/08/10 12:57	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		01/08/10 12:57	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.2 **Lab ID: 4027175003** Collected: 01/06/10 15:45 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 17:56	1336-36-3	
Tetrachloro-m-xylene (S)	103	%	51-130		1	01/12/10 10:00	01/13/10 17:56	877-09-8	
Decachlorobiphenyl (S)	107	%	18-150		1	01/12/10 10:00	01/13/10 17:56	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 13:21	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 13:21	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:21	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 13:21	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 13:21	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 13:21	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 13:21	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 13:21	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:21	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 13:21	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 13:21	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:21	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 13:21	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 13:21	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 13:21	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 13:21	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 13:21	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 13:21	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 13:21	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 13:21	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:21	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 13:21	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 13:21	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 13:21	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 13:21	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 13:21	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 13:21	75-35-4	
cis-1,2-Dichloroethene	**5.1**	ug/L	1.0	0.83	1		01/08/10 13:21	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 13:21	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 13:21	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 13:21	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 13:21	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 13:21	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 13:21	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.2 **Lab ID: 4027175003** Collected: 01/06/10 15:45 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 13:21	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 13:21	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 13:21	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 13:21	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 13:21	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 13:21	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 13:21	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 13:21	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 13:21	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 13:21	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 13:21	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 13:21	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 13:21	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 13:21	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 13:21	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 13:21	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:21	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 13:21	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 13:21	79-00-5	
Trichloroethene	**0.75J**	ug/L	1.0	0.48	1		01/08/10 13:21	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 13:21	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 13:21	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:21	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:21	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 13:21	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 13:21	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:21	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		1		01/08/10 13:21	460-00-4	
Dibromofluoromethane (S)	85	%	70-130		1		01/08/10 13:21	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		01/08/10 13:21	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 06.18 **Lab ID: 4027175004** Collected: 01/06/10 16:15 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:14	1336-36-3	
Tetrachloro-m-xylene (S)	112	%	51-130		1	01/12/10 10:00	01/13/10 18:14	877-09-8	
Decachlorobiphenyl (S)	114	%	18-150		1	01/12/10 10:00	01/13/10 18:14	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 11:23	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 11:23	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 11:23	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 11:23	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 11:23	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 11:23	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 11:23	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 11:23	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 11:23	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 11:23	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 11:23	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 11:23	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 11:23	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 11:23	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 11:23	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 11:23	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 11:23	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 11:23	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 11:23	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 11:23	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 11:23	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 11:23	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 11:23	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 11:23	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 11:23	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 11:23	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 11:23	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 11:23	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 11:23	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 11:23	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 11:23	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 11:23	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 11:23	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 11:23	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 06.18 **Lab ID: 4027175004** Collected: 01/06/10 16:15 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 11:23	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 11:23	108-20-3	
Ethylbenzene	**1.5**	ug/L	1.0	0.54	1		01/08/10 11:23	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 11:23	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 11:23	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 11:23	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 11:23	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 11:23	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 11:23	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 11:23	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 11:23	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 11:23	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 11:23	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 11:23	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 11:23	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 11:23	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 11:23	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 11:23	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 11:23	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 11:23	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 11:23	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 11:23	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 11:23	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 11:23	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 11:23	75-01-4	
m&p-Xylene	**3.0**	ug/L	2.0	1.8	1		01/08/10 11:23	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 11:23	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		01/08/10 11:23	460-00-4	
Dibromofluoromethane (S)	82	%	70-130		1		01/08/10 11:23	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		01/08/10 11:23	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 06.12 **Lab ID: 4027175005** Collected: 01/06/10 16:45 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:31	1336-36-3	
Tetrachloro-m-xylene (S)	112	%	51-130		1	01/12/10 10:00	01/13/10 18:31	877-09-8	
Decachlorobiphenyl (S)	114	%	18-150		1	01/12/10 10:00	01/13/10 18:31	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 13:44	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 13:44	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:44	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 13:44	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 13:44	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 13:44	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 13:44	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 13:44	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:44	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 13:44	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 13:44	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:44	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 13:44	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 13:44	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 13:44	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 13:44	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 13:44	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 13:44	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 13:44	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 13:44	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:44	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 13:44	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 13:44	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 13:44	75-71-8	
1,1-Dichloroethane	**0.78J**	ug/L	1.0	0.75	1		01/08/10 13:44	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 13:44	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 13:44	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:44	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 13:44	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 13:44	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 13:44	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 13:44	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 13:44	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 13:44	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: MW 06.12 **Lab ID: 4027175005** Collected: 01/06/10 16:45 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 13:44	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 13:44	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 13:44	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 13:44	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 13:44	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 13:44	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 13:44	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 13:44	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 13:44	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 13:44	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 13:44	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 13:44	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 13:44	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 13:44	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 13:44	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 13:44	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:44	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 13:44	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 13:44	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 13:44	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 13:44	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 13:44	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 13:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:44	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 13:44	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 13:44	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 13:44	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		1		01/08/10 13:44	460-00-4	
Dibromofluoromethane (S)	83	%	70-130		1		01/08/10 13:44	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		01/08/10 13:44	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 3.1 **Lab ID: 4027175006** Collected: 01/07/10 06:40 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 18:49	1336-36-3	
Tetrachloro-m-xylene (S)	107	%	51-130		1	01/12/10 10:00	01/13/10 18:49	877-09-8	
Decachlorobiphenyl (S)	100	%	18-150		1	01/12/10 10:00	01/13/10 18:49	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:08	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 14:08	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:08	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:08	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 14:08	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 14:08	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 14:08	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:08	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:08	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:08	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:08	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:08	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 14:08	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 14:08	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 14:08	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:08	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 14:08	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:08	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:08	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 14:08	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:08	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 14:08	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 14:08	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:08	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:08	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 14:08	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 14:08	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:08	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 14:08	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:08	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:08	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 14:08	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:08	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:08	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 3.1 **Lab ID: 4027175006** Collected: 01/07/10 06:40 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 14:08	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 14:08	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 14:08	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 14:08	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 14:08	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:08	99-87-6	
Methylene Chloride	**0.68J**	ug/L	1.0	0.43	1		01/08/10 14:08	75-09-2	Z3
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:08	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:08	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:08	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 14:08	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 14:08	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:08	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 14:08	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:08	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:08	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:08	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 14:08	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 14:08	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 14:08	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 14:08	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:08	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:08	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 14:08	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 14:08	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:08	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		01/08/10 14:08	460-00-4	
Dibromofluoromethane (S)	85	%	70-130		1		01/08/10 14:08	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		01/08/10 14:08	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 3.2 **Lab ID: 4027175007** Collected: 01/07/10 07:10 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.94	0.23	1	01/12/10 10:00	01/13/10 19:06	1336-36-3	
Tetrachloro-m-xylene (S)	99	%	51-130		1	01/12/10 10:00	01/13/10 19:06	877-09-8	
Decachlorobiphenyl (S)	113	%	18-150		1	01/12/10 10:00	01/13/10 19:06	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:31	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 14:31	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:31	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:31	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 14:31	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 14:31	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 14:31	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:31	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:31	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:31	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:31	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:31	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 14:31	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 14:31	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 14:31	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:31	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 14:31	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:31	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:31	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 14:31	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:31	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 14:31	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 14:31	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:31	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:31	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 14:31	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 14:31	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:31	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 14:31	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:31	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:31	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 14:31	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:31	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:31	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 3.2 **Lab ID: 4027175007** Collected: 01/07/10 07:10 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 14:31	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 14:31	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 14:31	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 14:31	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 14:31	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:31	99-87-6	
Methylene Chloride	**0.48J**	ug/L	1.0	0.43	1		01/08/10 14:31	75-09-2	Z3
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:31	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:31	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:31	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 14:31	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 14:31	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:31	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 14:31	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:31	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:31	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:31	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 14:31	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 14:31	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 14:31	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 14:31	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:31	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:31	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:31	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 14:31	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 14:31	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:31	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		01/08/10 14:31	460-00-4	
Dibromofluoromethane (S)	86	%	70-130		1		01/08/10 14:31	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		01/08/10 14:31	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.1 **Lab ID: 4027175008** Collected: 01/07/10 07:30 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	11096-82-5	
PCB, Total	**<0.23**	ug/L	0.96	0.23	1	01/12/10 10:00	01/13/10 19:23	1336-36-3	
Tetrachloro-m-xylene (S)	112	%	51-130		1	01/12/10 10:00	01/13/10 19:23	877-09-8	
Decachlorobiphenyl (S)	107	%	18-150		1	01/12/10 10:00	01/13/10 19:23	2051-24-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:55	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 14:55	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:55	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:55	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 14:55	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 14:55	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 14:55	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:55	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:55	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:55	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 14:55	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:55	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 14:55	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 14:55	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 14:55	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:55	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 14:55	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:55	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 14:55	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 14:55	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:55	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 14:55	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 14:55	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:55	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:55	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 14:55	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 14:55	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:55	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 14:55	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 14:55	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:55	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 14:55	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 14:55	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:55	10061-01-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: ACM MW 4.1 **Lab ID: 4027175008** Collected: 01/07/10 07:30 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 14:55	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 14:55	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 14:55	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 14:55	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 14:55	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:55	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 14:55	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 14:55	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 14:55	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 14:55	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 14:55	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 14:55	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 14:55	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 14:55	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 14:55	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 14:55	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:55	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 14:55	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 14:55	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 14:55	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 14:55	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 14:55	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 14:55	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:55	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 14:55	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 14:55	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 14:55	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		01/08/10 14:55	460-00-4	
Dibromofluoromethane (S)	84	%	70-130		1		01/08/10 14:55	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		01/08/10 14:55	2037-26-5	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: TRIP BLANK **Lab ID: 4027175009** Collected: 01/07/10 00:00 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:10	71-43-2	
Bromobenzene	**<0.82**	ug/L	1.0	0.82	1		01/08/10 12:10	108-86-1	
Bromochloromethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:10	74-97-5	
Bromodichloromethane	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:10	75-27-4	
Bromoform	**<0.94**	ug/L	1.0	0.94	1		01/08/10 12:10	75-25-2	
Bromomethane	**<0.91**	ug/L	1.0	0.91	1		01/08/10 12:10	74-83-9	
n-Butylbenzene	**<0.93**	ug/L	1.0	0.93	1		01/08/10 12:10	104-51-8	
sec-Butylbenzene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:10	135-98-8	
tert-Butylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:10	98-06-6	
Carbon tetrachloride	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:10	56-23-5	
Chlorobenzene	**<0.41**	ug/L	1.0	0.41	1		01/08/10 12:10	108-90-7	
Chloroethane	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:10	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		01/08/10 12:10	67-66-3	
Chloromethane	**<0.24**	ug/L	1.0	0.24	1		01/08/10 12:10	74-87-3	
2-Chlorotoluene	**<0.85**	ug/L	1.0	0.85	1		01/08/10 12:10	95-49-8	
4-Chlorotoluene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:10	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	5.0	1.7	1		01/08/10 12:10	96-12-8	
Dibromochloromethane	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:10	124-48-1	
1,2-Dibromoethane (EDB)	**<0.56**	ug/L	1.0	0.56	1		01/08/10 12:10	106-93-4	
Dibromomethane	**<0.60**	ug/L	1.0	0.60	1		01/08/10 12:10	74-95-3	
1,2-Dichlorobenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:10	95-50-1	
1,3-Dichlorobenzene	**<0.87**	ug/L	1.0	0.87	1		01/08/10 12:10	541-73-1	
1,4-Dichlorobenzene	**<0.95**	ug/L	1.0	0.95	1		01/08/10 12:10	106-46-7	
Dichlorodifluoromethane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:10	75-71-8	
1,1-Dichloroethane	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:10	75-34-3	
1,2-Dichloroethane	**<0.36**	ug/L	1.0	0.36	1		01/08/10 12:10	107-06-2	
1,1-Dichloroethene	**<0.57**	ug/L	1.0	0.57	1		01/08/10 12:10	75-35-4	
cis-1,2-Dichloroethene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:10	156-59-2	
trans-1,2-Dichloroethene	**<0.89**	ug/L	1.0	0.89	1		01/08/10 12:10	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/L	1.0	0.49	1		01/08/10 12:10	78-87-5	
1,3-Dichloropropane	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:10	142-28-9	
2,2-Dichloropropane	**<0.62**	ug/L	1.0	0.62	1		01/08/10 12:10	594-20-7	
1,1-Dichloropropene	**<0.75**	ug/L	1.0	0.75	1		01/08/10 12:10	563-58-6	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:10	10061-01-5	
trans-1,3-Dichloropropene	**<0.19**	ug/L	1.0	0.19	1		01/08/10 12:10	10061-02-6	
Diisopropyl ether	**<0.76**	ug/L	1.0	0.76	1		01/08/10 12:10	108-20-3	
Ethylbenzene	**<0.54**	ug/L	1.0	0.54	1		01/08/10 12:10	100-41-4	
Hexachloro-1,3-butadiene	**<0.67**	ug/L	5.0	0.67	1		01/08/10 12:10	87-68-3	
Isopropylbenzene (Cumene)	**<0.59**	ug/L	1.0	0.59	1		01/08/10 12:10	98-82-8	
p-Isopropyltoluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:10	99-87-6	
Methylene Chloride	**<0.43**	ug/L	1.0	0.43	1		01/08/10 12:10	75-09-2	
Methyl-tert-butyl ether	**<0.61**	ug/L	1.0	0.61	1		01/08/10 12:10	1634-04-4	
Naphthalene	**<0.89**	ug/L	5.0	0.89	1		01/08/10 12:10	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	1.0	0.81	1		01/08/10 12:10	103-65-1	
Styrene	**<0.86**	ug/L	1.0	0.86	1		01/08/10 12:10	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.92**	ug/L	1.0	0.92	1		01/08/10 12:10	630-20-6	

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ANALYTICAL RESULTS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Sample: TRIP BLANK **Lab ID: 4027175009** Collected: 01/07/10 00:00 Received: 01/07/10 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		01/08/10 12:10	79-34-5	
Tetrachloroethene	**<0.45**	ug/L	1.0	0.45	1		01/08/10 12:10	127-18-4	
Toluene	**<0.67**	ug/L	1.0	0.67	1		01/08/10 12:10	108-88-3	
1,2,3-Trichlorobenzene	**<0.74**	ug/L	1.0	0.74	1		01/08/10 12:10	87-61-6	
1,2,4-Trichlorobenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:10	120-82-1	
1,1,1-Trichloroethane	**<0.90**	ug/L	1.0	0.90	1		01/08/10 12:10	71-55-6	
1,1,2-Trichloroethane	**<0.42**	ug/L	1.0	0.42	1		01/08/10 12:10	79-00-5	
Trichloroethene	**<0.48**	ug/L	1.0	0.48	1		01/08/10 12:10	79-01-6	
Trichlorofluoromethane	**<0.79**	ug/L	1.0	0.79	1		01/08/10 12:10	75-69-4	
1,2,3-Trichloropropane	**<0.99**	ug/L	1.0	0.99	1		01/08/10 12:10	96-18-4	
1,2,4-Trimethylbenzene	**<0.97**	ug/L	1.0	0.97	1		01/08/10 12:10	95-63-6	
1,3,5-Trimethylbenzene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:10	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/08/10 12:10	75-01-4	
m&p-Xylene	**<1.8**	ug/L	2.0	1.8	1		01/08/10 12:10	1330-20-7	
o-Xylene	**<0.83**	ug/L	1.0	0.83	1		01/08/10 12:10	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		01/08/10 12:10	460-00-4	
Dibromofluoromethane (S)	85	%	70-130		1		01/08/10 12:10	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		01/08/10 12:10	2037-26-5	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

QC Batch: OEXT/6540 Analysis Method: EPA 8082
QC Batch Method: EPA 3510 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 4027175001, 4027175002, 4027175003, 4027175004, 4027175005, 4027175006, 4027175007, 4027175008

METHOD BLANK: 254135 Matrix: Water
Associated Lab Samples: 4027175001, 4027175002, 4027175003, 4027175004, 4027175005, 4027175006, 4027175007, 4027175008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1221 (Aroclor 1221)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1232 (Aroclor 1232)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1242 (Aroclor 1242)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1248 (Aroclor 1248)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1254 (Aroclor 1254)	ug/L	<0.24	1.0	01/13/10 16:12	
PCB-1260 (Aroclor 1260)	ug/L	<0.24	1.0	01/13/10 16:12	
Decachlorobiphenyl (S)	%	78	18-150	01/13/10 16:12	
Tetrachloro-m-xylene (S)	%	65	51-130	01/13/10 16:12	

LABORATORY CONTROL SAMPLE & LCSD: 254136 254137

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.24	<0.24					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.24	<0.24					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.24	<0.24					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.24	<0.24					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.24	<0.24					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.24	<0.24					20	
PCB-1260 (Aroclor 1260)	ug/L	5	3.6	3.9	71	78	62-130	9	20	
Decachlorobiphenyl (S)	%				85	87	18-150			
Tetrachloro-m-xylene (S)	%				74	87	51-130			

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

QC Batch: MSV/6575 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 4027175001, 4027175002, 4027175003, 4027175004, 4027175005, 4027175006, 4027175007, 4027175008, 4027175009

METHOD BLANK: 253256 Matrix: Water
Associated Lab Samples: 4027175001, 4027175002, 4027175003, 4027175004, 4027175005, 4027175006, 4027175007, 4027175008, 4027175009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.92	1.0	01/08/10 08:25	
1,1,1-Trichloroethane	ug/L	<0.90	1.0	01/08/10 08:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	1.0	01/08/10 08:25	
1,1,2-Trichloroethane	ug/L	<0.42	1.0	01/08/10 08:25	
1,1-Dichloroethane	ug/L	<0.75	1.0	01/08/10 08:25	
1,1-Dichloroethene	ug/L	<0.57	1.0	01/08/10 08:25	
1,1-Dichloropropene	ug/L	<0.75	1.0	01/08/10 08:25	
1,2,3-Trichlorobenzene	ug/L	<0.74	1.0	01/08/10 08:25	
1,2,3-Trichloropropane	ug/L	<0.99	1.0	01/08/10 08:25	
1,2,4-Trichlorobenzene	ug/L	<0.97	1.0	01/08/10 08:25	
1,2,4-Trimethylbenzene	ug/L	<0.97	1.0	01/08/10 08:25	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.0	01/08/10 08:25	
[redacted],2-Dibromoethane (EDB)	ug/L	<0.56	1.0	01/08/10 08:25	
[redacted],2-Dichlorobenzene	ug/L	<0.83	1.0	01/08/10 08:25	
[redacted],2-Dichloroethane	ug/L	<0.36	1.0	01/08/10 08:25	
1,2-Dichloropropane	ug/L	<0.49	1.0	01/08/10 08:25	
1,3,5-Trimethylbenzene	ug/L	<0.83	1.0	01/08/10 08:25	
1,3-Dichlorobenzene	ug/L	<0.87	1.0	01/08/10 08:25	
1,3-Dichloropropane	ug/L	<0.61	1.0	01/08/10 08:25	
1,4-Dichlorobenzene	ug/L	<0.95	1.0	01/08/10 08:25	
2,2-Dichloropropane	ug/L	<0.62	1.0	01/08/10 08:25	
2-Chlorotoluene	ug/L	<0.85	1.0	01/08/10 08:25	
4-Chlorotoluene	ug/L	<0.74	1.0	01/08/10 08:25	
Benzene	ug/L	<0.41	1.0	01/08/10 08:25	
Bromobenzene	ug/L	<0.82	1.0	01/08/10 08:25	
Bromochloromethane	ug/L	<0.97	1.0	01/08/10 08:25	
Bromodichloromethane	ug/L	<0.56	1.0	01/08/10 08:25	
Bromoform	ug/L	<0.94	1.0	01/08/10 08:25	
Bromomethane	ug/L	<0.91	1.0	01/08/10 08:25	
Carbon tetrachloride	ug/L	<0.49	1.0	01/08/10 08:25	
Chlorobenzene	ug/L	<0.41	1.0	01/08/10 08:25	
Chloroethane	ug/L	<0.97	1.0	01/08/10 08:25	
Chloroform	ug/L	<1.3	5.0	01/08/10 08:25	
Chloromethane	ug/L	<0.24	1.0	01/08/10 08:25	
cis-1,2-Dichloroethene	ug/L	<0.83	1.0	01/08/10 08:25	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	01/08/10 08:25	
Dibromochloromethane	ug/L	<0.81	1.0	01/08/10 08:25	
Dibromomethane	ug/L	<0.60	1.0	01/08/10 08:25	
Dichlorodifluoromethane	ug/L	<0.99	1.0	01/08/10 08:25	
Diisopropyl ether	ug/L	<0.76	1.0	01/08/10 08:25	
Ethylbenzene	ug/L	<0.54	1.0	01/08/10 08:25	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

METHOD BLANK: 253256 Matrix: Water

Associated Lab Samples: 4027175001, 4027175002, 4027175003, 4027175004, 4027175005, 4027175006, 4027175007, 4027175008, 4027175009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<0.67	5.0	01/08/10 08:25	
Isopropylbenzene (Cumene)	ug/L	<0.59	1.0	01/08/10 08:25	
m&p-Xylene	ug/L	<1.8	2.0	01/08/10 08:25	
Methyl-tert-butyl ether	ug/L	<0.61	1.0	01/08/10 08:25	
Methylene Chloride	ug/L	<0.43	1.0	01/08/10 08:25	
n-Butylbenzene	ug/L	<0.93	1.0	01/08/10 08:25	
n-Propylbenzene	ug/L	<0.81	1.0	01/08/10 08:25	
Naphthalene	ug/L	<0.89	5.0	01/08/10 08:25	
o-Xylene	ug/L	<0.83	1.0	01/08/10 08:25	
p-Isopropyltoluene	ug/L	<0.67	1.0	01/08/10 08:25	
sec-Butylbenzene	ug/L	<0.89	5.0	01/08/10 08:25	
Styrene	ug/L	<0.86	1.0	01/08/10 08:25	
tert-Butylbenzene	ug/L	<0.97	1.0	01/08/10 08:25	
Tetrachloroethene	ug/L	<0.45	1.0	01/08/10 08:25	
Toluene	ug/L	<0.67	1.0	01/08/10 08:25	
trans-1,2-Dichloroethene	ug/L	<0.89	1.0	01/08/10 08:25	
trans-1,3-Dichloropropene	ug/L	<0.19	1.0	01/08/10 08:25	
Trichloroethene	ug/L	<0.48	1.0	01/08/10 08:25	
Trichlorofluoromethane	ug/L	<0.79	1.0	01/08/10 08:25	
Vinyl chloride	ug/L	<0.18	1.0	01/08/10 08:25	
4-Bromofluorobenzene (S)	%	102	70-130	01/08/10 08:25	
Dibromofluoromethane (S)	%	86	70-130	01/08/10 08:25	
Toluene-d8 (S)	%	97	70-130	01/08/10 08:25	

LABORATORY CONTROL SAMPLE & LCSD: 253257 253258

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	42.5	44.1	85	88	70-132	4	20	
1,1,2,2-Tetrachloroethane	ug/L	50	45.8	45.8	92	92	69-130	.2	20	
1,1,2-Trichloroethane	ug/L	50	47.5	45.3	95	91	70-130	5	20	
1,1-Dichloroethane	ug/L	50	41.8	41.3	84	83	70-130	1	20	
1,1-Dichloroethene	ug/L	50	49.4	49.4	99	99	70-130	.007	20	
1,2-Dichloroethane	ug/L	50	39.6	40.3	79	81	70-134	2	20	
1,2-Dichloropropane	ug/L	50	46.2	46.0	92	92	70-130	.5	20	
Benzene	ug/L	50	44.9	44.8	90	90	70-131	.2	20	
Bromodichloromethane	ug/L	50	47.9	47.5	96	95	70-130	.8	20	
Bromoform	ug/L	50	50.8	51.4	102	103	70-130	1	20	
Bromomethane	ug/L	50	56.9	60.5	114	121	23-200	6	20	
Carbon tetrachloride	ug/L	50	44.6	44.7	89	89	70-144	.2	20	
Chlorobenzene	ug/L	50	49.1	49.4	98	99	70-130	.6	20	
Chloroethane	ug/L	50	47.4	47.4	95	95	70-136	.03	20	
Chloroform	ug/L	50	41.2	41.1	82	82	70-130	.3	20	
Chloromethane	ug/L	50	31.4	31.5	63	63	54-148	.4	20	
cis-1,2-Dichloroethene	ug/L	50	45.2	44.1	90	88	70-130	2	20	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

LABORATORY CONTROL SAMPLE & LCSD: 253257 253258

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	50.0	49.3	100	99	70-130	1	20	
Dibromochloromethane	ug/L	50	46.3	45.7	93	91	70-130	1	20	
Ethylbenzene	ug/L	50	52.5	52.2	105	104	70-130	.6	20	
m&p-Xylene	ug/L	100	105	106	105	106	70-130	1	20	
Methylene Chloride	ug/L	50	47.2	46.8	94	94	66-130	.9	20	
o-Xylene	ug/L	50	51.0	51.5	102	103	70-130	1	20	
Styrene	ug/L	50	47.4	47.5	95	95	70-130	.1	20	
Tetrachloroethene	ug/L	50	54.0	54.8	108	110	75-130	2	20	
Toluene	ug/L	50	52.3	53.1	105	106	70-130	1	20	
trans-1,2-Dichloroethene	ug/L	50	48.4	47.5	97	95	70-130	2	20	
trans-1,3-Dichloropropene	ug/L	50	45.6	47.1	91	94	70-130	3	20	
Trichloroethene	ug/L	50	46.8	46.4	94	93	70-130	.9	20	
Vinyl chloride	ug/L	50	37.3	37.5	75	75	63-141	.7	20	
4-Bromofluorobenzene (S)	%				98	98	70-130			
Dibromofluoromethane (S)	%				85	85	70-130			
Toluene-d8 (S)	%				96	97	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 253346 253347

Parameter	Units	4027175004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.90	50	50	42.7	44.0	85	88	70-137	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	50	50	47.0	46.8	94	94	67-130	.6	20	
1,1,2-Trichloroethane	ug/L	<0.42	50	50	47.1	47.1	94	94	70-130	.09	20	
1,1-Dichloroethane	ug/L	<0.75	50	50	42.0	42.5	84	85	70-130	1	20	
1,1-Dichloroethene	ug/L	<0.57	50	50	50.3	49.1	101	98	70-130	2	20	
1,2-Dichloroethane	ug/L	<0.36	50	50	39.2	40.1	78	80	69-134	2	20	
1,2-Dichloropropane	ug/L	<0.49	50	50	45.4	47.6	91	95	70-130	5	20	
Benzene	ug/L	<0.41	50	50	44.7	45.4	89	91	69-131	1	20	
Bromodichloromethane	ug/L	<0.56	50	50	46.6	48.1	93	96	70-130	3	20	
Bromoform	ug/L	<0.94	50	50	50.9	51.8	102	104	68-130	2	20	
Bromomethane	ug/L	<0.91	50	50	58.2	58.3	116	117	22-200	.2	20	
Carbon tetrachloride	ug/L	<0.49	50	50	44.7	46.0	89	92	70-144	3	20	
Chlorobenzene	ug/L	<0.41	50	50	49.6	49.6	99	99	70-130	.06	20	
Chloroethane	ug/L	<0.97	50	50	48.2	48.6	96	97	66-136	.7	20	
Chloroform	ug/L	<1.3	50	50	40.9	41.4	82	83	70-130	1	20	
Chloromethane	ug/L	<0.24	50	50	32.9	31.5	66	63	54-148	4	20	
cis-1,2-Dichloroethene	ug/L	<0.83	50	50	45.0	45.8	90	92	70-130	2	20	
cis-1,3-Dichloropropene	ug/L	<0.20	50	50	48.8	50.3	98	101	70-130	3	20	
Dibromochloromethane	ug/L	<0.81	50	50	48.1	46.5	96	93	70-130	3	20	
Ethylbenzene	ug/L	1.5	50	50	54.2	53.7	105	104	70-130	.9	20	
m&p-Xylene	ug/L	3.0	100	100	109	108	106	105	70-130	1	20	
Methylene Chloride	ug/L	<0.43	50	50	48.1	47.3	96	95	64-130	2	20	
o-Xylene	ug/L	<0.83	50	50	51.0	50.6	102	101	70-130	.9	20	
Styrene	ug/L	<0.86	50	50	43.4	42.4	87	85	43-130	2	20	
Tetrachloroethene	ug/L	<0.45	50	50	55.5	54.1	111	108	70-130	3	20	
Toluene	ug/L	<0.67	50	50	53.9	52.9	108	106	70-130	2	20	

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QUALITY CONTROL DATA

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 253346 253347

Parameter	Units	4027175004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
trans-1,2-Dichloroethene	ug/L	<0.89	50	50	49.0	48.4	98	97	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	<0.19	50	50	46.7	46.7	93	93	70-130	.07	20	
Trichloroethene	ug/L	<0.48	50	50	46.2	48.4	92	97	70-130	5	20	
Vinyl chloride	ug/L	<0.18	50	50	38.8	38.2	78	76	59-141	2	20	
4-Bromofluorobenzene (S)	%						98	98	70-130			
Dibromofluoromethane (S)	%						85	87	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALIFIERS

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: GCSV/3878

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

Z3 Methylene chloride is a common laboratory contaminant. Results for this analyte should be considered estimated unless the amount found in the sample is 3 to 5 times higher than that found in the method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60142656 KOENING & VITTS
Pace Project No.: 4027175

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4027175001	**MW 03.01**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175002	**ACM MW 4.3**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175003	**ACM MW 4.2**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175004	**MW 06.18**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175005	**MW 06.12**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175006	**ACM MW 3.1**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175007	**ACM MW 3.2**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175008	**ACM MW 4.1**	EPA 3510	OEXT/6540	EPA 8082	GCSV/3878
4027175001	**MW 03.01**	EPA 8260	MSV/6575		
4027175002	**ACM MW 4.3**	EPA 8260	MSV/6575		
4027175003	**ACM MW 4.2**	EPA 8260	MSV/6575		
4027175004	**MW 06.18**	EPA 8260	MSV/6575		
4027175005	**MW 06.12**	EPA 8260	MSV/6575		
4027175006	**ACM MW 3.1**	EPA 8260	MSV/6575		
4027175007	**ACM MW 3.2**	EPA 8260	MSV/6575		
4027175008	**ACM MW 4.1**	EPA 8260	MSV/6575		
4027175009	**TRIP BLANK**	EPA 8260	MSV/6575		