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June 14, 2016

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Approved, C.Callihan, 6/16/2016
Further Evaluation Warranted
Carolyn Callihan
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Date: 2016.06.16 12:18:05 -04'00'

Subject: Site Inspection Report
Alcoa Badin Works Landfill
NCD 003 162 542
Badin, Stanly County, NC

Dear Ms. Callihan,

The NC Superfund Section has completed a Site Inspection (SI) at the above site. The SI was completed in response to a petition, completed by the Duke Environmental Policy and Law Center in October 2014, requesting a Preliminary Assessment under CERCLA. It was subsequently determined that Preliminary Assessments had been completed in March and October of 1985.

Based on the results of the SI, this site qualifies for further evaluation as a candidate for addition to the EPA Superfund National Priorities List. However, it is currently anticipated that the site will be addressed under the authority of the NC DEQ Hazardous Waste Section as a RCRA corrective action.

The project site, the former Alcoa Badin Municipal Landfill, is Alcoa Badin Works' Solid Waste Management Unit (SWMU) No. 2. The mixed-use landfill operated from the early 1900s until the 1970s. Waste received by the landfill included spent pot liner, a K088 RCRA Hazardous Waste containing semi-volatile organic compounds (SVOCs), metals, cyanide and fluoride.

The landfill is located up gradient and adjacent to Little Mountain Creek. In 2001, Alcoa converted three existing groundwater seeps at the base of the landfill into seepage collection points. Alcoa discharged the collected seepage to Little Mountain Creek until 2005, but currently disposes of the seepage via the local POTW. Additional groundwater discharge occurs to the creek floodplain, which contains mapped wetland. Surface water crosses the floodplain and discharges to the creek via two excavated drainage ditches and via additional surface flows.

The site's 15-mile surface water pathway includes the floodplain wetlands, and sections of Little Mountain Creek, Mountain Creek and Lake Tillery. No surface water intakes were identified within the pathway. Little Mountain Creek and Mountain Creek are possible fisheries, although no evidence of fishing was observed along proximal Little Mountain Creek during the SI. Lake Tillery is a fishery with posted Health Risk Advisories for consumption due to mercury and PCBs. Mapped wetland exists at the probable point of entry and at intervals downstream.

SI field operations, conducted in July 2015, included groundwater sample collection at the three seepage collections, and surface water and sediment sampling in the wetland surface flows and adjacent Little Mountain Creek. Sampling revealed SVOC, fluoride and cyanide contamination in the wetland between the landfill seepage collections and the creek. SI and contractor sampling from Little Mountain Creek itself produced ambiguous results, making it unclear whether contaminants were discharging to the creek at the time of the SI. Pre-SI data collected by other parties indicated that cyanide was present in creek water, but only in close downstream proximity to the landfill. Organic contaminants (SVOCs; PCBs) are confined to the floodplain and were not detected in SI samples from the creek itself.

The presence of contaminants in the floodplain wetlands, along with historical groundwater monitoring results there, indicate that contaminant transport is bypassing the current seepage collection system. The total length/perimeter of contaminated wetland has not been determined to date.

On April 5, 2016, the NC Hazardous Waste Section notified Alcoa of the need for further site remedial investigation as a SWMU under RCRA. Alcoa has indicated their intent to emplace a slurry wall between the landfill and the floodplain to augment the interception of groundwater contaminant transport from the landfill.

If you have any questions, please call me at (919) 707-8377, or contact me at stuart.parker@ncdenr.gov.

Sincerely,

Stuart F. Parker, Hydrogeologist
NC DEQ, Superfund Section

Attachments

STATE OF NORTH CAROLINA

Department of Environmental Quality
Division of Waste Management
Superfund Section

SITE INSPECTION (SI) REPORT

Alcoa Badin Works Landfill
NCD 003 162 542
Badin, Stanly County, NC

June 2016

Stuart F. Parker,
Hydrogeologist

David Lown,
Federal Remediation
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1.0 INTRODUCTION

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the North Carolina Superfund Section conducted a Site Inspection (SI) at the Alcoa Badin Works/Alcoa Badin Landfill site in Badin, Stanly County, NC. The purpose of this investigation was to collect information concerning conditions at the site sufficient to assess the threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or other appropriate action.

The scope of this investigation included on-site and off-site reconnaissance visits, and a sampling event on July 21, 2015.

2.0 SITE DESCRIPTION, OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

2.1 Site Location:

The Alcoa Badin Works is located on NC Highway 740 in the town of Badin, Stanly County, NC (Figs. 1-3). Site geographic coordinates for the adjacent Alcoa Badin Landfill are 35.4042^{o} north latitude and -80.1229^{o} west longitude. (Refs. 3-5; Figs 1-3).

The climate in Stanly County is mild, characterized by a mean Winter temperature of 42 ^{o}F and a mean Summer temperature of 77.3 ^{o}F (Ref. 8). Mean annual precipitation is approximately 48.76 inches (Ref. 6).

2.2 Site Description, Operational and Regulatory History and Waste Characteristics:

The Alcoa Badin Works (NCD 003 162 542) began operation in August 1917 and manufactured high-purity aluminum and carbon-based electrodes until 2007. The plant closed permanently in 2010. The adjacent 14-acre Alcoa Badin Landfill is the subject of the current investigation (Refs. 3, 4, 7).

The Alcoa Badin Works employed the Hall-Heroult industrial aluminum smelting process, which involved high-power electrolytic extraction of aluminum from a Cryolite solution containing sodium, alumina and fluoride. Extraction was conducted in brick-lined “pots”, with an inner lining of carbon-based cathode manufactured on site from anthracite and coal tar pitch. Carbon-based anodes, also manufactured on site, were lowered into the Cryolite to apply the electric current. The cathodes and anodes were partially consumed in the process, and “spent pot liner” – consisting of carbon cathode and liner brick – was periodically jackhammered out of the pots, prior to the latter being re-lined for future use (Refs. 8-9).

Spent pot liner waste stream constituents identified by EPA include: cyanide (total: 18.25-9,190 mg/kg); fluoride (230-135,000 mg/kg); arsenic (1.1-40 mg/kg; polynuclear aromatic hydrocarbons (PAH: <0.005-200 mg/kg). Cyanide is generated during exposure of the electrolytic process to air (nitrogen). Fluoride is derived from the electrolytic solution. PAH (a.k.a., semi-volatile organic compounds (SVOCs)) originates from use of coal/coal tar in electrode manufacture, and includes benzo(a)pyrene, benzo(b)fluoranthene and several related species (Ref. 8).

Spent pot liner is listed by the US Environmental Protection Agency (EPA) as K088 Hazardous Waste, due to cyanide contamination. Listing was suspended in January 1981, but K088 was re-listed in March 1989 (Refs. 3, 4, 10).

Alcoa historically operated two landfills outside the main facility: the Alcoa Badin Landfill and the Old Brick Landfill.

1. The Alcoa Badin Landfill is Solid Waste Management Unit (SWMU) #2 of the Alcoa Badin Works (NCD 003 152 542). This approximately 14-acre landfill is located 500 feet southwest of the main Alcoa plant, adjacent to Wood Road and Little Mountain Creek. The Alcoa Badin Landfill received Alcoa and municipal waste from approximately 1916 to the 1970s, including waste from extensive Alcoa plant renovation in 1965. The various Alcoa process wastes included carbon dust, spent pot liner and possibly asbestos (Refs. 3, 5, 10). The Alcoa Badin Landfill SWMU #2 is also known as the Alcoa Badin Municipal Landfill. The landfill is surrounded by undeveloped Alcoa property, plus two large Alcoa electrical switchyards that border its eastern margin (Figs. 2-3).

2. The Old Brick Landfill is SWMU #3 of the Alcoa Badin Works, but was assigned a separate EPA identification number (NCD 986 171 320). This 3-acre landfill is located approximately one mile northeast of the main plant, on a hill side adjacent to Badin Lake (Ref. 11). The Old Brick Landfill is not part of the current investigation.

In March 1990, Alcoa submitted a Resource Conservation and Recovery Act (RCRA) Part B permit application to the US EPA. Concurrently, Alcoa contractors completed a March 1990 Interim RCRA Facility Assessment (RFA) Report, recommending RCRA Facility Investigation at several of Alcoa's SWMUs, including groundwater at the Alcoa Badin Landfill. The NC Department of Environment, Health and Natural Resources, in cooperation with EPA Region 4, issued the final RCRA Part B permit to Alcoa in March 1992 (Ref. 10).

Alcoa conducted RCRA Interim Measures at the Alcoa Badin Landfill, SWMU #2. In 1996, Alcoa re-routed and replaced a leaking natural gas pipeline that formerly crossed the landfill. In 1997, Alcoa re-graded the landfill to prevent surface water run-on, promote surface water runoff, and reduce water infiltration. The new landfill cap consisted of two feet of clay and six inches of topsoil (Refs. 9, 10; Figs 2-3; Photos 1, 2, 12).

Alcoa constructed two concrete-lined flumes along the western and eastern lateral margins of the landfill to intercept storm runoff from up gradient of the landfill, and excavated two ditches across the Little Mountain Creek floodplain to convey the flume runoff to the creek. The discharges of the western and eastern drainage ditches constitute National Pollutant Discharge Elimination System (NPDES) Outfalls #18 and #22, respectively (Refs. 9, 10, 35; Figs 2-3; Photos 1, 2, 12).

Groundwater surface seeps existed at three locations (ABL01; ABL02; ABL03) below the western, middle and eastern toe of the landfill, at the upper edge of the Little Mountain Creek floodplain (Fig. 3). In 2001, Alcoa installed collection systems at all three seep locations. Each seep collection consisted of a near-horizontal well screen installed in a bed of rip-rap and gravel (Photo 3). Water from each seep collection is gravity fed across the floodplain surface via three interconnected PVC pipelines, joining to a main pipeline (Photo 8, Fig. 2). During SI field activities, Alcoa representatives noted that the eastern seep collection was located up gradient from the excavated drainage ditch that receives runoff from the landfill's eastern storm runoff flume (NPDES Outfall # 22). Due to its depth, the ditch is likely to discharge emergent groundwater from the floodplain during periods when no runoff is occurring in the flume (Refs. 9, 12-13, 21; Fig. 2).

From 2001 to 2005, Alcoa discharged the combined seepage collection to Little Mountain Creek via a PVC pipeline and box weir, as NPDES Outfall # 21. This outfall was located a short distance up the creek from the discharge of the eastern drainage ditch (Photos 4-6; Fig. 2). In 2005, Alcoa installed a lift station at the base of the landfill, and the combined seepage collection was re-routed to the Stanly County Publicly Owned Treatment Works (POTW). The inactive box weir and pipeline were left in place; Alcoa subsequently removed them in late Spring/early Summer of 2015 (Refs. 9, 12, 13; Photos 4, 5, 11).

2.3 Previous Investigations

2.3.1 CERCLA Investigations

Federal Investigations conducted to date at the Alcoa Badin Works site (NCD 003 162 542) included a March 1985 Preliminary Assessment (PA) and a March 1989 Preliminary Re-assessment (PRA), both of which included the Alcoa Badin Landfill SWMU #2. Based on the absence of local groundwater receptors (drinking water wells), the 1985 PA report concluded that groundwater contamination from landfill leachate posed a minimal health threat, and designated the site as "low priority" for further federal action (Refs. 3, 4).

Citing the absence of sample analytical data from the landfill, the 1989 PRA recommended that a higher-priority Screening Site Inspection (SSI) be conducted at the Alcoa Badin Works (Ref. 4). However, the EPA re-listed spent pot liner as K088 Hazardous Waste in March 1989, and Alcoa Badin was subsequently regulated as a RCRA Treatment, Storage and Disposal (TSD) facility; the SSI was cancelled in July 1989 and the site was deferred to RCRA (Refs. 10, 14).

In March 1991, the NC Superfund Section conducted an SSI at the Old Brick Landfill, SWMU #3. The report title mistakenly described the landfill as the "Alcoa Badin Landfill". SSI sampling did not reveal the presence of organic, inorganic or cyanide contamination, and a limited number of receptors were identified. Therefore, SWMU #3 was designated for no further action under CERCLA (Ref. 11).

2.3.2 Alcoa RCRA Investigations

Alcoa contractors conducted a RCRA Facility Investigation (RFI) at the Badin Works in 2001. The RFI included sampling at six monitoring wells installed at the Alcoa Badin Landfill. Alcoa reported that Total Cyanide concentration "slightly exceeded the NCAC 2L state groundwater standard in one of the monitoring wells (Ref. 10).

The RFI included a Screening Level Risk Assessment for surface water and sediment in Little Mountain Creek. Sampling was conducted at one upstream and one downstream location relative to the landfill. In the downstream water sample, fluoride and cyanide reportedly were elevated above background. The cyanide concentration did not exceed the NCAC 2L groundwater standard or the NCAC 2B surface water standard (no standard was available for fluoride). Because of the above groundwater exceedance, however, the SWMU #2 was retained in the Corrective Action Process (Refs. 10, 15).

In November 2011, during Phase III of the RCRA Corrective Measures Study, Alcoa conducted additional groundwater and surface water investigation at the landfill Groundwater sampling detected cyanide in two monitoring wells and piezometers, located in the southeastern part of the landfill and in one downgradient monitoring well in the Little Mountain Creek floodplain. The highest concentration (27 ug/l) occurred in a floodplain monitoring well, located approximately 200 feet southwest from the eastern seep collection. Fluoride was present in six piezometers within the landfill's southeast perimeter. Alcoa collected a surface water sample downstream in Little Mountain Creek; fluoride was detected but was also present in a laboratory blank. No cyanide, volatile or semi-volatile organic compounds or PCBs were detected (Ref. 15).

The Phase III Study included Electromagnetic (EM) and Ground-penetrating Radar (GPR) surveys, conducted across the landfill and in an adjacent Alcoa electrical switchyard to the east. Results of the surveys, in combination with test boring data, indicated that "carbon"/"carbon debris" was buried beneath approximately 6.5 acres of the landfill and beneath less than one acre of the switchyard (Ref. 15).

2.3.3 Appalachian State University Investigations

On April 4, 2014 and April 11, 2015, the Appalachian State University (ASU) Aquatic Ecotoxicology Laboratory conducted water chemistry, fish and macroinvertebrate assessment in Little Mountain Creek and its floodplain adjacent to the Alcoa Badin Landfill SWMU #2. ASU established sampling stations on the creek at locations upstream and several hundred feet downstream from the landfill, and at a discharge point from the floodplain. Samples were analyzed by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP OES), reflux distillation, gas chromatography and Ion Chromatography (IC) methods (Refs 16-17).

ASU sampling detected elevated fluoride concentrations - a possible indicator of pot-liner leachate – in standing surface water between the landfill and Little Mountain Creek (Photo 7). In two of the floodplain water samples, fluoride exceeded the NCAC 2L groundwater standard and the NCAC 2B surface water standard (Ref. 16).

Fluoride and cyanide were detected in surface water at the landfill drainage discharge to Little Mountain Creek. However, their concentrations farther downstream in the creek did not exceed those in the upstream reference sample. Arsenic, cadmium and lead were elevated at the downstream surface water sample station, but not at the discharge point. ASU analysis of metals in creek sediment indicated a 50% increase in lead between the upstream and downstream sample stations. However, ASU collected no sediment at the discharge point for comparison (Ref. 16)

ASU conducted electrofishing in Little Mountain Creek, collecting four individuals of two *Lepomis* (Bluegill) species, each, at points upstream and several hundred feet downstream from the landfill. Tissue samples were analyzed for arsenic cadmium, lead, selenium and zinc, and one downstream sample was of sufficient quantity for PCB analysis. Cadmium was the only inorganic analyte whose downstream concentration range was sufficiently elevated not to overlap the range for the two upstream sample results. PCB Aroclor 1248 was detected in the single, downstream tissue sample for which it was analyzed (Ref. 16).

An ASU report summarizing the above findings noted that fluoride, lead and cyanide results exceeded EPA sediment criteria at all three stations (including upstream), particularly in the landfill drainage to the creek. Aqueous Cyanide also exceeded EPA freshwater criteria in the landfill drainage. The report noted that lead exceeded EPA criteria in both upstream and downstream fish tissue, and that PCB exceeded criteria in the single (downstream) sample for which it was analyzed (Ref. 16).

It should be noted that ASU reported both its aqueous cyanide results and the EPA freshwater criterion for cyanide in parts per million (mg/L); however, the actual unit for the quoted freshwater criterion is in parts per billion (ug/l). For this reason, it may be that the sample results were in parts per billion as well.

The ASU report concluded that the landfill had caused no serious disturbance to the creek biota, but that sample results – particularly fluoride, cyanide, lead and PCBs – demonstrated the potential for chronic environmental impact. Because the results indicated that the landfill waste was possibly leaching contaminants to Little Mountain Creek, the report concluded that "there is not enough data to warrant large scale remediation, but routine monitoring of the elevated contaminants is needed" (Ref. 16).

2.3.4 Duke Law Investigation and Petition

The Duke Environmental Law and Policy Center (DELPC) conducted a limited sampling event at the site on June 27, 2014, collecting from the same approximate locations as the ASU sampling team. Analysis of surface water and sediment samples from Little Mountain Creek detected cyanide (2.7 ug/L) and fluoride (48.8 ug/L) in surface water. These results did not exceed the respective NCAC 2B surface water criteria (5 ug/L; 1800 ug/L). A higher fluoride concentration, exceeding the NCAC 2B surface water and NCAC 2L groundwater standards, was present in a pool of standing water in the upper floodplain below the landfill (Photo 7). DELPC reported that a PVC pipeline crossing the floodplain was cracked and appeared to be leaking water to the floodplain surface; a sample of the water exceeded the surface water criterion for fluoride (Ref. 18).

On October 17, 2014, based on the April and June 2014 sampling results, DELPC, on behalf of the Yadkin River Keeper, petitioned the US EPA Region 4 to conduct a Preliminary Assessment (PA) of the Alcoa Badin Landfill and Little Mountain Creek (Ref. 18). Because a PA had been completed at this site in 1985 (Ref. 3), the EPA tasked the site for a Site Inspection.

During the week of April 6, 2015, representatives of the NCDENR Division of Waste Management (DWM), Division of Water Resources (DWR) and US EPA Region 4 met with Alcoa representatives. They toured the landfill and floodplain/wetland and observed the ASU and DELPC sampling locations for further evaluation (Ref. 9).

During the floodplain reconnaissance, NC and EPA personnel examined the location of the reported leaking pipeline, and determined that the pipeline segment and attached box weir were no longer an active component of the seep collection and disposal system. A crack was visible in a larger-diameter section of PVC pipe that served as a protective sleeve for the pipeline itself. The water-saturated ground surface was slightly eroded on the downgradient side of the cracked sleeve; the reported "leakage" from the pipeline instead appeared to be groundwater that had flowed beneath the pipeline and was emerging to the surface on its downgradient side (Ref. 9; Photos 4-6).

2.3.5 NC DWR Investigation

On April 23 and May 15, 2015, representatives of the NC DWR and Alcoa met and collected split water samples from the floodplain between the landfill and Little Mountain Creek. In the creek channel, samples were collected upstream from the landfill and at Highway 740, approximately 0.1 mile downstream from the landfill. No sampling was conducted directly downstream from the floodplain discharge to the creek (Ref. 19).

DWR and Alcoa water samples were analyzed for inorganics and cyanide. Cyanide, fluoride, arsenic and lead were present in samples from the floodplain drainage pathways below the central and eastern seep collections, indicating a release of these contaminants to wetlands. Analytical results for the samples collected downstream at Highway 740 were non-detect or similar to upstream background concentrations (Ref. 19).

3.0 SI WASTE/SOURCE SAMPLING

At the direction of the NC DENR, Hazardous Waste Section (NC RCRA), Alcoa submitted a work plan for sampling operations to be conducted at the landfill and Little Mountain Creek. Source sampling for this SI consisted of collecting groundwater samples from each of the three seepage collections near the base of the landfill. Alcoa contractors and NC Superfund Section personnel met at the site on July 21, 2015 and collected split samples (ABL01GW; ABL02GW; ABL03GW) from the respective western, middle and eastern seep collection points, using a peristaltic pump and tubing furnished by the contractor (Refs. 13, 20; Figs 2-3).

At the time of sampling, Stanly County and the surrounding portion of NC were experiencing moderate drought conditions. Standing/flowing surface water was absent at several locations on the floodplain where it had previously been observed during the April 2015 reconnaissance (Photos 7, 9). The landfill seeps were similarly affected; the western seep in particular was very slow to recover between sample extraction intervals (Ref. 13).

The SI seep groundwater samples were analyzed for volatile and semi-volatile organic compounds (VOCs/SVOCs), polychlorinated biphenyl (PCB) Aroclors and organics including RCRA and other metals, Total Cyanide and fluoride (Appendix A).

The NC Superfund Section's SI source sample results are summarized in Tables 1A and 1B. No VOCs, SVOCs or PCB Aroclors were detected in the landfill seep samples. Barium was detected in all three seep samples and zinc was detected in the western seep sample. However, the inorganic results were all less than their analytical Method Reporting Limit (MRL) and were therefore "J" qualified as approximate values (Table 1B; Appendix A).

The available EPA Contract Laboratory analytical method for aqueous Total Cyanide (CLP ISM02.2.AS) resulted in a Method Reporting Limit (MRL) of 10 ug/L and a Method Detection Limit (MDL) of approximately 3 ug/L. No cyanide detections were reported above the MRL, and no "J"d cyanide detections were reported between the MDL and the MRL (Table 1B; Appendix A).

Fluoride was detected in all three landfill seep SI samples. The highest concentrations (33 mg/L; 27 mg/L) were reported in the middle and eastern seep samples, respectively. None of the fluoride results exceeded the EPA's Maximum Contaminant Level (MCL) for groundwater (Table 1B; Appendix A).

The Alcoa contractor's seep sample analytical results generally agreed with those for the SI samples. Alcoa's organic seep sample results included acetone and bis(2-ethylhexyl) phthalate, which the contractor interpreted to be possible laboratory contaminants. No other VOCs/SVOCs were reported. The contractor's seep samples contained fluoride and barium at concentrations similar to the SI samples. Cyanide was reported as non-detect (< 1.1 ug/L) (Ref. 21).

4.0 GROUNDWATER PATHWAY

4.1 Hydrogeologic Setting:

Stanly County, NC lies within the Piedmont Physiographic Province. The Piedmont landscape is characterized by rolling surface topography with well-rounded hills and northeast-southwest-oriented ridges, dendritic surface drainage patterns and broad, flat inter-stream areas (Ref. 22; Fig 1).

The site is located in the Carolina Slate Belt geologic region of the state. Bedrock lithology in this region generally consists of greenschist-grade metamorphic rock derived from volcanic and/or sedimentary parent rock (Ref. 23.

Native soil at the landfill location is mapped as Badin Urban Land Complex, Badin Channery Silt Loam and loamy Udorthents (soil disturbed by earth-moving activities). Typical undisturbed Badin soils consist of a 6-inch surface layer of brown silt loan, underlain by brown silty clay loam, yellowish red silty clay and mottled red, yellow and brown silty clay loam to 25 inches depth. Underlying saprolite (chemically weathered bedrock), consisting of highly–fractured "slate", gives way to competent bedrock at approximately 30 inches depth (Ref. 24)

Local bedrock lithology beneath the landfill consists of the Late Proterozoic Cid Formation. The mudstone member of this formation is a gray, tan-weathering metasedimentary rock in which ripple-marked, cross-bedded stratified siltstone grades upward into a laminated siltstone-mudstone, both containing minor igneous tuff beds. To the west lies the Flat Swamp member, consisting of gray crystal and lithic tuffs, primarily of rhyodacitic and rhyolitic composition (Ref. 23). The latter lithology results in a NNE-SSW-trending topographic ridge, through which Little Mountain Creek has eroded, upstream from the landfill (Fig. 1)

Average annual precipitation in the area is 49 inches (Ref. 6). Precipitation that does not run off to streams infiltrates into the ground surface. Infiltrating water that is not lost to evapotranspiration migrates down through the soil column to recharge the underlying aquifer.

In the piedmont, the groundwater aquifer consists of fractured bedrock and an overlying veneer of saprolite (weathered rock). Groundwater seeps through the permeable saprolite, but migration through competent bedrock occurs primarily via discontinuities including fractures, faults and bedding planes (Ref. 22).

4.2 Groundwater Targets:

The municipalities of Badin, New London and Albemarle NC obtain public drinking water from a surface water intake located on Badin Lake, approximately 4 miles north of Badin. Residences within the incorporated municipalities are supplied drinking water by municipal water lines, some of which extend several miles outside municipal boundaries into the county (Ref. 25; Fig. 1).

Groundwater constitutes the domestic drinking water supply for residences in the study area that are not connected to public water. Based on Geographic Inquiry System (GIS) analysis conducted by the NC Superfund Section, the Badin municipality includes the large majority of residences located within a 0.25-mile radius from the Alcoa Badin Landfill. Those homes within the radius that lie outside the municipal boundary are located on the south side of Little Mountain Creek, which is likely to act as a discharge boundary for potential groundwater contaminant migration (Ref. 22; Fig. 1).

The potential groundwater-using population is calculated to be 9 people within a 0.25-mile radius, and approximately 48 people between 0.25 mile and 0.5 mile from the landfill. The total population within a 4-mile radius that potentially uses groundwater was calculated to be 3458 people. However, this calculation includes rural residences which may have been connected to municipal water-line extensions. Therefore, the actual groundwater population in the study area is likely to be less than the calculated population (Ref. 26; Fig. 1).

4.3 Groundwater Sampling:

Except for the landfill groundwater seep collections, no groundwater sampling was conducted as part of the current SI.

4.4 Groundwater Conclusions:

Based on groundwater conditions and the absence of proximal drinking-water wells, the hazard posed by site groundwater contaminants is considered to be minimal for this exposure pathway.

5.0 SURFACE WATER PATHWAY

5.1 Hydrologic Setting:

The Alcoa Badin Landfill is located adjacent to the floodplain of Little Mountain Creek. During periods of normal seasonal rainfall, emergent groundwater seepage not intercepted by the three seep collections appears as surface water, either standing in pools on the floodplain or flowing as surface discharge to Little Mountain Creek (Ref. 9; Photos 7-10).

Preferential surface discharge pathways below the western and middle seep collections (ABL01; ABL02) consist of two shallow rivulets measuring approximately 400 feet and 150 feet in length, respectively. The pathway below the eastern seep collection (ABL03) consists of an excavated drainage ditch measuring approximately 220 feet in length with a maximum depth of approximately 5 feet (Ref. 9; Photos 8, 10, 12).

During storm runoff events, the eastern drainage ditch receives background runoff from up gradient of the landfill via the concrete-lined flume on the landfill's eastern lateral margin (Figs 2-3; Photos 1-2). During July 2015 sampling operations at the landfill, the eastern flume was observed to be dry; however, standing water was visible on the bed of the eastern drainage ditch, and a trickle of water was flowing within the middle and lower portion of the ditch (Ref. 13). Therefore, the ditch (NPDES Outfall # 22) appeared to be discharging groundwater from the floodplain as base flow to Little Mountain Creek.

The probable point(s) of entry (PPE(s)) to a site's surface water pathway is defined by 1) the beginning of perennial surface water flow downgradient of the source, or 2) the nearest perennial wetland area downgradient of the source (Ref. 1). At the Alcoa Badin Landfill, wetlands constitute PPEs, and perennial surface flows within the floodplain constitute in-water segments of the 15-mile Surface Water Pathway.

From the mouth of the excavated eastern drainage ditch, Little Mountain Creek flows east and southeast to join Mountain Creek, 3.1 miles downstream. Mountain Creek continues eastward for 2.7 miles, then discharges into Lake Tillery, a reservoir constructed on the Yadkin River downriver from Badin Lake. The remainder of the 15-mile surface water pathway lies within Lake Tillery (Refs 27-28). Little Mountain Creek is classified as a Minimal Stream (<10 cubic feet/second (cfs)), Mountain Creek is a Small to Moderate Stream (mean flow approximately 18 cfs) and Lake Tillery is a Large Stream/River (1000-10,000 cfs) (Refs 1, 28, 30).

5.2 Surface Water Targets:

5.2.1 Drinking Water

The nearest downstream surface water intake for public supply is located on Lake Tillery at Norwood, NC. This intake is located 15.5 miles downstream from the mouth of the eastern drainage ditch, and is therefore outside the 15-mile Target Distance Limit of the Surface Water Pathway (Refs. 1, 25, 27).

5.2.2 Human Food Chain

Between the PPEs and Lake Tillery, five ready access points exist for potential recreational/subsistence fishing. Four of these points are road crossings of Little Mountain and Mountain creeks, including: NC Highway 740; Byrd Road; Valley Drive and the entrance road to Morrow Mountain State Park. The fifth point is a boat launch located on Lake Tillery at the Mouth of Mountain Creek. Based on GIS data, the Byrd Road and Valley Drive crossings are surrounded by private residential properties (Ref. 31). The lowermost portion of Mountain Creek also skirts the southern edge of Morrow Mountain State Park. However, park roads do not intersect the creek, and pedestrian hiking trails which loop through the park do not intersect the creek (Ref. 32).

Sampling activities conducted by ASU in 2015 included successful electrofishing for Bluegill species ("pan fish") in Little Mountain Creek pools in proximity to the landfill (Ref. 16). However, during SI field reconnaissance and sampling activities, no evidence of recreational fishing was observed along Little Mountain Creek, either in proximity to the site or downstream at the NC Highway 740 road crossing (Refs. 9, 13).

Both Lake Tillery and Badin Lake are large reservoirs with multiple boat launches and shore fishing access points. A primary boat/shoreline access on Badin Lake is located off Highway 740, 0.6 mile north of Little Mountain Creek (Refs. 9, 33). The limited stream flow and access along Little Mountain Creek and Mountain Creek, combined with the ready accessibility of Lake Tillery and Badin Lake, indicate that the reservoirs are likely to be the closest water bodies to the site where recreational/subsistence fishing occurs on a regular basis.

A Fish Consumption Advisory is in effect at Lake Tillery for catfish, due to mercury and PCB pollution. A similar advisory exists at Badin Lake for Black Bass and catfish (Ref. 34). However, local residents report that subsistence fishing still take place regularly on Badin Lake (Ref. 9).

5.2.3 Environmental

A large area of mapped Palustrine Forested wetland, crossed by three surface drainage pathways, lies between the landfill and Little Mountain Creek. Downstream from the eastern drainage ditch, Little Mountain Creek contains a total of approximately 4.0 miles of mapped Palustrine, Scrub-shrub and/or Emergent wetland frontage (Refs. 27-28; Figs 1, 3). The nearest GIS-identified Threatened/Endangered species habitat is located at the confluence of Little Mountain Creek and Mountain Creek, approximately 3.1 miles downstream from the site (Fig. 1).

5.3 <u>Surface Water Pathway Sampling and Results</u>:

5.3.1 Sampling Activity and Locations

Alcoa contractor and NC Superfund Section personnel met at the site on July 21, 2015 to conduct SI and split sampling. Surface water and/or sediment samples were collected from the western and middle surface flows across the Little Mountain Creek floodplain (ABL04; ABL05) and from the bed of the excavated eastern drainage ditch (ABL06). The middle flow pathway was dry at the time of the field activity, so only sediment was collected at that location. The location where the "cracked pipeline" formerly existed had been regraded and stabilized with landscape mesh; a surface soil sample was collected at that location (ABL07) (Refs. 13, 21; Figs. 2-3; Photo 11).

As part of the SI, the NC Superfund Section collected four surface water and sediment sample sets from three locations along Little Mountain Creek. The upstream/background creek samples (ABL08SW; ABL08SD) were collected at Station ABL08, upstream (west) of the discharge from the landfill's western runoff flume (Outfall # 18), and several hundred feet upstream from the other landfill discharge points to the creek as well. Intermediate creek samples (ABL09SW; ABL09SD) were collected at Station ABL09, downstream from the discharge of the western and middle floodplain drainages, but upstream from the mouth of the excavated eastern drainage ditch. Downstream and duplicate sample sets (ABL10SW; ABL11SW; ABL10SD; ABL11SD) were collected at Station ABL10, approximately 30 feet downstream from the mouth of the ditch. Candidate locations for sediment sampling were limited by the degree of pooling and availability of sediment deposits in the otherwise rocky stream bed (Refs 13, 21; Photos 13-14; Figs. 2-3).

All environmental sampling for the SI was conducted according to NC Superfund Section Standard Operating Procedures (SOPs), and the EPA Region 4's "Field Branches Quality System and Technical Procedures". SI samples were submitted to the EPA Region 4 Regional Laboratory or to EPA Contract Laboratories for analysis (Appendix A).

The SI surface water and sediment samples were analyzed for volatile and semi-volatile organic compounds (VOCs/SVOCs), polychlorinated biphenyl (PCB) Aroclors, and inorganics including metals, fluoride and total cyanide. NC Superfund SI sample results are summarized in Tables 1A and 1B and in Appendix A of this report.

5.3.2 Floodplain Results

Analysis of the floodplain and eastern drainage ditch surface water samples detected no organic compounds. Barium (estimated concentrations) and fluoride were detected in both water samples. The highest fluoride concentration (9.3 mg/L) was detected at the eastern drainage ditch. No EPA Screening Values are currently established for barium or fluoride in surface water. Cyanide was detected in water in the eastern drainage ditch; the concentration (63 ug/L) considerably exceeded the (5.2 ug/L) EPA Screening Value for surface water (Tables 1A-1B; Appendix A).

Sediment samples from the western and middle flow pathways contained trace levels of chloroform and 1,2,4-trichlorobenzene, below Method Reporting Limits (MRLs). SVOCs were present in sediment from the middle flow pathway and eastern drainage ditch, and in soil from the former pipeline location. PCB Aroclor 1260 was detected in the pipeline soil and PCB Aroclors 1242 and 1260 were detected in sediment from the eastern drainage ditch. Concentrations of PCB Aroclors and several SVOC species exceeded their respective EPA Ecological Sediment Screening Values (ESVs) (Table 1A; Appendix A).

All four sediment/soil samples from the floodplain contained arsenic, chromium, lead, zinc and fluoride. Arsenic concentrations (13-29 mg/kg) exceeded the ESV in all four samples. Cyanide (1.2-1.8 mg/kg) was detected in western flow path and eastern drainage ditch sediment and in former pipeline soil. No ESVs are currently established for cyanide or fluoride. The remaining inorganics were below ESVs except for slight exceedances by chromium in the western flow path and lead in the former pipeline soil (Table 1B; Appendix A).

The Alcoa contractor's sample analytical results generally agreed with the SI sample results. Alcoa's results supported the presence of cyanide in eastern drainage ditch water and sediment, as well as the existence of SVOCs in sediment from the eastern drainage ditch and other flow pathways in the floodplain. Alcoa's laboratory analyses detected a greater variety of metals in the floodplain sediments. No fluoride was reported in sediment in the eastern drainage ditch, likely because the Alcoa laboratory analysis resulted in a higher MDL for fluoride. Alcoa's PCB results were also non-detect.

5.3.3 Little Mountain Creek Results

Methylene chloride was reported as a "J"d (estimated, below MRL) result in one of the two (duplicate) downstream water samples from Little Mountain Creek. This detection was possibly due to laboratory contamination. No other VOCs, SVOCs or PCBs were detected in SI water samples from the creek. Barium (11-13 ug/L) was reported in the intermediate and downstream water samples; however, the results were "J"d, being less than the MRL. No other metals were detected in the SI surface water samples from the creek.

The available EPA Contract Laboratory method for cyanide analysis in water (CLP ISM02.2AS) resulted in a Method Reporting Limit of 10 ug/L and a Method Detection Limit of approximately 3 ug/L. No cyanide concentrations were reported above the MRL in SI water samples from the creek, and no "J"d cyanide detections were reported between the MDL and the MRL (Table 1B; Appendix A).

Fluoride was detected (0.097-0.11 mg/L) in each of the SI surface water samples from Little Mountain Creek. However, the highest concentration was obtained from the upstream/background sample (ABL08SW) (Table 1B; Appendix A)

No VOCs, SVOCs or PCBs were detected in the SI sediment samples collected from Little Mountain Creek. All of the SI creek sediment samples contained arsenic, chromium, lead and zinc, and arsenic and chromium results exceeded EPA Sediment Screening Levels (ESVs). However, none of the intermediate or downstream results was elevated above 3 times background, and so no Observed Release of these contaminants was documented to the creek under CERCLA (Tables 1A-1B; Appendix A).

Cyanide (0.75 mg/kg) was reported in one of the two downstream sediment samples (ABL10SD). However, cyanide was not reported in the duplicate sample (ABL11SD), which had a higher sample MRL.

Fluoride was reportedly detected in each of the SI sediment samples from Little Mountain Creek. Concentrations increased from the upstream/background location (0.58 mg/kg) to the downstream location (1.2-1.3 mg/kg). However, the increase was insufficient (< 3 times) to constitute an Observed Release under CERCLA.

The Alcoa contractor's sample analytical results for Little Mountain Creek generally agreed with the SI sample results. No organic compounds were detected, and metals concentrations in downstream surface water and sediment were comparable to upstream/background results. Alcoa's laboratory analysis detected no fluoride in the creek samples, likely due to a higher Alcoa laboratory MDL for fluoride (Ref. 21).

Alcoa sampling results indicated a trace detection of cyanide (4.9 ug/L) in downstream surface water in Little Mountain Creek. The result was "J"d as an approximate value, between the MDL and MRL. However, Alcoa's analysis also detected cyanide in their Little Mountain Creek sediment samples, and the increase in concentration from upstream/background (0.13 mg/kg) to downstream (0.54 mg/kg) met the CERCLA criterion for an Observed Release to the creek (Refs. 1, 21)

5.4 Surface Water Pathway Conclusions:

Fluoride was the only spent pot liner constituent detected in SI samples from the three landfill seep collections (Section 3.0). However, Alcoa's historical sampling investigations revealed cyanide contamination in groundwater beneath the southeastern portion of the landfill, and beneath the adjacent downgradient floodplain (Section 2.3.2). The presence of cyanide in surface water within the adjacent excavated eastern drainage ditch (NPDES Outfall #22) is therefore likely attributable to 1) groundwater contaminant migration not intercepted by the existing seepage collection and 2) base-flow discharge of contaminated groundwater from the floodplain to the ditch.

SVOC (PAH), an additional listed pot liner waste stream constituent, was present in ditch and floodplain SI sediment samples, and in soil at the former pipeline location where groundwater previously appeared to be discharging to the floodplain surface (Section 2.3.4). Sediment/soil concentrations of SVOCs, including several benzo-PAH species, ranged from non-detect in the western drainage to several hundred parts per billion in the middle drainage and pipeline locations and to parts per-million at the eastern drainage ditch, exceeding EPA Ecological Sediment Screening Values in the ditch. This variation indicates that the SVOC detections represent localized contamination attributable to the landfill, rather than ambient urban concentrations.

The floodplain between the landfill and Little Mountain Creek contains a large area of mapped wetland which includes the locations where SI sampling detected contamination. This indicates an Observed Release of contaminants to the wetland probable point of entry (PPE) to the surface water pathway. Although the National Wetlands Inventory has mapped much of the floodplain as wetland, accurate delineation of the area/perimeter of contaminated wetland would require a detailed wetland survey, and additional analytical sampling.

SI sampling detected PCB contamination only in the eastern drainage ditch and in an adjacent area of recently-disturbed soil (the former pipeline). During storm runoff events, the eastern drainage ditch receives runoff from up gradient of the landfill, via the concrete-lined flume that runs down the landfill's eastern margin. This flume passes in direct proximity to the two large Alcoa electrical switchyards adjacent to the landfill (Figs 2-3; Photo 1). The switchyards contain multiple electrical transformers, and Alcoa investigations indicate that buried carbon waste is present beneath both the landfill and one of the switchyards. Therefore, a potential source for Alcoa SVOC and PCB exists at this location as well.

SI surface water and sediment sampling in Little Mountain Creek detected none of the organic contaminants detected in the creek floodplain drainage pathways. SVOC and PCB contamination of sediment was limited to the floodplain drainage pathways and eastern drainage ditch, and was not evident in the creek itself. Arsenic, chromium, lead and zinc concentrations in creek sediment SI samples were comparable to those in the floodplain. However, except for barium, none of the floodplain or downstream creek sediment concentrations for these elements was significantly elevated above upstream/background results from the creek.

Historical (pre-SI) sampling has detected cyanide and/or fluoride at the confluence of landfill drainage with Little Mountain Creek. SI sample analysis of surface water a short distance downstream from the confluence was unable to replicate quantitation in the range (< 5 ug/L) at which cyanide detections were previously reported. Alcoa contactors reported a "J'd" cyanide detection in surface water at the downstream SI sample location. SI sampling revealed cyanide in one of two duplicate sediment samples directly downstream from the landfill, and Alcoa contractor sampling confirmed cyanide in the downstream sediment. Downstream fluoride results from SI and contractor split-sampling were either non-detect or did not exceed three times (upstream) background.

Collectively, SI and historical sampling results indicate that cyanide and/or fluoride releases to Little Mountain Creek vary with time and seasonal conditions. To date, however, results from downstream samples in the creek have not exceeded EPA Screening Values or NC surface water standards. Pre-SI sampling results also have not indicated elevated cyanide or fluoride concentrations occurring farther downstream (e.g., at NC Highway 740).

Fish species commonly taken for human consumption have been documented in Little Mountain Creek between the Alcoa Badin Landfill and NC Highway 740. However, during SI field reconnaissance and sampling, no evidence of recreational/subsistence fishing was observed in this segment of the site's surface water pathway.

6.0 SOIL EXPOSURE AND AIR PATHWAYS

Fires were reported to have historically occurred at the Alcoa Badin Works Landfill (SWMU #2) (Ref. 9). However, the landfill has been inactive since the 1970s (Refs. 3-4). Alcoa subsequently re-graded the landfill to prevent surface water run-on, promote surface water runoff, and reduce water infiltration. The landfill cover consists of 2 feet of clay, covered by 6 inches of vegetated topsoil. The landfill perimeter is continuously fenced, with locked gates. The adjacent Little Mountain Creek floodplain is accessible to the public from Highway 740, albeit travelling on foot through approximately 0.1 mile of heavy vegetation. The nearest residences are located 0.1 mile north and 0.11 mile south of areas of the floodplain where surface soil/sediment contamination has been identified (Fig. 1). No schools or day care facilities exist in proximity to the site.

No surface soil or air sampling was conducted on the landfill and no air sampling was conducted on the adjacent floodplain. Based on the above findings, neither the soil exposure or air pathways were evaluated as part of the current investigation.

7.0 SI SUMMARY AND CONCLUSIONS

Based on the Site Inspection results and findings, this site warrants further evaluation under CERCLA. Further evaluation could be conducted under RCRA authority and oversight, however, CERCLA authority would apply if no such action was undertaken by Alcoa. Further evaluation would specifically address:

- Groundwater contaminant migration pathways not intercepted by the existing seepage collection system

- The areal and linear extent of wetland contamination between the landfill and Little Mountain Creek.

- The extent of SVOC and cyanide contamination in the excavated eastern drainage ditch (within the creek floodplain) and contribution of groundwater discharge to the contamination.

- Identification of the source of PCB Aroclors in (and adjacent to) the eastern drainage ditch.

- The eastern drainage ditch's contribution to cyanide and fluoride in Little Mountain Creek.

- Variation on creek contaminant levels and the maximum downstream extent to which contamination can be detected.

Alcoa Badin Works Landfill
NC 003 162 542
Site Inspection
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April 2016

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PHOTOGRAPHS

Photo 1: Concrete-lined run-on diversion flume, passing transformers on eastern margin of Alcoa Badin Landfill

Photo 2: Concrete-lined flume (left); monitoring well and seepage lift station (right), at base of Alcoa Badin Landfill

Photo 3: Eastern seepage collection at base of Alcoa Badin Landfill

Photo 4: "Leaking" (inactive – now removed) former discharge pipeline for landfill seepage collection , April 2015.

Photo 5: Box weir (now removed) for former discharge of landfill seepage collection, April 2015.

Photo 6: Former landfill seepage collection discharge to Little Mountain Creek.

Photo 7: Standing water in Little Mountain Creek floodplain, April 2015.

Photo 8: Western seepage collection pipeline, crossing drainage pathway from area near middle seepage collection

Photo 9: Little Mountain Creek floodplain in drought, July 2015.

Photo 10: Discolored emergent groundwater near western seep collection, April 2015.

Photo 11: Former location of "leaking" seepage discharge pipeline, July 2015.

Photo 12: Excavated eastern drainage ditch, July 2015.

Photo 13: Collecting sediment downstream from eastern drainage ditch on Little Mountain Creek, July 21, 2015.

Photo 14: Collecting samples on Little Mountain Creek, July 21, 2015.

TABLES

Table 1A
Alcoa Badin Works
Landfill Sampling Results:
Volatile and Semi-volatile Organic Compounds; PCBs
7/21/2015

	Landfill Seep Collection			Little Mountain Creek Floodplain				Little Mountain Creek			
	West	Middle	East	West	Middle	East	Former Pipeline	Upstream	Below Middle Seep	Downstream / Duplicate	
AQUEOUS:	ABL01GW	ABL02GW	ABL03GW	ABL04SW	ABL05SW	ABL06SW	ABL07SW	ABL08SW	ABL09SW	ABL10SW	ABL11SW
Volatile Organic Compounds	- -	- -	- -	- -		- -		- -	- -	- -	- -
Semi-volatile Organic Compounds	- -	- -	- -	- -		- -		- -	- -	- -	- -
PCB Aroclors	- -	- -	- -	- -		- -		- -	- -	- -	- -

	Landfill Seep Collection			Little Mountain Creek Floodplain				Little Mountain Creek				EPA Ecological Sediment Screening Value (ESV) [1]
	West	Middle	East	West	Middle	East	Former Pipeline	Upstream	Below Middle Seep	Downstream / Duplicate		
SEDIMENT:				ABL04SD	ABL05SD	ABL06SD	ABL07SD	ABL08SD	ABL09SD	ABL10SD	ABL11SD	
Chloroform				12 J	- -	- -	- -	- -	- -	- -	- -	NA
1,2,4-Trichlorobenzene				- -	17 J	- -	- -	- -	- -	- -	- -	1700
Methylene Chloride				- -	- -	- -	- -	- -	- -	6.7 J	- -	NA
Anthracene				- -	- -	310	110 J	- -	- -	- -	- -	**594**
Benzo(a)anthracene				- -	170	**1300**	520	- -	- -	- -	- -	**841**
Benzo(a)pyrene				- -	200	**1500**	630	- -	- -	- -	- -	**965**
Benzo(b)fluoranthene				- -	250	**1500**	660	- -	- -	- -	- -	**979**
Benzo(g,h,i)perylene				- -	140	850	460	- -	- -	- -	- -	**1095**
Benzo(k)fluoranthene				- -	160	**1300**	500	- -	- -	- -	- -	**981**
Carbazole				- -	- -	270	- -	- -	- -	- -	- -	**NA**
Chrysene				- -	200	**1500**	620	- -	- -	- -	- -	**844**
Dibenzo(a,h)anthracene				- -	- -	390	200	- -	- -	- -	- -	**1123**
Fluoranthene				- -	270	**2300**	**860**	- -	- -	- -	- -	**707**
Indeno(1,2,3-cd)pyrene				- -	130	810	400	- -	- -	- -	- -	**1115**
Phenanthrene				- -	130	**1300**	480	- -	- -	- -	- -	**596**
Pyrene				- -	230	**1800**	**740**	- -	- -	- -	- -	**697**
Aroclor 1242 (MRL=50)				- -	- -	**65 J**	- -	- -	- -	- -	- -	*
Aroclor 1260 (MRL=16-19)				- -	- -	**49 J**	35 J	- -	- -	- -	- -	*

All aqueous results are in ug/L
All sediment results in ug/kg
" - - " = Non-detection above Method Reporting Limit
Sample medium unavailable at this location
Bold Result exceeds ESV.

[1] Source: *USEPA Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft (2015).*
http://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
Total PAH Screening Value (1610 ug/kg): Table 2B; Individual PAH Screening Values: Table 2C.
* Total PCBs Screening Value = 59.8 ug/kg; Wildlife-based = 0.33 ug/kg (Table 2A).

Table 1B
Alcoa Badin Works
Landfill Sampling Results:
Inorganics and Cyanide
7/21/2015

		Landfill Seep Collection			Little Mountain Creek Floodplain				Little Mountain Creek				HRS Benchmark (Environmental: Freshwater chronic)	EPA Fresh Surface Water Screening Value (Chronic) [1]	15A NCAC2B Surface Water Standard (2014)	
		West	Middle	East	West	Middle	East	Former Pipeline	Upstream	Below Middle Seep	Downstream / Duplicate					
AQUEOUS:		ABL01GW	ABL02GW	ABL03GW	ABL04SW		ABL06SW		ABL08SW	ABL09SW	ABL10SW	ABL11SW				
Arsenic	ug/L	- -	- -	- -	- -		- -		- -	- -	- -	- -	150	150	150	Arsenic
Barium		53 J	70 J	41 J	15 J		53 J		- -	11 J	12 J	13 J	NA	220	NA	Barium
Cadmium		- -	- -	- -	- -		- -		- -	- -	- -	- -	0.25	0.25	0.15	Cadmium
Chromium		- -	- -	- -	- -		- -		- -	- -	- -	- -	74	74	24	Chromium
Lead		- -	- -	- -	- -		- -		- -	- -	- -	- -	2.5	2.5	0.54	Lead
Mercury		- -	- -	- -	- -		- -		- -	- -	- -	- -	0.77	0.77	0.012	Mercury
Selenium		- -	- -	- -	- -		- -		- -	- -	- -	- -	5	5	NA	Selenium
Silver		- -	- -	- -	- -		- -		- -	- -	- -	- -	NA	0.06	0.06	Silver
Zinc		27 J	- -	- -	- -		- -		- -	- -	- -	- -	120	120	36	Zinc
Cyanide		- -	- -	- -	- -		**63**		- -	- -	- -	- -	5.2	5.2	5	Cyanide
Fluoride	mg/L	0.26	33	27	0.24		**9.1**		0.11	0.097	0.099	0.1	NA	2.7	1.8	Fluoride

		Landfill Seep Collection			Little Mountain Creek Floodplain				Little Mountain Creek				HRS Benchmark (Sediment, Human Food Chain)	EPA Ecological Sediment Screening Value (ESV) [1]	
		West	Middle	East	West	Middle	East	Former Pipeline	Upstream	Below Middle Seep	Downstream / Duplicate				
SEDIMENT:					ABL04SD	ABL05SD	ABL06SD	ABL07SD	ABL08SD	ABL09SD	ABL10SD	ABL11SD			
Arsenic	mg/kg				**29**	**15**	**13**	**26**	**46**	**20**	**32**	**32**	NA	9.8	Arsenic
Barium					**47**	**210**	**85**	**270**	**76**	**46**	**36**	**61**	NA	20	Barium
Cadmium					- -	- -	- -	- -	- -	- -	- -	- -	NA	1	Cadmium
Chromium					**61**	31	30	19	**160 J**	**57**	**74**	**96**	NA	43.4	Chromium
Lead					18	23	22	**44**	24 J	15	17	30	NA	35.8	Lead
Mercury					- -	- -	- -	- -	- -	- -	- -	- -	NA	0.18	Mercury
Selenium					- -	- -	- -	- -	- -	- -	- -	- -	NA	11	Selenium
Silver					- -	- -	- -	- -	- -	- -	- -	- -	NA	1	Silver
Zinc					24	46	43	120	79	74	31	90	NA	121	Zinc
Cyanide					1.7	- -	1.9	1.2	- -	- -	0.75	- -	NA	NA	Cyanide
Fluoride					3.7 J	190	41	82	0.58	0.92	1.2	1.3	NA	NA	Fluoride

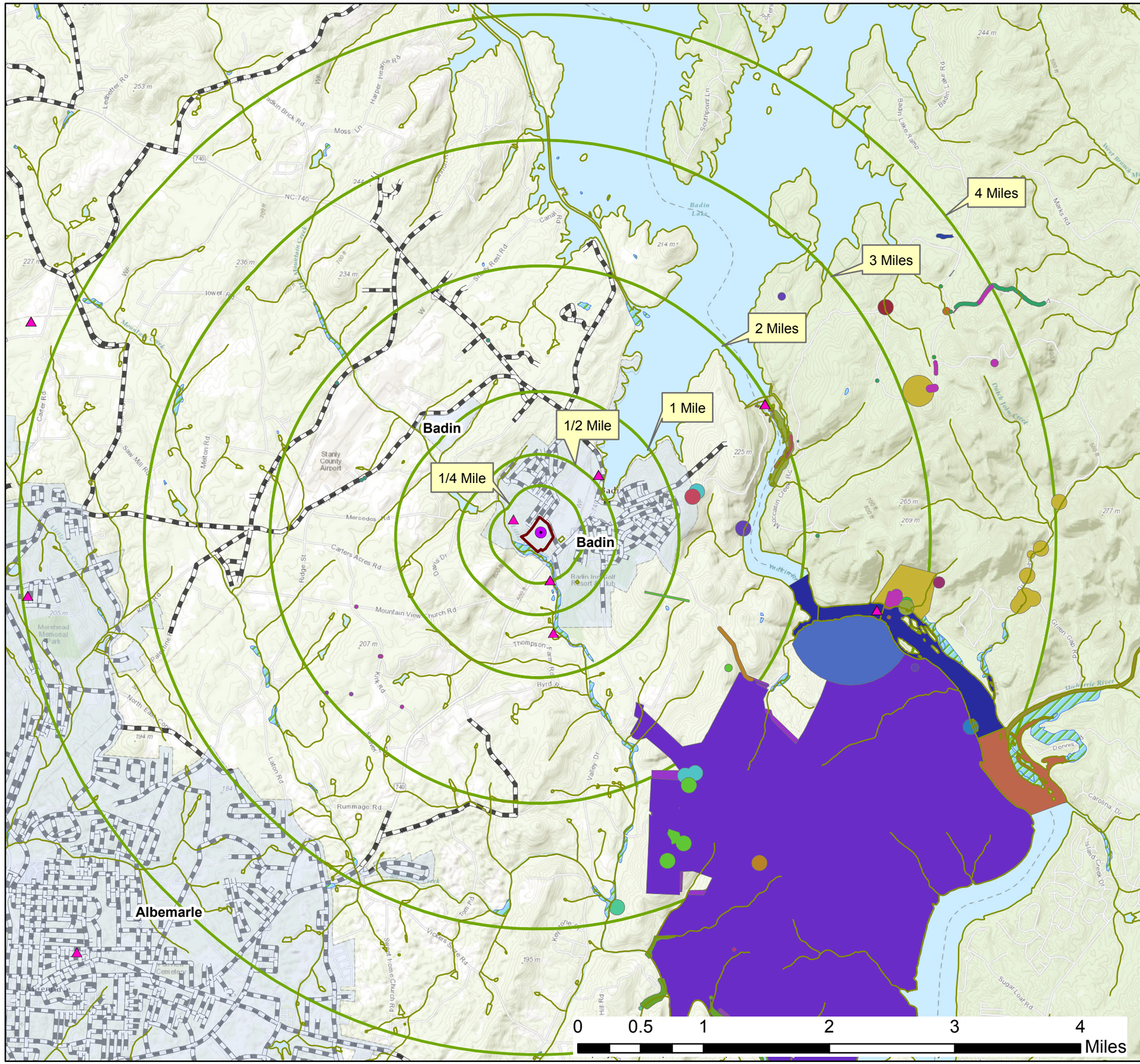
All aqueous results (except fluoride) are in ug/L
All sediment results in mg/kg
" - - " = Non-detection above Method Reporting Limit
Sample medium unavailable at this location

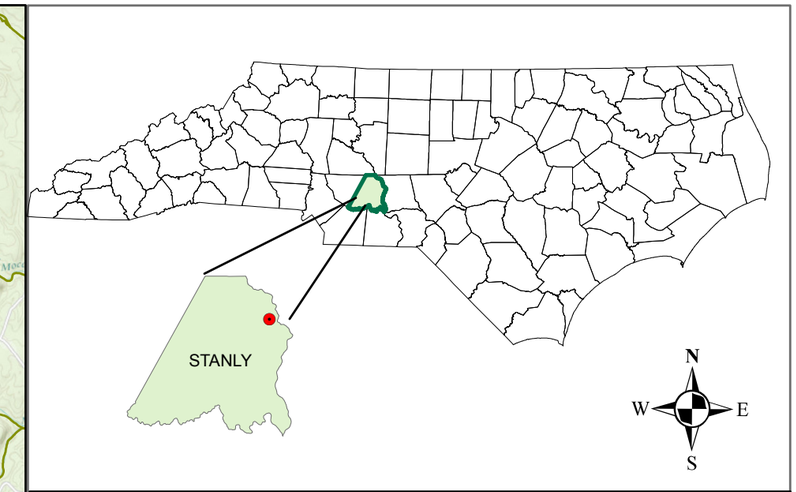
[1] *Source: USEPA Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft (2015).*
http://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
[2] *Source: NCAC2B Surface Water Standards, 2014*
http://deq.nc.gov/document/nc-stdstable-nonmetals-2014

Table 2
Alcoa Badin Works
Sample GPS Readings
7/21/2015

	Longitude	Latitude	HAE	Station ID		Sample
1	-80.1258	35.40308	112.588	ABL01	144.196	abl01gw
2	-80.1249	35.40239	109.096	ABL02	140.704	abl02gw
3	-80.1242	35.40173	118.775	ABL06	150.383	abl06sw
4	-80.1241	35.40178	109.549	ABL06	141.157	abl06sd
5	-80.1248	35.40225	112.362	ABL05	143.97	abl05sd
6	-80.1255	35.4022	114.854	ABL04	146.462	abl04sw; abl04sd
7	-80.1279	35.40402	119.647	ABL08	151.255	abl08sw; abl08sd
8	-80.1246	35.4018	121.705	ABL09	153.314	abl09sw; abl09sd
9	-80.1243	35.40142	114.499	ABL10	146.108	abl010sw&sd abl011sw&sd
	From NWI Mapper					
	-80.1238	35.4021		ABL03		abl03gw
	-80.1241	35.4019		ABL07		abl07sw; abl07sd

FIGURES





Project Name: Alcoa Badin Works

Figure 1: Landfill Location

Date Prepared: September 17, 2015

Prepared By: Amy Axon

Legend

- NPDES Outfalls
- Landfill Location
- WaterLines

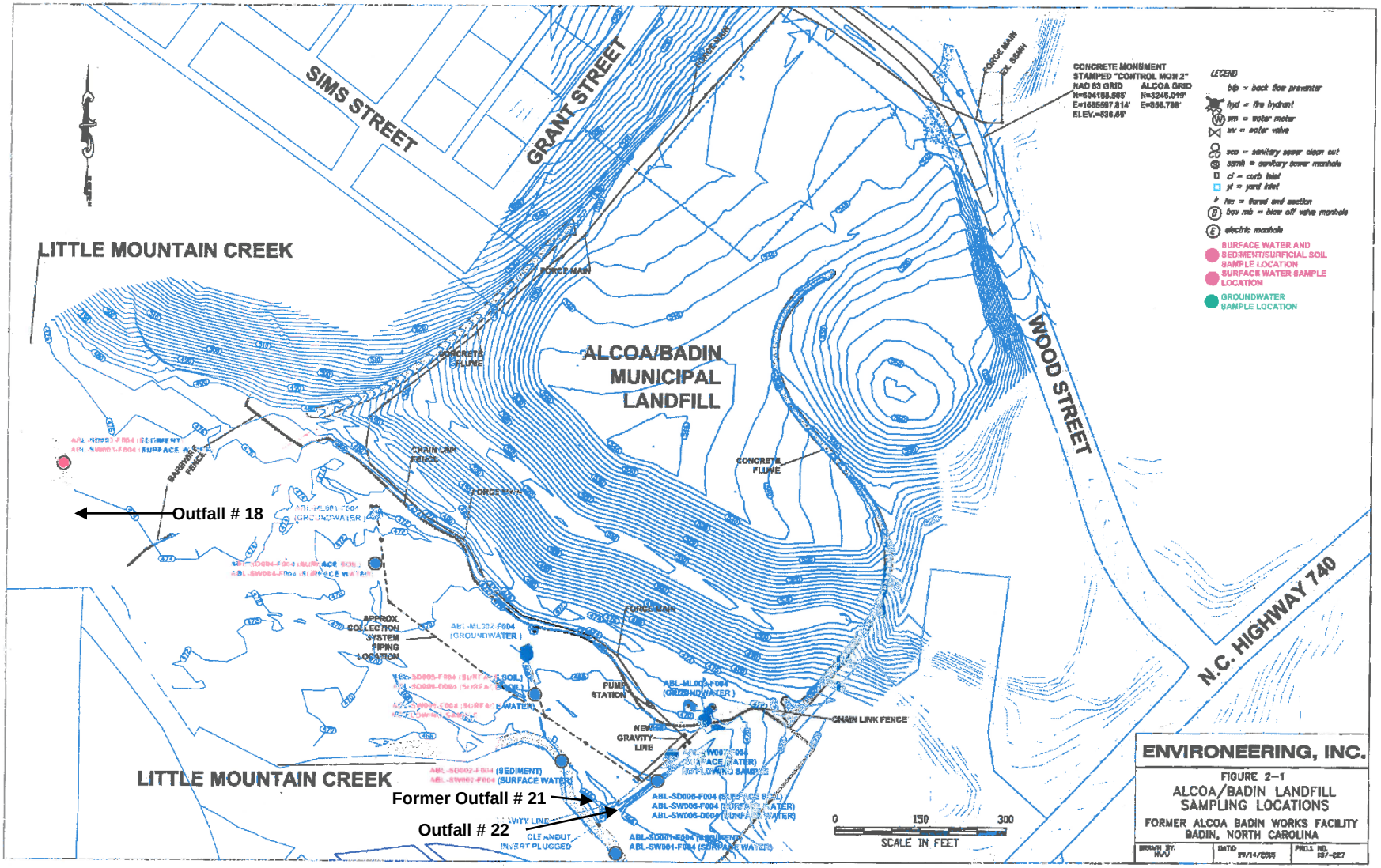
Public Water Supplies

- Wells
- Surface Intakes
- Wetlands
- Radius around Landfill
- Municipal Boundaries

Threatened or Endangered Species

- Bald Eagle
- Buffalo Clover
- Bush's Sedge
- Carolina Birdfoot-trefoil
- Carolina Creekshell
- Carolina Redhorse
- Carolina Thistle
- Crested Coralroot
- Dwarf Salamander
- Eastern Creekshell
- Eastern Lampmussel
- Four-toed Salamander
- Georgia Aster
- Glade Milkvine
- Glade Wild Quinine
- Littleleaf Sneezeweed
- Low Wild-petunia
- Northern Witch Grass
- Notched Rainbow
- Piedmont Horsebalm
- Ravine Sedge
- Ringed Witch Grass
- Sadie Price's Yellow Wood Sorrel
- Schweinitz's Sunflower
- Slender Glass Lizard
- Smooth Sunflower
- Terrestrial Water-starwort
- Thick-pod White Wild Indigo
- Timber Rattlesnake
- Western Rough Goldenrod
- Yadkin Hedge-nettle
- Yadkin River Goldenrod

North Carolina Division of Waste Management
DWM
Educating today for a cleaner tomorrow
wastenotnc.org

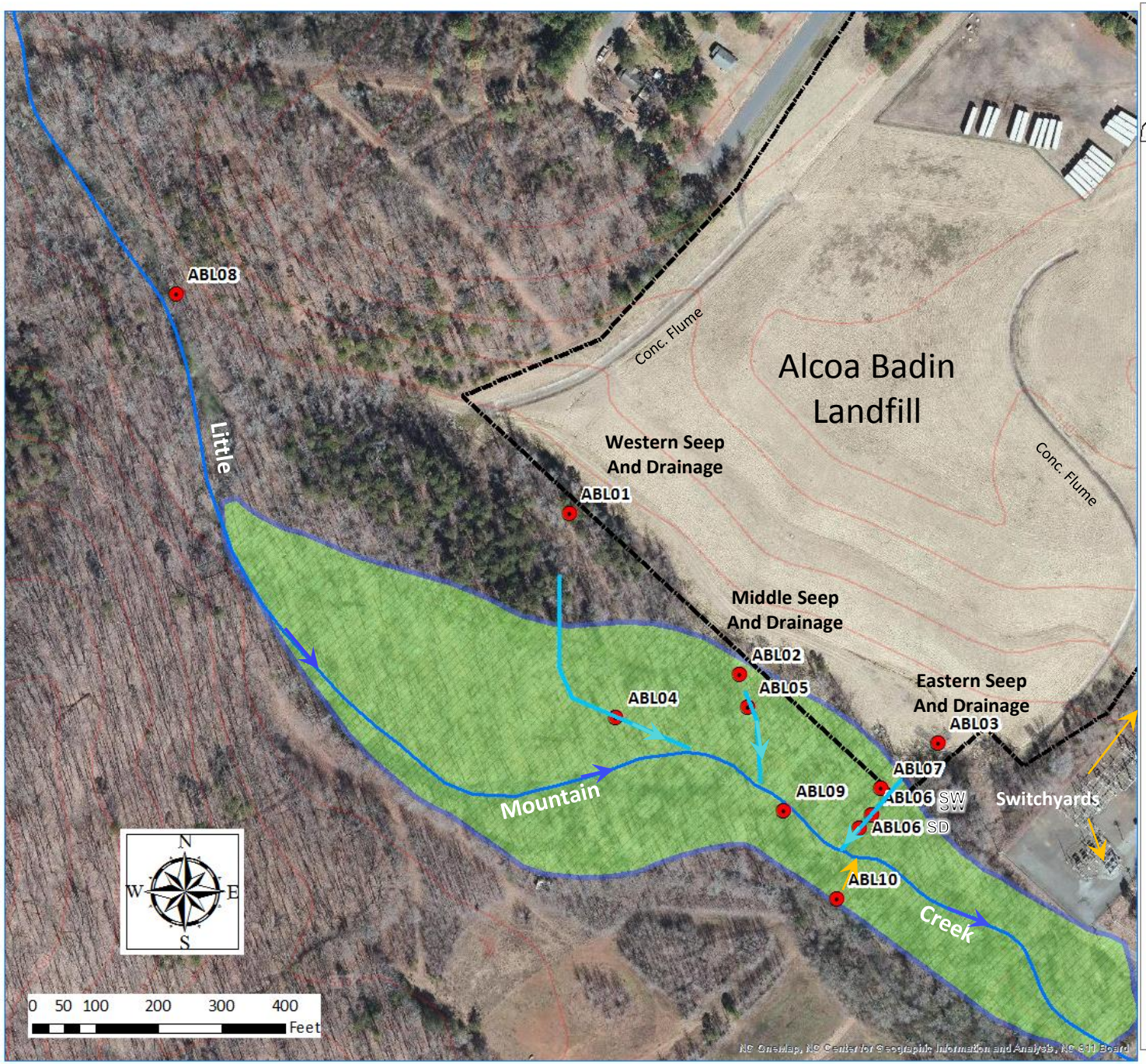


Alcoa Badin Works SWMU #2 Landfill
NCD 003 162 542
Badin, Stanly County, NC
Site Configuration with Alcoa Split Sample Locations

DRAWN BY: Environeering, Inc.
ADAPTED BY: Stuart F Parker
SCALE: as shown
DATE: 09/14/2015

FIGURE

2



Project Name: Alcoa Badin Works
EPA ID: NCD 003 162 542

Figure 3:
Site Inspection Sampling Locations,
Alcoa Badin Landfill and Little Mountain Creek,
July 21, 2015.

Date Prepared: April 1, 2016
Prepared By: A. Axon; S. F. Parker

Legend

- Landfill_Sample_Locations
- Wetlands
- 20 Ft. Base Contour
- 100 Ft. Base Contour

APPENDIX A:

SI Sample Analytical Reports

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

August 12, 2015

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 15-0416, Alcoa Badin Works
Superfund Remedial

FROM: Nancy Seabolt
Office of Quality Assurance Chemist

THRU: Jeannie Williamson, Acting Chief
Office of Quality Assurance

TO: Carolyn Callihan

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Office of Quality Assurance. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:	Method Used:	Accreditations:
Volatile Organics (VOA)		
Volatile organic compounds	CLP VOA (Soil)	
Volatile organic compounds	CLP VOA (Water)	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Report Narrative for Work Order C153207, Project: 15-0416

Site Name: Alcoa Badin Works, Badin, NC
CLP Case No. 45485, ELEMENT Sample Nos. C153207-01 and C153207-04 through C153207-21
C153208-01 and C153208-02 (PES only)

Organic Analysis: KAP Technologies, Inc., The Woodlands, TX

The ESAT Work Team reviewed data for 10 water samples analyzed for Trace Volatile Organic Compounds and 9 soil samples analyzed for Low/Medium Volatile Organic Compounds per CLP Statement of Work SOM02.2. The samples were collected on 7/21/15, and were received by the laboratory between 7/22/15 and 7/23/15. The final data package was received on 08/06/15 by the USEPA Office of Quality Assurance, Region 4 SESD. The analytical results were reported in two sample delivery groups (SDGs) by the laboratory. In addition to the field samples, the laboratory also analyzed two performance evaluation samples (PES) for evaluating the laboratory's performance with using the methods.

The laboratory satisfied all technical analysis and extraction holding time requirements. However, the coolers containing the samples were received by the laboratory at elevated temperatures (15 to 17°C) and all sample results were "J" qualified (P-6).

A Stage 4 validation consisting of an electronic/manual review (S4VEM) was performed on the organic samples submitted for this case. The data package presents acceptable technical performance with qualifications.

All results associated with erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier (CLP16 and/or QC-1). Deuterated monitoring compounds (DMC) are used as surrogates in each sample for GC/MS analysis to monitor extraction efficiency.

Data quality factors requiring qualification of results are discussed below:

Trace Volatiles (Waters)

1. The laboratory scored within warning limits for all spiked analytes in the PES except for 1,1-Dichloroethene and Carbon disulfide which were scored as warning low. The results for these two compounds, all not detected, were qualified "J" (CLP25). Methyl acetate was scored as a contaminant at greater than the Contract Required Quantitation Limit (CRQL) but data qualification was not required since this compound was not detected in any of the samples.

Low/Medium Volatiles (Soils)

2. The laboratory scored within limits for the spiked analytes in the PES except for Dibromochloromethane and 1,2,4-Trichlorobenzene which were scored as warning low. The results for these compounds, all not detected, were qualified "J" (CLP25). Methyl acetate was scored as a contaminant at greater than the CRQL and treated as a method blank contaminant during data qualification. The reporting limit for Methyl acetate was elevated and reported as not detected "U" (B-4) in sample C153207-08.

3. Recovery of the DMC 1,2-Dichlorobenzene-d4 was less than the lower quality control limit in sample C153207-13. The associated compounds in this sample, all not detected, were qualified "J" (QS-3).

4. The reporting limits for Methylene chloride were elevated and reported as not detected (B-4) in samples C153207-08, 10, 11, 13, and 16 since these results were not 10X the amount detected in the associated method blank.

Data qualification factors are explained by the Region 4 - specific qualifier definitions which are included elsewhere in this report. Further details are provided in the complete data review report, which is on file in the Region 4 SESD Records Center.

cc: Nardina Turner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

SAMPLES INCLUDED IN THIS REPORT

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected
ABL21TB	C153207-01		9B32	Trip Blank - Soil	7/21/15 08:30
ABL25TB	C153207-04		9B42	Trip Blank - Water	7/21/15 08:30
ABL01GW	C153207-05	9B39	9B39	Groundwater	7/21/15 15:25
ABL02GW	C153207-06	9B40	9B40	Groundwater	7/21/15 16:15
ABL03GW	C153207-07	9B41	9B41	Groundwater	7/21/15 17:15
ABL04SD	C153207-08	9B24	9B24	Sediment	7/21/15 12:15
ABL04SW	C153207-09	9B33	9B33	Surface Water	7/21/15 12:10
ABL05SD	C153207-10	9B25	9B25	Sediment	7/21/15 13:15
ABL06SD	C153207-11	9B26	9B26	Sediment	7/21/15 14:00
ABL06SW	C153207-12	9B34	9B34	Surface Water	7/21/15 12:13
ABL07SD	C153207-13	9B27	9B27	Sediment	7/21/15 14:42
ABL08SD	C153207-14	9B28	9B28	Sediment	7/21/15 11:00
ABL08SW	C153207-15	9B35	9B35	Surface Water	7/21/15 12:55
ABL09SD	C153207-16	9B29	9B29	Sediment	7/21/15 09:55
ABL09SW	C153207-17	9B36	9B36	Surface Water	7/21/15 10:00
ABL10SD	C153207-18	9B30	9B30	Sediment	7/21/15 09:05
ABL10SW	C153207-19	9B37	9B37	Surface Water	7/21/15 08:55
ABL11SD	C153207-20	9B31	9B31	Sediment	7/21/15 09:00
ABL11SW	C153207-21	9B38	9B38	Surface Water	7/21/15 08:55

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
B-4	Level in blank impacts MRLs.
CLP01	Concentration reported is less than the lowest standard on calibration curve
CLP15	TIC Results Reported as Identified by Lab - IDs Not Verified
CLP16	Initial Calibration Response Erratic
CLP25	PE sample recovery scored as warning-low.
J	The identification of the analyte is acceptable; the reported value is an estimate.
NJ	Presumptive evidence that analyte is present; reported as a tentative identification with an estimated value.
P-6	Incorrect reagent or technique used to preserve sample.
QC-1	Analyte concentration low in continuing calibration verification standard
QS-3	Surrogate recovery is lower than established control limits.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL21TB **Lab ID: C153207-01** **MD No:**

Station ID: **Matrix: Trip Blank - Soil** **D No: 9B32 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	17		%		7/27/15	7/27/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	5.8	U, J, CLP25, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
67-64-1	Acetone	12	U, J, P-6	ug/kg dry	12	7/27/15	7/27/15	CLP SOM02.2 V
71-43-2	Benzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-25-2	Bromoform	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
74-83-9	Bromomethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-00-3	Chloroethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL21TB **Lab ID: C153207-01** **MD No:**

Station ID: **Matrix: Trip Blank - Soil** **D No: 9B32 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
74-87-3	Chloromethane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
110-82-7	Cyclohexane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	5.8	U, J, CLP25, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	12	U, J, QC-1, CLP16, P-6	ug/kg dry	12	7/27/15	7/27/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	12	U, J, P-6, CLP16	ug/kg dry	12	7/27/15	7/27/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	12	U, J, P-6	ug/kg dry	12	7/27/15	7/27/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
95-47-6	o-Xylene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
100-42-5	Styrene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
108-88-3	Toluene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	5.8	U, J, P-6	ug/kg dry	5.8	7/27/15	7/27/15	CLP SOM02.2 V

Tentatively Identified Compounds:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL21TB **Lab ID: C153207-01** **MD No:**

Station ID: **Matrix: Trip Blank - Soil** **D No: 9B32 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/27/15	7/27/15	CLP SOM02.2 V

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL25TB **Lab ID: C153207-04** **MD No:**

Station ID: **Matrix: Trip Blank - Water** **D No: 9B42 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL25TB **Lab ID: C153207-04** **MD No:**

Station ID: **Matrix: Trip Blank - Water** **D No: 9B42 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL25TB **Lab ID: C153207-04** **MD No:**

Station ID: **Matrix: Trip Blank - Water** **D No: 9B42 KAP**

Date Collected: 7/21/15 8:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL01GW **Lab ID: C153207-05** **MD No: 9B39 STLV**
Station ID: ABL01 **Matrix: Groundwater** **D No: 9B39 KAP**

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL01GW **Lab ID: C153207-05** **MD No: 9B39 STLV**
Station ID: ABL01 **Matrix: Groundwater** **D No: 9B39 KAP**

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL01GW **Lab ID: C153207-05** **MD No: 9B39 STLV**

Station ID: ABL01 **Matrix: Groundwater** **D No: 9B39 KAP**

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL02GW **Lab ID: C153207-06** **MD No: 9B40 STLV**

Station ID: ABL02 **Matrix: Groundwater** **D No: 9B40 KAP**

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL02GW **Lab ID: C153207-06** **MD No: 9B40 STLV**

Station ID: ABL02 **Matrix: Groundwater** **D No: 9B40 KAP**

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL02GW **Lab ID: C153207-06** **MD No: 9B40 STLV**

Station ID: ABL02 **Matrix: Groundwater** **D No: 9B40 KAP**

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL03GW **Lab ID: C153207-07** **MD No: 9B41 STLV**

Station ID: ABL03 **Matrix: Groundwater** **D No: 9B41 KAP**

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL03GW **Lab ID: C153207-07** **MD No: 9B41 STLV**
Station ID: ABL03 **Matrix: Groundwater** **D No: 9B41 KAP**

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL03GW **Lab ID: C153207-07** **MD No: 9B41 STLV**

Station ID: ABL03 **Matrix: Groundwater** **D No: 9B41 KAP**

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SD **Lab ID: C153207-08** **MD No: 9B24 STLV**
Station ID: ABL04 **Matrix: Sediment** **D No: 9B24 KAP**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	29		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	6.1	U, J, CLP25, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	12	U, J, P-6	ug/kg dry	12	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-00-3	Chloroethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SD **Lab ID: C153207-08** **MD No: 9B24 STLV**
Station ID: ABL04 **Matrix: Sediment** **D No: 9B24 KAP**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	12	J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	6.1	U, J, CLP25, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	14	U, J, B-4, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	12	U, J, CLP16, P-6	ug/kg dry	12	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	12	U, J, CLP16, P-6	ug/kg dry	12	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	12	U, J, P-6	ug/kg dry	12	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	9.3	U, J, B-4, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	6.1	U, J, P-6	ug/kg dry	6.1	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SD **Lab ID: C153207-08** **MD No: 9B24 STLV**

Station ID: ABL04 **Matrix: Sediment** **D No: 9B24 KAP**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SW **Lab ID: C153207-09** **MD No: 9B33 STLV**

Station ID: ABL04 **Matrix: Surface Water** **D No: 9B33 KAP**

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SW **Lab ID: C153207-09** **MD No: 9B33 STLV**

Station ID: ABL04 **Matrix: Surface Water** **D No: 9B33 KAP**

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SW **Lab ID: C153207-09** **MD No: 9B33 STLV**

Station ID: ABL04 **Matrix: Surface Water** **D No: 9B33 KAP**

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL05SD **Lab ID: C153207-10** **MD No: 9B25 STLV**
Station ID: ABL05 **Matrix: Sediment** **D No: 9B25 KAP**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	42		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	17	J, CLP25, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	9.1	J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	23	U, J, P-6	ug/kg dry	23	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-00-3	Chloroethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL05SD **Lab ID: C153207-10** **MD No: 9B25 STLV**
Station ID: ABL05 **Matrix: Sediment** **D No: 9B25 KAP**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	11	U, J, CLP25, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	23	U, J, CLP16, P-6	ug/kg dry	23	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	23	U, J, CLP16, P-6	ug/kg dry	23	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	23	U, J, P-6	ug/kg dry	23	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	17	U, J, B-4, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL05SD **Lab ID: C153207-10** **MD No: 9B25 STLV**

Station ID: ABL05 **Matrix: Sediment** **D No: 9B25 KAP**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
80-56-8	.alpha.-Pinene	300	NJ, CLP15	ug/kg dry		7/28/15	7/28/15	CLP SOM02.2 V
471-84-1	Bicyclo[2.2.1]heptane, 7,7-dimethyl-2-methylene-	20	NJ, CLP15	ug/kg dry		7/28/15	7/28/15	CLP SOM02.2 V
79-92-5	Camphene	90	NJ, CLP15	ug/kg dry		7/28/15	7/28/15	CLP SOM02.2 V
5989-54-8	Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (S)-	40	NJ, CLP15	ug/kg dry		7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SD **Lab ID: C153207-11** **MD No: 9B26 STLV**
Station ID: ABL06 **Matrix: Sediment** **D No: 9B26 KAP**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	62		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	17	U, J, CLP25, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	35	U, J, P-6	ug/kg dry	35	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-00-3	Chloroethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SD **Lab ID: C153207-11** **MD No: 9B26 STLV**
Station ID: ABL06 **Matrix: Sediment** **D No: 9B26 KAP**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	17	U, J, CLP25, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	35	U, J, CLP16, P-6	ug/kg dry	35	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	35	U, J, CLP16, P-6	ug/kg dry	35	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	35	U, J, P-6	ug/kg dry	35	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	24	U, J, B-4, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	17	U, J, P-6	ug/kg dry	17	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SD **Lab ID: C153207-11** **MD No: 9B26 STLV**

Station ID: ABL06 **Matrix: Sediment** **D No: 9B26 KAP**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	20	U	ug/kg dry	20	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SW **Lab ID: C153207-12** **MD No: 9B34 STLV**
Station ID: ABL06 **Matrix: Surface Water** **D No: 9B34 KAP**

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SW **Lab ID: C153207-12** **MD No: 9B34 STLV**

Station ID: ABL06 **Matrix: Surface Water** **D No: 9B34 KAP**

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SW **Lab ID: C153207-12** **MD No: 9B34 STLV**

Station ID: ABL06 **Matrix: Surface Water** **D No: 9B34 KAP**

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL07SD **Lab ID: C153207-13** **MD No: 9B27 STLV**
Station ID: ABL07 **Matrix: Sediment** **D No: 9B27 KAP**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	43		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	10	U, J, QS-3, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	6.3	J, CLP01, QS-3, CLP25, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	10	U, J, QS-3, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	10	U, J, QS-3, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	10	U, J, QS-3, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	20	U, J, P-6	ug/kg dry	20	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	10	U, J, QS-3, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL07SD **Lab ID: C153207-13** **MD No: 9B27 STLV**
Station ID: ABL07 **Matrix: Sediment** **D No: 9B27 KAP**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
67-66-3	Chloroform	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	10	U, J, CLP25, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	20	U, J, CLP16, P-6	ug/kg dry	20	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	20	U, J, CLP16, P-6	ug/kg dry	20	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	20	U, J, P-6	ug/kg dry	20	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	11	U, J, B-4, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	10	U, J, P-6	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL07SD **Lab ID: C153207-13** **MD No: 9B27 STLV**

Station ID: ABL07 **Matrix: Sediment** **D No: 9B27 KAP**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-0000	Tentatively Identified Compounds	10	U	ug/kg dry	10	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SD **Lab ID: C153207-14** **MD No: 9B28 STLV**
Station ID: ABL08 **Matrix: Sediment** **D No: 9B28 KAP**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	17		%		7/27/15	7/27/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	6.3	U, J, CLP25, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
67-64-1	Acetone	13	U, J, P-6	ug/kg dry	13	7/27/15	7/27/15	CLP SOM02.2 V
71-43-2	Benzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-25-2	Bromoform	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
74-83-9	Bromomethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-00-3	Chloroethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SD **Lab ID: C153207-14** **MD No: 9B28 STLV**
Station ID: ABL08 **Matrix: Sediment** **D No: 9B28 KAP**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
74-87-3	Chloromethane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
110-82-7	Cyclohexane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	6.3	U, J, CLP25, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	13	U, J, QC-1, CLP16, P-6	ug/kg dry	13	7/27/15	7/27/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	13	U, J, CLP16, P-6	ug/kg dry	13	7/27/15	7/27/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	13	U, J, P-6	ug/kg dry	13	7/27/15	7/27/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
95-47-6	o-Xylene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
100-42-5	Styrene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
108-88-3	Toluene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	6.3	U, J, P-6	ug/kg dry	6.3	7/27/15	7/27/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SD **Lab ID: C153207-14** **MD No: 9B28 STLV**

Station ID: ABL08 **Matrix: Sediment** **D No: 9B28 KAP**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/27/15	7/27/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SW **Lab ID: C153207-15** **MD No: 9B35 STLV**

Station ID: ABL08 **Matrix: Surface Water** **D No: 9B35 KAP**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/29/15	7/29/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, QC-1, CLP25, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2

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Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SW **Lab ID: C153207-15** **MD No: 9B35 STLV**

Station ID: ABL08 **Matrix: Surface Water** **D No: 9B35 KAP**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/29/15	7/29/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/29/15	7/29/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/29/15	7/29/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SW **Lab ID: C153207-15** **MD No: 9B35 STLV**

Station ID: ABL08 **Matrix: Surface Water** **D No: 9B35 KAP**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, QC-1, P-6	ug/L	0.50	7/29/15	7/29/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/29/15	7/29/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SD **Lab ID: C153207-16** **MD No: 9B29 STLV**
Station ID: ABL09 **Matrix: Sediment** **D No: 9B29 KAP**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	16		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	5.6	U, J, CLP25, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-00-3	Chloroethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SD **Lab ID: C153207-16** **MD No: 9B29 STLV**
Station ID: ABL09 **Matrix: Sediment** **D No: 9B29 KAP**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	5.6	U, J, CLP25, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	11	U, J, CLP16, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	11	U, J, CLP16, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	11	U, J, P-6	ug/kg dry	11	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	8.0	U, J, B-4, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	5.6	U, J, P-6	ug/kg dry	5.6	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SD **Lab ID: C153207-16** **MD No: 9B29 STLV**

Station ID: ABL09 **Matrix: Sediment** **D No: 9B29 KAP**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SW **Lab ID: C153207-17** **MD No: 9B36 STLV**

Station ID: ABL09 **Matrix: Surface Water** **D No: 9B36 KAP**

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SW **Lab ID: C153207-17** **MD No: 9B36 STLV**

Station ID: ABL09 **Matrix: Surface Water** **D No: 9B36 KAP**

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SW **Lab ID: C153207-17** **MD No: 9B36 STLV**

Station ID: ABL09 **Matrix: Surface Water** **D No: 9B36 KAP**

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SD **Lab ID: C153207-18** **MD No: 9B30 STLV**
Station ID: ABL10 **Matrix: Sediment** **D No: 9B30 KAP**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	15		%		7/27/15	7/27/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	5.7	U, J, CLP25, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
67-64-1	Acetone	11	U, J, P-6	ug/kg dry	11	7/27/15	7/27/15	CLP SOM02.2 V
71-43-2	Benzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-25-2	Bromoform	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
74-83-9	Bromomethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-00-3	Chloroethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SD **Lab ID: C153207-18** **MD No: 9B30 STLV**
Station ID: ABL10 **Matrix: Sediment** **D No: 9B30 KAP**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
74-87-3	Chloromethane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
110-82-7	Cyclohexane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	5.7	U, J, CLP25, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	11	U, J, QC-1, CLP16, P-6	ug/kg dry	11	7/27/15	7/27/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	11	U, J, CLP16, P-6	ug/kg dry	11	7/27/15	7/27/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	11	U, J, P-6	ug/kg dry	11	7/27/15	7/27/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	6.7	J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
95-47-6	o-Xylene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
100-42-5	Styrene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
108-88-3	Toluene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	5.7	U, J, P-6	ug/kg dry	5.7	7/27/15	7/27/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SD **Lab ID: C153207-18** **MD No: 9B30 STLV**

Station ID: ABL10 **Matrix: Sediment** **D No: 9B30 KAP**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/27/15	7/27/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SW **Lab ID: C153207-19** **MD No: 9B37 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B37 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SW **Lab ID: C153207-19** **MD No: 9B37 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B37 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SW **Lab ID: C153207-19** **MD No: 9B37 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B37 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SD **Lab ID: C153207-20** **MD No: 9B31 STLV**

Station ID: ABL10 **Matrix: Sediment** **D No: 9B31 KAP**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	20		%		7/28/15	7/28/15	CLP VOA
R4-7156	(m- and/or p-)Xylene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
71-55-6	1,1,1-Trichloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
79-00-5	1,1,2-Trichloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-34-3	1,1-Dichloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
87-61-6	1,2,3-Trichlorobenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
120-82-1	1,2,4-Trichlorobenzene	7.3	U, J, CLP25, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
106-93-4	1,2-Dibromoethane (EDB)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
95-50-1	1,2-Dichlorobenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
107-06-2	1,2-Dichloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
78-87-5	1,2-Dichloropropane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
541-73-1	1,3-Dichlorobenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
106-46-7	1,4-Dichlorobenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
67-64-1	Acetone	15	U, J, P-6	ug/kg dry	15	7/28/15	7/28/15	CLP SOM02.2 V
71-43-2	Benzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
74-97-5	Bromochloromethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-27-4	Bromodichloromethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-25-2	Bromoform	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
74-83-9	Bromomethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-15-0	Carbon disulfide	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
56-23-5	Carbon Tetrachloride	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
108-90-7	Chlorobenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-00-3	Chloroethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SD **Lab ID: C153207-20** **MD No: 9B31 STLV**

Station ID: ABL10 **Matrix: Sediment** **D No: 9B31 KAP**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-66-3	Chloroform	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
74-87-3	Chloromethane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
156-59-2	cis-1,2-Dichloroethene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
10061-01-5	cis-1,3-Dichloropropene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
110-82-7	Cyclohexane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
124-48-1	Dibromochloromethane	7.3	U, J, CLP25, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
100-41-4	Ethyl Benzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
98-82-8	Isopropylbenzene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
79-20-9	Methyl Acetate	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
591-78-6	Methyl Butyl Ketone	15	U, J, CLP16, P-6	ug/kg dry	15	7/28/15	7/28/15	CLP SOM02.2 V
78-93-3	Methyl Ethyl Ketone	15	U, J, CLP16, P-6	ug/kg dry	15	7/28/15	7/28/15	CLP SOM02.2 V
108-10-1	Methyl Isobutyl Ketone	15	U, J, P-6	ug/kg dry	15	7/28/15	7/28/15	CLP SOM02.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
108-87-2	Methylcyclohexane	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-09-2	Methylene Chloride	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
95-47-6	o-Xylene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
100-42-5	Styrene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
108-88-3	Toluene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
156-60-5	trans-1,2-Dichloroethene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
10061-02-6	trans-1,3-Dichloropropene	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
79-01-6	Trichloroethene (Trichloroethylene)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V
75-01-4	Vinyl chloride	7.3	U, J, P-6	ug/kg dry	7.3	7/28/15	7/28/15	CLP SOM02.2 V

Tentatively Identified Compounds:

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SD **Lab ID: C153207-20** **MD No: 9B31 STLV**

Station ID: ABL10 **Matrix: Sediment** **D No: 9B31 KAP**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	7	U	ug/kg dry	7	7/28/15	7/28/15	CLP SOM02.2 V

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SW **Lab ID: C153207-21** **MD No: 9B38 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B38 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
71-55-6	1,1,1-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-00-5	1,1,2-Trichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-34-3	1,1-Dichloroethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
87-61-6	1,2,3-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
120-82-1	1,2,4-Trichlorobenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-93-4	1,2-Dibromoethane (EDB)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-50-1	1,2-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
107-06-2	1,2-Dichloroethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
78-87-5	1,2-Dichloropropane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
541-73-1	1,3-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
106-46-7	1,4-Dichlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-64-1	Acetone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
71-43-2	Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-97-5	Bromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-27-4	Bromodichloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-25-2	Bromoform	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-83-9	Bromomethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-15-0	Carbon disulfide	0.50	U, J, CLP25, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
56-23-5	Carbon Tetrachloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-90-7	Chlorobenzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

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Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SW **Lab ID: C153207-21** **MD No: 9B38 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B38 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-00-3	Chloroethane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
67-66-3	Chloroform	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
74-87-3	Chloromethane	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-59-2	cis-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-01-5	cis-1,3-Dichloropropene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
110-82-7	Cyclohexane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
124-48-1	Dibromochloromethane	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-41-4	Ethyl Benzene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
98-82-8	Isopropylbenzene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-20-9	Methyl Acetate	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
591-78-6	Methyl Butyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
78-93-3	Methyl Ethyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
108-10-1	Methyl Isobutyl Ketone	5.0	U, J, CLP16, P-6	ug/L	5.0	7/28/15	7/28/15	CLP SOM02.2
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-87-2	Methylcyclohexane	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-09-2	Methylene Chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
95-47-6	o-Xylene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
100-42-5	Styrene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
108-88-3	Toluene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
156-60-5	trans-1,2-Dichloroethene	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
10061-02-6	trans-1,3-Dichloropropene	0.50	U, J, CLP16, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Nancy Seabolt

Volatile Organics

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SW **Lab ID: C153207-21** **MD No: 9B38 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B38 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U, J, QC-1, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
75-01-4	Vinyl chloride	0.50	U, J, P-6	ug/L	0.50	7/28/15	7/28/15	CLP SOM02.2
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	0.5	U	ug/L	0.5	7/28/15	7/28/15	CLP SOM02.2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

September 1, 2015

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 15-0412, Alcoa Badin Works
Superfund Remedial

FROM: Diana Burdette
OCS Analyst

THRU: Floyd Wellborn, Chief
ASB Organic Chemistry Section

TO: Carolyn Callihan

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Semi Volatile Organics (SVOA)		
Semivolatile organic compounds	EPA 8270D (Soil)	ISO

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

cc: Nardina Turner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

SAMPLES INCLUDED IN THIS REPORT

Project: 15-0412, Alcoa Badin Works

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
ABL04SD	E153008-04	Sediment	7/21/15 12:15	7/23/15 9:52
ABL05SD	E153008-06	Sediment	7/21/15 13:15	7/23/15 9:52
ABL06SD	E153008-07	Sediment	7/21/15 14:00	7/23/15 9:52
ABL07SD	E153008-09	Sediment	7/21/15 14:42	7/23/15 9:52
ABL08SD	E153008-10	Sediment	7/21/15 11:00	7/23/15 9:52
ABL09SD	E153008-12	Sediment	7/21/15 09:55	7/23/15 9:52
ABL10SD	E153008-14	Sediment	7/21/15 09:05	7/23/15 9:52
ABL11SD	E153008-16	Sediment	7/21/15 09:00	7/23/15 9:52

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
B-2	Reporting level elevated due to trace amounts of analyte present in the method blank.
H-7	Recommended preparation holding time exceeded
J	The identification of the analyte is acceptable; the reported value is an estimate.
N	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification.
NJ	Presumptive evidence that analyte is present; reported as a tentative identification with an estimated value.
Q-2	Result greater than MDL but less than MRL.
QM-6	Matrix Spike Recovery less than 10%
QR-1	MRL verification recovery less than lower control limits.
QS-4	Surrogate recovery less than 10%
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

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Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL04SD
Station ID: ABL04
Lab ID: E153008-04
Matrix: Sediment

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
92-52-4	1,1-Biphenyl	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
123-91-1	1,4-Dioxane	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
90-12-0	1-Methylnaphthalene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
120-83-2	2,4-Dichlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
105-67-9	2,4-Dimethylphenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
51-28-5	2,4-Dinitrophenol	5500	U, J, H-7	ug/kg dry	5500	8/17/15 16:28	8/19/15 19:44	EPA 8270D
121-14-2	2,4-Dinitrotoluene	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
606-20-2	2,6-Dinitrotoluene	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
91-58-7	2-Chloronaphthalene	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
95-57-8	2-Chlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
91-57-6	2-Methylnaphthalene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
95-48-7	2-Methylphenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
88-74-4	2-Nitroaniline	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
88-75-5	2-Nitrophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
99-09-2	3-Nitroaniline	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
106-47-8	4-Chloroaniline	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
100-01-6	4-Nitroaniline	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
100-02-7	4-Nitrophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
83-32-9	Acenaphthene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL04SD
Station ID: ABL04
Lab ID: E153008-04
Matrix: Sediment

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
98-86-2	Acetophenone	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
120-12-7	Anthracene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
1912-24-9	Atrazine	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
100-52-7	Benzaldehyde	59	J, Q-2	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
56-55-3	Benzo(a)anthracene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
50-32-8	Benzo(a)pyrene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
205-99-2	Benzo(b)fluoranthene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
207-08-9	Benzo(k)fluoranthene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
100-51-6	Benzyl alcohol	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
85-68-7	Benzyl butyl phthalate	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
105-60-2	Caprolactam	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
86-74-8	Carbazole	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
218-01-9	Chrysene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
132-64-9	Dibenzofuran	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
84-66-2	Diethyl phthalate	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
131-11-3	Dimethyl phthalate	630	U, B-2	ug/kg dry	630	7/24/15 12:49	8/07/15 11:50	EPA 8270D
84-74-2	Di-n-butylphthalate	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
117-84-0	Di-n-octylphthalate	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
206-44-0	Fluoranthene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
86-73-7	Fluorene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D

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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL04SD
Station ID: ABL04
Lab ID: E153008-04
Matrix: Sediment

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
78-59-1	Isophorone	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
91-20-3	Naphthalene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
98-95-3	Nitrobenzene	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	470	U	ug/kg dry	470	7/24/15 12:49	8/07/15 11:50	EPA 8270D
87-86-5	Pentachlorophenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
85-01-8	Phenanthrene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
108-95-2	Phenol	2800	U, J, H-7	ug/kg dry	2800	8/17/15 16:28	8/19/15 19:44	EPA 8270D
129-00-0	Pyrene	95	U	ug/kg dry	95	7/24/15 12:49	8/07/15 11:50	EPA 8270D
Tentatively Identified Compounds:								
R4-6504	Caryophyllene (TIC)	900	NJ	ug/kg dry		7/24/15 12:49	8/07/15 11:50	EPA 8270D
R4-6505	Cinnamylcinnamate (TIC)	800	NJ	ug/kg dry		7/24/15 12:49	8/07/15 11:50	EPA 8270D
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 11:50	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL05SD
Station ID: ABL05
Lab ID: E153008-06
Matrix: Sediment

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
92-52-4	1,1-Biphenyl	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
123-91-1	1,4-Dioxane	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
90-12-0	1-Methylnaphthalene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
120-83-2	2,4-Dichlorophenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
105-67-9	2,4-Dimethylphenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
51-28-5	2,4-Dinitrophenol	7300	U, J, H-7, QS-4	ug/kg dry	7300	8/17/15 16:28	8/19/15 20:10	EPA 8270D
121-14-2	2,4-Dinitrotoluene	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
606-20-2	2,6-Dinitrotoluene	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
91-58-7	2-Chloronaphthalene	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
95-57-8	2-Chlorophenol	3700	U, J, H-7, QS-4	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
91-57-6	2-Methylnaphthalene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
95-48-7	2-Methylphenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
88-74-4	2-Nitroaniline	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
88-75-5	2-Nitrophenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
99-09-2	3-Nitroaniline	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
106-47-8	4-Chloroaniline	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
100-01-6	4-Nitroaniline	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
100-02-7	4-Nitrophenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
83-32-9	Acenaphthene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D

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Region 4 Science and Ecosystem Support Division
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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL05SD
Station ID: ABL05
Lab ID: E153008-06
Matrix: Sediment

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
98-86-2	Acetophenone	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
120-12-7	Anthracene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
1912-24-9	Atrazine	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
100-52-7	Benzaldehyde	320	J, Q-2	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
56-55-3	Benzo(a)anthracene	170		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
50-32-8	Benzo(a)pyrene	200		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
205-99-2	Benzo(b)fluoranthene	250		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	140		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
207-08-9	Benzo(k)fluoranthene	160		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
100-51-6	Benzyl alcohol	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
85-68-7	Benzyl butyl phthalate	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
105-60-2	Caprolactam	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
86-74-8	Carbazole	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
218-01-9	Chrysene	200		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	70	J, Q-2	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
132-64-9	Dibenzofuran	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
84-66-2	Diethyl phthalate	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
131-11-3	Dimethyl phthalate	1500	U, B-2	ug/kg dry	1500	7/24/15 12:49	8/07/15 14:09	EPA 8270D
84-74-2	Di-n-butylphthalate	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
117-84-0	Di-n-octylphthalate	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
206-44-0	Fluoranthene	270		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
86-73-7	Fluorene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL05SD
Station ID: ABL05
Lab ID: E153008-06
Matrix: Sediment

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	130		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
78-59-1	Isophorone	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
91-20-3	Naphthalene	130	U	ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
98-95-3	Nitrobenzene	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	630	U	ug/kg dry	630	7/24/15 12:49	8/07/15 14:09	EPA 8270D
87-86-5	Pentachlorophenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
85-01-8	Phenanthrene	130		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
108-95-2	Phenol	3700	U, J, QS-4, H-7	ug/kg dry	3700	8/17/15 16:28	8/19/15 20:10	EPA 8270D
129-00-0	Pyrene	230		ug/kg dry	130	7/24/15 12:49	8/07/15 14:09	EPA 8270D
Tentatively Identified Compounds:								
R4-6505	Cinnamylcinnamate (TIC)	1000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 14:09	EPA 8270D
R4-6510	Hexadecanoic acid (TIC)	1000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 14:09	EPA 8270D
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 14:09	EPA 8270D
R4-6521	Sitosterol (TIC)	2000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 14:09	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL06SD
Station ID: ABL06
Lab ID: E153008-07
Matrix: Sediment

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
92-52-4	1,1-Biphenyl	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
123-91-1	1,4-Dioxane	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
90-12-0	1-Methylnaphthalene	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
120-83-2	2,4-Dichlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
105-67-9	2,4-Dimethylphenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
51-28-5	2,4-Dinitrophenol	1500	U	ug/kg dry	1500	7/24/15 12:49	8/07/15 15:04	EPA 8270D
121-14-2	2,4-Dinitrotoluene	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
606-20-2	2,6-Dinitrotoluene	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
91-58-7	2-Chloronaphthalene	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
95-57-8	2-Chlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
91-57-6	2-Methylnaphthalene	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
95-48-7	2-Methylphenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
88-74-4	2-Nitroaniline	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
88-75-5	2-Nitrophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
99-09-2	3-Nitroaniline	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
106-47-8	4-Chloroaniline	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
100-01-6	4-Nitroaniline	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
100-02-7	4-Nitrophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
83-32-9	Acenaphthene	140	J, Q-2	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D

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Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL06SD
Station ID: ABL06
Lab ID: E153008-07
Matrix: Sediment

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
98-86-2	Acetophenone	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
120-12-7	Anthracene	310		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
1912-24-9	Atrazine	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
100-52-7	Benzaldehyde	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
56-55-3	Benzo(a)anthracene	1300		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
50-32-8	Benzo(a)pyrene	1500		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
205-99-2	Benzo(b)fluoranthene	1500		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	850		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
207-08-9	Benzo(k)fluoranthene	1300		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
100-51-6	Benzyl alcohol	79	J, Q-2	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
85-68-7	Benzyl butyl phthalate	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
105-60-2	Caprolactam	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
86-74-8	Carbazole	270		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
218-01-9	Chrysene	1500		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	390		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
132-64-9	Dibenzofuran	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
84-66-2	Diethyl phthalate	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
131-11-3	Dimethyl phthalate	2400	U, B-2	ug/kg dry	2400	7/24/15 12:49	8/07/15 15:04	EPA 8270D
84-74-2	Di-n-butylphthalate	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
117-84-0	Di-n-octylphthalate	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
206-44-0	Fluoranthene	2300		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
86-73-7	Fluorene	120	J, Q-2	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D

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D.A.R.T. Id: 15-0412
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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL06SD
Lab ID: E153008-07
Station ID: ABL06
Matrix: Sediment

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	810		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
78-59-1	Isophorone	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
91-20-3	Naphthalene	150	U	ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
98-95-3	Nitrobenzene	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
87-86-5	Pentachlorophenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
85-01-8	Phenanthrene	1300		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
108-95-2	Phenol	770	U	ug/kg dry	770	7/24/15 12:49	8/07/15 15:04	EPA 8270D
129-00-0	Pyrene	1800		ug/kg dry	150	7/24/15 12:49	8/07/15 15:04	EPA 8270D
Tentatively Identified Compounds:								
R4-8001075	Amyrin (TIC)	3000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 15:04	EPA 8270D
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 15:04	EPA 8270D
R4-6521	Sitosterol (TIC)	4000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 15:04	EPA 8270D
R4-6501	Unidentified Compound(s)	3000	J	ug/kg dry		7/24/15 12:49	8/07/15 15:04	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL07SD
Station ID: ABL07
Lab ID: E153008-09
Matrix: Sediment

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
92-52-4	1,1-Biphenyl	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
123-91-1	1,4-Dioxane	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
90-12-0	1-Methylnaphthalene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
120-83-2	2,4-Dichlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
105-67-9	2,4-Dimethylphenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
51-28-5	2,4-Dinitrophenol	36000	U, J, QR-1, H-7	ug/kg dry	36000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
121-14-2	2,4-Dinitrotoluene	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
606-20-2	2,6-Dinitrotoluene	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
91-58-7	2-Chloronaphthalene	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
95-57-8	2-Chlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
91-57-6	2-Methylnaphthalene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
95-48-7	2-Methylphenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
88-74-4	2-Nitroaniline	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
88-75-5	2-Nitrophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
99-09-2	3-Nitroaniline	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
106-47-8	4-Chloroaniline	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
100-01-6	4-Nitroaniline	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
100-02-7	4-Nitrophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
83-32-9	Acenaphthene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D

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D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL07SD
Station ID: ABL07
Lab ID: E153008-09
Matrix: Sediment

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
98-86-2	Acetophenone	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
120-12-7	Anthracene	110	J, Q-2	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
1912-24-9	Atrazine	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
100-52-7	Benzaldehyde	180	J, Q-2	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
56-55-3	Benzo(a)anthracene	520		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
50-32-8	Benzo(a)pyrene	630		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
205-99-2	Benzo(b)fluoranthene	660		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	460		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
207-08-9	Benzo(k)fluoranthene	500		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
100-51-6	Benzyl alcohol	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
85-68-7	Benzyl butyl phthalate	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
105-60-2	Caprolactam	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
86-74-8	Carbazole	110	J, Q-2	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
218-01-9	Chrysene	620		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	200		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
132-64-9	Dibenzofuran	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
84-66-2	Diethyl phthalate	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
131-11-3	Dimethyl phthalate	750	U, B-2	ug/kg dry	750	7/24/15 12:49	8/07/15 14:36	EPA 8270D
84-74-2	Di-n-butylphthalate	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
117-84-0	Di-n-octylphthalate	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
206-44-0	Fluoranthene	860		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
86-73-7	Fluorene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL07SD
Station ID: ABL07
Lab ID: E153008-09
Matrix: Sediment

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	400		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
78-59-1	Isophorone	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
91-20-3	Naphthalene	120	U	ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
98-95-3	Nitrobenzene	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	620	U	ug/kg dry	620	7/24/15 12:49	8/07/15 14:36	EPA 8270D
87-86-5	Pentachlorophenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
85-01-8	Phenanthrene	480		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
108-95-2	Phenol	18000	U, J, H-7	ug/kg dry	18000	8/21/15 16:28	8/31/15 14:36	EPA 8270D
129-00-0	Pyrene	740		ug/kg dry	120	7/24/15 12:49	8/07/15 14:36	EPA 8270D
Tentatively Identified Compounds:								
R4-8000146	Cyclopentaphenanthrene (TIC)	700	NJ	ug/kg dry		7/24/15 12:49	8/07/15 14:36	EPA 8270D
R4-6510	Hexadecanoic acid (TIC)	800	NJ	ug/kg dry		7/24/15 12:49	8/07/15 14:36	EPA 8270D
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 14:36	EPA 8270D
R4-6501	Unidentified Compound(s)	2000	J	ug/kg dry		7/24/15 12:49	8/07/15 14:36	EPA 8270D

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Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL08SD
Station ID: ABL08
Lab ID: E153008-10
Matrix: Sediment

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
92-52-4	1,1-Biphenyl	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
123-91-1	1,4-Dioxane	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
90-12-0	1-Methylnaphthalene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
120-83-2	2,4-Dichlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
105-67-9	2,4-Dimethylphenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
51-28-5	2,4-Dinitrophenol	4500	U, J, H-7	ug/kg dry	4500	8/17/15 16:28	8/19/15 21:03	EPA 8270D
121-14-2	2,4-Dinitrotoluene	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
606-20-2	2,6-Dinitrotoluene	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
91-58-7	2-Chloronaphthalene	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
95-57-8	2-Chlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
91-57-6	2-Methylnaphthalene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
95-48-7	2-Methylphenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
88-74-4	2-Nitroaniline	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
88-75-5	2-Nitrophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
99-09-2	3-Nitroaniline	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
106-47-8	4-Chloroaniline	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
100-01-6	4-Nitroaniline	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
100-02-7	4-Nitrophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
83-32-9	Acenaphthene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D

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Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL08SD
Station ID: ABL08
Lab ID: E153008-10
Matrix: Sediment

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
98-86-2	Acetophenone	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
120-12-7	Anthracene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
1912-24-9	Atrazine	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
100-52-7	Benzaldehyde	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
56-55-3	Benzo(a)anthracene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
50-32-8	Benzo(a)pyrene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
205-99-2	Benzo(b)fluoranthene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
207-08-9	Benzo(k)fluoranthene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
100-51-6	Benzyl alcohol	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
85-68-7	Benzyl butyl phthalate	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
105-60-2	Caprolactam	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
86-74-8	Carbazole	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
218-01-9	Chrysene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
132-64-9	Dibenzofuran	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
84-66-2	Diethyl phthalate	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
131-11-3	Dimethyl phthalate	530	U, B-2	ug/kg dry	530	7/24/15 12:49	8/07/15 12:18	EPA 8270D
84-74-2	Di-n-butylphthalate	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
117-84-0	Di-n-octylphthalate	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
206-44-0	Fluoranthene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
86-73-7	Fluorene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL08SD
Station ID: ABL08
Lab ID: E153008-10
Matrix: Sediment

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
78-59-1	Isophorone	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
91-20-3	Naphthalene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
98-95-3	Nitrobenzene	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	380	U	ug/kg dry	380	7/24/15 12:49	8/07/15 12:18	EPA 8270D
87-86-5	Pentachlorophenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
85-01-8	Phenanthrene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
108-95-2	Phenol	2200	U, J, H-7	ug/kg dry	2200	8/17/15 16:28	8/19/15 21:03	EPA 8270D
129-00-0	Pyrene	76	U	ug/kg dry	76	7/24/15 12:49	8/07/15 12:18	EPA 8270D
Tentatively Identified Compounds:								
R4-8000333	Friedelanone (TIC)	1000	NJ	ug/kg dry		7/24/15 12:49	8/07/15 12:18	EPA 8270D

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Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SD
Station ID: ABL09
Lab ID: E153008-12
Matrix: Sediment

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
92-52-4	1,1-Biphenyl	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
123-91-1	1,4-Dioxane	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
90-12-0	1-Methylnaphthalene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
120-83-2	2,4-Dichlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
105-67-9	2,4-Dimethylphenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
51-28-5	2,4-Dinitrophenol	5000	U, J, H-7	ug/kg dry	5000	8/17/15 16:28	8/19/15 21:30	EPA 8270D
121-14-2	2,4-Dinitrotoluene	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
606-20-2	2,6-Dinitrotoluene	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
91-58-7	2-Chloronaphthalene	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
95-57-8	2-Chlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
91-57-6	2-Methylnaphthalene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
95-48-7	2-Methylphenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
88-74-4	2-Nitroaniline	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
88-75-5	2-Nitrophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
99-09-2	3-Nitroaniline	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
106-47-8	4-Chloroaniline	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
100-01-6	4-Nitroaniline	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
100-02-7	4-Nitrophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
83-32-9	Acenaphthene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SD
Station ID: ABL09
Lab ID: E153008-12
Matrix: Sediment

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
98-86-2	Acetophenone	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
120-12-7	Anthracene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
1912-24-9	Atrazine	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
100-52-7	Benzaldehyde	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
56-55-3	Benzo(a)anthracene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
50-32-8	Benzo(a)pyrene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
205-99-2	Benzo(b)fluoranthene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
207-08-9	Benzo(k)fluoranthene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
100-51-6	Benzyl alcohol	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
85-68-7	Benzyl butyl phthalate	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
105-60-2	Caprolactam	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
86-74-8	Carbazole	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
218-01-9	Chrysene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
132-64-9	Dibenzofuran	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
84-66-2	Diethyl phthalate	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
131-11-3	Dimethyl phthalate	480	U, B-2	ug/kg dry	480	7/24/15 12:49	8/07/15 12:46	EPA 8270D
84-74-2	Di-n-butylphthalate	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
117-84-0	Di-n-octylphthalate	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
206-44-0	Fluoranthene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
86-73-7	Fluorene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SD
Station ID: ABL09
Lab ID: E153008-12
Matrix: Sediment

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
78-59-1	Isophorone	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
91-20-3	Naphthalene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
98-95-3	Nitrobenzene	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	430	U	ug/kg dry	430	7/24/15 12:49	8/07/15 12:46	EPA 8270D
87-86-5	Pentachlorophenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
85-01-8	Phenanthrene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
108-95-2	Phenol	2500	U, J, H-7	ug/kg dry	2500	8/17/15 16:28	8/19/15 21:30	EPA 8270D
129-00-0	Pyrene	85	U	ug/kg dry	85	7/24/15 12:49	8/07/15 12:46	EPA 8270D
Tentatively Identified Compounds:								
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 12:46	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL10SD
Station ID: ABL10
Lab ID: E153008-14
Matrix: Sediment

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
92-52-4	1,1-Biphenyl	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
123-91-1	1,4-Dioxane	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
90-12-0	1-Methylnaphthalene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
120-83-2	2,4-Dichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
105-67-9	2,4-Dimethylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
51-28-5	2,4-Dinitrophenol	830	U, J, QS-4	ug/kg dry	830	7/24/15 12:49	8/07/15 13:13	EPA 8270D
121-14-2	2,4-Dinitrotoluene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
606-20-2	2,6-Dinitrotoluene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
91-58-7	2-Chloronaphthalene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
95-57-8	2-Chlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
91-57-6	2-Methylnaphthalene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
95-48-7	2-Methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
88-74-4	2-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
88-75-5	2-Nitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
99-09-2	3-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
106-47-8	4-Chloroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
100-01-6	4-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
100-02-7	4-Nitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
83-32-9	Acenaphthene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL10SD
Station ID: ABL10
Lab ID: E153008-14
Matrix: Sediment

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
208-96-8	Acenaphthylene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
98-86-2	Acetophenone	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
120-12-7	Anthracene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
1912-24-9	Atrazine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
100-52-7	Benzaldehyde	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
56-55-3	Benzo(a)anthracene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
50-32-8	Benzo(a)pyrene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
205-99-2	Benzo(b)fluoranthene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
207-08-9	Benzo(k)fluoranthene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
100-51-6	Benzyl alcohol	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
85-68-7	Benzyl butyl phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
105-60-2	Caprolactam	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
86-74-8	Carbazole	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
218-01-9	Chrysene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
132-64-9	Dibenzofuran	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
84-66-2	Diethyl phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
131-11-3	Dimethyl phthalate	540	U, B-2	ug/kg dry	540	7/24/15 12:49	8/07/15 13:13	EPA 8270D
84-74-2	Di-n-butylphthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
117-84-0	Di-n-octylphthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
206-44-0	Fluoranthene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
86-73-7	Fluorene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
77-47-4	Hexachlorocyclopentadiene (HCCP)	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL10SD
Station ID: ABL10
Lab ID: E153008-14
Matrix: Sediment

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
67-72-1	Hexachloroethane	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
78-59-1	Isophorone	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
91-20-3	Naphthalene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
98-95-3	Nitrobenzene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
87-86-5	Pentachlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
85-01-8	Phenanthrene	43	J, Q-2	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
108-95-2	Phenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:13	EPA 8270D
129-00-0	Pyrene	83	U	ug/kg dry	83	7/24/15 12:49	8/07/15 13:13	EPA 8270D
Tentatively Identified Compounds:								
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 13:13	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL11SD
Station ID: ABL10
Lab ID: E153008-16
Matrix: Sediment

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
92-52-4	1,1-Biphenyl	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
123-91-1	1,4-Dioxane	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
90-12-0	1-Methylnaphthalene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
58-90-2	2,3,4,6-Tetrachlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
95-95-4	2,4,5-Trichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
88-06-2	2,4,6-Trichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
120-83-2	2,4-Dichlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
105-67-9	2,4-Dimethylphenol	410	U, R, QM-6, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
51-28-5	2,4-Dinitrophenol	810	U, R, QM-6, QS-4	ug/kg dry	810	7/24/15 12:49	8/07/15 13:41	EPA 8270D
121-14-2	2,4-Dinitrotoluene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
606-20-2	2,6-Dinitrotoluene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
91-58-7	2-Chloronaphthalene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
95-57-8	2-Chlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
534-52-1	2-Methyl-4,6-dinitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
91-57-6	2-Methylnaphthalene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
95-48-7	2-Methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
88-74-4	2-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
88-75-5	2-Nitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
91-94-1	3,3'-Dichlorobenzidine	410	U, R, QM-6	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
99-09-2	3-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
101-55-3	4-Bromophenyl phenyl ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
59-50-7	4-Chloro-3-methylphenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
106-47-8	4-Chloroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
7005-72-3	4-Chlorophenyl phenyl ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
100-01-6	4-Nitroaniline	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
100-02-7	4-Nitrophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 15-0412
Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL11SD
Station ID: ABL10
Lab ID: E153008-16
Matrix: Sediment

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
83-32-9	Acenaphthene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
208-96-8	Acenaphthylene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
98-86-2	Acetophenone	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
120-12-7	Anthracene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
1912-24-9	Atrazine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
100-52-7	Benzaldehyde	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
56-55-3	Benzo(a)anthracene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
50-32-8	Benzo(a)pyrene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
205-99-2	Benzo(b)fluoranthene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
191-24-2	Benzo(g,h,i)perylene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
207-08-9	Benzo(k)fluoranthene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
100-51-6	Benzyl alcohol	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
85-68-7	Benzyl butyl phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
111-91-1	Bis(2-chloroethoxy)methane	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
111-44-4	bis(2-Chloroethyl) Ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
39638-32-9	Bis(2-chloroisopropyl) ether	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
117-81-7	Bis(2-ethylhexyl) phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
105-60-2	Caprolactam	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
86-74-8	Carbazole	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
218-01-9	Chrysene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
53-70-3	Dibenz(a,h)anthracene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
132-64-9	Dibenzofuran	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
84-66-2	Diethyl phthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
131-11-3	Dimethyl phthalate	570	U, B-2	ug/kg dry	570	7/24/15 12:49	8/07/15 13:41	EPA 8270D
84-74-2	Di-n-butylphthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
117-84-0	Di-n-octylphthalate	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
206-44-0	Fluoranthene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
86-73-7	Fluorene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
118-74-1	Hexachlorobenzene (HCB)	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D

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Project: 15-0412, Alcoa Badin Works - Reported by Diana Burdette

Semi Volatile Organics

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL11SD
Station ID: ABL10
Lab ID: E153008-16
Matrix: Sediment

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
77-47-4	Hexachlorocyclopentadiene (HCCP)	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
67-72-1	Hexachloroethane	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
193-39-5	Indeno (1,2,3-cd) pyrene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
78-59-1	Isophorone	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
91-20-3	Naphthalene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
98-95-3	Nitrobenzene	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
621-64-7	n-Nitroso di-n-Propylamine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	410	U	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
87-86-5	Pentachlorophenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
85-01-8	Phenanthrene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
108-95-2	Phenol	410	U, J, QS-4	ug/kg dry	410	7/24/15 12:49	8/07/15 13:41	EPA 8270D
129-00-0	Pyrene	81	U	ug/kg dry	81	7/24/15 12:49	8/07/15 13:41	EPA 8270D
Tentatively Identified Compounds:								
R4-6500	Petroleum Product:		N			7 24, 15 12:49	8/07/15 13:41	EPA 8270D

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Blank (1507074-BLK1)				Prepared: 07/24/15 Analyzed: 08/07/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	U	330	ug/kg dry							U
1,1-Biphenyl	U	66	"							U
1,4-Dioxane	U	66	"							U
1-Methylnaphthalene	U	66	"							U
2,3,4,6-Tetrachlorophenol	U	330	"							U
2,4,5-Trichlorophenol	U	330	"							U
2,4,6-Trichlorophenol	U	330	"							U
2,4-Dichlorophenol	U	330	"							U
2,4-Dimethylphenol	U	330	"							U
2,4-Dinitrophenol	U	660	"							U
2,4-Dinitrotoluene	U	330	"							U
2,6-Dinitrotoluene	U	330	"							U
2-Chloronaphthalene	U	330	"							U
2-Chlorophenol	U	330	"							U
2-Methyl-4,6-dinitrophenol	U	330	"							U
2-Methylnaphthalene	U	66	"							U
2-Methylphenol	U	330	"							U
2-Nitroaniline	U	330	"							U
2-Nitrophenol	U	330	"							U
3,3'-Dichlorobenzidine	U	330	"							U
3-Nitroaniline	U	330	"							U
4-Bromophenyl phenyl ether	U	330	"							U
4-Chloro-3-methylphenol	U	330	"							U
4-Chloroaniline	U	330	"							U
4-Chlorophenyl phenyl ether	U	330	"							U
4-Nitroaniline	U	330	"							U
4-Nitrophenol	U	330	"							U
Acenaphthene	U	66	"							U
Acenaphthylene	U	66	"							U
Acetophenone	U	330	"							U
Anthracene	U	66	"							U
Atrazine	U	330	"							U
Benzaldehyde	U	330	"							U
Benzo(a)anthracene	U	66	"							U
Benzo(a)pyrene	U	66	"							U
Benzo(b)fluoranthene	U	66	"							U
Benzo(g,h,i)perylene	U	66	"							U
Benzo(k)fluoranthene	U	66	"							U
Benzyl alcohol	U	330	"							U

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Blank (1507074-BLK1)				Prepared: 07/24/15 Analyzed: 08/07/15						
Benzyl butyl phthalate	U	330	ug/kg dry							U
Bis(2-chloroethoxy)methane	U	330	"							U
bis(2-Chloroethyl) Ether	U	330	"							U
Bis(2-chloroisopropyl) ether	U	330	"							U
Bis(2-ethylhexyl) phthalate	U	330	"							U
Caprolactam	U	330	"							U
Carbazole	U	66	"							U
Chrysene	U	66	"							U
Dibenz(a,h)anthracene	U	66	"							U
Dibenzofuran	U	66	"							U
Diethyl phthalate	U	330	"							U
Dimethyl phthalate	344.33	330	"							B-4
Di-n-butylphthalate	U	330	"							U
Di-n-octylphthalate	U	330	"							U
Fluoranthene	U	66	"							U
Fluorene	U	66	"							U
Hexachlorobenzene (HCB)	U	330	"							U
Hexachlorocyclopentadiene (HCCP)	U	330	"							U
Hexachloroethane	U	330	"							U
Indeno (1,2,3-cd) pyrene	U	66	"							U
Isophorone	U	330	"							U
Naphthalene	U	66	"							U
Nitrobenzene	U	330	"							U
n-Nitroso di-n-Propylamine	U	330	"							U
n-Nitrosodiphenylamine/Diphenylamine	U	330	"							U
Pentachlorophenol	U	330	"							U
Phenanthrene	U	66	"							U
Phenol	U	330	"							U
Pyrene	U	66	"							U
Tentatively Identified Compounds	U	300	"							U

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
LCS (1507074-BS1)				Prepared: 07/24/15 Analyzed: 08/07/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	1432.2	330	ug/kg dry	2000.0		71.6	56-94			
1,1-Biphenyl	1472.4	66	"	2000.0		73.6	60-95			
1,4-Dioxane	694.10	66	"	2000.0		34.7	20-76			
1-Methylnaphthalene	1467.3	66	"	2000.0		73.4	59-87			
2,3,4,6-Tetrachlorophenol	1607.9	330	"	2000.0		80.4	42-128			
2,4,5-Trichlorophenol	1656.2	330	"	2000.0		82.8	66-105			
2,4,6-Trichlorophenol	1603.4	330	"	2000.0		80.2	63-98			
2,4-Dichlorophenol	1550.6	330	"	2000.0		77.5	62-97			
2,4-Dimethylphenol	1102.0	330	"	2000.0		55.1	24-87			
2,4-Dinitrophenol	1483.3	660	"	4000.0		37.1	17-71			
2,4-Dinitrotoluene	1639.0	330	"	2000.0		81.9	65-110			
2,6-Dinitrotoluene	1654.2	330	"	2000.0		82.7	62-110			
2-Chloronaphthalene	1472.4	330	"	2000.0		73.6	57-96			
2-Chlorophenol	1367.6	330	"	2000.0		68.4	56-90			
2-Methyl-4,6-dinitrophenol	1198.1	330	"	2000.0		59.9	51-99			
2-Methylnaphthalene	1477.3	66	"	2000.0		73.9	63-96			
2-Methylphenol	1363.6	330	"	2000.0		68.2	53-92			
2-Nitroaniline	1623.0	330	"	2000.0		81.1	61-116			
2-Nitrophenol	1438.1	330	"	2000.0		71.9	60-92			
3,3'-Dichlorobenzidine	1576.6	330	"	2000.0		78.8	31-104			
3-Nitroaniline	1534.0	330	"	2000.0		76.7	56-101			
4-Bromophenyl phenyl ether	1583.6	330	"	2000.0		79.2	55-109			
4-Chloro-3-methylphenol	1525.1	330	"	2000.0		76.3	63-102			
4-Chloroaniline	1361.9	330	"	2000.0		68.1	10-96			
4-Chlorophenyl phenyl ether	1587.0	330	"	2000.0		79.3	55-109			
4-Nitroaniline	1724.9	330	"	2000.0		86.2	56-135			
4-Nitrophenol	1614.4	330	"	2000.0		80.7	58-117			
Acenaphthene	1548.7	66	"	2000.0		77.4	60-102			
Acenaphthylene	1563.8	66	"	2000.0		78.2	59-100			
Acetophenone	1369.6	330	"	2000.0		68.5	49-96			
Anthracene	1635.4	66	"	2000.0		81.8	61-102			
Atrazine	1722.5	330	"	2000.0		86.1	10-123			
Benzaldehyde	1324.7	330	"	2000.0		66.2	41-125			
Benzo(a)anthracene	1592.6	66	"	2000.0		79.6	65-105			
Benzo(a)pyrene	1649.7	66	"	2000.0		82.5	60-113			
Benzo(b)fluoranthene	1564.3	66	"	2000.0		78.2	61-116			
Benzo(g,h,i)perylene	1596.6	66	"	2000.0		79.8	45-114			
Benzo(k)fluoranthene	1667.0	66	"	2000.0		83.4	57-115			
Benzyl alcohol	1384.3	330	"	2000.0		69.2	50-104			

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
LCS (1507074-BS1)				Prepared: 07/24/15 Analyzed: 08/07/15						
Benzyl butyl phthalate	1571.7	330	ug/kg dry	2000.0		78.6	56-112			
Bis(2-chloroethoxy)methane	1481.0	330	"	2000.0		74.1	51-102			
bis(2-Chloroethyl) Ether	1355.7	330	"	2000.0		67.8	43-100			
Bis(2-chloroisopropyl) ether	1383.1	330	"	2000.0		69.2	40-105			
Bis(2-ethylhexyl) phthalate	1561.8	330	"	2000.0		78.1	55-109			
Caprolactam	1474.0	330	"	2000.0		73.7	66-101			
Carbazole	1802.1	66	"	2000.0		90.1	62-112			
Chrysene	1601.6	66	"	2000.0		80.1	60-106			
Dibenz(a,h)anthracene	1623.0	66	"	2000.0		81.2	46-117			
Dibenzofuran	1469.6	66	"	2000.0		73.5	57-100			
Diethyl phthalate	1631.7	330	"	2000.0		81.6	57-99			
Dimethyl phthalate	1887.1	330	"	2000.0		94.4	55-97			
Di-n-butylphthalate	1632.6	330	"	2000.0		81.6	54-101			
Di-n-octylphthalate	1663.7	330	"	2000.0		83.2	48-127			
Fluoranthene	1679.9	66	"	2000.0		84.0	64-105			
Fluorene	1599.7	66	"	2000.0		80.0	62-108			
Hexachlorobenzene (HCB)	1342.0	330	"	2000.0		67.1	36-91			
Hexachlorocyclopentadiene (HCCP)	1384.7	330	"	2000.0		69.2	25-99			
Hexachloroethane	1338.6	330	"	2000.0		66.9	50-86			
Indeno (1,2,3-cd) pyrene	1632.1	66	"	2000.0		81.6	48-116			
Isophorone	1432.7	330	"	2000.0		71.6	55-100			
Naphthalene	1372.4	66	"	2000.0		68.6	58-89			
Nitrobenzene	1436.4	330	"	2000.0		71.8	52-102			
n-Nitroso di-n-Propylamine	1457.4	330	"	2000.0		72.9	50-98			
n-Nitrosodiphenylamine/Diphenylamine	1615.7	330	"	2000.0		80.8	59-104			
Pentachlorophenol	1624.7	330	"	2000.0		81.2	50-105			
Phenanthrene	1581.6	66	"	2000.0		79.1	62-103			
Phenol	1399.9	330	"	2000.0		70.0	56-94			
Pyrene	1463.1	66	"	2000.0		73.2	58-119			

Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Matrix Spike (1507074-MS1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/07/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	577.34	410	ug/kg dry	2472.2	U	23.4	10-119			
1,1-Biphenyl	1817.7	82	"	2472.2	U	73.5	56-96			
1,4-Dioxane	826.74	82	"	2472.2	U	33.4	25-70			
1-Methylnaphthalene	1849.2	82	"	2472.2	U	74.8	54-88			
2,3,4,6-Tetrachlorophenol	1828.6	410	"	2472.2	U	74.0	45-115			
2,4,5-Trichlorophenol	2006.3	410	"	2472.2	U	81.2	63-107			
2,4,6-Trichlorophenol	1572.6	410	"	2472.2	U	63.6	47-106			
2,4-Dichlorophenol	1583.9	410	"	2472.2	U	64.1	55-99			
2,4-Dimethylphenol	188.05	410	"	2472.2	U	7.61	10-117			Q-2, QM-6, J
2,4-Dinitrophenol	2087.6	820	"	4944.4	U	42.2	10-145			
2,4-Dinitrotoluene	2081.2	410	"	2472.2	U	84.2	64-107			
2,6-Dinitrotoluene	2078.7	410	"	2472.2	U	84.1	63-106			
2-Chloronaphthalene	1848.2	410	"	2472.2	U	74.8	55-94			
2-Chlorophenol	1273.7	410	"	2472.2	U	51.5	44-93			
2-Methyl-4,6-dinitrophenol	1912.1	410	"	2472.2	U	77.3	18-127			
2-Methylnaphthalene	1878.1	82	"	2472.2	U	76.0	58-97			
2-Methylphenol	620.52	410	"	2472.2	U	25.1	5-115			
2-Nitroaniline	2076.1	410	"	2472.2	U	84.0	52-117			
2-Nitrophenol	1887.8	410	"	2472.2	U	76.4	59-94			
3,3'-Dichlorobenzidine	164.40	410	"	2472.2	U	6.65	10-99			Q-2, QM-6, J
3-Nitroaniline	1624.8	410	"	2472.2	U	65.7	10-117			
4-Bromophenyl phenyl ether	1966.3	410	"	2472.2	U	79.5	49-105			
4-Chloro-3-methylphenol	1497.2	410	"	2472.2	U	60.6	54-105			
4-Chloroaniline	831.03	410	"	2472.2	U	33.6	10-73			
4-Chlorophenyl phenyl ether	1956.9	410	"	2472.2	U	79.2	49-105			
4-Nitroaniline	2075.5	410	"	2472.2	U	84.0	10-151			
4-Nitrophenol	2082.4	410	"	2472.2	U	84.2	57-111			
Acenaphthene	1944.2	82	"	2472.2	U	78.6	51-106			
Acenaphthylene	1909.5	82	"	2472.2	U	77.2	43-106			
Acetophenone	1706.5	410	"	2472.2	U	69.0	46-98			
Anthracene	1936.5	82	"	2472.2	U	78.3	45-103			
Atrazine	2129.1	410	"	2472.2	U	86.1	10-115			
Benzaldehyde	1359.0	410	"	2472.2	U	55.0	10-139			
Benzo(a)anthracene	1982.6	82	"	2472.2	U	80.2	10-190			
Benzo(a)pyrene	1996.2	82	"	2472.2	U	80.7	10-172			
Benzo(b)fluoranthene	2021.4	82	"	2472.2	U	81.8	10-190			
Benzo(g,h,i)perylene	1734.1	82	"	2472.2	U	70.1	10-131			
Benzo(k)fluoranthene	1986.4	82	"	2472.2	U	80.4	10-184			

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Matrix Spike (1507074-MS1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/07/15						
Benzyl alcohol	1667.7	410	ug/kg dry	2472.2	U	67.5	46-101			
Benzyl butyl phthalate	1876.7	410	"	2472.2	U	75.9	42-114			
Bis(2-chloroethoxy)methane	1866.9	410	"	2472.2	U	75.5	52-98			
bis(2-Chloroethyl) Ether	1712.4	410	"	2472.2	U	69.3	41-98			
Bis(2-chloroisopropyl) ether	1726.0	410	"	2472.2	U	69.8	44-97			
Bis(2-ethylhexyl) phthalate	1887.6	410	"	2472.2	U	76.4	10-174			
Caprolactam	1800.7	410	"	2472.2	U	72.8	63-103			
Carbazole	2253.6	82	"	2472.2	U	91.2	54-115			
Chrysene	1997.9	82	"	2472.2	U	80.8	10-190			
Dibenz(a,h)anthracene	1833.8	82	"	2472.2	U	74.2	22-114			
Dibenzofuran	1844.8	82	"	2472.2	U	74.6	50-103			
Diethyl phthalate	2007.0	410	"	2472.2	U	81.2	54-94			
Dimethyl phthalate	2566.0	410	"	2472.2	U	104	56-94			QM-2
Di-n-butylphthalate	1891.4	410	"	2472.2	U	76.5	46-92			
Di-n-octylphthalate	1998.6	410	"	2472.2	U	80.8	33-141			
Fluoranthene	2031.5	82	"	2472.2	U	82.2	10-145			
Fluorene	1991.6	82	"	2472.2	U	80.6	53-111			
Hexachlorobenzene (HCB)	1638.7	410	"	2472.2	U	66.3	34-83			
Hexachlorocyclopentadiene (HCCP)	1179.6	410	"	2472.2	U	47.7	10-88			
Hexachloroethane	1598.2	410	"	2472.2	U	64.6	42-83			
Indeno (1,2,3-cd) pyrene	1834.7	82	"	2472.2	U	74.2	10-131			
Isophorone	1777.3	410	"	2472.2	U	71.9	58-93			
Naphthalene	1705.9	82	"	2472.2	U	69.0	56-88			
Nitrobenzene	1822.0	410	"	2472.2	U	73.7	43-110			
n-Nitroso di-n-Propylamine	1764.1	410	"	2472.2	U	71.4	52-92			
n-Nitrosodiphenylamine/Diphenylamine	1756.7	410	"	2472.2	U	71.1	32-115			
Pentachlorophenol	1953.9	410	"	2472.2	U	79.0	43-107			
Phenanthrene	1957.0	82	"	2472.2	U	79.2	10-171			
Phenol	1447.2	410	"	2472.2	U	58.5	46-97			
Pyrene	1849.6	82	"	2472.2	U	74.8	10-180			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Matrix Spike Dup (1507074-MSD1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/07/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	680.24	410	ug/kg dry	2470.2	U	27.5	10-119	16.4	99	
1,1-Biphenyl	1849.9	82	"	2470.2	U	74.9	56-96	1.75	16	
1,4-Dioxane	807.82	82	"	2470.2	U	32.7	25-70	2.31	25	
1-Methylnaphthalene	1883.2	82	"	2470.2	U	76.2	54-88	1.83	18	
2,3,4,6-Tetrachlorophenol	1753.0	410	"	2470.2	U	71.0	45-115	4.22	17	
2,4,5-Trichlorophenol	1965.7	410	"	2470.2	U	79.6	63-107	2.04	14	
2,4,6-Trichlorophenol	1546.9	410	"	2470.2	U	62.6	47-106	1.65	19	
2,4-Dichlorophenol	1514.2	410	"	2470.2	U	61.3	55-99	4.50	17	
2,4-Dimethylphenol	292.84	410	"	2470.2	U	11.9	10-117	43.6	98	Q-2, J
2,4-Dinitrophenol	290.20	820	"	4940.3	U	5.87	10-145	151	95	Q-2, QM-3, QM-6, J
2,4-Dinitrotoluene	2052.8	410	"	2470.2	U	83.1	64-107	1.37	15	
2,6-Dinitrotoluene	2098.1	410	"	2470.2	U	84.9	63-106	0.925	14	
2-Chloronaphthalene	1868.0	410	"	2470.2	U	75.6	55-94	1.06	15	
2-Chlorophenol	1293.2	410	"	2470.2	U	52.4	44-93	1.52	21	
2-Methyl-4,6-dinitrophenol	1691.1	410	"	2470.2	U	68.5	18-127	12.3	22	
2-Methylnaphthalene	1926.3	82	"	2470.2	U	78.0	58-97	2.54	18	
2-Methylphenol	703.66	410	"	2470.2	U	28.5	5-115	12.6	62	
2-Nitroaniline	2007.2	410	"	2470.2	U	81.3	52-117	3.37	18	
2-Nitrophenol	1899.2	410	"	2470.2	U	76.9	59-94	0.601	17	
3,3'-Dichlorobenzidine	228.45	410	"	2470.2	U	9.25	10-99	32.6	58	Q-2, QM-6, J
3-Nitroaniline	1621.8	410	"	2470.2	U	65.7	10-117	0.186	49	
4-Bromophenyl phenyl ether	2012.4	410	"	2470.2	U	81.5	49-105	2.32	17	
4-Chloro-3-methylphenol	1452.8	410	"	2470.2	U	58.8	54-105	3.01	19	
4-Chloroaniline	930.05	410	"	2470.2	U	37.7	10-73	11.2	49	
4-Chlorophenyl phenyl ether	1971.9	410	"	2470.2	U	79.8	49-105	0.765	17	
4-Nitroaniline	1948.9	410	"	2470.2	U	78.9	10-151	6.29	61	
4-Nitrophenol	2050.4	410	"	2470.2	U	83.0	57-111	1.55	22	
Acenaphthene	1978.1	82	"	2470.2	U	80.1	51-106	1.73	22	
Acenaphthylene	1934.3	82	"	2470.2	U	78.3	43-106	1.29	20	
Acetophenone	1730.5	410	"	2470.2	U	70.1	46-98	1.40	14	
Anthracene	2031.0	82	"	2470.2	U	82.2	45-103	4.76	20	
Atrazine	2142.2	410	"	2470.2	U	86.7	10-115	0.612	13	
Benzaldehyde	1295.4	410	"	2470.2	U	52.4	10-139	4.79	70	
Benzo(a)anthracene	2034.2	82	"	2470.2	U	82.3	10-190	2.57	35	
Benzo(a)pyrene	2071.3	82	"	2470.2	U	83.9	10-172	3.69	36	
Benzo(b)fluoranthene	2020.8	82	"	2470.2	U	81.8	10-190	0.0274	38	
Benzo(g,h,i)perylene	1832.3	82	"	2470.2	U	74.2	10-131	5.51	34	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
Matrix Spike Dup (1507074-MSD1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/07/15						
Benzo(k)fluoranthene	2153.7	82	ug/kg dry	2470.2	U	87.2	10-184	8.08	32	
Benzyl alcohol	1693.7	410	"	2470.2	U	68.6	46-101	1.55	31	
Benzyl butyl phthalate	1944.3	410	"	2470.2	U	78.7	42-114	3.54	24	
Bis(2-chloroethoxy)methane	1849.0	410	"	2470.2	U	74.9	52-98	0.962	11	
bis(2-Chloroethyl) Ether	1729.8	410	"	2470.2	U	70.0	41-98	1.01	27	
Bis(2-chloroisopropyl) ether	1763.0	410	"	2470.2	U	71.4	44-97	2.13	12	
Bis(2-ethylhexyl) phthalate	1970.1	410	"	2470.2	U	79.8	10-174	4.27	10	
Caprolactam	1837.3	410	"	2470.2	U	74.4	63-103	2.01	13	
Carbazole	2256.7	82	"	2470.2	U	91.4	54-115	0.139	19	
Chrysene	2052.0	82	"	2470.2	U	83.1	10-190	2.67	34	
Dibenz(a,h)anthracene	1912.7	82	"	2470.2	U	77.4	22-114	4.21	22	
Dibenzofuran	1888.8	82	"	2470.2	U	76.5	50-103	2.36	22	
Diethyl phthalate	1986.9	410	"	2470.2	U	80.4	54-94	1.01	15	
Dimethyl phthalate	2481.4	410	"	2470.2	U	100	56-94	3.35	10	QM-2
Di-n-butylphthalate	2007.9	410	"	2470.2	U	81.3	46-92	5.97	24	
Di-n-octylphthalate	2094.3	410	"	2470.2	U	84.8	33-141	4.68	20	
Fluoranthene	2111.0	82	"	2470.2	U	85.5	10-145	3.84	60	
Fluorene	2024.0	82	"	2470.2	U	81.9	53-111	1.61	22	
Hexachlorobenzene (HCB)	1714.3	410	"	2470.2	U	69.4	34-83	4.51	15	
Hexachlorocyclopentadiene (HCCP)	1131.0	410	"	2470.2	U	45.8	10-88	4.21	100	
Hexachloroethane	1653.7	410	"	2470.2	U	66.9	42-83	3.41	19	
Indeno (1,2,3-cd) pyrene	1911.4	82	"	2470.2	U	77.4	10-131	4.10	31	
Isophorone	1754.5	410	"	2470.2	U	71.0	58-93	1.29	12	
Naphthalene	1742.8	82	"	2470.2	U	70.6	56-88	2.14	18	
Nitrobenzene	1831.7	410	"	2470.2	U	74.2	43-110	0.526	14	
n-Nitroso di-n-Propylamine	1786.3	410	"	2470.2	U	72.3	52-92	1.25	13	
n-Nitrosodiphenylamine/Diphenylamine	1807.7	410	"	2470.2	U	73.2	32-115	2.86	24	
Pentachlorophenol	1927.1	410	"	2470.2	U	78.0	43-107	1.38	21	
Phenanthrene	2039.8	82	"	2470.2	U	82.6	10-171	4.14	52	
Phenol	1486.9	410	"	2470.2	U	60.2	46-97	2.71	38	
Pyrene	1910.4	82	"	2470.2	U	77.3	10-180	3.23	50	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
MRL Verification (1507074-PS1)				Prepared: 07/24/15 Analyzed: 08/07/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	231.20	330	ug/kg dry	333.33		69.4	36-114			Q-2, MRL-3, J
1,1-Biphenyl	55.467	66	"	66.667		83.2	40-115			Q-2, MRL-3, J
1,4-Dioxane	28.867	66	"	66.667		43.3	10-96			Q-2, MRL-3, J
1-Methylnaphthalene	51.800	66	"	66.667		77.7	39-107			Q-2, MRL-3, J
2,3,4,6-Tetrachlorophenol	264.97	330	"	333.33		79.5	22-148			Q-2, MRL-3, J
2,4,5-Trichlorophenol	284.97	330	"	333.33		85.5	46-125			Q-2, MRL-3, J
2,4,6-Trichlorophenol	271.77	330	"	333.33		81.5	43-118			Q-2, MRL-3, J
2,4-Dichlorophenol	257.77	330	"	333.33		77.3	42-117			Q-2, MRL-3, J
2,4-Dimethylphenol	138.57	330	"	333.33		41.6	10-107			Q-2, MRL-3, J
2,4-Dinitrophenol	103.63	660	"	666.67		15.5	10-91			Q-2, MRL-3, J
2,4-Dinitrotoluene	269.43	330	"	333.33		80.8	45-130			Q-2, MRL-3, J
2,6-Dinitrotoluene	286.90	330	"	333.33		86.1	42-130			Q-2, MRL-3, J
2-Chloronaphthalene	265.47	330	"	333.33		79.6	37-116			Q-2, MRL-3, J
2-Chlorophenol	239.67	330	"	333.33		71.9	36-110			Q-2, MRL-3, J
2-Methyl-4,6-dinitrophenol	150.10	330	"	333.33		45.0	31-119			Q-2, MRL-3, J
2-Methylnaphthalene	53.100	66	"	66.667		79.6	43-116			Q-2, MRL-3, J
2-Methylphenol	231.33	330	"	333.33		69.4	33-112			Q-2, MRL-3, J
2-Nitroaniline	274.40	330	"	333.33		82.3	41-136			Q-2, MRL-3, J
2-Nitrophenol	245.73	330	"	333.33		73.7	40-112			Q-2, MRL-3, J
3,3'-Dichlorobenzidine	216.93	330	"	333.33		65.1	11-124			Q-2, MRL-3, J
3-Nitroaniline	203.60	330	"	333.33		61.1	36-121			Q-2, MRL-3, J
4-Bromophenyl phenyl ether	280.53	330	"	333.33		84.2	35-129			Q-2, MRL-3, J
4-Chloro-3-methylphenol	261.17	330	"	333.33		78.4	43-122			Q-2, MRL-3, J
4-Chloroaniline	215.60	330	"	333.33		64.7	10-116			Q-2, MRL-3, J

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
MRL Verification (1507074-PS1)				Prepared: 07/24/15 Analyzed: 08/07/15						
4-Chlorophenyl phenyl ether	282.43	330	ug/kg dry	333.33		84.7	35-129			Q-2, MRL-3, J
4-Nitroaniline	240.00	330	"	333.33		72.0	36-155			Q-2, MRL-3, J
4-Nitrophenol	241.30	330	"	333.33		72.4	38-137			Q-2, MRL-3, J
Acenaphthene	57.833	66	"	66.667		86.7	40-122			Q-2, MRL-3, J
Acenaphthylene	56.567	66	"	66.667		84.8	39-120			Q-2, MRL-3, J
Acetophenone	245.63	330	"	333.33		73.7	29-116			Q-2, MRL-3, J
Anthracene	59.233	66	"	66.667		88.8	41-122			Q-2, MRL-3, J
Atrazine	306.23	330	"	333.33		91.9	10-143			Q-2, MRL-3, J
Benzaldehyde	226.67	330	"	333.33		68.0	21-145			Q-2, MRL-3, J
Benzo(a)anthracene	60.633	66	"	66.667		90.9	45-125			Q-2, MRL-3, J
Benzo(a)pyrene	59.400	66	"	66.667		89.1	40-133			Q-2, MRL-3, J
Benzo(b)fluoranthene	60.267	66	"	66.667		90.4	41-136			Q-2, MRL-3, J
Benzo(g,h,i)perylene	62.667	66	"	66.667		94.0	25-134			Q-2, MRL-3, J
Benzo(k)fluoranthene	66.933	66	"	66.667		100	37-135			MRL-3
Benzyl alcohol	237.67	330	"	333.33		71.3	30-124			Q-2, MRL-3, J
Benzyl butyl phthalate	311.97	330	"	333.33		93.6	36-132			Q-2, MRL-3, J
Bis(2-chloroethoxy)methane	261.43	330	"	333.33		78.4	31-122			Q-2, MRL-3, J
bis(2-Chloroethyl) Ether	242.13	330	"	333.33		72.6	23-120			Q-2, MRL-3, J
Bis(2-chloroisopropyl) ether	241.53	330	"	333.33		72.5	20-125			Q-2, MRL-3, J
Bis(2-ethylhexyl) phthalate	319.77	330	"	333.33		95.9	35-129			Q-2, MRL-3, J
Caprolactam	260.40	330	"	333.33		78.1	46-121			Q-2, MRL-3, J
Carbazole	62.367	66	"	66.667		93.6	42-132			Q-2, MRL-3, J
Chrysene	59.400	66	"	66.667		89.1	40-126			Q-2, MRL-3, J
Dibenz(a,h)anthracene	60.400	66	"	66.667		90.6	26-137			Q-2, MRL-3, J
Dibenzofuran	53.667	66	"	66.667		80.5	37-120			Q-2, MRL-3, J

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507074 - E 3545A Modified										
MRL Verification (1507074-PS1)				Prepared: 07/24/15 Analyzed: 08/07/15						
Diethyl phthalate	299.17	330	ug/kg dry	333.33		89.8	37-119			Q-2, MRL-3, J
Dimethyl phthalate	636.57	330	"	333.33		191	35-117			QR-2, MRL-3
Di-n-butylphthalate	318.97	330	"	333.33		95.7	34-121			Q-2, MRL-3, J
Di-n-octylphthalate	337.60	330	"	333.33		101	28-147			MRL-3
Fluoranthene	59.300	66	"	66.667		88.9	44-125			Q-2, MRL-3, J
Fluorene	57.667	66	"	66.667		86.5	42-128			Q-2, MRL-3, J
Hexachlorobenzene (HCB)	236.17	330	"	333.33		70.9	16-111			Q-2, MRL-3, J
Hexachlorocyclopentadiene (HCCP)	210.83	330	"	333.33		63.2	10-119			Q-2, MRL-3, J
Hexachloroethane	234.60	330	"	333.33		70.4	30-106			Q-2, MRL-3, J
Indeno (1,2,3-cd) pyrene	61.667	66	"	66.667		92.5	28-136			Q-2, MRL-3, J
Isophorone	260.53	330	"	333.33		78.2	35-120			Q-2, MRL-3, J
Naphthalene	53.500	66	"	66.667		80.2	38-109			Q-2, MRL-3, J
Nitrobenzene	264.63	330	"	333.33		79.4	32-122			Q-2, MRL-3, J
n-Nitroso di-n-Propylamine	253.60	330	"	333.33		76.1	30-118			Q-2, MRL-3, J
n-Nitrosodiphenylamine/Diphenylamine	286.47	330	"	333.33		85.9	39-124			Q-2, MRL-3, J
Pentachlorophenol	244.67	330	"	333.33		73.4	30-125			Q-2, MRL-3, J
Phenanthrene	58.767	66	"	66.667		88.2	42-123			Q-2, MRL-3, J
Phenol	255.67	330	"	333.33		76.7	36-114			Q-2, MRL-3, J
Pyrene	60.333	66	"	66.667		90.5	38-139			Q-2, MRL-3, J
Batch 1508053 - E 3545A Modified										
Blank (1508053-BLK1)				Prepared: 08/18/15 Analyzed: 08/19/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	U	330	ug/kg dry							U
2,3,4,6-Tetrachlorophenol	U	330	"							U
2,4,5-Trichlorophenol	U	330	"							U
2,4,6-Trichlorophenol	U	330	"							U
2,4-Dichlorophenol	U	330	"							U

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508053 - E 3545A Modified										
Blank (1508053-BLK1)				Prepared: 08/18/15 Analyzed: 08/19/15						
2,4-Dimethylphenol	U	330	ug/kg dry							U
2,4-Dinitrophenol	U	660	"							U
2-Chlorophenol	U	330	"							U
2-Methyl-4,6-dinitrophenol	U	330	"							U
2-Methylphenol	U	330	"							U
2-Nitrophenol	U	330	"							U
4-Chloro-3-methylphenol	U	330	"							U
4-Nitrophenol	U	330	"							U
Pentachlorophenol	U	330	"							U
Phenol	U	330	"							U
LCS (1508053-BS1)				Prepared: 08/18/15 Analyzed: 08/19/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	1464.1	330	ug/kg dry	2000.0		73.2	56-94			
2,3,4,6-Tetrachlorophenol	1545.9	330	"	2000.0		77.3	42-128			
2,4,5-Trichlorophenol	1570.8	330	"	2000.0		78.5	66-105			
2,4,6-Trichlorophenol	1516.3	330	"	2000.0		75.8	63-98			
2,4-Dichlorophenol	1549.6	330	"	2000.0		77.5	62-97			
2,4-Dimethylphenol	1079.3	330	"	2000.0		54.0	24-87			
2,4-Dinitrophenol	1469.5	660	"	4000.0		36.7	17-71			
2-Chlorophenol	1405.4	330	"	2000.0		70.3	56-90			
2-Methyl-4,6-dinitrophenol	1323.4	330	"	2000.0		66.2	51-99			
2-Methylphenol	1405.0	330	"	2000.0		70.2	53-92			
2-Nitrophenol	1418.9	330	"	2000.0		70.9	60-92			
4-Chloro-3-methylphenol	1580.7	330	"	2000.0		79.0	63-102			
4-Nitrophenol	1412.8	330	"	2000.0		70.6	58-117			
Pentachlorophenol	1617.1	330	"	2000.0		80.9	50-105			
Phenol	1484.6	330	"	2000.0		74.2	56-94			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508053 - E 3545A Modified										
LCS Dup (1508053-BSD1)				Prepared: 08/18/15 Analyzed: 08/19/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	1528.7	330	ug/kg dry	2000.0		76.4	56-94	4.31	10	
2,3,4,6-Tetrachlorophenol	1607.3	330	"	2000.0		80.4	42-128	3.89	10	
2,4,5-Trichlorophenol	1640.9	330	"	2000.0		82.0	66-105	4.37	10	
2,4,6-Trichlorophenol	1597.1	330	"	2000.0		79.9	63-98	5.19	15	
2,4-Dichlorophenol	1596.3	330	"	2000.0		79.8	62-97	2.97	10	
2,4-Dimethylphenol	1214.5	330	"	2000.0		60.7	24-87	11.8	12	
2,4-Dinitrophenol	1423.6	660	"	4000.0		35.6	17-71	3.18	89	
2-Chlorophenol	1459.2	330	"	2000.0		73.0	56-90	3.76	11	
2-Methyl-4,6-dinitrophenol	1295.7	330	"	2000.0		64.8	51-99	2.12	10	
2-Methylphenol	1455.8	330	"	2000.0		72.8	53-92	3.55	10	
2-Nitrophenol	1462.9	330	"	2000.0		73.1	60-92	3.05	10	
4-Chloro-3-methylphenol	1660.6	330	"	2000.0		83.0	63-102	4.93	12	
4-Nitrophenol	1467.5	330	"	2000.0		73.4	58-117	3.80	14	
Pentachlorophenol	1657.0	330	"	2000.0		82.9	50-105	2.44	10	
Phenol	1515.1	330	"	2000.0		75.8	56-94	2.03	10	
Duplicate (1508053-DUP1)				**Source: E153008-12RE1**	Prepared: 08/18/15 Analyzed: 08/19/15					
EPA 8270D										
(3-and/or 4-)Methylphenol	U	2500	ug/kg dry		U				200	J, H-7, U
2,3,4,6-Tetrachlorophenol	U	2500	"		U				200	J, H-7, U
2,4,5-Trichlorophenol	U	2500	"		U				200	J, H-7, U
2,4,6-Trichlorophenol	U	2500	"		U				200	J, H-7, U
2,4-Dichlorophenol	U	2500	"		U				200	J, H-7, U
2,4-Dimethylphenol	U	2500	"		U				200	J, H-7, U
2,4-Dinitrophenol	U	5000	"		U				200	J, H-7, U
2-Chlorophenol	U	2500	"		U				200	J, H-7, U
2-Methyl-4,6-dinitrophenol	U	2500	"		U				200	J, H-7, U
2-Methylphenol	U	2500	"		U				200	J, H-7, U
2-Nitrophenol	U	2500	"		U				200	J, H-7, U
4-Chloro-3-methylphenol	U	2500	"		U				200	J, H-7, U
4-Nitrophenol	U	2500	"		U				200	J, H-7, U
Pentachlorophenol	U	2500	"		U				200	J, H-7, U
Phenol	U	2500	"		U				200	J, H-7, U

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508053 - E 3545A Modified										
MRL Verification (1508053-PS1)				Prepared: 08/18/15 Analyzed: 08/19/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	228.90	330	ug/kg dry	333.33		68.7	36-114			Q-2, MRL-3, J
2,3,4,6-Tetrachlorophenol	243.47	330	"	333.33		73.0	22-148			Q-2, MRL-3, J
2,4,5-Trichlorophenol	258.03	330	"	333.33		77.4	46-125			Q-2, MRL-3, J
2,4,6-Trichlorophenol	240.67	330	"	333.33		72.2	43-118			Q-2, MRL-3, J
2,4-Dichlorophenol	251.10	330	"	333.33		75.3	42-117			Q-2, MRL-3, J
2,4-Dimethylphenol	121.00	330	"	333.33		36.3	10-107			Q-2, MRL-3, J
2,4-Dinitrophenol	104.03	660	"	666.67		15.6	10-91			Q-2, MRL-3, J
2-Chlorophenol	238.00	330	"	333.33		71.4	36-110			Q-2, MRL-3, J
2-Methyl-4,6-dinitrophenol	137.97	330	"	333.33		41.4	31-119			Q-2, MRL-3, J
2-Methylphenol	220.20	330	"	333.33		66.1	33-112			Q-2, MRL-3, J
2-Nitrophenol	230.90	330	"	333.33		69.3	40-112			Q-2, MRL-3, J
4-Chloro-3-methylphenol	247.07	330	"	333.33		74.1	43-122			Q-2, MRL-3, J
4-Nitrophenol	201.47	330	"	333.33		60.4	38-137			Q-2, MRL-3, J
Pentachlorophenol	219.27	330	"	333.33		65.8	30-125			Q-2, MRL-3, J
Phenol	254.63	330	"	333.33		76.4	36-114			Q-2, MRL-3, J
Batch 1508065 - E 3545A Modified										
Blank (1508065-BLK1)				Prepared: 08/21/15 Analyzed: 08/31/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	U	330	ug/kg dry							U
2,3,4,6-Tetrachlorophenol	U	330	"							U
2,4,5-Trichlorophenol	U	330	"							U
2,4,6-Trichlorophenol	U	330	"							U
2,4-Dichlorophenol	U	330	"							U
2,4-Dimethylphenol	U	330	"							U
2,4-Dinitrophenol	U	660	"							U
2-Chlorophenol	U	330	"							U
2-Methyl-4,6-dinitrophenol	U	330	"							U
2-Methylphenol	U	330	"							U

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508065 - E 3545A Modified										
Blank (1508065-BLK1)				Prepared: 08/21/15 Analyzed: 08/31/15						
2-Nitrophenol	U	330	ug/kg dry							U
4-Chloro-3-methylphenol	U	330	"							U
4-Nitrophenol	U	330	"							U
Pentachlorophenol	U	330	"							U
Phenol	U	330	"							U
LCS (1508065-BS1)				Prepared: 08/21/15 Analyzed: 08/31/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	1547.9	330	ug/kg dry	2000.0		77.4	56-94			
2,3,4,6-Tetrachlorophenol	1978.5	330	"	2000.0		98.9	42-128			
2,4,5-Trichlorophenol	1739.2	330	"	2000.0		87.0	66-105			
2,4,6-Trichlorophenol	1815.0	330	"	2000.0		90.7	63-98			
2,4-Dichlorophenol	1888.8	330	"	2000.0		94.4	62-97			
2,4-Dimethylphenol	978.40	330	"	2000.0		48.9	24-87			
2,4-Dinitrophenol	1886.2	660	"	4000.0		47.2	17-71			
2-Chlorophenol	1484.7	330	"	2000.0		74.2	56-90			
2-Methyl-4,6-dinitrophenol	1662.8	330	"	2000.0		83.1	51-99			
2-Methylphenol	1478.3	330	"	2000.0		73.9	53-92			
2-Nitrophenol	1622.8	330	"	2000.0		81.1	60-92			
4-Chloro-3-methylphenol	1723.2	330	"	2000.0		86.2	63-102			
4-Nitrophenol	1961.9	330	"	2000.0		98.1	58-117			
Pentachlorophenol	1928.4	330	"	2000.0		96.4	50-105			
Phenol	1474.8	330	"	2000.0		73.7	56-94			
MRL Verification (1508065-PS2)				Prepared: 08/21/15 Analyzed: 08/31/15						
EPA 8270D										
(3-and/or 4-)Methylphenol	241.30	330	ug/kg dry	333.33		72.4	36-114			Q-2, MRL-3, J
2,3,4,6-Tetrachlorophenol	300.70	330	"	333.33		90.2	22-148			Q-2, MRL-3, J
2,4,5-Trichlorophenol	279.63	330	"	333.33		83.9	46-125			Q-2, MRL-3, J
2,4,6-Trichlorophenol	291.80	330	"	333.33		87.5	43-118			Q-2, MRL-3, J
2,4-Dichlorophenol	300.43	330	"	333.33		90.1	42-117			Q-2, MRL-3, J
2,4-Dimethylphenol	124.20	330	"	333.33		37.3	10-107			Q-2, MRL-3, J
2,4-Dinitrophenol	32.767	660	"	666.67		4.92	10-91			Q-2, QR-1, MRL-3, J

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508065 - E 3545A Modified										
MRL Verification (1508065-PS2)				Prepared: 08/21/15 Analyzed: 08/31/15						
2-Chlorophenol	241.13	330	ug/kg dry	333.33		72.3	36-110			Q-2, MRL-3, J
2-Methyl-4,6-dinitrophenol	164.70	330	"	333.33		49.4	31-119			Q-2, MRL-3, J
2-Methylphenol	237.53	330	"	333.33		71.3	33-112			Q-2, MRL-3, J
2-Nitrophenol	252.07	330	"	333.33		75.6	40-112			Q-2, MRL-3, J
4-Chloro-3-methylphenol	277.00	330	"	333.33		83.1	43-122			Q-2, MRL-3, J
4-Nitrophenol	273.20	330	"	333.33		82.0	38-137			Q-2, MRL-3, J
Pentachlorophenol	250.70	330	"	333.33		75.2	30-125			Q-2, MRL-3, J
Phenol	251.47	330	"	333.33		75.4	36-114			Q-2, MRL-3, J

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
B-4	Level in blank impacts MRLs.
H-7	Recommended preparation holding time exceeded
J	The identification of the analyte is acceptable; the reported value is an estimate.
MRL-3	MRL verification for Soil matrix
Q-2	Result greater than MDL but less than MRL.
QM-2	Matrix Spike Recovery greater than method control limits
QM-3	Matrix Spike Precision outside method control limits
QM-6	Matrix Spike Recovery less than 10%
QR-1	MRL verification recovery less than lower control limits.
QR-2	MRL verification recovery greater than upper control limits.

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August 27, 2015

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 15-0412, Alcoa Badin Works
Superfund Remedial

FROM: Jason Collum
OCS Analyst

THRU: Floyd Wellborn, Chief
ASB Organic Chemistry Section

TO: Carolyn Callihan

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
PCB Aroclors (PCBA)		
PCB aroclors	EPA 8082 (Soil)	ISO
PCB aroclors	EPA 8082 (Water)	ISO

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

cc: Nardina Turner

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SAMPLES INCLUDED IN THIS REPORT

Project: 15-0412, Alcoa Badin Works

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
ABL01GW	E153008-01	Groundwater	7/21/15 15:25	7/23/15 9:52
ABL02GW	E153008-02	Groundwater	7/21/15 16:15	7/23/15 9:52
ABL03GW	E153008-03	Groundwater	7/21/15 17:15	7/23/15 9:52
ABL04SD	E153008-04	Sediment	7/21/15 12:15	7/23/15 9:52
ABL04SW	E153008-05	Surface Water	7/21/15 12:10	7/23/15 9:52
ABL05SD	E153008-06	Sediment	7/21/15 13:15	7/23/15 9:52
ABL06SD	E153008-07	Sediment	7/21/15 14:00	7/23/15 9:52
ABL06SW	E153008-08	Surface Water	7/21/15 12:13	7/23/15 9:52
ABL07SD	E153008-09	Sediment	7/21/15 14:42	7/23/15 9:52
ABL08SD	E153008-10	Sediment	7/21/15 11:00	7/23/15 9:52
ABL08SW	E153008-11	Surface Water	7/21/15 12:55	7/23/15 9:52
ABL09SD	E153008-12	Sediment	7/21/15 09:55	7/23/15 9:52
ABL09SW	E153008-13	Surface Water	7/21/15 10:00	7/23/15 9:52
ABL10SD	E153008-14	Sediment	7/21/15 09:05	7/23/15 9:52
ABL10SW	E153008-15	Surface Water	7/21/15 08:55	7/23/15 9:52
ABL11SD	E153008-16	Sediment	7/21/15 09:00	7/23/15 9:52
ABL11SW	E153008-17	Surface Water	7/21/15 08:55	7/23/15 9:52

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
CR	Ar1242 indistinguishable from Ar1016. Results reported as Ar1242.
CRa	Ar1260 indistinguishable from Ar1262. Results reported as Ar1260.
CRb	MRL elevated due to the presence of Ar1242.
CRc	MRL elevated due to the presence of Ar1260.
J	The identification of the analyte is acceptable; the reported value is an estimate.
T-1	Sample received in cooler with temperature blank greater than 6 degrees C.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

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Project: 15-0412, Alcoa Badin Works - Reported by Jason Collum

PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL01GW
Station ID: ABL01
Lab ID: E153008-01
Matrix: Groundwater

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.53	U, T-1	ug/L	0.53	7/27/15 10:13	8/11/15 15:49	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 15:49	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL02GW
Station ID: ABL02
Lab ID: E153008-02
Matrix: Groundwater

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.51	U, T-1	ug/L	0.51	7/27/15 10:13	8/11/15 16:21	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 16:21	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL03GW
Station ID: ABL03
Lab ID: E153008-03
Matrix: Groundwater

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.52	U, T-1	ug/L	0.52	7/27/15 10:13	8/11/15 16:54	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.26	U, T-1	ug/L	0.26	7/27/15 10:13	8/11/15 16:54	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL04SD
Station ID: ABL04
Lab ID: E153008-04
Matrix: Sediment

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	24	U	ug/kg dry	24	7/24/15 12:50	8/11/15 23:22	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	12	U	ug/kg dry	12	7/24/15 12:50	8/11/15 23:22	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL04SW
Station ID: ABL04
Lab ID: E153008-05
Matrix: Surface Water

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.49	U	ug/L	0.49	7/27/15 10:13	8/11/15 17:26	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 17:26	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL05SD
Station ID: ABL05
Lab ID: E153008-06
Matrix: Sediment

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	32	U	ug/kg dry	32	7/24/15 12:50	8/11/15 23:55	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	16	U	ug/kg dry	16	7/24/15 12:50	8/11/15 23:55	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL06SD
Station ID: ABL06
Lab ID: E153008-07
Matrix: Sediment

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	66	U, CRb	ug/kg dry	66	7/24/15 12:50	8/12/15 0:27	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	66	U, CRb	ug/kg dry	66	7/24/15 12:50	8/12/15 0:27	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	66	U, CRb	ug/kg dry	66	7/24/15 12:50	8/12/15 0:27	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	65	J, CR	ug/kg dry	50	7/24/15 12:50	8/17/15 19:45	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	50	U, CRc	ug/kg dry	50	7/24/15 12:50	8/12/15 0:27	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	50	U, CRc	ug/kg dry	50	7/24/15 12:50	8/12/15 0:27	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	49	J, CRa	ug/kg dry	19	7/24/15 12:50	8/12/15 0:27	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	50	U, CRc	ug/kg dry	50	7/24/15 12:50	8/12/15 0:27	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	19	U	ug/kg dry	19	7/24/15 12:50	8/12/15 0:27	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL06SW
Station ID: ABL06
Lab ID: E153008-08
Matrix: Surface Water

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.54	U, T-1	ug/L	0.54	7/27/15 10:13	8/11/15 17:58	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.27	U, T-1	ug/L	0.27	7/27/15 10:13	8/11/15 17:58	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL07SD
Station ID: ABL07
Lab ID: E153008-09
Matrix: Sediment

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	16	U	ug/kg dry	16	7/24/15 12:50	8/12/15 0:59	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	31	U	ug/kg dry	31	7/24/15 12:50	8/12/15 0:59	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	16	U	ug/kg dry	16	7/24/15 12:50	8/12/15 0:59	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	16	U	ug/kg dry	16	7/24/15 12:50	8/17/15 20:17	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	36	U, CRc	ug/kg dry	36	7/24/15 12:50	8/12/15 0:59	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	36	U, CRc	ug/kg dry	36	7/24/15 12:50	8/12/15 0:59	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	35	J, CRa	ug/kg dry	16	7/24/15 12:50	8/12/15 0:59	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	36	U, CRc	ug/kg dry	36	7/24/15 12:50	8/12/15 0:59	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	16	U	ug/kg dry	16	7/24/15 12:50	8/12/15 0:59	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL08SD
Station ID: ABL08
Lab ID: E153008-10
Matrix: Sediment

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	19	U	ug/kg dry	19	7/24/15 12:50	8/12/15 1:32	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	9.6	U	ug/kg dry	9.6	7/24/15 12:50	8/12/15 1:32	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL08SW
Station ID: ABL08
Lab ID: E153008-11
Matrix: Surface Water

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.51	U	ug/L	0.51	7/27/15 10:13	8/11/15 18:31	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.25	U	ug/L	0.25	7/27/15 10:13	8/11/15 18:31	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SD
Station ID: ABL09
Lab ID: E153008-12
Matrix: Sediment

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	21	U	ug/kg dry	21	7/24/15 12:50	8/12/15 2:04	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	11	U	ug/kg dry	11	7/24/15 12:50	8/12/15 2:04	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SW
Station ID: ABL09
Lab ID: E153008-13
Matrix: Surface Water

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.53	U	ug/L	0.53	7/27/15 10:13	8/11/15 19:03	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 19:03	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL10SD
Station ID: ABL10
Lab ID: E153008-14
Matrix: Sediment

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	21	U	ug/kg dry	21	7/24/15 12:50	8/12/15 2:37	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 2:37	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL10SW
Station ID: ABL10
Lab ID: E153008-15
Matrix: Surface Water

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.50	U, T-1	ug/L	0.50	7/27/15 10:13	8/11/15 19:36	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.25	U, T-1	ug/L	0.25	7/27/15 10:13	8/11/15 19:36	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL11SD
Station ID: ABL10
Lab ID: E153008-16
Matrix: Sediment

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	21	U	ug/kg dry	21	7/24/15 12:50	8/12/15 3:09	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	10	U	ug/kg dry	10	7/24/15 12:50	8/12/15 3:09	EPA 8082

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PCB Aroclors

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL11SW
Station ID: ABL10
Lab ID: E153008-17
Matrix: Surface Water

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
12674-11-2	PCB-1016 (Aroclor 1016)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
11104-28-2	PCB-1221 (Aroclor 1221)	0.51	U	ug/L	0.51	7/27/15 10:13	8/11/15 20:08	EPA 8082
11141-16-5	PCB-1232 (Aroclor 1232)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
12672-29-6	PCB-1248 (Aroclor 1248)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
11096-82-5	PCB-1260 (Aroclor 1260)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082
11100-14-4	PCB-1268 (Aroclor 1268)	0.26	U	ug/L	0.26	7/27/15 10:13	8/11/15 20:08	EPA 8082

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PCB Aroclors (PCBA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507075 - E 3545A Modified										
Blank (1507075-BLK1)				Prepared: 07/24/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	U	8.3	ug/kg dry							U
PCB-1016 (Aroclor 1016) [2C]	U	8.3	"							U
PCB-1221 (Aroclor 1221)	U	17	"							U
PCB-1221 (Aroclor 1221) [2C]	U	17	"							U
PCB-1232 (Aroclor 1232)	U	8.3	"							U
PCB-1232 (Aroclor 1232) [2C]	U	8.3	"							U
PCB-1242 (Aroclor 1242)	U	8.3	"							U
PCB-1242 (Aroclor 1242) [2C]	U	8.3	"							U
PCB-1248 (Aroclor 1248)	U	8.3	"							U
PCB-1248 (Aroclor 1248) [2C]	U	8.3	"							U
PCB-1254 (Aroclor 1254)	U	8.3	"							U
PCB-1254 (Aroclor 1254) [2C]	U	8.3	"							U
PCB-1260 (Aroclor 1260)	U	8.3	"							U
PCB-1260 (Aroclor 1260) [2C]	U	8.3	"							U
PCB-1262 (Aroclor 1262)	U	8.3	"							U
PCB-1262 (Aroclor 1262) [2C]	U	8.3	"							U
PCB-1268 (Aroclor 1268)	U	8.3	"							U
PCB-1268 (Aroclor 1268) [2C]	U	8.3	"							U
LCS (1507075-BS1)				Prepared: 07/24/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	143.58	42	ug/kg dry	166.67		86.1	46.6-138			
PCB-1016 (Aroclor 1016) [2C]	134.38	42	"	166.67		80.6	46.6-138			
PCB-1221 (Aroclor 1221)	U	83	"				46.6-138			U
PCB-1221 (Aroclor 1221) [2C]	U	83	"				46.6-138			U
PCB-1232 (Aroclor 1232)	U	42	"				46.6-138			U
PCB-1232 (Aroclor 1232) [2C]	U	42	"				46.6-138			U
PCB-1242 (Aroclor 1242)	U	42	"				46.6-138			U
PCB-1242 (Aroclor 1242) [2C]	U	42	"				46.6-138			U
PCB-1248 (Aroclor 1248)	U	42	"				46.6-138			U
PCB-1248 (Aroclor 1248) [2C]	U	42	"				46.6-138			U
PCB-1254 (Aroclor 1254)	U	42	"				52-134			U
PCB-1254 (Aroclor 1254) [2C]	U	42	"				52-134			U
PCB-1260 (Aroclor 1260)	141.61	42	"	166.67		85.0	52-134			
PCB-1260 (Aroclor 1260) [2C]	134.33	42	"	166.67		80.6	52-134			
PCB-1262 (Aroclor 1262)	U	42	"				52-134			U
PCB-1262 (Aroclor 1262) [2C]	U	42	"				52-134			U
PCB-1268 (Aroclor 1268)	U	42	"				52-134			U
PCB-1268 (Aroclor 1268) [2C]	U	42	"				52-134			U

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PCB Aroclors (PCBA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507075 - E 3545A Modified										
LCS (1507075-BS1)				Prepared: 07/24/15 Analyzed: 08/11/15						
Matrix Spike (1507075-MS1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	168.25	52	ug/kg dry	206.19	U	81.6	25.5-136			
PCB-1016 (Aroclor 1016) [2C]	157.21	52	"	206.19	U	76.2	25.5-136			
PCB-1221 (Aroclor 1221)	U	100	"		U		25.5-136			U
PCB-1221 (Aroclor 1221) [2C]	U	100	"		U		25.5-136			U
PCB-1232 (Aroclor 1232)	U	52	"		U		25.5-136			U
PCB-1232 (Aroclor 1232) [2C]	U	52	"		U		25.5-136			U
PCB-1242 (Aroclor 1242)	U	52	"		U		25.5-136			U
PCB-1242 (Aroclor 1242) [2C]	U	52	"		U		25.5-136			U
PCB-1248 (Aroclor 1248)	U	52	"		U		25.5-136			U
PCB-1248 (Aroclor 1248) [2C]	U	52	"		U		25.5-136			U
PCB-1254 (Aroclor 1254)	U	52	"		U		16.1-145			U
PCB-1254 (Aroclor 1254) [2C]	U	52	"		U		16.1-145			U
PCB-1260 (Aroclor 1260)	134.95	52	"	206.19	U	65.5	16.1-145			
PCB-1260 (Aroclor 1260) [2C]	129.78	52	"	206.19	U	62.9	16.1-145			
PCB-1262 (Aroclor 1262)	U	52	"		U		16.1-145			U
PCB-1262 (Aroclor 1262) [2C]	U	52	"		U		16.1-145			U
PCB-1268 (Aroclor 1268)	U	52	"		U		16.1-145			U
PCB-1268 (Aroclor 1268) [2C]	U	52	"		U		16.1-145			U
Matrix Spike Dup (1507075-MSD1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	159.44	51	ug/kg dry	205.76	U	77.5	25.5-136	5.38	36.4	
PCB-1016 (Aroclor 1016) [2C]	153.01	51	"	205.76	U	74.4	25.5-136	2.71	36.4	
PCB-1221 (Aroclor 1221)	U	100	"		U		25.5-136		36.4	U
PCB-1221 (Aroclor 1221) [2C]	U	100	"		U		25.5-136		36.4	U
PCB-1232 (Aroclor 1232)	U	51	"		U		25.5-136		36.4	U
PCB-1232 (Aroclor 1232) [2C]	U	51	"		U		25.5-136		36.4	U
PCB-1242 (Aroclor 1242)	U	51	"		U		25.5-136		36.4	U
PCB-1242 (Aroclor 1242) [2C]	U	51	"		U		25.5-136		36.4	U
PCB-1248 (Aroclor 1248)	U	51	"		U		25.5-136		36.4	U
PCB-1248 (Aroclor 1248) [2C]	U	51	"		U		25.5-136		36.4	U
PCB-1254 (Aroclor 1254)	U	51	"		U		16.1-145		34.4	U
PCB-1254 (Aroclor 1254) [2C]	U	51	"		U		16.1-145		34.4	U
PCB-1260 (Aroclor 1260)	123.32	51	"	205.76	U	59.9	16.1-145	9.01	34.4	
PCB-1260 (Aroclor 1260) [2C]	117.50	51	"	205.76	U	57.1	16.1-145	9.93	34.4	
PCB-1262 (Aroclor 1262)	U	51	"		U		16.1-145		34.4	U

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PCB Aroclors (PCBA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507075 - E 3545A Modified										
Matrix Spike Dup (1507075-MSD1)		**Source: E153008-16**		Prepared: 07/24/15 Analyzed: 08/11/15						
PCB-1262 (Aroclor 1262) [2C]	U	51	ug/kg dry		U		16.1-145		34.4	U
PCB-1268 (Aroclor 1268)	U	51	"		U		16.1-145		34.4	U
PCB-1268 (Aroclor 1268) [2C]	U	51	"		U		16.1-145		34.4	U
MRL Verification (1507075-PS1)				Prepared: 07/24/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	7.7570	8.3	ug/kg dry	8.3333		93.1	26.6-158			MRL-3, U
PCB-1016 (Aroclor 1016) [2C]	6.2740	8.3	"	8.3333		75.3	26.6-158			MRL-3, U
PCB-1221 (Aroclor 1221)	U	17	"				26.6-158			U
PCB-1221 (Aroclor 1221) [2C]	U	17	"				26.6-158			U
PCB-1232 (Aroclor 1232)	U	8.3	"				26.6-158			U
PCB-1232 (Aroclor 1232) [2C]	U	8.3	"				26.6-158			U
PCB-1242 (Aroclor 1242)	U	8.3	"				26.6-158			U
PCB-1242 (Aroclor 1242) [2C]	U	8.3	"				26.6-158			U
PCB-1248 (Aroclor 1248)	U	8.3	"				26.6-158			U
PCB-1248 (Aroclor 1248) [2C]	U	8.3	"				26.6-158			U
PCB-1254 (Aroclor 1254)	U	8.3	"				32-154			U
PCB-1254 (Aroclor 1254) [2C]	U	8.3	"				32-154			U
PCB-1260 (Aroclor 1260)	7.2730	8.3	"	8.3333		87.3	32-154			MRL-3, U
PCB-1260 (Aroclor 1260) [2C]	6.0117	8.3	"	8.3333		72.1	32-154			MRL-3, U
PCB-1262 (Aroclor 1262)	U	8.3	"				32-154			U
PCB-1262 (Aroclor 1262) [2C]	U	8.3	"				32-154			U
PCB-1268 (Aroclor 1268)	U	8.3	"				32-154			U
PCB-1268 (Aroclor 1268) [2C]	U	8.3	"				32-154			U
Batch 1507080 - E 3520 LLE										
Blank (1507080-BLK1)				Prepared: 07/27/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	U	0.25	ug/L							U
PCB-1016 (Aroclor 1016) [2C]	U	0.25	"							U
PCB-1221 (Aroclor 1221)	U	0.50	"							U
PCB-1221 (Aroclor 1221) [2C]	U	0.50	"							U
PCB-1232 (Aroclor 1232)	U	0.25	"							U
PCB-1232 (Aroclor 1232) [2C]	U	0.25	"							U
PCB-1242 (Aroclor 1242)	U	0.25	"							U
PCB-1242 (Aroclor 1242) [2C]	U	0.25	"							U

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PCB Aroclors (PCBA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507080 - E 3520 LLE										
Blank (1507080-BLK1)				Prepared: 07/27/15 Analyzed: 08/11/15						
PCB-1248 (Aroclor 1248)	U	0.25	ug/L							U
PCB-1248 (Aroclor 1248) [2C]	U	0.25	"							U
PCB-1254 (Aroclor 1254)	U	0.25	"							U
PCB-1254 (Aroclor 1254) [2C]	U	0.25	"							U
PCB-1260 (Aroclor 1260)	U	0.25	"							U
PCB-1260 (Aroclor 1260) [2C]	U	0.25	"							U
PCB-1262 (Aroclor 1262)	U	0.25	"							U
PCB-1262 (Aroclor 1262) [2C]	U	0.25	"							U
PCB-1268 (Aroclor 1268)	U	0.25	"							U
PCB-1268 (Aroclor 1268) [2C]	U	0.25	"							U
LCS (1507080-BS1)				Prepared: 07/27/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	3.3492	1.2	ug/L	5.0000		67.0	43.3-123			
PCB-1016 (Aroclor 1016) [2C]	3.2430	1.2	"	5.0000		64.9	43.3-123			
PCB-1221 (Aroclor 1221)	U	2.5	"				43.3-123			U
PCB-1221 (Aroclor 1221) [2C]	U	2.5	"				43.3-123			U
PCB-1232 (Aroclor 1232)	U	1.2	"				43.3-123			U
PCB-1232 (Aroclor 1232) [2C]	U	1.2	"				43.3-123			U
PCB-1242 (Aroclor 1242)	U	1.2	"				43.3-123			U
PCB-1242 (Aroclor 1242) [2C]	U	1.2	"				43.3-123			U
PCB-1248 (Aroclor 1248)	U	1.2	"				43.3-123			U
PCB-1248 (Aroclor 1248) [2C]	U	1.2	"				43.3-123			U
PCB-1254 (Aroclor 1254)	U	1.2	"				55.8-118			U
PCB-1254 (Aroclor 1254) [2C]	U	1.2	"				55.8-118			U
PCB-1260 (Aroclor 1260)	3.4486	1.2	"	5.0000		69.0	55.8-118			
PCB-1260 (Aroclor 1260) [2C]	3.3098	1.2	"	5.0000		66.2	55.8-118			
PCB-1262 (Aroclor 1262)	U	1.2	"				55.8-118			U
PCB-1262 (Aroclor 1262) [2C]	U	1.2	"				55.8-118			U
PCB-1268 (Aroclor 1268)	U	1.2	"				55.8-118			U
PCB-1268 (Aroclor 1268) [2C]	U	1.2	"				55.8-118			U

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PCB Aroclors (PCBA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507080 - E 3520 LLE										
Matrix Spike (1507080-MS1)		**Source: E153008-11**		Prepared: 07/27/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	3.5735	1.2	ug/L	4.9505	U	72.2	18-174			
PCB-1016 (Aroclor 1016) [2C]	3.4491	1.2	"	4.9505	U	69.7	18-174			
PCB-1221 (Aroclor 1221)	U	2.5	"		U		18-174			U
PCB-1221 (Aroclor 1221) [2C]	U	2.5	"		U		18-174			U
PCB-1232 (Aroclor 1232)	U	1.2	"		U		18-174			U
PCB-1232 (Aroclor 1232) [2C]	U	1.2	"		U		18-174			U
PCB-1242 (Aroclor 1242)	U	1.2	"		U		18-174			U
PCB-1242 (Aroclor 1242) [2C]	U	1.2	"		U		18-174			U
PCB-1248 (Aroclor 1248)	U	1.2	"		U		18-174			U
PCB-1248 (Aroclor 1248) [2C]	U	1.2	"		U		18-174			U
PCB-1254 (Aroclor 1254)	U	1.2	"		U		15.9-165			U
PCB-1254 (Aroclor 1254) [2C]	U	1.2	"		U		15.9-165			U
PCB-1260 (Aroclor 1260)	2.6525	1.2	"	4.9505	U	53.6	15.9-165			
PCB-1260 (Aroclor 1260) [2C]	2.6686	1.2	"	4.9505	U	53.9	15.9-165			
PCB-1262 (Aroclor 1262)	U	1.2	"		U		15.9-165			U
PCB-1262 (Aroclor 1262) [2C]	U	1.2	"		U		15.9-165			U
PCB-1268 (Aroclor 1268)	U	1.2	"		U		15.9-165			U
PCB-1268 (Aroclor 1268) [2C]	U	1.2	"		U		15.9-165			U
Matrix Spike Dup (1507080-MSD1)		**Source: E153008-11**		Prepared: 07/27/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	3.6224	1.2	ug/L	5.0000	U	72.4	18-174	1.36	38.9	
PCB-1016 (Aroclor 1016) [2C]	3.4260	1.2	"	5.0000	U	68.5	18-174	0.672	38.9	
PCB-1221 (Aroclor 1221)	U	2.5	"		U		18-174		30	U
PCB-1221 (Aroclor 1221) [2C]	U	2.5	"		U		18-174		30	U
PCB-1232 (Aroclor 1232)	U	1.2	"		U		18-174		30	U
PCB-1232 (Aroclor 1232) [2C]	U	1.2	"		U		18-174		30	U
PCB-1242 (Aroclor 1242)	U	1.2	"		U		18-174		30	U
PCB-1242 (Aroclor 1242) [2C]	U	1.2	"		U		18-174		30	U
PCB-1248 (Aroclor 1248)	U	1.2	"		U		18-174		30	U
PCB-1248 (Aroclor 1248) [2C]	U	1.2	"		U		18-174		30	U
PCB-1254 (Aroclor 1254)	U	1.2	"		U		15.9-165		28.7	U
PCB-1254 (Aroclor 1254) [2C]	U	1.2	"		U		15.9-165		28.7	U
PCB-1260 (Aroclor 1260)	2.4307	1.2	"	5.0000	U	48.6	15.9-165	8.73	28.7	
PCB-1260 (Aroclor 1260) [2C]	2.4504	1.2	"	5.0000	U	49.0	15.9-165	8.53	28.7	
PCB-1262 (Aroclor 1262)	U	1.2	"		U		15.9-165		28.7	U
PCB-1262 (Aroclor 1262) [2C]	U	1.2	"		U		15.9-165		28.7	U
PCB-1268 (Aroclor 1268)	U	1.2	"		U		15.9-165		28.7	U
PCB-1268 (Aroclor 1268) [2C]	U	1.2	"		U		15.9-165		28.7	U

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PCB Aroclors (PCBA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507080 - E 3520 LLE										
Matrix Spike Dup (1507080-MSD1)		**Source: E153008-11**		Prepared: 07/27/15 Analyzed: 08/11/15						
MRL Verification (1507080-PS1)				Prepared: 07/27/15 Analyzed: 08/11/15						
EPA 8082										
PCB-1016 (Aroclor 1016)	0.19350	0.25	ug/L	0.25000		77.4	23.3-143			MRL-2, U
PCB-1016 (Aroclor 1016) [2C]	0.16398	0.25	"	0.25000		65.6	23.3-143			MRL-2, U
PCB-1221 (Aroclor 1221)	U	0.50	"				23.3-143			U
PCB-1221 (Aroclor 1221) [2C]	U	0.50	"				23.3-143			U
PCB-1232 (Aroclor 1232)	U	0.25	"				23.3-143			U
PCB-1232 (Aroclor 1232) [2C]	U	0.25	"				23.3-143			U
PCB-1242 (Aroclor 1242)	U	0.25	"				23.3-143			U
PCB-1242 (Aroclor 1242) [2C]	U	0.25	"				23.3-143			U
PCB-1248 (Aroclor 1248)	U	0.25	"				23.3-143			U
PCB-1248 (Aroclor 1248) [2C]	U	0.25	"				23.3-143			U
PCB-1254 (Aroclor 1254)	U	0.25	"				35.8-138			U
PCB-1254 (Aroclor 1254) [2C]	U	0.25	"				35.8-138			U
PCB-1260 (Aroclor 1260)	0.24156	0.25	"	0.25000		96.6	35.8-138			MRL-2, U
PCB-1260 (Aroclor 1260) [2C]	0.20205	0.25	"	0.25000		80.8	35.8-138			MRL-2, U
PCB-1262 (Aroclor 1262)	U	0.25	"				35.8-138			U
PCB-1262 (Aroclor 1262) [2C]	U	0.25	"				35.8-138			U
PCB-1268 (Aroclor 1268)	U	0.25	"				35.8-138			U
PCB-1268 (Aroclor 1268) [2C]	U	0.25	"				35.8-138			U

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
MRL-2	MRL verification for Non-Potable Water matrix
MRL-3	MRL verification for Soil matrix

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Project: 15-0416, Alcoa Badin Works - Reported by Denise Goddard

September 1, 2015

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 15-0416, Alcoa Badin Works
Superfund Remedial

FROM: Denise Goddard
Office of Quality Assurance Chemist

THRU: Jeannie Williamson, Acting Chief
Office of Quality Assurance

TO: Carolyn Callihan

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Office of Quality Assurance. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:	Method Used:	Accreditations:
Classical/Nutrient Analyses (CNA)		
Cyanide	CLP Inorganics (Soil)	
Cyanide	CLP Inorganics (Water)	
Total Metals (TMTL)		
Total Mercury	CLP Inorganics (Soil)	
Total Mercury	CLP Inorganics (Water)	
Total Metals	CLP Inorganics (Soil)	
Total Metals	CLP Inorganics (Water)	

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Project: 15-0416, Alcoa Badin Works - Reported by Denise Goddard

Report Narrative for Project: 15-0416q 45485

Subject: Inorganic Data Review and Validation Report
Site Name: Alcoa Badin Works, Badin, NC
Case No.: 45485, Project No. 15-0416, Work Order Nos. C153207, C153209
ELEMENT Sample ID.: C153207-02, 03, 05 – 21; C153209-01 - 05
Sampling Date(s): 7/20 – 22/15
Validated Time of Sample Receipt: 7/23/15
Laboratory Performing Inorganic Analyses: TestAmerica, South Burlington, VT
Date Received from Lab: 8/6/15

Analyses conducted: Total Metals, Mercury, and Cyanide

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of 14 water samples and 10 soil samples for total metals by ICP-AES, mercury, and cyanide analyses according to the contract Statement of Work ISM02.2 and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of laboratory blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as ten times the blank levels to discount possible false positives due to contamination in laboratory blanks.

The above-referenced Statement of Work states "All aqueous/water and soil/sediment samples must be iced or refrigerated at 4°C (± 2°C) from the time of collection until digestion." The samples in this case were received at 11°C with the ice melted. Samples were not qualified on the basis of temperature.

ICP-AES Analysis

PE Sample Results

The performance evaluation sample recoveries for metals in soil by ICP-AES were scored as action high for calcium and warning high for iron and manganese by the web-based SPS Web software. All positive field sample results for iron and manganese in soil were considered estimated and "J" qualified. All positive field sample results for calcium were considered unusable and "R" qualified.

The performance evaluation sample recoveries for metals in water by ICP-AES were all scored as within limits.

Other QA/QC Results

Matrix spike recoveries were above control limits for chromium and nickel in sample C153207-14. The results were 144% and 134%, respectively. The post digestion spike recoveries were 85% and 101%, respectively. The chromium and nickel results in sample C153207-14 were considered estimated and "J" qualified.

Matrix spike recovery was below control limits for antimony in sample C153207-14. The result was 70% recovery and the post-digestion spike recovery was 95%. The antimony result for sample C153207-14 was considered estimated and "J" qualified.

Matrix precision was outside of control limits for barium (166 RPD), cobalt (126 RPD), copper (45 RPD), lead (43 RPD), magnesium (77 RPD), manganese (127 RPD), and nickel (121 RPD) in sample C153207-14. The results for barium, cobalt, copper, lead, magnesium, manganese, and nickel in sample C153207-14 were considered estimated and "J" qualified.

Mercury Analysis

PE Sample Results

The performance evaluation sample recovery for mercury in water was scored as within limits by the web-based SPS Web software. Therefore, no data qualifiers were applied to sample results for mercury in water based on this criterion. There was not a performance evaluation sample submitted for mercury in soil.

Other QA/QC Results

There were no other QA/QC problems observed for mercury analysis. Therefore, no data qualifiers were applied to the sample results for mercury based on these criteria.

Cyanide Analysis

PE Sample Results

The performance evaluation sample recoveries for cyanide in soil and water were scored as within limits by the web-based SPS Web software. Therefore, no data qualifiers were applied to sample results for cyanide based on these criteria.

Other QA/QC Results

Matrix precision was outside of control limits for cyanide (30 RPD) in sample C153207-07. The cyanide result for sample C153207-07 was considered estimated and "J" qualified.

A Stage 4 validation consisting of manual review was performed on the inorganic samples submitted for this case.
Further details are provided in the attached review summary form. Please feel free to contact this office if we can be of further service.

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cc: Nardina Turner

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SAMPLES INCLUDED IN THIS REPORT

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected
ABL22PB	C153207-02	9B43		Preservative Blank	7/22/15 14:00
ABL24PB	C153207-03	9B44		Preservative Blank	7/20/15 08:00
ABL01GW	C153207-05	9B39	9B39	Groundwater	7/21/15 15:25
ABL02GW	C153207-06	9B40	9B40	Groundwater	7/21/15 16:15
ABL03GW	C153207-07	9B41	9B41	Groundwater	7/21/15 17:15
ABL04SD	C153207-08	9B24	9B24	Sediment	7/21/15 12:15
ABL04SW	C153207-09	9B33	9B33	Surface Water	7/21/15 12:10
ABL05SD	C153207-10	9B25	9B25	Sediment	7/21/15 13:15
ABL06SD	C153207-11	9B26	9B26	Sediment	7/21/15 14:00
ABL06SW	C153207-12	9B34	9B34	Surface Water	7/21/15 12:13
ABL07SD	C153207-13	9B27	9B27	Sediment	7/21/15 14:42
ABL08SD	C153207-14	9B28	9B28	Sediment	7/21/15 11:00
ABL08SW	C153207-15	9B35	9B35	Surface Water	7/21/15 12:55
ABL09SD	C153207-16	9B29	9B29	Sediment	7/21/15 09:55
ABL09SW	C153207-17	9B36	9B36	Surface Water	7/21/15 10:00
ABL10SD	C153207-18	9B30	9B30	Sediment	7/21/15 09:05
ABL10SW	C153207-19	9B37	9B37	Surface Water	7/21/15 08:55
ABL11SD	C153207-20	9B31	9B31	Sediment	7/21/15 09:00
ABL11SW	C153207-21	9B38	9B38	Surface Water	7/21/15 08:55

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
B-4	Level in blank impacts MRLs.
CLP26	PE sample recovery scored as warning-high.
CLP28	PE sample recovery scored as action high.
CLP36	Identification/Concentration of analyte not confirmed by ICP-MS.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.
QM-1	Matrix Spike Recovery less than method control limits
QM-2	Matrix Spike Recovery greater than method control limits
QM-4	Matrix Precision outside method control limits
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL22PB **Lab ID: C153207-02** **MD No: 9B43 STLV**

Station ID: **Matrix: Preservative Blank** **D No:**

Date Collected: 7/22/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	200	U	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	200	U	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	100	U	ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	15	U	ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL22PB **Lab ID: C153207-02** **MD No: 9B43 STLV**

Station ID: **Matrix: Preservative Blank** **D No:**

Date Collected: 7/22/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL24PB **Lab ID: C153207-03** **MD No: 9B44 STLV**

Station ID: **Matrix: Preservative Blank** **D No:**

Date Collected: 7/20/15 8:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	200	U	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	200	U	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	100	U	ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	15	U	ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	5000	U	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL01GW **Lab ID: C153207-05** **MD No: 9B39 STLV**
Station ID: ABL01 **Matrix: Groundwater** **D No: 9B39 KAP**

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	280		ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	53	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	9600		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	29	J, Q-2	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	4.2	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	2500		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	1800	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	1000		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	8.1	J, Q-2	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	1000	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	94000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	27	J, Q-2	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL01GW
Station ID: ABL01

Lab ID: C153207-05
Matrix: Groundwater

MD No: 9B39 STLV
D No: 9B39 KAP

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL02GW **Lab ID: C153207-06** **MD No: 9B40 STLV**
Station ID: ABL02 **Matrix: Groundwater** **D No: 9B40 KAP**

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	570		ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	70	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	0.53	J, Q-2	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	58000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	12	J, Q-2	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	4.1	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	3000		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	14000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	4700		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	1.7	J, Q-2	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	9600		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	370000		ug/L	25000	7/24/15	8/04/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL02GW
Station ID: ABL02

Lab ID: C153207-06
Matrix: Groundwater

MD No: 9B40 STLV
D No: 9B40 KAP

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL03GW **Lab ID: C153207-07** **MD No: 9B41 STLV**

Station ID: ABL03 **Matrix: Groundwater** **D No: 9B41 KAP**

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	78	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	41	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	67000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	9.2	J, Q-2	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	1.4	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	250		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	11000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	2200		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	14000		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	430000		ug/L	50000	7/24/15	8/04/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL03GW
Station ID: ABL03

Lab ID: C153207-07
Matrix: Groundwater

MD No: 9B41 STLV
D No: 9B41 KAP

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	11	U, J, QM-4, B-4	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL04SD **Lab ID: C153207-08** **MD No: 9B24 STLV**

Station ID: ABL04 **Matrix: Sediment** **D No: 9B24 KAP**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.12	U	mg/kg dry	0.12	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	76		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	12000		mg/kg dry	25	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.49	J, Q-2	mg/kg dry	7.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	29	CLP36	mg/kg dry	1.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	47		mg/kg dry	25	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	0.90		mg/kg dry	0.62	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.33	J, Q-2	mg/kg dry	0.62	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	770	R, CLP28	mg/kg dry	620	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	61		mg/kg dry	1.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	13		mg/kg dry	6.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	18		mg/kg dry	3.1	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	85000	J, CLP26	mg/kg dry	50	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	18		mg/kg dry	1.2	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	680		mg/kg dry	620	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	1800	J, CLP26	mg/kg dry	7.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	3.9	J, Q-2	mg/kg dry	5.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	250	J, Q-2	mg/kg dry	620	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	3.4	J, CLP36, Q-2	mg/kg dry	4.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	1.2	U	mg/kg dry	1.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	22	J, Q-2	mg/kg dry	620	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	3.1	U	mg/kg dry	3.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	59		mg/kg dry	6.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	24		mg/kg dry	7.4	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL04SD
Station ID: ABL04

Lab ID: C153207-08
Matrix: Sediment

MD No: 9B24 STLV
D No: 9B24 KAP

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	76		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	1.7		mg/kg dry	0.58	7/31/15	7/31/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL04SW
Station ID: ABL04

Lab ID: C153207-09
Matrix: Surface Water

MD No: 9B33 STLV
D No: 9B33 KAP

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	350		ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-39-3	Barium	15	J, Q-2	ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-70-2	Calcium	6500		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-48-4	Cobalt	0.99	J, Q-2	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-50-8	Copper	2.4	J, Q-2	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7439-89-6	Iron	540		ug/L	100	7/24/15	7/30/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7439-95-4	Magnesium	1900	J, Q-2	ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7439-96-5	Manganese	190		ug/L	15	7/24/15	7/30/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/30/15	CLP ISM02.2 P
7440-09-7	Potassium	2300	J, Q-2	ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/30/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-23-5	Sodium	7000		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Denise Goddard

Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL04SW
Station ID: ABL04

Lab ID: C153207-09
Matrix: Surface Water

MD No: 9B33 STLV
D No: 9B33 KAP

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL05SD **Lab ID: C153207-10** **MD No: 9B25 STLV**

Station ID: ABL05 **Matrix: Sediment** **D No: 9B25 KAP**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.056	J, Q-2	mg/kg dry	0.15	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	57		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	17000		mg/kg dry	29	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	8.7	U	mg/kg dry	8.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	15	CLP36	mg/kg dry	1.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	210		mg/kg dry	29	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	1.1		mg/kg dry	0.72	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.49	J, Q-2	mg/kg dry	0.72	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	5700	R, CLP28	mg/kg dry	720	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	31		mg/kg dry	1.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	20		mg/kg dry	7.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	34		mg/kg dry	3.6	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	32000	J, CLP26	mg/kg dry	14	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	23		mg/kg dry	1.4	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	1700		mg/kg dry	720	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	8600	J, CLP26	mg/kg dry	11	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	15		mg/kg dry	5.8	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	610	J, Q-2	mg/kg dry	720	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	4.5	J, CLP36, Q-2	mg/kg dry	5.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	0.46	J, Q-2	mg/kg dry	1.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	1100		mg/kg dry	720	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	3.6	U	mg/kg dry	3.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	39		mg/kg dry	7.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	46		mg/kg dry	8.7	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL05SD
Station ID: ABL05

Lab ID: C153207-10
Matrix: Sediment

MD No: 9B25 STLV
D No: 9B25 KAP

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	57		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	0.42	J, Q-2	mg/kg dry	0.68	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SD **Lab ID: C153207-11** **MD No: 9B26 STLV**
Station ID: ABL06 **Matrix: Sediment** **D No: 9B26 KAP**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.072	J, Q-2	mg/kg dry	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	48		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	15000		mg/kg dry	33	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.37	J, Q-2	mg/kg dry	9.9	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	13	CLP36	mg/kg dry	1.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	85		mg/kg dry	33	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	0.67	J, Q-2	mg/kg dry	0.83	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.24	J, Q-2	mg/kg dry	0.83	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	2500	R, CLP28	mg/kg dry	820	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	30		mg/kg dry	1.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	16		mg/kg dry	8.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	39		mg/kg dry	4.1	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	31000	J, CLP26	mg/kg dry	16	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	22		mg/kg dry	1.7	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	1200		mg/kg dry	820	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	2400	J, CLP26	mg/kg dry	9.9	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	10		mg/kg dry	6.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	470	J, Q-2	mg/kg dry	820	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	2.1	J, Q-2, CLP36	mg/kg dry	5.8	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	1.7	U	mg/kg dry	1.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	360	J, Q-2	mg/kg dry	820	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	4.1	U	mg/kg dry	4.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	35		mg/kg dry	8.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	42		mg/kg dry	9.9	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL06SD
Station ID: ABL06

Lab ID: C153207-11
Matrix: Sediment

MD No: 9B26 STLV
D No: 9B26 KAP

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	48		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	1.9		mg/kg dry	1.0	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL06SW **Lab ID: C153207-12** **MD No: 9B34 STLV**

Station ID: ABL06 **Matrix: Surface Water** **D No: 9B34 KAP**

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	1500		ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-39-3	Barium	53	J, Q-2	ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-70-2	Calcium	32000		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7440-47-3	Chromium	0.61	J, Q-2	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-48-4	Cobalt	41	J, Q-2	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-50-8	Copper	12	J, Q-2	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7439-89-6	Iron	3000		ug/L	100	7/24/15	7/30/15	CLP ISM02.2 P
7439-92-1	Lead	7.5	J, Q-2	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7439-95-4	Magnesium	11000		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7439-96-5	Manganese	3100		ug/L	15	7/24/15	7/30/15	CLP ISM02.2 P
7440-02-0	Nickel	2.1	J, Q-2	ug/L	40	7/24/15	7/30/15	CLP ISM02.2 P
7440-09-7	Potassium	6200		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/30/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-23-5	Sodium	250000		ug/L	20000	7/24/15	8/04/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7440-62-2	Vanadium	3.2	J, Q-2	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-66-6	Zinc	8.4	J, Q-2	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL06SW
Station ID: ABL06

Lab ID: C153207-12
Matrix: Surface Water

MD No: 9B34 STLV
D No: 9B34 KAP

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	63		ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL07SD **Lab ID: C153207-13** **MD No: 9B27 STLV**
Station ID: ABL07 **Matrix: Sediment** **D No: 9B27 KAP**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.082	J, Q-2	mg/kg dry	0.17	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	54		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	24000		mg/kg dry	30	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	9.0	U	mg/kg dry	9.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	26	CLP36	mg/kg dry	1.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	270		mg/kg dry	30	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	0.96		mg/kg dry	0.75	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.67	J, Q-2	mg/kg dry	0.75	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	3600	R, CLP28	mg/kg dry	750	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	19		mg/kg dry	1.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	56		mg/kg dry	7.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	66		mg/kg dry	3.8	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	74000	J, CLP26	mg/kg dry	60	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	44		mg/kg dry	1.5	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	1800		mg/kg dry	750	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	6400	J, CLP26	mg/kg dry	9.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	22		mg/kg dry	6.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	690	J, Q-2	mg/kg dry	750	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	4.0	J, CLP36, Q-2	mg/kg dry	5.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	0.23	J, Q-2	mg/kg dry	1.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	470	J, Q-2	mg/kg dry	750	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	3.8	U	mg/kg dry	3.8	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	41		mg/kg dry	7.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	120		mg/kg dry	9.0	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL07SD
Station ID: ABL07

Lab ID: C153207-13
Matrix: Sediment

MD No: 9B27 STLV
D No: 9B27 KAP

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	54		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	1.2		mg/kg dry	0.92	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SD **Lab ID: C153207-14** **MD No: 9B28 STLV**

Station ID: ABL08 **Matrix: Sediment** **D No: 9B28 KAP**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.11	U	mg/kg dry	0.11	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	89		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	19000		mg/kg dry	20	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.86	J, Q-2, QM-1	mg/kg dry	6.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	46	CLP36	mg/kg dry	1.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	76	J, QM-4	mg/kg dry	20	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	1.6		mg/kg dry	0.50	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.55		mg/kg dry	0.50	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	330	R, Q-2, CLP28	mg/kg dry	500	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	160	J, QM-2	mg/kg dry	1.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	26	J, QM-4	mg/kg dry	5.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	20	J, QM-4	mg/kg dry	2.5	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	130000	J, CLP26	mg/kg dry	50	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	24	J, QM-4	mg/kg dry	2.0	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	4300	J, QM-4	mg/kg dry	500	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	2900	J, QM-4, CLP26	mg/kg dry	7.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	17	J, QM-4, QM-2	mg/kg dry	8.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	340	J, Q-2	mg/kg dry	500	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	3.5	J, CLP36, Q-2	mg/kg dry	3.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	0.11	J, Q-2	mg/kg dry	1.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	8.9	J, Q-2	mg/kg dry	500	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	0.32	J, CLP36, Q-2	mg/kg dry	2.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	120		mg/kg dry	5.0	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	79		mg/kg dry	12	7/31/15	8/01/15	CLP ISM02.2 P

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D.A.R.T. Id: 15-0412
Project: 15-0416, Alcoa Badin Works - Reported by Denise Goddard

Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL08SD
Station ID: ABL08

Lab ID: C153207-14
Matrix: Sediment

MD No: 9B28 STLV
D No: 9B28 KAP

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	89		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	0.14	J, Q-2	mg/kg dry	0.46	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SW **Lab ID: C153207-15** **MD No: 9B35 STLV**

Station ID: ABL08 **Matrix: Surface Water** **D No: 9B35 KAP**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	110	J, Q-2	ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-39-3	Barium	10	J, Q-2	ug/L	200	7/24/15	7/30/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/30/15	CLP ISM02.2 P
7440-70-2	Calcium	11000		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-48-4	Cobalt	50	U	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-50-8	Copper	1.5	J, Q-2	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7439-89-6	Iron	640		ug/L	100	7/24/15	7/30/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7439-95-4	Magnesium	4300	J, Q-2	ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7439-96-5	Manganese	25		ug/L	15	7/24/15	7/30/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/30/15	CLP ISM02.2 P
7440-09-7	Potassium	1500	J, Q-2	ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/30/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/30/15	CLP ISM02.2 P
7440-23-5	Sodium	6600		ug/L	5000	7/24/15	7/30/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/30/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/30/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/30/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL08SW **Lab ID: C153207-15** **MD No: 9B35 STLV**

Station ID: ABL08 **Matrix: Surface Water** **D No: 9B35 KAP**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SD **Lab ID: C153207-16** **MD No: 9B29 STLV**

Station ID: ABL09 **Matrix: Sediment** **D No: 9B29 KAP**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.12	U	mg/kg dry	0.12	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	74		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	16000		mg/kg dry	22	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.28	J, Q-2	mg/kg dry	6.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	20	CLP36	mg/kg dry	1.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	46		mg/kg dry	22	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	1.1		mg/kg dry	0.54	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.38	J, Q-2	mg/kg dry	0.54	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	300	R, Q-2, CLP28	mg/kg dry	540	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	57		mg/kg dry	1.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	16		mg/kg dry	5.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	15		mg/kg dry	2.7	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	83000	J, CLP26	mg/kg dry	44	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	15		mg/kg dry	1.1	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	5700		mg/kg dry	540	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	1600	J, CLP26	mg/kg dry	6.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	16		mg/kg dry	4.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	300	J, Q-2	mg/kg dry	540	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	1.7	J, CLP36, Q-2	mg/kg dry	3.8	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	1.1	U	mg/kg dry	1.1	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	15	J, Q-2	mg/kg dry	540	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	2.7	U	mg/kg dry	2.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	42		mg/kg dry	5.4	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	74		mg/kg dry	6.5	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SD **Lab ID: C153207-16** **MD No: 9B29 STLV**

Station ID: ABL09 **Matrix: Sediment** **D No: 9B29 KAP**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	74		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	0.29	J, Q-2	mg/kg dry	0.53	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL09SW **Lab ID: C153207-17** **MD No: 9B36 STLV**

Station ID: ABL09 **Matrix: Surface Water** **D No: 9B36 KAP**

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	88	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	11	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	8600		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	1.7	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	520		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	3600	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	37		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	1600	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	5900		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL09SW
Station ID: ABL09

Lab ID: C153207-17
Matrix: Surface Water

MD No: 9B36 STLV
D No: 9B36 KAP

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SD **Lab ID: C153207-18** **MD No: 9B30 STLV**
Station ID: ABL10 **Matrix: Sediment** **D No: 9B30 KAP**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.11	U	mg/kg dry	0.11	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	81		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	17000		mg/kg dry	18	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.66	J, Q-2	mg/kg dry	5.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	32	CLP36	mg/kg dry	0.92	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	36		mg/kg dry	18	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	0.85		mg/kg dry	0.46	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.35	J, Q-2	mg/kg dry	0.46	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	280	R, Q-2, CLP28	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	74		mg/kg dry	0.92	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	14		mg/kg dry	4.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	12		mg/kg dry	2.3	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	88000	J, CLP26	mg/kg dry	37	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	17		mg/kg dry	0.92	7/31/15	8/01/15	CLP ISM02.2 P
7439-95-4	Magnesium	1400		mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	1400	J, CLP26	mg/kg dry	5.5	7/31/15	8/01/15	CLP ISM02.2 P
7440-02-0	Nickel	3.3	J, Q-2	mg/kg dry	3.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-09-7	Potassium	74	J, Q-2	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	2.4	J, Q-2, CLP36	mg/kg dry	3.2	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	0.92	U	mg/kg dry	0.92	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	15	J, Q-2	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	2.3	U	mg/kg dry	2.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	82		mg/kg dry	4.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	31		mg/kg dry	5.5	7/31/15	8/01/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL10SD
Station ID: ABL10

Lab ID: C153207-18
Matrix: Sediment

MD No: 9B30 STLV
D No: 9B30 KAP

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	81		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	0.75		mg/kg dry	0.45	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL10SW **Lab ID: C153207-19** **MD No: 9B37 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B37 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	96	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	12	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	9600		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	1.1	J, Q-2	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	2.0	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	460		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	3900	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	68		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	1500	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	6800		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL10SW
Station ID: ABL10

Lab ID: C153207-19
Matrix: Surface Water

MD No: 9B37 STLV
D No: 9B37 KAP

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SD **Lab ID: C153207-20** **MD No: 9B31 STLV**

Station ID: ABL10 **Matrix: Sediment** **D No: 9B31 KAP**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/30/15	7/30/15	CLP ISM02.2 CV
E1642941	% Solids	81		%		7/30/15	7/30/15	CLP Inorganics
7429-90-5	Aluminum	15000		mg/kg dry	19	7/31/15	8/01/15	CLP ISM02.2 P
7440-36-0	Antimony	0.69	J, Q-2	mg/kg dry	5.6	7/31/15	8/01/15	CLP ISM02.2 P
7440-38-2	Arsenic	32	CLP36	mg/kg dry	0.93	7/31/15	8/01/15	CLP ISM02.2 P
7440-39-3	Barium	61		mg/kg dry	19	7/31/15	8/01/15	CLP ISM02.2 P
7440-41-7	Beryllium	1.5		mg/kg dry	0.47	7/31/15	8/01/15	CLP ISM02.2 P
7440-43-9	Cadmium	0.45	J, Q-2	mg/kg dry	0.47	7/31/15	8/01/15	CLP ISM02.2 P
7440-70-2	Calcium	620	R, CLP28	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7440-47-3	Chromium	96		mg/kg dry	0.93	7/31/15	8/01/15	CLP ISM02.2 P
7440-48-4	Cobalt	27		mg/kg dry	4.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-50-8	Copper	25		mg/kg dry	2.3	7/31/15	8/01/15	CLP ISM02.2 P
7439-89-6	Iron	100000	J, CLP26	mg/kg dry	37	7/31/15	8/01/15	CLP ISM02.2 P
7439-92-1	Lead	30		mg/kg dry	1.9	7/31/15	8/02/15	CLP ISM02.2 P
7439-95-4	Magnesium	2900		mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7439-96-5	Manganese	1900	J, CLP26	mg/kg dry	2.8	7/31/15	8/02/15	CLP ISM02.2 P
7440-02-0	Nickel	14		mg/kg dry	7.4	7/31/15	8/02/15	CLP ISM02.2 P
7440-09-7	Potassium	280	J, Q-2	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7782-49-2	Selenium	2.8	J, CLP36, Q-2	mg/kg dry	3.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-22-4	Silver	0.93	U	mg/kg dry	0.93	7/31/15	8/01/15	CLP ISM02.2 P
7440-23-5	Sodium	28	J, Q-2	mg/kg dry	460	7/31/15	8/01/15	CLP ISM02.2 P
7440-28-0	Thallium	2.3	U	mg/kg dry	2.3	7/31/15	8/01/15	CLP ISM02.2 P
7440-62-2	Vanadium	77		mg/kg dry	4.7	7/31/15	8/01/15	CLP ISM02.2 P
7440-66-6	Zinc	90		mg/kg dry	11	7/31/15	8/02/15	CLP ISM02.2 P

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Project: 15-0416, Alcoa Badin Works - Reported by Denise Goddard

Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL11SD
Station ID: ABL10

Lab ID: C153207-20
Matrix: Sediment

MD No: 9B31 STLV
D No: 9B31 KAP

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	81		%		7/30/15	7/30/15	CLP Inorganics
57-12-5	Cyanide	0.43	J, Q-2	mg/kg dry	0.53	7/31/15	8/01/15	CLP ISM02.2 AS

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Total Metals

Project: 15-0416, Alcoa Badin Works **Contract Lab Case: 45485**

Sample ID: ABL11SW **Lab ID: C153207-21** **MD No: 9B38 STLV**

Station ID: ABL10 **Matrix: Surface Water** **D No: 9B38 KAP**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.20	U	ug/L	0.20	7/30/15	7/30/15	CLP ISM02.2 CV
7429-90-5	Aluminum	74	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-39-3	Barium	13	J, Q-2	ug/L	200	7/24/15	7/31/15	CLP ISM02.2 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/15	7/31/15	CLP ISM02.2 P
7440-70-2	Calcium	9200		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-48-4	Cobalt	0.78	J, Q-2	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-50-8	Copper	1.6	J, Q-2	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7439-89-6	Iron	430		ug/L	100	7/24/15	7/31/15	CLP ISM02.2 P
7439-92-1	Lead	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7439-95-4	Magnesium	3800	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7439-96-5	Manganese	84		ug/L	15	7/24/15	7/31/15	CLP ISM02.2 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/15	7/31/15	CLP ISM02.2 P
7440-09-7	Potassium	1500	J, Q-2	ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/15	7/31/15	CLP ISM02.2 P
7440-22-4	Silver	10	U	ug/L	10	7/24/15	7/31/15	CLP ISM02.2 P
7440-23-5	Sodium	6500		ug/L	5000	7/24/15	7/31/15	CLP ISM02.2 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/15	7/31/15	CLP ISM02.2 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/15	7/31/15	CLP ISM02.2 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/15	7/31/15	CLP ISM02.2 P

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Classical/Nutrient Analyses

Project: 15-0416, Alcoa Badin Works

Contract Lab Case: 45485

Sample ID: ABL11SW
Station ID: ABL10

Lab ID: C153207-21
Matrix: Surface Water

MD No: 9B38 STLV
D No: 9B38 KAP

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
57-12-5	Cyanide	10	U	ug/L	10	7/29/15	7/30/15	CLP ISM02.2 AS

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September 3, 2015

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 15-0412, Alcoa Badin Works
Superfund Remedial

FROM: Jeffrey Hendel
ASB Inorganic Chemistry Section Chief

THRU: Danny France, Chief
Analytical Support Branch

TO: Carolyn Callihan

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Classical/Nutrient Analyses (CNA)		
Classical/Nutrients	EPA 300.0 (Water)	ISO
Classical/Nutrients	EPA 300.0 (Soil)	NR
Physical Properties (PHYSP)		
Physical Properties	EPA 200.2 (Soil)	NR

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

cc: Nardina Turner

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SAMPLES INCLUDED IN THIS REPORT

Project: 15-0412, Alcoa Badin Works

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
ABL01GW	E153008-01	Groundwater	7/21/15 15:25	7/23/15 9:52
ABL02GW	E153008-02	Groundwater	7/21/15 16:15	7/23/15 9:52
ABL03GW	E153008-03	Groundwater	7/21/15 17:15	7/23/15 9:52
ABL04SD	E153008-04	Sediment	7/21/15 12:15	7/23/15 9:52
ABL04SW	E153008-05	Surface Water	7/21/15 12:10	7/23/15 9:52
ABL05SD	E153008-06	Sediment	7/21/15 13:15	7/23/15 9:52
ABL06SD	E153008-07	Sediment	7/21/15 14:00	7/23/15 9:52
ABL06SW	E153008-08	Surface Water	7/21/15 12:13	7/23/15 9:52
ABL07SD	E153008-09	Sediment	7/21/15 14:42	7/23/15 9:52
ABL08SD	E153008-10	Sediment	7/21/15 11:00	7/23/15 9:52
ABL08SW	E153008-11	Surface Water	7/21/15 12:55	7/23/15 9:52
ABL09SD	E153008-12	Sediment	7/21/15 09:55	7/23/15 9:52
ABL09SW	E153008-13	Surface Water	7/21/15 10:00	7/23/15 9:52
ABL10SD	E153008-14	Sediment	7/21/15 09:05	7/23/15 9:52
ABL10SW	E153008-15	Surface Water	7/21/15 08:55	7/23/15 9:52
ABL11SD	E153008-16	Sediment	7/21/15 09:00	7/23/15 9:52
ABL11SW	E153008-17	Surface Water	7/21/15 08:55	7/23/15 9:52

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
QM-2	Matrix Spike Recovery greater than method control limits
T-1	Sample received in cooler with temperature blank greater than 6 degrees C.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL01GW** **Lab ID:** **E153008-01**

Station ID: **ABL01** **Matrix:** **Groundwater**

Date Collected: 7/21/15 15:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.26		mg/L	0.050	8/11/15 12:08	8/14/15 8:14	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL02GW** **Lab ID:** **E153008-02**

Station ID: **ABL02** **Matrix:** **Groundwater**

Date Collected: 7/21/15 16:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	33		mg/L	1.0	8/11/15 12:08	8/14/15 13:51	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL03GW** **Lab ID:** **E153008-03**

Station ID: **ABL03** **Matrix:** **Groundwater**

Date Collected: 7/21/15 17:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	27		mg/L	1.0	8/11/15 12:08	8/14/15 15:16	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL04SD** **Lab ID:** **E153008-04**

Station ID: **ABL04** **Matrix:** **Sediment**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	3.7	J, QM-2, T-1	mg/kg dry	0.68	8/17/15 15:15	8/22/15 4:37	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL04SD** **Lab ID:** **E153008-04**

Station ID: **ABL04** **Matrix:** **Sediment**

Date Collected: 7/21/15 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	73		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL04SW** **Lab ID:** **E153008-05**

Station ID: **ABL04** **Matrix:** **Surface Water**

Date Collected: 7/21/15 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.24		mg/L	0.050	8/11/15 12:08	8/14/15 10:21	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL05SD** **Lab ID:** **E153008-06**

Station ID: **ABL05** **Matrix:** **Sediment**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	190		mg/kg dry	0.97	8/17/15 15:15	8/22/15 5:40	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL05SD** **Lab ID:** **E153008-06**

Station ID: **ABL05** **Matrix:** **Sediment**

Date Collected: 7/21/15 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	51		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL06SD** **Lab ID:** **E153008-07**

Station ID: **ABL06** **Matrix:** **Sediment**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	41	T-1	mg/kg dry	1.1	8/17/15 15:15	8/22/15 6:01	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL06SD** **Lab ID:** **E153008-07**

Station ID: **ABL06** **Matrix:** **Sediment**

Date Collected: 7/21/15 14:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	45		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL06SW** **Lab ID:** **E153008-08**

Station ID: **ABL06** **Matrix:** **Surface Water**

Date Collected: 7/21/15 12:13

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	9.1		mg/L	0.050	8/11/15 12:08	8/14/15 10:42	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL07SD** **Lab ID:** **E153008-09**

Station ID: **ABL07** **Matrix:** **Sediment**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	82		mg/kg dry	0.90	8/17/15 15:15	8/22/15 6:22	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL07SD** **Lab ID:** **E153008-09**

Station ID: **ABL07** **Matrix:** **Sediment**

Date Collected: 7/21/15 14:42

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	55		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL08SD** **Lab ID:** **E153008-10**

Station ID: **ABL08** **Matrix:** **Sediment**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.58	U, T-1	mg/kg dry	0.58	8/17/15 15:15	8/22/15 6:43	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL08SD** **Lab ID:** **E153008-10**

Station ID: **ABL08** **Matrix:** **Sediment**

Date Collected: 7/21/15 11:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	86		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL08SW** **Lab ID:** **E153008-11**

Station ID: **ABL08** **Matrix:** **Surface Water**

Date Collected: 7/21/15 12:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.11		mg/L	0.050	8/11/15 12:08	8/14/15 11:03	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL09SD** **Lab ID:** **E153008-12**

Station ID: **ABL09** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.92	T-1	mg/kg dry	0.64	8/17/15 15:15	8/22/15 7:04	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL09SD** **Lab ID:** **E153008-12**

Station ID: **ABL09** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	78		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: ABL09SW
Station ID: ABL09
Lab ID: E153008-13
Matrix: Surface Water

Date Collected: 7/21/15 10:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.097		mg/L	0.050	8/11/15 12:08	8/14/15 11:24	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL10SD** **Lab ID:** **E153008-14**

Station ID: **ABL10** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	1.2	T-1	mg/kg dry	0.63	8/17/15 15:15	8/22/15 7:26	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL10SD** **Lab ID:** **E153008-14**

Station ID: **ABL10** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	79		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL10SW** **Lab ID:** **E153008-15**

Station ID: **ABL10** **Matrix:** **Surface Water**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.099		mg/L	0.050	8/11/15 12:08	8/14/15 11:45	EPA 300.0

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL11SD** **Lab ID:** **E153008-16**

Station ID: **ABL10** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	1.3	T-1	mg/kg dry	0.61	8/17/15 15:15	8/22/15 7:47	EPA 300.0

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Physical Properties

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL11SD** **Lab ID:** **E153008-16**

Station ID: **ABL10** **Matrix:** **Sediment**

Date Collected: 7/21/15 9:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	81		%	0.0	8/25/15 16:28	8/26/15 10:06	EPA 200.2

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Classical/Nutrient Analyses

Project: 15-0412, Alcoa Badin Works

Sample ID: **ABL11SW** **Lab ID:** **E153008-17**

Station ID: **ABL10** **Matrix:** **Surface Water**

Date Collected: 7/21/15 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
16984-48-8	Fluoride	0.10		mg/L	0.050	8/11/15 12:08	8/14/15 12:06	EPA 300.0

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Classical/Nutrient Analyses (CNA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508033 - C 300.0 Ion Chromat										
Blank (1508033-BLK1)				Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	U	0.050	mg/L							U
Blank (1508033-BLK2)				Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	U	0.050	mg/L							U
Blank (1508033-BLK3)				Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	U	0.050	mg/L							U
Blank (1508033-BLK4)				Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	U	0.050	mg/L							U
Duplicate (1508033-DUP1)		**Source: E153002-07**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	3.1470	0.050	mg/L		3.1250			0.702	10	
Duplicate (1508033-DUP2)		**Source: E153104-02**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	0.12100	0.050	mg/L		0.12000			0.830	10	
Duplicate (1508033-DUP3)		**Source: E153008-01**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	0.26100	0.050	mg/L		0.26200			0.382	10	
Duplicate (1508033-DUP4)		**Source: E153008-02RE1**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	33.020	1.0	mg/L		32.520			1.53	10	
Matrix Spike (1508033-MS1)		**Source: E153002-07**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	4.0330	0.050	mg/L	1.0000	3.1250	90.8	90-110			
Matrix Spike (1508033-MS2)		**Source: E153104-02**		Prepared: 08/11/15 Analyzed: 08/14/15						

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Classical/Nutrient Analyses (CNA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508033 - C 300.0 Ion Chromat										
Matrix Spike (1508033-MS2)		**Source: E153104-02**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	1.2360	0.050	mg/L	1.0000	0.12000	112	90-110			QM-2
Matrix Spike (1508033-MS3)		**Source: E153008-01**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	1.3490	0.050	mg/L	1.0000	0.26200	109	90-110			
Matrix Spike (1508033-MS4)		**Source: E153008-02RE1**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	2.6380		mg/L	1.0000	1.6260	101	90-110			
Matrix Spike Dup (1508033-MSD1)		**Source: E153002-07**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	4.0680	0.050	mg/L	1.0000	3.1250	94.3	90-110	0.864	10	
Matrix Spike Dup (1508033-MSD2)		**Source: E153104-02**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	1.2370	0.050	mg/L	1.0000	0.12000	112	90-110	0.0809	10	QM-2
Matrix Spike Dup (1508033-MSD3)		**Source: E153008-01**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	1.3480	0.050	mg/L	1.0000	0.26200	109	90-110	0.0742	10	
Matrix Spike Dup (1508033-MSD4)		**Source: E153008-02RE1**		Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	2.6420		mg/L	1.0000	1.6260	102	90-110	0.152	10	
MRL Verification (1508033-PS1)				Prepared: 08/11/15 Analyzed: 08/14/15						
EPA 300.0										
Fluoride	0.048000	0.050	mg/L	0.050000		96.0	70-130			MRL-2, U
Batch 1508047 - C 300.0 Soil										
Blank (1508047-BLK1)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	U	0.50	mg/kg wet							U

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Classical/Nutrient Analyses (CNA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508047 - C 300.0 Soil										
Blank (1508047-BLK2)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	U	0.50	mg/kg wet							U
Blank (1508047-BLK3)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	U	0.50	mg/kg wet							U
Blank (1508047-BLK4)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	U	0.50	mg/kg wet							U
Blank (1508047-BLK5)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	U	0.50	mg/kg wet							U
LCS (1508047-BS1)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	73.038	0.50	mg/kg wet	70.800		103	80-120			
LCS Dup (1508047-BSD1)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	76.994	50	mg/kg wet	70.800		109	80-120	5.27	20	
Matrix Spike (1508047-MS1)		**Source: E153008-04**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	37.497	0.68	mg/kg dry	13.586	3.7200	249	80-120			QM-2
Matrix Spike (1508047-MS2)		**Source: E153104-15**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	17.932	0.60	mg/kg dry	12.019	4.4238	112	80-120			
Matrix Spike (1508047-MS3)		**Source: E153104-20**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	4.5691	0.62	mg/kg dry	12.416	0.50679	32.7	80-120			QM-1
Matrix Spike (1508047-MS4)		**Source: E153104-27**		Prepared: 08/17/15 Analyzed: 08/22/15						

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Classical/Nutrient Analyses (CNA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508047 - C 300.0 Soil										
Matrix Spike (1508047-MS4)		**Source: E153104-27**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	13.367	0.63	mg/kg dry	12.540	2.7161	84.9	80-120			
Matrix Spike Dup (1508047-MSD1)		**Source: E153008-04**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	37.892	0.68	mg/kg dry	13.620	3.7200	251	80-120	1.05	20	QM-2
Matrix Spike Dup (1508047-MSD2)		**Source: E153104-15**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	16.931	0.60	mg/kg dry	12.034	4.4238	104	80-120	5.74	20	
Matrix Spike Dup (1508047-MSD3)		**Source: E153104-20**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	4.0939	0.62	mg/kg dry	12.406	0.50679	28.9	80-120	11.0	20	QM-1
Matrix Spike Dup (1508047-MSD4)		**Source: E153104-27**		Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	13.493	0.63	mg/kg dry	12.551	2.7161	85.9	80-120	0.933	20	
MRL Verification (1508047-PS1)				Prepared: 08/17/15 Analyzed: 08/22/15						
EPA 300.0										
Fluoride	0.86000	1.0	mg/kg wet	1.0000		86.0	60-140			MRL-3, U

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Physical Properties (PHYSP) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508072 - M % Solids										
Duplicate (1508072-DUP1)		**Source: E153008-09**		Prepared: 08/25/15 Analyzed: 08/26/15						
EPA 200.2										
% Solids	55.067	0.0	%		55.063			0.00727	10	

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
MRL-2	MRL verification for Non-Potable Water matrix
MRL-3	MRL verification for Soil matrix
QM-1	Matrix Spike Recovery less than method control limits
QM-2	Matrix Spike Recovery greater than method control limits