Scott Schoeman PaulsCorp, LLC 100 St. Paul Street, Suite 300 Denver, CO 80206

Ms. Dilan Roe Alameda County Health Care Services Agency Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 **RECEIVED**

By Alameda County Environmental Health 2:24 pm, Aug 07, 2017

Re: 1233 Bockman Road - Acknowledgement Statement

San Lorenzo, California ACEH Case No. 3239

Dear Ms. Roe:

PaulsCorp, LLC, has retained the environmental consultant referenced on the attached report for the project referenced above. The attached report is being submitted on PaulsCorp's, LLC, behalf.

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the State Water Resources Control Board's GeoTracker website.

Sincerely,

Scott Schoeman

Development Associate



August 4, 2017

Scott Schoeman PaulsCorp, LLC 100 Saint Paul Street Denver, Colorado 80206

Re: Remedial Excavation Completion Report

1233 Bockman Road (East Sector) San Lorenzo, California ACDEH Case No. RO00003239

Dear Mr. Schoeman:

On behalf of PaulsCorp, LLC, PANGEA Environmental Services, Inc. (PANGEA) prepared this *Remedial Excavation Completion Report* for 1233 Bockman Road (East Sector) in San Lorenzo, California (Site). This report documents implementation of the *Remediation Design Implementation Report (RDIP)* dated May 12, 2017. The RDIP was prepared to mitigate potential vapor intrusion risk in conjunction with development of the eastern sector of the property where Buildings 6, 7, 9 and 10 are planned.

If you have any questions or comments, please call me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,

PANGEA Environmental Services, Inc.

Bob Clark-Riddell, P.E. Principal Engineer

Attachment: Remedial Excavation Completion Report



REMEDIAL EXCAVATION COMPLETION REPORT

1233 Bockman Road (East Sector) San Lorenzo, CA 94577 ACEH Case # RO00003239

August 4, 2017

Prepared for:

PaulsCorp, LLC 100 Saint Paul Street Denver, Colorado 80206

Prepared by:

PANGEA Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, California 94612

Written by:

PROFESSIONAL STATE OF CALFORNIA CONTINUES OF

Ron Scheele, P.G. Principal Geologist

Bob Clark-Riddell, P.E. Principal Engineer

PANGEA Environmental Services, Inc.

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1.0 INTRODUCTION

On behalf of PaulsCorp, LLC, PANGEA Environmental Services, Inc. (PANGEA) has prepared this *Remedial Excavation Completion Report* for 1233 Bockman Road (East Sector) in San Lorenzo, California (Site). This report documents implementation of the *Remediation Design Implementation Report (RDIP)* dated May 12, 2017 that was prepared to mitigate potential vapor intrusion risk in conjunction with development of the eastern sector of the property where Buildings 6, 7, 9 and 10 are planned. Described below are the site background, remedial excavation activities, conclusions and references.

2.0 SITE BACKGROUND

The Site is located in a commercial and residential area along Bockman Road in San Lorenzo, California (Figure 1). The Site is currently under construction for redevelopment into residential housing. Prior Site assessment activities have identified volatile organic compounds (VOCs) in the subsurface. The VOC impact is apparently due a historic dry cleaner at 1269 Bockman Road (eastern portion of Site), a former auto shop at 1415 Bockman Road (western portion of the Site), and potential offsite sources of petroleum hydrocarbons from 1210 Bockman (former Impulse Motors fueling station/auto repair facility) and 17093 Via Chiquita (commercial street sweeping business).

2.1 Site Description and History

The Site consists of an approximately 3.87-acre lot along Bockman road in San Lorenzo, California (Figure 2). The property is owned and being redeveloped by PaulsCorp, LLC into 53 two-story residential units. The assessor parcel number (APN) for the Site is 411-63-17. The subject property is relatively flat and lies at an elevation of about 20 feet above mean sea level. Historically, the Site consisted of a strip mall and an associated parking lot. The Site is surrounded in all directions by single and multi-family residences.

According to a Phase I Environmental Site Assessment Update (ESA) dated June 3, 2016 prepared by ENGEO Incorporated (ENGEO), the Site was used a strip mall until the buildings were demolished in 2007. Two former tenants of note were identified: a dry cleaner that operated between approximately 1960 and 1979 at 1269 Bockman Road (in the eastern portion of the Site), and an automotive repair shop that operated hydraulic lifts (in the western portion of the Site). The ESA also noted that a gasoline service station previously existed on the adjacent parcel located south of the Site across Bockman Road at 1210 Bockman Road.

2.2 Chemicals of Potential Concern

The chemicals of potential concern at this Site primarily include petroleum hydrocarbons as well as tetrachloroethene (PCE) and its potential breakdown products. The following chemicals have been detected in shallow *soil gas* in excess of conservative residential soil vapor environmental screening levels (ESLs)

established by the San Francisco Bay Region Water Quality Control Board (RWQCB) and were identified as chemicals of concern (COCs): PCE, benzene, and ethylbenzene. The following additional VOCs have been detected at the Site below ESLs: acetone; chloroform; 1,2-dichloroethane; naphthalene; 1,1,1-trichloroethylene (TCE); toluene; xylenes; and gas-range, diesel-range, and motor oil-range total petroleum hydrocarbons. No significant VOC impact has been detected in soil or groundwater based on data comparison to ESLs.

2.3 Summary of Previous Site Investigations

The following provides a general overview of previous environmental investigations at the Site.

- November 18, 2004, Phase I Environmental Site Assessment, Secor International Inc. (Secor): A Phase 1 ESA revealed that the auto repair shop located on the western portion of the Site may have formerly had a fuel dispenser island and that an oil/water separator existed within the building. The possibility of a dry cleaner was noted but it was not determined if operations were onsite or if the business was just a drop-off location. A former gasoline station/automotive repair facility located at 1210 Bockman Road (adjacent to the Site to the south) was also indicated as an environmental concern due to the elevated levels of petroleum hydrocarbons detected in confirmation samples during tank removal activities in 2004.
- December 21, 2004, Phase II Environmental Site Assessment, Secor: A total of eight soil borings were advanced onsite to a depth of 10 to 15 feet below ground surface (ft bgs) but sample data was not reported.
- June 30, 2015, Phase I Environmental Site Assessment, ENGEO: A Phase 1 ESA revealed the same three environmental concerns as the Phase 1 ESA completed in 2004: possible historical dry cleaner operations, the gas station adjacent and south of the Site, and the former automotive repair facility located on the western portion of the Site. Based on these findings and the lack of data from the Phase II ESA completed in 2004, ENGEO recommended completion of a new Phase II ESA.
- July 2, 2015, Phase II Environmental Site Assessment, ENGEO: Soil, groundwater, and soil gas were sampled to identify potential concerns related to the historical operations. Three soil borings were advanced (S-1 through S-3) to a depth of 10 feet bgs in the vicinity of the former dry cleaner (S-1) and the former automotive repair facility (S-2 and S-3). Soil samples were collected at depths of 1, 5, and 10 feet bgs from each boring. Grab groundwater samples (GW-1 through GW-3) were also collected from three separate borings at depths ranging from 15 to 25 feet bgs depending on where groundwater was first observed. Soil and groundwater samples were analyzed for VOCs, CAM-17 metals, and total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo). While VOCs, TPHg, and metals were detected in groundwater samples, all analytes were below screening levels except arsenic (which likely represents background conditions). For the two analyzed soil gas samples (SG-1 and SG-2), no VOCs were reported above environmental screening levels.

- October 1, 2015, Geotechnical Investigation (Langan Treadwell Rollo): A geotechnical investigation was conducted for the Site. The report concluded that from a geotechnical standpoint, the Site can be developed as planned, provided the recommendations presented in this section of the report are incorporated into the design and contract documents. Criteria for foundation design, together with recommendations for Site preparation, floor slabs, fill placement and seismic design were presented the report.
- June 3, 2016, Phase I Environmental Site Assessment Update, ENGEO: The Phase 1 ESA completed in 2015 was updated to include the results of an environmental record search. No new environmental concerns were recognized.
- August 2, 2016, Revised Phase II Environmental Site Assessment, ENGEO: Additional Site assessment activities including installing and sampling six new temporary soil gas wells (SG-5 through SG-10) and collecting four grab groundwater samples (GW-1 through GW-4). The soil gas wells were installed to depths of 7 feet bgs (SG-6, SG-8, and SG-9) and 10 feet bgs (SG-5, SG-7, and SG-10) and sampled for TPHg and VOCs. PCE was detected in SG-6 and SG-9 at an identical concentration of 256 micrograms per cubic meter (μg/m³). Grab groundwater borings GW-1 through GW-3 were advanced in close proximity to the borings by the same identity in 2015. All four borings were advanced to a depth of 16 to 17 feet bgs depending on where first encountered groundwater was observed. A sample was collected from each boring and analyzed for VOCs, TPHg, TPHd, TPHmo, and CAM-17 metals. VOCs, TPHg, and metals were detected below screening levels except for arsenic.
- August 17, 2016, Site Management Plan Supplement, PANGEA: A Site Management Plan Supplement was prepared to facilitate grading work at the western portion of the Site.
- August 26, 2016, Site Assessment Report, PANGEA: A dynamic site assessment was conducted involving the sampling of soil, groundwater, and shallow soil gas. PANGEA employed MiHPT, a high-resolution site characterization technique, to help delineate the extent of contaminants in the subsurface and to evaluate hydrogeologic conditions, primarily in the vicinity of the former drycleaners. No significant VOC impact was detected in soil and groundwater, but shallow soil gas in the eastern portion of the Site is impacted with concentrations of PCE, benzene, and ethylbenzene that exceed their respective residential shallow soil gas ESLs.
- October 7, 2016, Pilot Study Workplan, PANGEA: A Pilot Study Workplan was prepared to outline procedures to test the effectiveness of a proposed soil excavation approach, prior to full implementation. The pilot study area targeted VOC impact near planned Buildings 5 and 8.

- October 14, 2016, Draft Corrective Action Plan, PANGEA: A Draft Corrective Action Plan (CAP)
 was prepared to provide an approach to remediate VOC impact and help mitigate potential vapor
 intrusion issues in conjunction with development at the Site. The CAP proposed soil excavation, an
 excavation pilot study, and addition site assessment in conjunction with remediation and mitigation
 efforts for the eastern Site area (Buildings 5 through 10).
- October 17, 2016, Data Gap Field Investigation Workplan, PANGEA: A Data Gap Field Investigation Workplan was prepared to address data gaps across the Site pertaining to potential remediation and vapor intrusion mitigation, as required by Alameda County Department of Environmental Health (ACDEH) letter dated October 14, 2016. The proposed work scope included onsite soil gas sampling within the footprint of future Buildings 1, 2, 3, 4 and 10. The work scope also involved soil sampling from three soil borings (SB-14 through SB-16) to further evaluate potential VOC impact in soil near elevated soil gas impact within the eastern portion of the Site. Soil gas sampling procedures and results from Buildings 1 & 2 area are presented in PANGEA's Interim Remediation Report Former Auto Repair Area dated October 26, 2016. Sampling procedures and results from Buildings 3 and 4 are presented in PANGEA's Data Gap Investigation Report Buildings 3 & 4 dated November 1, 2016. Soil gas sampling procedures near Building 10 will be presented in the future Remedial Action Implementation Plan.
- October 26, 2016 Interim Remediation Report Former Auto Repair Area, PANGEA: The report documents soil excavation activities in the area of the former auto repair facility (Buildings 1 and 2 of the Site development). Approximately 690 cubic yards of impacted soil was excavated from the vicinity of the former auto repair facility. Confirmation soil sampling data indicated that remaining residual impact was well below regulatory screening levels.
- November 16, 2016, Data Gap Investigation Report Buildings 3 & 4, PANGEA: Site assessment activities involved the installation and sampling of four soil gas probes (SV-51 through SV-54) to assess VOC levels within the footprint of proposed Buildings 3 and 4. No PCE or benzene were detected above their respective residential shallow soil gas ESLs. Based on the soil gas sampling data, ACDEH tentatively concurred that no remediation was required near Buildings 3 and 4 and vapor mitigation could involve subslab ventilation and a contingent post-slab engineered vapor barrier.
- November 16, 2016, Site and Perimeter Air Monitoring and Dust Mitigation Plan, PANGEA: The Air/Dust Monitoring and Mitigation Plan was prepared to establish procedures for air/dust monitoring and related mitigation measures for safeguarding nearby residents from VOCs and/or airborne particle matter generated during redevelopment of the Site.

- November 29, 2016, Vapor Intrusion Mitigation System (VIMS) Basis of Design Report for Buildings 1 through 4, PANGEA: The report described construction of a proposed vapor intrusion mitigation system (VIMS) and related Operations & Maintenance Plan for Buildings 1 through 4. The proposed VIMS consisted of SSV piping and a contingent post-slab construction engineered vapor barrier.
- February 13, 2017, Vapor Intrusion Mitigation System (VIMS) Basis of Design Report for Buildings 5 & 8, PANGEA: The report described construction of proposed VIMS and related O&M Plan for Buildings 5 and 8. The proposed VIMS consisted of SSV piping and a subslab engineered vapor barrier. The VIMS BOD report included emission calculations for all ten proposed buildings. The VIMS BOD report encompasses all three building types of the ten buildings.
- **February 17, 2017, Pilot Study Report, PANGEA:** The report documents soil excavation activities and associated soil and groundwater sampling, along with post-excavation soil gas sampling. The pilot study was conducted to confirm the effectiveness of the excavation and soil reuse approach presented in PANGEA's *Draft Corrective Action Plan* (CAP) dated October 7, 2016 prior to full CAP implementation.
- March 13, 2017, Data Gap Field Investigation Workplan, PANGEA: A Data Gap Field
 Investigation Workplan was prepared to further delineate contamination to help refine the corrective
 action approach prior to full implementation.
- March 30, 2017, Pilot Study Report Addendum, PANGEA: The report documents third and final soil gas sampling event from soil gas wells within the pilot study area. Results confirmed the effectiveness of the remedial excavation and soil reuse approach presented in PANGEA's *Draft Corrective Action Plan* (CAP) dated October 7, 2016.
- May 12, 2017, Remedial Design and Implementation Plan (RDIP), PANGEA: The RDIP was prepared to mitigate potential vapor intrusion risk in conjunction with development of the eastern sector of the property where Buildings 6, 7, 9 and 10 are planned. The RDIP documented data gap investigation results and provided design and implementation procedures for a remedial soil excavation that targets residual PCE and ethylbenzene impact at the Site where Buildings 6, 7, 9 and 10 are planned.

2.4 Potential Offsite Sources of VOCs

1210 Bockman: A fueling station/auto repair facility (Impulse Motors, B.P.) was formerly located across the street from the Site and operated from the 1950s until 2004. In 2004, three fuel USTs, and two dispensers with associated piping were removed. Elevated levels of TPHg, TPHd and BTEX were detected in soil,

groundwater and soil gas. The environmental case was granted closure by ACDEH in 2013. The 1210 Bockman property is located directly upgradient of the Site and may be the source or contributing source of select petroleum hydrocarbon compounds at the eastern boundary of the Site, where ethylbenzene concentrations in soil gas exceed ESLs. In 2013, dissolved-phased TPHd concentrations were reported in an irrigation well at a residential property (17109 Via Chiquita) located 155 feet north of the 1210 Bockman property.

17093 Via Chiquita: This property, immediately adjacent the Site's eastern property boundary, is currently occupied by a street sweeping business (Midnight Sweepers) with several commercial vehicles parked periodically at the property. PANGEA understands that historically numerous automotive vehicles are stored at this property. This property may be the source or contributing source of select petroleum hydrocarbon compounds at the eastern boundary of the Site, where ethylbenzene concentrations in soil gas exceed ESLs.

2.5 Site Geology and Hydrogeology

The Site property is located within the East Bay Plain subbasin, which is part of the larger Santa Clara Valley Groundwater Basin. The East Bay Plain subbasin is a northwest trending alluvial plain bounded to the north by San Pablo bay, to the east by the contact with Franciscan Basement rock, and to the south by the Niles Cone Groundwater basin. The basin extends beneath San Francisco Bay to the west. Groundwater is generally found very near the surface throughout the basin.

The East Bay Plain subbasin aquifer system consists of unconsolidated sediments of Quaternary age. The Early Holocene Temescal Formation is the most recently deposited and consists of primarily silts and clays with some gravel layers.

The relatively flat Site lies at an elevation of approximately 20 feet above mean sea level to the east of San Francisco Bay (Figure 1). Soil beneath the Site consists of sandy gravel fill (likely base rock material) to approximately 1 ft bgs underlain by 2 to 3 feet of moderately plastic clay. The clay layer is underlain by silt and a discontinuous, one-foot thick sand lens observed intermittently between 6 and 10 feet bgs. Pangea observed groundwater between 7 and 9 feet bgs, while others reported first encountered groundwater deeper. Based on data from neighboring sites, static groundwater was approximately 8 ft bgs (1201 Bockman) and groundwater flows to the northwest.

2.6 Site Development Phases and New Legal Description

Site development involves three main phases, moving from west to east across the Site. Construction began with Buildings 1 through 4 in the west sector of the Site. Construction then proceeded to Building 5 and 8, located in the center of the Site within the east sector of the Site. At the time of this report, ACDEH concurred with commencement of grading for Buildings 6, 7, 9 and 10 in the east sector of the Site.

The Site was re-surveyed to obtain a new legal description for the western and eastern sectors of the Site (Figure 3). This splitting of the Site was described during a February 2, 2017 meeting with ACDEH. A new agency case (no. RO3239) was setup for the western portion of the Site and current agency case no. RO3217 applies to the eastern portion of the Site. The Site will remain as one parcel for sale to one homeowner's association in the future.

2.7 Agency Direction

During a meeting on May 4, 2017, ACDEH reviewed the preliminary data gap sampling results and a draft remedial excavation plan. Together with installation of vapor mitigation system beneath proposed Buildings 5 and 8, ACDEH tentatively concurred with the proposed remedial approach within the draft remedial excavation plan. Consistent with the meeting, PANGEA submitted the *Remedial Design Implementation Plan* (RDIP) dated May 12, 2017 to address potential chemicals of concern within the eastern sector of the property where Buildings 6, 7, 9 and 10 are planned.

During a meeting on June 8, 2017, ACDEH concurred with the remedial approach presented in the RDIP. The RDIP proposed excavation of select soil within the central area of the PCE and ethylbenzene soil gas plumes. ACDEH subsequently provided approval to implement the RDIP, with the understanding that vapor mitigation systems will be installed beneath Buildings 6, 7, 9 and 10 and documented by Langan Engineering and Environmental Services similar to procedures described in PANGEA's *Vapor Intrusion Mitigation System Basis of Design Report – Buildings 5 & 8* dated February 13, 2017. The VIMS BOD report included emission calculations for all ten proposed buildings, and the VIMS BOD reports for Buildings 1 thru 4 and Buildings 5 & 8 encompassed all three building types used for Buildings 6, 7, 9 and 10. [The planned full vapor intrusion mitigation systems are shown on Figure 4.

3.0 REMEDIAL EXCAVATION ACTIVITIES

This section documents the full implementation of the RDIP conducted between June 19 and July 3, 2017. The purpose of the RDIP was to mitigate potential vapor intrusion risk in conjunction with development of the Site near Buildings 6, 7, 9 and 10. It involved the excavation of select areas were PCE and ethylbenzene concentrations in soil gas exceeded the conservative Tier 1 Environmental Screening Levels (ESLs) applicable for residential site use. This scope of work was completed consistent with the excavation procedures within the RDIP. The remedial excavation limits are shown on Figure 4. Photographs documenting the remedial soil excavation are included in Appendix A.

3.1 Excavation Overview

The remedial excavation involved the following tasks and general task sequence:

- Excavation Preparation and Notification;
- Soil Excavation and Field Screening;
- Confirmation Soil Stockpile Sampling;
- Soil Reuse and Disposal;
- Soil Gas Probe Destruction; and
- Air and Dust Monitoring.

3.2 Excavation Preparation and Notification

The following tasks were conducted to prepare for the excavation and Site work:

- Obtained authorization from ACDEH.
- Pre-marked the excavation area with white paint and notify Underground Service Alert (USA) of the excavation activities.
- Prepared a Site-specific *Health and Safety Plan* to educate personnel and minimize their exposure to potential hazards related to Site activities; and
- Coordinated with excavation and laboratory contractors and notified involved parties.
- Followed procedures in the *Site and Perimeter Air Monitoring, and Dust Mitigation Plan* dated November 16, 2016.
- Followed procedures in the Storm Water Pollution Prevention Plan (SWPPP) approved for the Site grading operations.

3.3 Soil Excavation and Field Screening

Between June 19 and July 3, 2017, PANGEA observed remedial excavation to address the primary residual PCE and ethylbenzene impact at the Site. The excavation areas are shown on Figure 4. Excavation activities were conducted by DCI Construction Inc. of Walnut Creek, California and Diablo General Engineering (DGE) of Concord, California. To address residual PCE impact, an area of soil approximately 15 feet (ft) wide by 160 ft long and 6.5 ft deep was excavated within the axis of the PCE soil gas plume, resulting in the removal of approximately 580 bank cubic yards (BCY) of soil (approximately 870 tons of soil assuming 1.5 tons/bcy). To address the residual ethylbenzene impact, an area of soil 20 ft x 25 ft by 6.5 ft deep was excavated resulting in the removal of approximately 120 BCY of soil or approximately 180 tons of soil.

During excavation, soil was removed and stockpiled in lifts corresponding to different soil types and proximity to the former dry cleaner and the capillary fringe. To facilitate soil screening for potential reuse, the long narrow PCE excavation was subdivided into three 50 to 60 ft long sections identified as Batch 1, Batch 2 and Batch 3. Soil from Batch 1 encountered the footprint of the former dry cleaners as shown on Figure 4. Soil from the ethylbenzene excavation was identified as Batch 4. Table A below summarizes the soil excavation and screening by lift within each batch. The excavation approach yielded a total of nine stockpiles. Photographs 1 through 3 show the excavation of soil from Batches 1 through 4.

Table A - Field Screening of Soil

Stockpile Excavation Area	Soil Lift Depth (ft bgs)	Insitu Soil PID Field Screening (ppmv)	Stockpiled Soil Initial Field Screening (ppmv)	Stockpiled Soil Final Field Screening (ppmv)	
BATCHES 1, 2, 3 and 4 – surface gravel	0-1 (gravel)	0	0	0	
BATCH 1 - PCE Excavation (within footprint of former	1-3 (clay)	0	0.1 to 0.6	0 to 0.5	
dry cleaners)	3-5 (silt)	0.1	0 to 0.6	0	
	5-6.5 (near capillary fringe)	0.2 to 0.6	0.7 to 1.6	0.1 to 0.4	
BATCHES 2 and 3 - PCE Excavation	1-5 (clay and silt)	0	0	0	
BATCH 2 - PCE Excavation	5-6.5 (near capillary fringe)	0	0	0	
BATCH 3 - PCE Excavation	5-6.5 (near capillary fringe)	0	0	0	
BATCH 4 - Ethylbenzene Excavation	1-5 (clay and silt)	0	0 to 0.4	0	
	5-6.5 (near capillary fringe)	0	0 to 0.3	0	

During excavation, insitu soil was collected from each batch/lift area and placed within new, 1-gallon, plastic bags where the soil was screened for volatile organic compounds (VOCs) using a portable RAE Systems MiniRAE 3000 Photo-Ionization Detector (PID). As shown above in Table A, PID hits (readings above 0.0 ppmv) were only detected in the *insitu soil* collected from Batch 1.

After the soil stockpiles were covered with plastic, the resulting headspace on each side of the stockpile was screened for VOCs using a PID. Initial field screening was conducted immediately after covering stockpile with plastic; *final* field screening was conducted the following day on the covered stockpile. Photograph 4 shows typical field screening of a soil stockpile.

Initial field screening detected VOCs in stockpiled soil from Batch 1 up to 1.6 parts per million per volume (ppmv). *Final* field screening of the same Batch 1 soil the next day detected VOCs up to 0.5 ppmv. No VOCs were detected by the PID in *final* field screening of surface gravelly material from approximately 0 to 1 ft depth from all batches, and no PID hits were detected in stockpiled soil from Batches 2, 3 and 4. Batches 2, 3 and 4 were more distant from the former dry cleaner area.

3.4 Confirmation Soil Sampling

On June 29 and 30, 2017, seven confirmation soil samples were collected to confirm whether the excavated soil met the reuse criteria. A confirmation sample was collected from six of the nine stockpiles where no PID hits were measured during field screening (Batch 1 from 0-1 ft and Batches 2, 3 and 4). A second confirmation sample was collected from one of the stockpiles (Batches 2 &3: 1-5 ft) since this stockpile had an estimated volume that exceeded the sampling criteria of 100 cubic yards. Each confirmation sample consisted of a discrete soil sample collected using EPA Method 5035 (e.g., TerraCoreTM) and submitted for analysis of VOCs by EPA Method 8260B to Curtis & Tompkins Ltd. of Berkeley, CA.

No VOCs were detected in any of confirmation soil samples (with the exception of very low levels of acetone). The lab results are summarized in Table 1. The laboratory analytical report is provided in Appendix B.

No confirmation samples were collected from the remaining three stockpiles (Batch 1: 1-3 ft, 3-5 ft, 5-6.5 ft) that were transported offsite for disposal. Soil was previously profiled with Alameda's Chuck Corica Golf Complex.

3.5 Soil Disposal and Reuse

Based on the VOCs detected during initial and/or final stockpile field screening with a PID, soil from Batch 1 (1 to 6.5 ft) was deemed *unacceptable* for onsite reuse. This evaluation is consistent with soil reuse criteria specified in the RDIP. Specifically, the soil reuse criteria required that final stockpile field screening not exceed 0.1 ppmv for the PCE impact area and not exceed 0.2 ppmv for the ethylbenzene impact area, and that VOC data from confirmation soil sampling must not exceed Tier 1 ESLs.

On June 29 and 30, 2017, thirteen (13) truckloads of soil from Batch 1 (approximately 150 BCY, 225 tons) were loaded and transported offsite for disposal at Alameda's Chuck Corica Golf Complex. Photograph 6 shows the loading of soil onto a truck for offsite transport and disposal. Trucking receipts documenting the transport of thirteen loads of soil to Alameda's Chuck Corica Golf Complex are included in Appendix C.

Based on the stockpile field screening data and laboratory results from confirmation soil sampling, all surface gravel (0-1 ft depth) and all soil excavated from Batches 2, 3 and 4 was deemed *acceptable* for reuse. This evaluation is consistent with the soil reuse criteria specified in the RDIP. All shallow gravel and soil from Batches 2, 3 and 4 was reused for backfilling of the remedial excavation area. No excavated soil was reused elsewhere at the Site. While PANGEA observed backfilling of the excavations, all compaction and testing was conducted and managed for geotechnical purposes by DGE and Langan Engineering and Environmental Services, Inc. of San Francisco, California. No imported fill was used for backfilling. Photo 5 shows typical backfilling and compaction of the excavation.

3.6 Soil Gas Probe Destruction

Prior to remedial excavation activities, fourteen (14) shallow soil gas probes at the Site were destroyed by Cascade Drilling of Richmond, California. On June 15, 2017, the following soil gas probes (SV-4, SV-17, SV-18, SV-23, SV-24, SV-26, SV-33, SV-34, SV-36, SV-37, SV-55, SV-63, SV-64, SV-65) were over-drilled using four-inch diameter augers to total depth to remove the 5 to 6 ft of ¼-inch TeflonTM tubing and related sand/bentonite materials. The resulting void was filled with portland cement. During remedial excavation activities, three soil gas probes (SV-2, SV-10 and SV-11) located within the soil excavation limits were destroyed by over-excavation. Figure 5 shows a map of all soil gas probes that were destroyed. The well destruction permit from Alameda County Public Works Agency is included in Appendix D.

An additional fifteen (15) shallow soil gas probes (SV-1, SV-3, SV-7, SV-8, SV-9, SV-12, SV-13, SV-14, SV-15, SV-16, SV-19, SV-25, SV-27, SV-35, SV-56) could not be located and are considered 'lost' or destroyed during construction grading. The ¹/₄-inch TeflonTM tubing from each probe was likely removed during Site grading activities eliminating any preferential pathway for vapor migration.

3.7 Air and Dust Monitoring

During soil excavation, backfilling, and soil off hauling, air and dust monitoring was conducted consistent with the procedures outlined in the RDIP and the *Site and Perimeter Air Monitoring, and Dust Mitigation Plan* dated November 16, 2017.

Air Monitoring for VOCs: To monitor for VOCs, a portable PID was used to measure VOC levels in air near work area as necessary for worker health and safety during onsite excavation activities. PID readings were measured and documented every 30 minutes on preformatted data field sheets provided in Appendix E. No VOC levels were measured above 0.0 ppmv. Since the action level of 50 ppmv was not triggered, no air mitigation measures were implemented.

Dust Monitoring and Mitigation: To help maintain low dust levels, the excavation area and nearby graded surfaces were regularly wetted with water as necessary during the day, and traffic through the work area was prevented or limited to a speed of 15 miles per hour.

Dust monitoring was conducted next to the excavation activities using a portable dust meter and also at a downwind perimeter location on the east property boundary using a fixed tripod-mounted dust meter station. Particulate matter (PM_{10}) concentrations along with wind speed and direction were measured and documented every 30 minutes on preformatted data field sheets and also recorded continuously on daily dust monitoring logs generated from the perimeter dust monitoring station.

During soil excavation, backfilling, and soil off hauling, the wind direction was measured consistently towards the east and southeast and ranged from 0 to 11 miles per hour (mph). No high wind conditions, defined as 18 mph sustained for at least 5 minutes in any 1-hour period, were encountered at the Site. Dust from the Site was consistently maintained below the PM₁₀ target level of 50 μg/m³ (above background) at the downwind perimeter dust monitoring station. Daily mass averages of dust at the perimeter dust monitoring station ranged from 3 to 18 μg/m³. Occasional dust spikes were typically short lived (less than 5 minutes) and did not require any significant mitigation measures, in accordance with PANGEA's *Dust Mitigation Plan*. PANGEA's *Air and Dust Monitoring Logs* and the *Perimeter Station Data Logs* are included in Appendix E.

4.0 CONCLUSION

Based on the above information, PANGEA concludes that the RDIP work scope has been successfully implemented. The planned installation of the full vapor intrusion mitigation systems (VIMS) beneath Buildings 5 through 10 is designed to adequately mitigate any significant vapor intrusion risk to future Site occupants. PANGEA concludes that regulatory case closure of the Site is appropriate upon completion of satisfactory documentation of the post-construction monitoring of the VIMS and any associated administrative controls.

5.0 REFERENCES

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PANGEA, 2016a, Site Management Plan Addendum, August 17.

PANGEA, 2016b, Site Assessment Report, August 26.

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PANGEA, 2016e, Data Gap Field Investigation Workplan, October 17.

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PANGEA, 2016g, Data Gap Investigation Report - Buildings 3 & 4, November 16.

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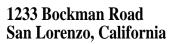
PANGEA, 2017c, Pilot Study Report Addendum, March 30.

PANGEA, 2017d, Remedial Design and Implementation Report, May 12.

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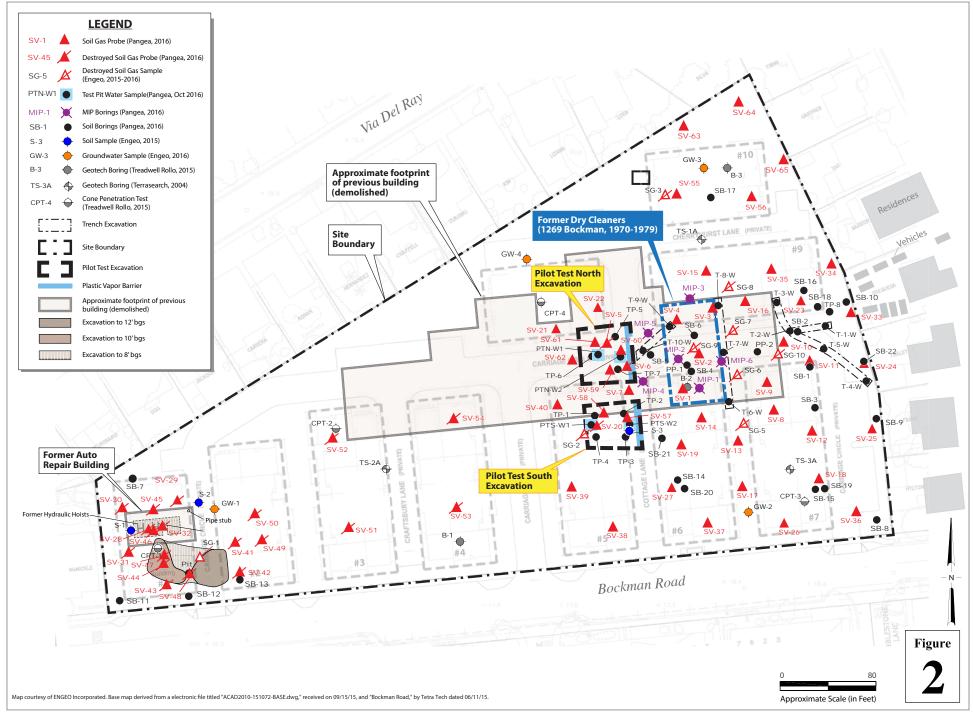
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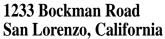




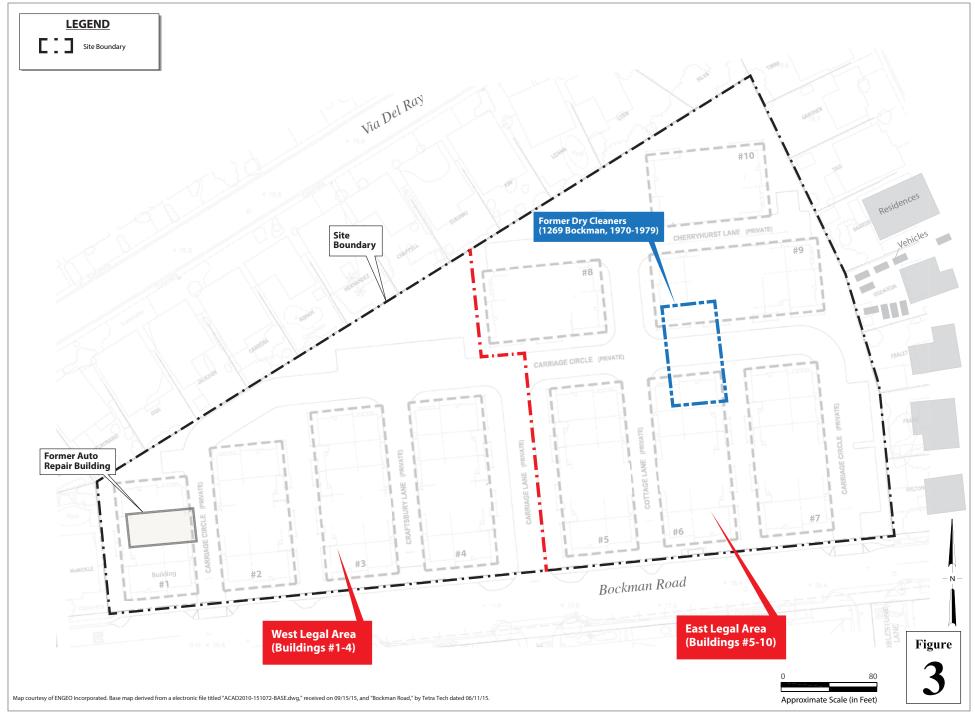


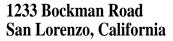
Vicinity Map





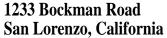




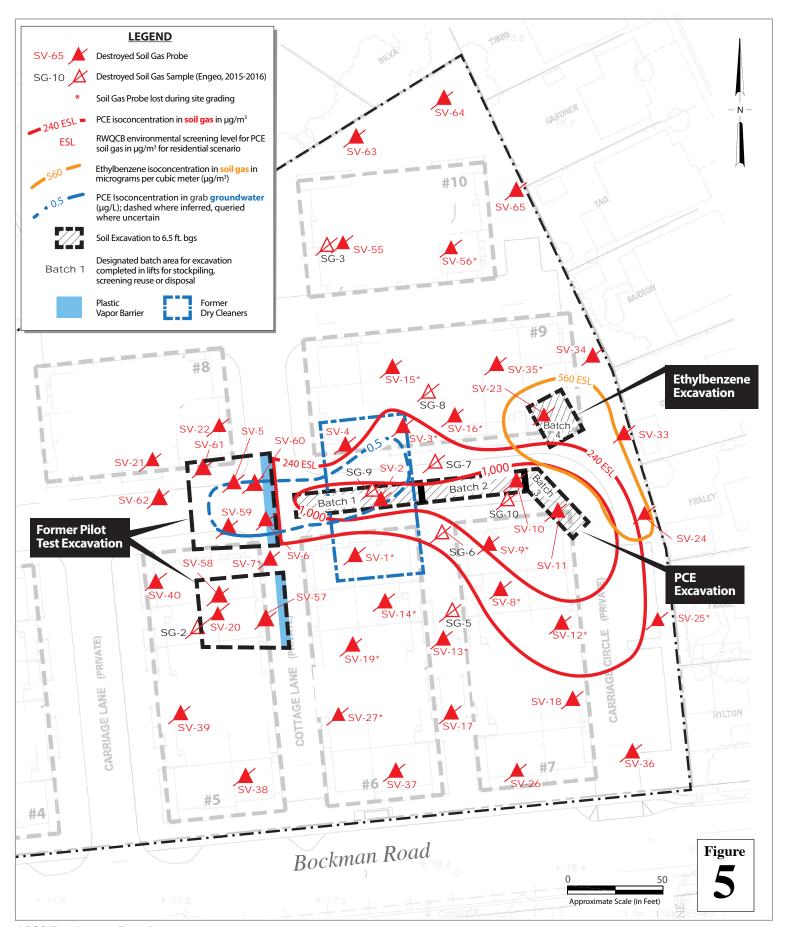


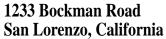














Pangea

Table 1. Soil Analytical Data - 1233 Bockman Road, San Lorenzo California

				7		% /	7	7	<u>.</u> /	7	7		v /	9/		. /		c ^a /
Boring / Sample ID	Date Sampled	Sample Depth (ft bgs)	Secretary Secret	Tolliene o	Fill Williams	Aylenes,	J. S.	Asphiliades,				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	rans-12	My Min	, John Marie	Acetomic A		Notes
			—							- mg/Kg							,	>
Confirmation Samples	- Remedial Excava	ation	Ī															
STP-1	6/21/2017	stockpile	< 0.0055	< 0.0055	< 0.0055	< 0.011	< 0.0055	< 0.0055	< 0.0055	< 0.0055	< 0.0055	< 0.0055	< 0.0055	< 0.011	< 0.0055	0.028	< 0.055	Batches 1 to 4, 0-1 ft
STP-2	6/21/2017	stockpile	< 0.0048	< 0.0048	< 0.0048	< 0.0096	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0095	< 0.0048	< 0.019	< 0.048	Batch 2 & 3, 1-5 ft
STP-3	6/21/2017	stockpile	< 0.0039	< 0.0039	< 0.0039	< 0.0078	< 0.0039	< 0.0039	< 0.0039	< 0.0039	< 0.0039	< 0.0039	< 0.0039	< 0.0079	< 0.0039	0.020	< 0.039	Batch 2 & 3, 1-5 ft
STP-4	6/21/2017	stockpile	< 0.0038	< 0.0038	< 0.0038	< 0.0096	< 0.0038	< 0.0038	< 0.0038	< 0.0038	< 0.0038	< 0.0038	< 0.0038	< 0.0077	< 0.0038	< 0.015	< 0.038	Batch 2, 5-6.5 ft
STP-5	6/22/2017	stockpile	< 0.0041	< 0.0041	< 0.0041	< 0.0082	< 0.0041	< 0.0041	< 0.0041	< 0.0041	< 0.0041	< 0.0041	< 0.0041	< 0.0082	< 0.0041	< 0.016	< 0.041	Batch 3, 5-6.5 ft
STP-6	6/22/2017	stockpile	< 0.0037	< 0.0037	< 0.0037	< 0.0074	< 0.0037	< 0.0037	< 0.0037	< 0.0037	< 0.0037	< 0.0037	< 0.0037	< 0.0073	< 0.0037	< 0.015	< 0.037	Batch 4, 1-5 ft
STP-7	6/22/2017	stockpile	<0.0044	< 0.0044	<0.0044	<0.0088	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044	<0.0044	< 0.0089	<0.0044	< 0.018	< 0.044	Batch 4, 5-6.5 ft

Explanation:

MTBE = Methyl tert-butyl ether 1,2-DCA = 1,2-Dichloroethane PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

VOCs = Volatile organic compounds by EPA Method 8260, collected by EPA Method 5035 (e.g., TerraCoreTM)

mg/kg = Milligrams per kilogram

 $ft\ bgs = Depth\ below\ ground\ surface\ (bgs)\ in\ feet.$

< n = Chemical not present at a concentration in excess of detection limit shown.

--- = Not analyzed

contaminant detections highlighted in gray

APPENDIX A

Remedial Excavation Photographs



Photo 1. Excavation of PCE-impacted area (Batches 1 and 2).



Photo 2. Excavation of PCE-impacted area (Batch 3).



Photo 3. Excavation of ethylbenzene-impacted area (Batch 4).



Photo 4. Field screening of soil stockpiles with PID.



Photo 5. Backfilling and compaction of excavation.



Photo 6. Stockpile soil from Batch 1 being loaded for offsite transport and disposal.



Photo 7. Perimeter dust monitoring station and windsock.



Photo 8. Dust mitigation procedures implemented using water truck to wet roadway.

APPENDIX B

Laboratory Analytical Reports





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 290022 ANALYTICAL REPORT

Pangea Environmental 1710 Franklin Street Oakland, CA 94612 Project : 2030.001 Location : 1233 Bockman

Level : II

Sample ID	<u>Lab ID</u>
STP-1	290022-001
STP-2	290022-002
STP-3	290022-003
STP-4	290022-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:

Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com
(510) 204-2225 Ext 13101

CA ELAP# 2896, NELAP# 4044-001

Date: <u>06/23/2017</u>



CASE NARRATIVE

Laboratory number: 290022

Client: Pangea Environmental

Project: 2030.001 Location: 1233 Bockman

Request Date: 06/21/17 Samples Received: 06/21/17

This data package contains sample and QC results for four soil samples, requested for the above referenced project on 06/21/17. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes were not performed for this analysis in batch 249014 due to insufficient sample amount. No other analytical problems were encountered.

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Project	Name: 1233 Buckman	Re	port To: R	on	Sc	hee	le							-													
Project	Project P. O. No:			Company: Pangea										Ì						Ì		-					
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Login # 290022 Client Pavyka	Date Received 6.21 Project 2	17 Numb 2030, OU	per of coolers_	j
Date Opened (0.2)·17 By (p. Date Logged in By (p. B	rint)W	(sign)	ism Jeru dism Jerun dism Jer	No
1. Did cooler come with a shippi Shipping info	ng slip (airbill, etc)		YES (NO
2A. Were custody seals present? How many 2B. Were custody seals intact up 3. Were custody papers dry and i 4. Were custody papers filled out 5. Is the project identifiable from 6. Indicate the packing in cooler:	Name_ on arrival?_ ntact when received? properly (ink, signed, en custody papers? (If so	Dat	YES 1	
Bubble Wrap Cloth material 7. Temperature documentation: Type of ice used: Wet	Cardboard St * Notify PM if tem	yrofoam perature exceeds	□ None □ Paper towel 6°C p(°C) 12.0	
Temperature blank(s) ind Samples received on ice 8. Were Method 5035 sampling of If YES, what time were the policy of the sample and the appropriate of the sample labels present, in grant 12. Are sample labels agree with 13. Do the sample labels agree with 14. Was sufficient amount of samples appropriately 15. Are the samples appropriately 16. Did you check preservatives for 17. Did you document your present 18. Did you change the hold time 19. Did you change the hold time 19. Did you change the hold time 19. Are bubbles > 6mm absent in 19. Was the client contacted concern If YES, Who was called? COMMENTS	directly from the field. Containers present? Ley transferred to freezer (unopened? Samples? Containers for indicate good condition and come the custody papers? ple sent for tests request preserved? Or all bottles for each sample to the custody papers or all bottles for each samples or all bottles for preserved to the custody papers? Or all bottles for each sample to the custody papers or all bottles for each sample to the custody papers or all bottles for each sample to the custody papers. Or all bottles for each sample delives to the custody papers or all bottles for unpreserved to the custody papers. Or all bottles for each sample delives to the custody papers. Description of the custody papers or all bottles for each sample delives to the custody papers.	cooling process large desired?	had begun YES YES YES YES YES YES YES YE	



Detections Summary for 290022

Results for any subcontracted analyses are not included in this summary.

Client : Pangea Environmental

Project : 2030.001

Location: 1233 Bockman

Client Sample ID : STP-1

Laboratory Sample ID :

290022-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Acetone	28		22	ug/Kg	As Recd	1.092	EPA 8260B	EPA 5035

Client Sample ID : STP-2 Laboratory Sample ID : 290022-002

No Detections

Client Sample ID: STP-3 Laboratory Sample ID: 290022-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Acetone	20		16	ug/Kg	As Recd	0.7874	EPA 8260B	EPA 5035

Client Sample ID: STP-4 Laboratory Sample ID: 290022-004

No Detections

Page 1 of 1



	Purgeable Organics by GC/MS									
Lab #:	290022	Location:	1233 Bockman							
Client:	Pangea Environmental	Prep:	EPA 5035							
Project#:	2030.001	Analysis:	EPA 8260B							
Field ID:	STP-1	Diln Fac:	1.092							
Lab ID:	290022-001	Batch#:	249014							
Matrix:	Soil	Sampled:	06/21/17							
Units:	ug/Kg	Received:	06/21/17							
Basis:	as received	Analyzed:	06/22/17							

Analyte	Result	RL	
Freon 12	ND ND	11	
Chloromethane	ND	11	
Vinyl Chloride	ND	11	
Bromomethane	ND	11	
Chloroethane	ND	11	
Trichlorofluoromethane	ND	5.5	
Acetone	28	22	
Freon 113	ND	5.5	
1,1-Dichloroethene	ND	5.5	
Methylene Chloride	ND	22	
Carbon Disulfide	ND	5.5	
MTBE	ND	5.5	
trans-1,2-Dichloroethene	ND	5.5	
Vinyl Acetate	ND	55	
1,1-Dichloroethane	ND	5.5	
2-Butanone	ND	11	
cis-1,2-Dichloroethene	ND	5.5	
2,2-Dichloropropane	ND	5.5	
Chloroform	ND	5.5	
Bromochloromethane	ND	5.5	
1,1,1-Trichloroethane	ND	5.5	
1,1-Dichloropropene	ND	5.5	
Carbon Tetrachloride	ND	5.5	
1,2-Dichloroethane	ND	5.5	
Benzene	ND	5.5	
Trichloroethene	ND	5.5	
1,2-Dichloropropane	ND	5.5	
Bromodichloromethane	ND	5.5	
Dibromomethane	ND	5.5	
4-Methyl-2-Pentanone	ND	11	
cis-1,3-Dichloropropene	ND	5.5	
Toluene	ND	5.5	
trans-1,3-Dichloropropene	ND	5.5	
1,1,2-Trichloroethane	ND	5.5	
2-Hexanone	ND	11	
1,3-Dichloropropane	ND	5.5	
Tetrachloroethene	ND	5.5	

ND= Not Detected RL= Reporting Limit

Page 1 of 2

3.0



Purgeable Organics by GC/MS					
Lab #:	290022	Location:	1233 Bockman		
Client:	Pangea Environmental	Prep:	EPA 5035		
Project#:	2030.001	Analysis:	EPA 8260B		
Field ID:	STP-1	Diln Fac:	1.092		
Lab ID:	290022-001	Batch#:	249014		
Matrix:	Soil	Sampled:	06/21/17		
Units:	ug/Kg	Received:	06/21/17		
Basis:	as received	Analyzed:	06/22/17		

Analyte	Result	RL	
Dibromochloromethane	ND	5.5	
1,2-Dibromoethane	ND	5.5	
Chlorobenzene	ND	5.5	
1,1,1,2-Tetrachloroethane	ND	5.5	
Ethylbenzene	ND	5.5	
m,p-Xylenes	ND	5.5	
o-Xylene	ND	5.5	
Styrene	ND	5.5	
Bromoform	ND	5.5	
Isopropylbenzene	ND	5.5	
1,1,2,2-Tetrachloroethane	ND	5.5	
1,2,3-Trichloropropane	ND	5.5	
Propylbenzene	ND	5.5	
Bromobenzene	ND	5.5	
1,3,5-Trimethylbenzene	ND	5.5	
2-Chlorotoluene	ND	5.5	
4-Chlorotoluene	ND	5.5	
tert-Butylbenzene	ND	5.5	
1,2,4-Trimethylbenzene	ND	5.5	
sec-Butylbenzene	ND	5.5	
para-Isopropyl Toluene	ND	5.5	
1,3-Dichlorobenzene	ND	5.5	
1,4-Dichlorobenzene	ND	5.5	
n-Butylbenzene	ND	5.5	
1,2-Dichlorobenzene	ND	5.5	
1,2-Dibromo-3-Chloropropane	ND	5.5	
1,2,4-Trichlorobenzene	ND	5.5	
Hexachlorobutadiene	ND	5.5	
Naphthalene	ND	5.5	
1,2,3-Trichlorobenzene	ND	5.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	91	80-128	
1,2-Dichloroethane-d4	85	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	109	80-132	

RL= Reporting Limit

Page 2 of 2



Purgeable Organics by GC/MS				
Lab #:	290022	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	2030.001	Analysis:	EPA 8260B	
Field ID:	STP-2	Diln Fac:	0.9524	
Lab ID:	290022-002	Batch#:	249014	
Matrix:	Soil	Sampled:	06/21/17	
Units:	ug/Kg	Received:	06/21/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Freon 12	ND	9.5	
Chloromethane	ND	9.5	
Vinyl Chloride	ND	9.5	
Bromomethane	ND	9.5	
Chloroethane	ND	9.5	
Trichlorofluoromethane	ND	4.8	
Acetone	ND	19	
Freon 113	ND	4.8	
1,1-Dichloroethene	ND	4.8	
Methylene Chloride	ND	19	
Carbon Disulfide	ND	4.8	
MTBE	ND	4.8	
trans-1,2-Dichloroethene	ND	4.8	
Vinyl Acetate	ND	48	
1,1-Dichloroethane	ND	4.8	
2-Butanone	ND	9.5	
cis-1,2-Dichloroethene	ND	4.8	
2,2-Dichloropropane	ND	4.8	
Chloroform	ND	4.8	
Bromochloromethane	ND	4.8	
1,1,1-Trichloroethane	ND	4.8	
1,1-Dichloropropene	ND	4.8	
Carbon Tetrachloride	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Trichloroethene	ND	4.8	
1,2-Dichloropropane	ND	4.8	
Bromodichloromethane	ND	4.8	
Dibromomethane	ND	4.8	
4-Methyl-2-Pentanone	ND	9.5	
cis-1,3-Dichloropropene	ND	4.8	
Toluene	ND	4.8	
trans-1,3-Dichloropropene	ND	4.8	
1,1,2-Trichloroethane	ND	4.8	
2-Hexanone	ND	9.5	
1,3-Dichloropropane	ND	4.8	
Tetrachloroethene	ND	4.8	

RL= Reporting Limit



Purgeable Organics by GC/MS					
Lab #:	290022	Location:	1233 Bockman		
Client:	Pangea Environmental	Prep:	EPA 5035		
Project#:	2030.001	Analysis:	EPA 8260B		
Field ID:	STP-2	Diln Fac:	0.9524		
Lab ID:	290022-002	Batch#:	249014		
Matrix:	Soil	Sampled:	06/21/17		
Units:	ug/Kg	Received:	06/21/17		
Basis:	as received	Analyzed:	06/22/17		

Analyte	Result	RL	
Dibromochloromethane	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Chlorobenzene	ND	4.8	
1,1,1,2-Tetrachloroethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	
Styrene	ND	4.8	
Bromoform	ND	4.8	
Isopropylbenzene	ND	4.8	
1,1,2,2-Tetrachloroethane	ND	4.8	
1,2,3-Trichloropropane	ND	4.8	
Propylbenzene	ND	4.8	
Bromobenzene	ND	4.8	
1,3,5-Trimethylbenzene	ND	4.8	
2-Chlorotoluene	ND	4.8	
4-Chlorotoluene	ND	4.8	
tert-Butylbenzene	ND	4.8	
1,2,4-Trimethylbenzene	ND	4.8	
sec-Butylbenzene	ND	4.8	
para-Isopropyl Toluene	ND	4.8	
1,3-Dichlorobenzene	ND	4.8	
1,4-Dichlorobenzene	ND	4.8	
n-Butylbenzene	ND	4.8	
1,2-Dichlorobenzene	ND	4.8	
1,2-Dibromo-3-Chloropropane	ND	4.8	
1,2,4-Trichlorobenzene	ND	4.8	
Hexachlorobutadiene	ND	4.8	
Naphthalene	ND	4.8	
1,2,3-Trichlorobenzene	ND	4.8	

Surrogate	%REC	Limits	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	96	80-136	
Toluene-d8	100	80-120	
Bromofluorobenzene	108	80-132	

RL= Reporting Limit

Page 2 of 2

4.0



Purgeable Organics by GC/MS					
Lab #:	290022	Location:	1233 Bockman		
Client:	Pangea Environmental	Prep:	EPA 5035		
Project#:	2030.001	Analysis:	EPA 8260B		
Field ID:	STP-3	Diln Fac:	0.7874		
Lab ID:	290022-003	Batch#:	249014		
Matrix:	Soil	Sampled:	06/21/17		
Units:	ug/Kg	Received:	06/21/17		
Basis:	as received	Analyzed:	06/22/17		

Analyte	Result	RL	
Freon 12	ND ND	7.9	
Chloromethane	ND	7.9	
Vinyl Chloride	ND	7.9	
Bromomethane	ND	7.9	
Chloroethane	ND	7.9	
Trichlorofluoromethane	ND	3.9	
Acetone	20	16	
Freon 113	ND	3.9	
1,1-Dichloroethene	ND	3.9	
Methylene Chloride	ND	16	
Carbon Disulfide	ND	3.9	
MTBE	ND	3.9	
trans-1,2-Dichloroethene	ND	3.9	
Vinyl Acetate	ND	39	
1,1-Dichloroethane	ND	3.9	
2-Butanone	ND	7.9	
cis-1,2-Dichloroethene	ND	3.9	
2,2-Dichloropropane	ND	3.9	
Chloroform	ND	3.9	
Bromochloromethane	ND	3.9	
1,1,1-Trichloroethane	ND	3.9	
1,1-Dichloropropene	ND	3.9	
Carbon Tetrachloride	ND	3.9	
1,2-Dichloroethane	ND	3.9	
Benzene	ND	3.9	
Trichloroethene	ND	3.9	
1,2-Dichloropropane	ND	3.9	
Bromodichloromethane	ND	3.9	
Dibromomethane	ND	3.9	
4-Methyl-2-Pentanone	ND	7.9	
cis-1,3-Dichloropropene	ND	3.9	
Toluene	ND	3.9	
trans-1,3-Dichloropropene	ND	3.9	
1,1,2-Trichloroethane	ND	3.9	
2-Hexanone	ND	7.9	
1,3-Dichloropropane	ND	3.9	
Tetrachloroethene	ND	3.9	

RL= Reporting Limit



Purgeable Organics by GC/MS					
Lab #:	290022	Location:	1233 Bockman		
Client:	Pangea Environmental	Prep:	EPA 5035		
Project#:	2030.001	Analysis:	EPA 8260B		
Field ID:	STP-3	Diln Fac:	0.7874		
Lab ID:	290022-003	Batch#:	249014		
Matrix:	Soil	Sampled:	06/21/17		
Units:	ug/Kg	Received:	06/21/17		
Basis:	as received	Analyzed:	06/22/17		

Analyte	Result	RL	
Dibromochloromethane	ND	3.9	
1,2-Dibromoethane	ND	3.9	
Chlorobenzene	ND	3.9	
1,1,1,2-Tetrachloroethane	ND	3.9	
Ethylbenzene	ND	3.9	
m,p-Xylenes	ND	3.9	
o-Xylene	ND	3.9	
Styrene	ND	3.9	
Bromoform	ND	3.9	
Isopropylbenzene	ND	3.9	
1,1,2,2-Tetrachloroethane	ND	3.9	
1,2,3-Trichloropropane	ND	3.9	
Propylbenzene	ND	3.9	
Bromobenzene	ND	3.9	
1,3,5-Trimethylbenzene	ND	3.9	
2-Chlorotoluene	ND	3.9	
4-Chlorotoluene	ND	3.9	
tert-Butylbenzene	ND	3.9	
1,2,4-Trimethylbenzene	ND	3.9	
sec-Butylbenzene	ND	3.9	
para-Isopropyl Toluene	ND	3.9	
1,3-Dichlorobenzene	ND	3.9	
1,4-Dichlorobenzene	ND	3.9	
n-Butylbenzene	ND	3.9	
1,2-Dichlorobenzene	ND	3.9	
1,2-Dibromo-3-Chloropropane	ND	3.9	
1,2,4-Trichlorobenzene	ND	3.9	
Hexachlorobutadiene	ND	3.9	
Naphthalene	ND	3.9	
1,2,3-Trichlorobenzene	ND	3.9	

Surrogate	%REC	Limits	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	94	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	106	80-132	

RL= Reporting Limit

Page 2 of 2



	Purgeable (Organics by GC/	ms	
Lab #:	290022	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	2030.001	Analysis:	EPA 8260B	
Field ID:	STP-4	Diln Fac:	0.7666	
Lab ID:	290022-004	Batch#:	249014	
Matrix:	Soil	Sampled:	06/21/17	
Units:	ug/Kg	Received:	06/21/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Freon 12	ND ND	7.7	
Chloromethane	ND	7.7	
Vinyl Chloride	ND	7.7	
Bromomethane	ND	7.7	
Chloroethane	ND	7.7	
Trichlorofluoromethane	ND	3.8	
Acetone	ND	15	
Freon 113	ND	3.8	
1,1-Dichloroethene	ND	3.8	
Methylene Chloride	ND	15	
Carbon Disulfide	ND	3.8	
MTBE	ND	3.8	
trans-1,2-Dichloroethene	ND	3.8	
Vinyl Acetate	ND	38	
1,1-Dichloroethane	ND	3.8	
2-Butanone	ND	7.7	
cis-1,2-Dichloroethene	ND	3.8	
2,2-Dichloropropane	ND	3.8	
Chloroform	ND	3.8	
Bromochloromethane	ND	3.8	
1,1,1-Trichloroethane	ND	3.8	
1,1-Dichloropropene	ND	3.8	
Carbon Tetrachloride	ND	3.8	
1,2-Dichloroethane	ND	3.8	
Benzene	ND	3.8	
Trichloroethene	ND	3.8	
1,2-Dichloropropane	ND	3.8	
Bromodichloromethane	ND	3.8	
Dibromomethane	ND	3.8	
4-Methyl-2-Pentanone	ND	7.7	
cis-1,3-Dichloropropene	ND	3.8	
Toluene	ND	3.8	
trans-1,3-Dichloropropene	ND	3.8	
1,1,2-Trichloroethane	ND	3.8	
2-Hexanone	ND	7.7	
1,3-Dichloropropane	ND	3.8	
Tetrachloroethene	ND	3.8	

RL= Reporting Limit



	Purgeable	Organics by GC/	MS	
Lab #:	290022	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	2030.001	Analysis:	EPA 8260B	
Field ID:	STP-4	Diln Fac:	0.7666	
Lab ID:	290022-004	Batch#:	249014	
Matrix:	Soil	Sampled:	06/21/17	
Units:	ug/Kg	Received:	06/21/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Dibromochloromethane	ND	3.8	
1,2-Dibromoethane	ND	3.8	
Chlorobenzene	ND	3.8	
1,1,1,2-Tetrachloroethane	ND	3.8	
Ethylbenzene	ND	3.8	
m,p-Xylenes	ND	3.8	
o-Xylene	ND	3.8	
Styrene	ND	3.8	
Bromoform	ND	3.8	
Isopropylbenzene	ND	3.8	
1,1,2,2-Tetrachloroethane	ND	3.8	
1,2,3-Trichloropropane	ND	3.8	
Propylbenzene	ND	3.8	
Bromobenzene	ND	3.8	
1,3,5-Trimethylbenzene	ND	3.8	
2-Chlorotoluene	ND	3.8	
4-Chlorotoluene	ND	3.8	
tert-Butylbenzene	ND	3.8	
1,2,4-Trimethylbenzene	ND	3.8	
sec-Butylbenzene	ND	3.8	
para-Isopropyl Toluene	ND	3.8	
1,3-Dichlorobenzene	ND	3.8	
1,4-Dichlorobenzene	ND	3.8	
n-Butylbenzene	ND	3.8	
1,2-Dichlorobenzene	ND	3.8	
1,2-Dibromo-3-Chloropropane	ND	3.8	
1,2,4-Trichlorobenzene	ND	3.8	
Hexachlorobutadiene	ND	3.8	
Naphthalene	ND	3.8	
1,2,3-Trichlorobenzene	ND	3.8	

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	91	80-136	
Toluene-d8	99	80-120	
Bromofluorobenzene	105	80-132	

RL= Reporting Limit

Page 2 of 2



Purgeable Organics by GC/MS						
Lab #:	290022	Location:	1233 Bockman			
Client:	Pangea Environmental	Prep:	EPA 5035			
Project#:	2030.001	Analysis:	EPA 8260B			
Matrix:	Soil	Batch#:	249014			
Units:	ug/Kg	Analyzed:	06/22/17			
Diln Fac:	1.000					

Type: BS Lab ID: QC890531

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	24.89	100	65-127
Benzene	25.00	24.59	98	75-124
Trichloroethene	25.00	23.86	95	76-122
Toluene	25.00	27.24	109	77-120
Chlorobenzene	25.00	28.29	113	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-128	
1,2-Dichloroethane-d4	93	80-136	
Toluene-d8	100	80-120	
Bromofluorobenzene	100	80-132	

Type: BSD Lab ID: QC890532

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	22.16	89	65-127	12	28
Benzene	25.00	22.37	89	75-124	9	25
Trichloroethene	25.00	22.54	90	76-122	6	26
Toluene	25.00	25.22	101	77-120	8	25
Chlorobenzene	25.00	26.09	104	80-120	8	24

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	94	80-136
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-132



Purgeable Organics by GC/MS						
Lab #:	290022	Location:	1233 Bockman			
Client:	Pangea Environmental	Prep:	EPA 5035			
Project#:	2030.001	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC890533	Batch#:	249014			
Matrix:	Soil	Analyzed:	06/22/17			
Units:	ug/Kg					

Analyte	Result	RL	
Freon 12	ND	10	
Chloromethane	ND	10	
Vinyl Chloride	ND	10	
Bromomethane	ND	10	
Chloroethane	ND	10	
Trichlorofluoromethane	ND	5.0	
Acetone	ND	20	
Freon 113	ND	5.0	
1,1-Dichloroethene	ND	5.0	
Methylene Chloride	ND	20	
Carbon Disulfide	ND	5.0	
MTBE	ND	5.0	
trans-1,2-Dichloroethene	ND	5.0	
Vinyl Acetate	ND	50	
1,1-Dichloroethane	ND	5.0	
2-Butanone	ND	10	
cis-1,2-Dichloroethene	ND	5.0	
2,2-Dichloropropane	ND	5.0	
Chloroform	ND	5.0	
Bromochloromethane	ND	5.0	
1,1,1-Trichloroethane	ND	5.0	
1,1-Dichloropropene	ND	5.0	
Carbon Tetrachloride	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Trichloroethene	ND	5.0	
1,2-Dichloropropane	ND	5.0	
Bromodichloromethane	ND	5.0	
Dibromomethane	ND	5.0	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	5.0	
Toluene	ND	5.0	
trans-1,3-Dichloropropene	ND	5.0	
1,1,2-Trichloroethane	ND	5.0	
2-Hexanone	ND	10	
1,3-Dichloropropane	ND	5.0	
Tetrachloroethene	ND	5.0	

ND= Not Detected

RL= Reporting Limit



	Purgeable (Organics by GC/	MS	
Lab #:	290022	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	2030.001	Analysis:	EPA 8260B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC890533	Batch#:	249014	
Matrix:	Soil	Analyzed:	06/22/17	
Units:	ug/Kg			

Analyte	Result	RL	
Dibromochloromethane	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Chlorobenzene	ND	5.0	
1,1,1,2-Tetrachloroethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Styrene	ND	5.0	
Bromoform	ND	5.0	
Isopropylbenzene	ND	5.0	
1,1,2,2-Tetrachloroethane	ND	5.0	
1,2,3-Trichloropropane	ND	5.0	
Propylbenzene	ND	5.0	
Bromobenzene	ND	5.0	
1,3,5-Trimethylbenzene	ND	5.0	
2-Chlorotoluene	ND	5.0	
4-Chlorotoluene	ND	5.0	
tert-Butylbenzene	ND	5.0	
1,2,4-Trimethylbenzene	ND	5.0	
sec-Butylbenzene	ND	5.0	
para-Isopropyl Toluene	ND	5.0	
1,3-Dichlorobenzene	ND	5.0	
1,4-Dichlorobenzene	ND	5.0	
n-Butylbenzene	ND	5.0	
1,2-Dichlorobenzene	ND	5.0	
1,2-Dibromo-3-Chloropropane	ND	5.0	
1,2,4-Trichlorobenzene	ND	5.0	
Hexachlorobutadiene	ND	5.0	
Naphthalene	ND	5.0	
1,2,3-Trichlorobenzene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	84	80-128	
1,2-Dichloroethane-d4	80	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	106	80-132	

ND= Not Detected

RL= Reporting Limit

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8.0





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 290055 ANALYTICAL REPORT

Project : 1233 BOCKMAN Pangea Environmental 1710 Franklin Street Location: 1233 Bockman Oakland, CA 94612

Level : II

Sample ID	<u>Lab ID</u>
STP-5	290055-001
STP-6	290055-002
STP-7	290055-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:

Mike Dahlquist Project Manager mike.dahlquist@ctberk.com (510) 204-2225 Ext 13101

CA ELAP# 2896, NELAP# 4044-001

Date: <u>06/23/2017</u>



CASE NARRATIVE

Laboratory number: 290055

Client: Pangea Environmental

Project: 1233 BOCKMAN
Location: 1233 Bockman

Request Date: 06/22/17 Samples Received: 06/22/17

This data package contains sample and QC results for three soil samples, requested for the above referenced project on 06/22/17. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes QC890665,QC890666 (batch 249012) were not reported because the parent sample was reanalyzed in another batch. No other analytical problems were encountered.

CHAIN OF CUSTODY

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COOLER RECEIPT CHECKLIST



Login # 29005 Date Received 677-17 Client Project 1235 Rux	Number of coolers
Date Opened 6.27.17By (print) WS (sign) Date Logged in By (print) WS (sign)	Madison Serent Madison Jeuny Muslim ferent
Did cooler come with a shipping slip (airbill, etc) Shipping info	YES (NO)
2A. Were custody seals present? YES (circle) on cooler How many Name 2B. Were custody seals intact upon arrival? 3. Were custody papers dry and intact when received? 4. Were custody papers filled out properly (ink, signed, etc)? 5. Is the project identifiable from custody papers? (If so fill out top 6. Indicate the packing in cooler: (if other, describe)	Date YES NO N/A
☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☐ Cloth material ☐ Cardboard ☐ Styrofoam 7. Temperature documentation: * Notify PM if temperature exceeds a substitution of the properties of the propertie	☐ None ☐ Paper towels ceeds 6°C
Type of ice used: ★ Wet ☐ Blue/Gel ☐ None	Temp(°C) 21,9
☐ Temperature blank(s) included? ☐ Thermometer#	IR Gun# B
Samples received on ice directly from the field. Cooling pro	agage had be seen
,	cess had begun
8. Were Method 5035 sampling containers present?	(YES) WS
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer?	YES WS
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened?	YES NO
 8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 	YES NO YES NO YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete?	YES NO YES NO YES NO YES NO YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers?	YES NO YES NO YES NO YES NO YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved?	YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample?	YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot#	YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs?	YES NO NA
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples?	YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples?	YES NO
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores?	YES NO
If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples? 21. Was the client contacted concerning this sample delivery? If YES, Who was called? By COLD TENTS	YES NO YE
If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples? 21. Was the client contacted concerning this sample delivery? If YES, Who was called? By	YES NO YE
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer? 9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? (pH strip lot# 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples? 21. Was the client contacted concerning this sample delivery? If YES, Who was called? By COMMENTS	YES NO YE



Detections Summary for 290055

Results for any subcontracted analyses are not included in this summary.

Client : Pangea Environmental

Project : 1233 BOCKMAN Location : 1233 Bockman

Client Sample ID : STP-5 Laboratory Sample ID : 290055-001

No Detections

Client Sample ID: STP-6 Laboratory Sample ID: 290055-002

No Detections

Client Sample ID : STP-7 Laboratory Sample ID : 290055-003

No Detections



	Purgeable	Organics by GC/	MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-5	Diln Fac:	0.8183	
Lab ID:	290055-001	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Freon 12	ND	8.2	
Chloromethane	ND	8.2	
Vinyl Chloride	ND	8.2	
Bromomethane	ND	8.2	
Chloroethane	ND	8.2	
Trichlorofluoromethane	ND	4.1	
Acetone	ND	16	
Freon 113	ND	4.1	
1,1-Dichloroethene	ND	4.1	
Methylene Chloride	ND	16	
Carbon Disulfide	ND	4.1	
MTBE	ND	4.1	
trans-1,2-Dichloroethene	ND	4.1	
Vinyl Acetate	ND	41	
1,1-Dichloroethane	ND	4.1	
2-Butanone	ND	8.2	
cis-1,2-Dichloroethene	ND	4.1	
2,2-Dichloropropane	ND	4.1	
Chloroform	ND	4.1	
Bromochloromethane	ND	4.1	
1,1,1-Trichloroethane	ND	4.1	
1,1-Dichloropropene	ND	4.1	
Carbon Tetrachloride	ND	4.1	
1,2-Dichloroethane	ND	4.1	
Benzene	ND	4.1	
Trichloroethene	ND	4.1	
1,2-Dichloropropane	ND	4.1	
Bromodichloromethane	ND	4.1	
Dibromomethane	ND	4.1	
4-Methyl-2-Pentanone	ND	8.2	
cis-1,3-Dichloropropene	ND	4.1	
Toluene	ND	4.1	
trans-1,3-Dichloropropene	ND	4.1	
1,1,2-Trichloroethane	ND	4.1	
2-Hexanone	ND	8.2	
1,3-Dichloropropane	ND	4.1	
Tetrachloroethene	ND	4.1	

RL= Reporting Limit



	Purgeable	Organics by GC/	'MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-5	Diln Fac:	0.8183	
Lab ID:	290055-001	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Dibromochloromethane	ND	4.1	
1,2-Dibromoethane	ND	4.1	
Chlorobenzene	ND	4.1	
1,1,1,2-Tetrachloroethane	ND	4.1	
Ethylbenzene	ND	4.1	
m,p-Xylenes	ND	4.1	
o-Xylene	ND	4.1	
Styrene	ND	4.1	
Bromoform	ND	4.1	
Isopropylbenzene	ND	4.1	
1,1,2,2-Tetrachloroethane	ND	4.1	
1,2,3-Trichloropropane	ND	4.1	
Propylbenzene	ND	4.1	
Bromobenzene	ND	4.1	
1,3,5-Trimethylbenzene	ND	4.1	
2-Chlorotoluene	ND	4.1	
4-Chlorotoluene	ND	4.1	
tert-Butylbenzene	ND	4.1	
1,2,4-Trimethylbenzene	ND	4.1	
sec-Butylbenzene	ND	4.1	
para-Isopropyl Toluene	ND	4.1	
1,3-Dichlorobenzene	ND	4.1	
1,4-Dichlorobenzene	ND	4.1	
n-Butylbenzene	ND	4.1	
1,2-Dichlorobenzene	ND	4.1	
1,2-Dibromo-3-Chloropropane	ND	4.1	
1,2,4-Trichlorobenzene	ND	4.1	
Hexachlorobutadiene	ND	4.1	
Naphthalene	ND	4.1	
1,2,3-Trichlorobenzene	ND	4.1	

Surrogate	%REC	Limits	
Dibromofluoromethane	88	80-128	
1,2-Dichloroethane-d4	95	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	101	80-132	

RL= Reporting Limit

Page 2 of 2



	Purgeable	Organics by GC/	MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-6	Diln Fac:	0.7331	
Lab ID:	290055-002	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Freon 12	ND	7.3	
Chloromethane	ND	7.3	
Vinyl Chloride	ND	7.3	
Bromomethane	ND	7.3	
Chloroethane	ND	7.3	
Trichlorofluoromethane	ND	3.7	
Acetone	ND	15	
Freon 113	ND	3.7	
1,1-Dichloroethene	ND	3.7	
Methylene Chloride	ND	15	
Carbon Disulfide	ND	3.7	
MTBE	ND	3.7	
trans-1,2-Dichloroethene	ND	3.7	
Vinyl Acetate	ND	37	
1,1-Dichloroethane	ND	3.7	
2-Butanone	ND	7.3	
cis-1,2-Dichloroethene	ND	3.7	
2,2-Dichloropropane	ND	3.7	
Chloroform	ND	3.7	
Bromochloromethane	ND	3.7	
1,1,1-Trichloroethane	ND	3.7	
1,1-Dichloropropene	ND	3.7	
Carbon Tetrachloride	ND	3.7	
1,2-Dichloroethane	ND	3.7	
Benzene	ND	3.7	
Trichloroethene	ND	3.7	
1,2-Dichloropropane	ND	3.7	
Bromodichloromethane	ND	3.7	
Dibromomethane	ND	3.7	
4-Methyl-2-Pentanone	ND	7.3	
cis-1,3-Dichloropropene	ND	3.7	
Toluene	ND	3.7	
trans-1,3-Dichloropropene	ND	3.7	
1,1,2-Trichloroethane	ND	3.7	
2-Hexanone	ND	7.3	
1,3-Dichloropropane	ND	3.7	
Tetrachloroethene	ND	3.7	

RL= Reporting Limit



	Purgeable	Organics by GC/	MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-6	Diln Fac:	0.7331	
Lab ID:	290055-002	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/22/17	

Analyte	Result	RL	
Dibromochloromethane	ND	3.7	
1,2-Dibromoethane	ND	3.7	
Chlorobenzene	ND	3.7	
1,1,1,2-Tetrachloroethane	ND	3.7	
Ethylbenzene	ND	3.7	
m,p-Xylenes	ND	3.7	
o-Xylene	ND	3.7	
Styrene	ND	3.7	
Bromoform	ND	3.7	
Isopropylbenzene	ND	3.7	
1,1,2,2-Tetrachloroethane	ND	3.7	
1,2,3-Trichloropropane	ND	3.7	
Propylbenzene	ND	3.7	
Bromobenzene	ND	3.7	
1,3,5-Trimethylbenzene	ND	3.7	
2-Chlorotoluene	ND	3.7	
4-Chlorotoluene	ND	3.7	
tert-Butylbenzene	ND	3.7	
1,2,4-Trimethylbenzene	ND	3.7	
sec-Butylbenzene	ND	3.7	
para-Isopropyl Toluene	ND	3.7	
1,3-Dichlorobenzene	ND	3.7	
1,4-Dichlorobenzene	ND	3.7	
n-Butylbenzene	ND	3.7	
1,2-Dichlorobenzene	ND	3.7	
1,2-Dibromo-3-Chloropropane	ND	3.7	
1,2,4-Trichlorobenzene	ND	3.7	
Hexachlorobutadiene	ND	3.7	
Naphthalene	ND	3.7	
1,2,3-Trichlorobenzene	ND	3.7	

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-128	
1,2-Dichloroethane-d4	98	80-136	
Toluene-d8	97	80-120	
Bromofluorobenzene	101	80-132	

RL= Reporting Limit

Page 2 of 2



	Purgeable	Organics by GC/	MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-7	Diln Fac:	0.8881	
Lab ID:	290055-003	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/23/17	

Analyte	Result	RL	
Freon 12	ND	8.9	
Chloromethane	ND	8.9	
Vinyl Chloride	ND	8.9	
Bromomethane	ND	8.9	
Chloroethane	ND	8.9	
Trichlorofluoromethane	ND	4.4	
Acetone	ND	18	
Freon 113	ND	4.4	
1,1-Dichloroethene	ND	4.4	
Methylene Chloride	ND	18	
Carbon Disulfide	ND	4.4	
MTBE	ND	4.4	
trans-1,2-Dichloroethene	ND	4.4	
Vinyl Acetate	ND	44	
1,1-Dichloroethane	ND	4.4	
2-Butanone	ND	8.9	
cis-1,2-Dichloroethene	ND	4.4	
2,2-Dichloropropane	ND	4.4	
Chloroform	ND	4.4	
Bromochloromethane	ND	4.4	
1,1,1-Trichloroethane	ND	4.4	
1,1-Dichloropropene	ND	4.4	
Carbon Tetrachloride	ND	4.4	
1,2-Dichloroethane	ND	4.4	
Benzene	ND	4.4	
Trichloroethene	ND	4.4	
1,2-Dichloropropane	ND	4.4	
Bromodichloromethane	ND	4.4	
Dibromomethane	ND	4.4	
4-Methyl-2-Pentanone	ND	8.9	
cis-1,3-Dichloropropene	ND	4.4	
Toluene	ND	4.4	
trans-1,3-Dichloropropene	ND	4.4	
1,1,2-Trichloroethane	ND	4.4	
2-Hexanone	ND	8.9	
1,3-Dichloropropane	ND	4.4	
Tetrachloroethene	ND	4.4	

RL= Reporting Limit



	Purgeable	Organics by GC/	MS	
Lab #:	290055	Location:	1233 Bockman	
Client:	Pangea Environmental	Prep:	EPA 5035	
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B	
Field ID:	STP-7	Diln Fac:	0.8881	
Lab ID:	290055-003	Batch#:	249012	
Matrix:	Soil	Sampled:	06/22/17	
Units:	ug/Kg	Received:	06/22/17	
Basis:	as received	Analyzed:	06/23/17	

Analyte	Result	RL	
Dibromochloromethane	ND	4.4	
1,2-Dibromoethane	ND	4.4	
Chlorobenzene	ND	4.4	
1,1,1,2-Tetrachloroethane	ND	4.4	
Ethylbenzene	ND	4.4	
m,p-Xylenes	ND	4.4	
o-Xylene	ND	4.4	
Styrene	ND	4.4	
Bromoform	ND	4.4	
Isopropylbenzene	ND	4.4	
1,1,2,2-Tetrachloroethane	ND	4.4	
1,2,3-Trichloropropane	ND	4.4	
Propylbenzene	ND	4.4	
Bromobenzene	ND	4.4	
1,3,5-Trimethylbenzene	ND	4.4	
2-Chlorotoluene	ND	4.4	
4-Chlorotoluene	ND	4.4	
tert-Butylbenzene	ND	4.4	
1,2,4-Trimethylbenzene	ND	4.4	
sec-Butylbenzene	ND	4.4	
para-Isopropyl Toluene	ND	4.4	
1,3-Dichlorobenzene	ND	4.4	
1,4-Dichlorobenzene	ND	4.4	
n-Butylbenzene	ND	4.4	
1,2-Dichlorobenzene	ND	4.4	
1,2-Dibromo-3-Chloropropane	ND	4.4	
1,2,4-Trichlorobenzene	ND	4.4	
Hexachlorobutadiene	ND	4.4	
Naphthalene	ND	4.4	
1,2,3-Trichlorobenzene	ND	4.4	

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-128	
1,2-Dichloroethane-d4	99	80-136	
Toluene-d8	97	80-120	
Bromofluorobenzene	102	80-132	

RL= Reporting Limit

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Purgeable Organics by GC/MS						
Lab #:	290055	Location:	1233 Bockman			
Client:	Pangea Environmental	Prep:	EPA 5035			
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC890526	Batch#:	249012			
Matrix:	Soil	Analyzed:	06/22/17			
Units:	ug/Kg					

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.23	93	65-127
Benzene	25.00	19.49	78	75-124
Trichloroethene	25.00	21.44	86	76-122
Toluene	25.00	20.87	83	77-120
Chlorobenzene	25.00	21.40	86	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-128	
1,2-Dichloroethane-d4	94	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	99	80-132	

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Purgeable Organics by GC/MS						
Lab #:	290055	Location:	1233 Bockman			
Client:	Pangea Environmental	Prep:	EPA 5035			
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC890527	Batch#:	249012			
Matrix:	Soil	Analyzed:	06/22/17			
Units:	ug/Kg					

Analyte	Result	RL	
Freon 12	ND	10	
Chloromethane	ND	10	
Vinyl Chloride	ND	10	
Bromomethane	ND	10	
Chloroethane	ND	10	
Trichlorofluoromethane	ND	5.0	
Acetone	ND	20	
Freon 113	ND	5.0	
1,1-Dichloroethene	ND	5.0	
Methylene Chloride	ND	20	
Carbon Disulfide	ND	5.0	
MTBE	ND	5.0	
trans-1,2-Dichloroethene	ND	5.0	
Vinyl Acetate	ND	50	
1,1-Dichloroethane	ND	5.0	
2-Butanone	ND	10	
cis-1,2-Dichloroethene	ND	5.0	
2,2-Dichloropropane	ND	5.0	
Chloroform	ND	5.0	
Bromochloromethane	ND	5.0	
1,1,1-Trichloroethane	ND	5.0	
1,1-Dichloropropene	ND	5.0	
Carbon Tetrachloride	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Trichloroethene	ND	5.0	
1,2-Dichloropropane	ND	5.0	
Bromodichloromethane	ND	5.0	
Dibromomethane	ND	5.0	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	5.0	
Toluene	ND	5.0	
trans-1,3-Dichloropropene	ND	5.0	
1,1,2-Trichloroethane	ND	5.0	
2-Hexanone	ND	10	
1,3-Dichloropropane	ND	5.0	
Tetrachloroethene	ND	5.0	

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

7.0



Purgeable Organics by GC/MS							
Lab #:	290055	Location:	1233 Bockman				
Client:	Pangea Environmental	Prep:	EPA 5035				
Project#:	1233 BOCKMAN	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC890527	Batch#:	249012				
Matrix:	Soil	Analyzed:	06/22/17				
Units:	ug/Kg						

Analyte	Result	RL	
Dibromochloromethane	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Chlorobenzene	ND	5.0	
1,1,1,2-Tetrachloroethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Styrene	ND	5.0	
Bromoform	ND	5.0	
Isopropylbenzene	ND	5.0	
1,1,2,2-Tetrachloroethane	ND	5.0	
1,2,3-Trichloropropane	ND	5.0	
Propylbenzene	ND	5.0	
Bromobenzene	ND	5.0	
1,3,5-Trimethylbenzene	ND	5.0	
2-Chlorotoluene	ND	5.0	
4-Chlorotoluene	ND	5.0	
tert-Butylbenzene	ND	5.0	
1,2,4-Trimethylbenzene	ND	5.0	
sec-Butylbenzene	ND	5.0	
para-Isopropyl Toluene	ND	5.0	
1,3-Dichlorobenzene	ND	5.0	
1,4-Dichlorobenzene	ND	5.0	
n-Butylbenzene	ND	5.0	
1,2-Dichlorobenzene	ND	5.0	
1,2-Dibromo-3-Chloropropane	ND	5.0	
1,2,4-Trichlorobenzene	ND	5.0	
Hexachlorobutadiene	ND	5.0	
Naphthalene	ND	5.0	
1,2,3-Trichlorobenzene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	88	80-128	
1,2-Dichloroethane-d4	91	80-136	
Toluene-d8	98	80-120	
Bromofluorobenzene	100	80-132	

ND= Not Detected

RL= Reporting Limit

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7.0

APPENDIX C

Waste Disposal Records

DELIVERY COPY B.E. NO. G11-154239 CHARLES F. GAGLIASSO TRUCKING, INC. 415 ALDO AVE., ZIP 95054 P. O. BOX 4404, ZIP 95056 SANTA CLARA, CALIF. (408) 988-4021 SH CODE am p RECEIVED FROM (CONSIGNOR) COMMODITY
TRANSPORTED UNLOADING LOADING WEIGHT DEPARTURE SCALE TAG # 8. 9. 10. 11. 12. TOTAL TONS TW TR BD SB SE OF AXLES (WEIGHT) ENDING TIME INCLUDING TRAVEL TIME STARTING DOWNTIME CHARGEABLE TIME & LUNCH OFFICE USE ONLY LAST TRIP LEAVE LOAD SITE UNLOADING OF LAST TRIF HOURLY RATE ARRIVE SIGN OUT TIME SITE RATE PER TON ELAPSED TIME TRAVEL TIME UNLOADING TIME REMARKS: OTHER CHARGES TOTAL "These charges include taxes paid to California cities instead of excise or business license taxes they could

Consignee agrees to pay any legal fees for collection of delinquent account. 11/2% service charge per month which equals 18% per year will be added to past due accounts. We make deliveries inside curb and on lot at customer's risk only, and accept no responsibility for damages resulting from such delivery.

DRIVER'S SIGNATURE

otherwise impose."

RECEIVED IN GOOD ORDER BY AUTHORIZED REPRESENTATIVE

P. O. BOX 4404, ZIP 95056

DELIVERY COPY CHARLES F. GAGLIASSO TRUCKING, INC.

SANTA CLARA, CALIF.

415 ALDO AVE., ZIP 95054

SH	CODE		(408) 98	00-4021		
TRUC	K NO	TRA	ILERNO. ENTE	DATE 06	29	17
UNDE	RLYING IIER	9.	13,110	VENDOR CODE	JOB# _	
RECE	IVED FROM (CONSIG	NOR)		DELIVERED TO (CONSIGNEE)		
ADDR	ESS	Box	1 mars 1	ADDRESS //	P.M	Daie
CITY	25 /0	1002	0 01	CITY A Lanc	1d	1
ORIGI	N			DESTINATION		
	LOAD	ING	COMMODITY TRANSPORTED	TARE WEIGHT	UNLO	ADING
11	ARRIVAL	DEPARTURE	SCALE TAG #	WEIGHT	ARRIVAL	DEPARTURE
1.	7:15	7:35		1026	8:15	8:31
2.	9.05	9:10		Load	9:41	9:5
3.	10:20	10.30		202d	11:05	11:1
4.	11:50	1230		load,	1:00	1:1
5.	1:45	1:55		Joad,	7:20	21/0
6.	3.10	3:20		2026	4.00	4:1
7.	4.55			Add to the second second	and the same of th	and the second
8.						
9.						
10.						
11.						

OF AXLES	□ BD □ SB □ SE	(WEIGHT)			
STARTING 7./5	DOWNTIME & LUNCH	ENDING TIME INCLUDING TRAVEL TIME 4:55	NET CHARGEABLE TIME		
LAST TRIP	UNLOADING	OFFICE U	ISE ONLY		
LEAVE LOAD SITE	OF LAST TRIP	HOURLY			
ARRIVE DUMP SITE	SIGN OUT TIME	RATE			
TRAVEL	ELAPSED TIME OF THE UNLOADING TIME	RATE PER TON			
REMARKS:		OTHER CHARGES			

"These charges include taxes paid to California cities instead of excise or business license taxes they could otherwise impose.

12.

RECEIVED IN GOOD ORDER BY AUTHORIZED REPRESENTATIVE

DRIVER'S SIGNATURE

TOTAL

Consignee agrees to pay any legal fees for collection of delinquent account. 11/2% service charge per month which equals 18% per year will be added to past due accounts. We make deliveries inside curb and on lot at customer's risk only, and accept no responsibility for damages resulting from such delivery.

CHARLES F. GAGLIASSO TRUCKING, INC.

P. O. BOX 4404, ZIP 95056

SANTA CLARA, CALIF.

415 ALDO AVE., ZIP 95054

SH CODE (408) 988-4021							
TRUC	K NO	1	TRAILER NO. SOLL OF	2/1/2 DATE 06-	30-	17	
UNDE	RLYING	3.00	11/10	VENDOR CODE	JOB #		
	IVED FROM (CON	NSIGNOR)		DELIVERED TO (CONSIGNEE)			
	51	4000)	(501)			
ADDR	233	ROC	Lorga Il	ADDRESS ALL OF	2v 7	3000	
CITY	7.	loren	70 CA	CITY Alamod	i c.	1/	
ORIGI	IN			DESTINATION			
	LOA	DING	COMMODITY TRANSPORTED	TARE WEIGHT	UNLO	ADING	
	ARRIVAL	DEPARTURI	SCALE TAG #	WEIGHT	ARRIVAL	DEPARTURE	
1.	7:30	0 7:4	0	2026	8:15	8 25	
2.	9:00	2 9.2	0	1026	10.00	10.19	
3.	10:5						
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
NUMI OF A	BER XLES	□TW □TR	□BD □SB □SE	TOTAL TONS (WEIGHT)	9.0)	
STAR	ITING 7	.30	DOWNTIME & LUNCH	ENDING TIME INCLUDING TRAVEL TIME / 0.55	NET CHARGEABLE TIME		
	TRIP		UNLOADING OF LAST TRIP	OFFICE I	JSE ONLY		
ARRI	RRIVE SIGN OUT			HOURLY RATE			
TRAV	TRAVEL ELAPSED TIME		RATE PER				
TIME UNLOADING TIME			UNLOADING TIME	TON			
REMARKS:				OTHER CHARGES			
				TOTAL			
"These charges include taxes paid to California cities instead of excise or business license taxes they could			es paid to California cities s license taxes they could		12		
oth	erwise imp	ose.		X Com	43		
X	april	Wit		DRIVER'S SIGNATURE	-)		
REC	EIVED IN GOO	DO ORDER BY AU	THORIZED REPRESENTATIVE				

Consignee agrees to pay any legal fees for collection of delinquent account. 11/2% service charge per month which equals 18% per year will be added to past due accounts. We make deliveries inside curb and on lot at customer's risk only, and accept no responsibility for damages resulting from such delivery.

APPENDIX D

Soil Gas Probe Destruction Permit

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 06/14/2017 By jamesy

Permit Numbers: W2017-0501 Permits Valid from 06/15/2017 to 06/15/2017

City of Project Site:San Lorenzo

Application Id: 1496876788446 **Site Location:** 1233 Bockman Roa

1233 Bockman Road, San Lorenzo

Start Date 6/15/2017, end date 6/16/2017 if possible

Project Start Date: 06/15/2017 Completion Date:06/15/2017

Assigned Inspector: Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

Applicant: Pangea Environmental Services, Inc. - Patrick **Phone:** 925-818-0010

Groff

1710 Franklin Street, #200, Oakland, CA 94612

Property Owner: Scott Shoeman-PaulsCorp, LLC Phone: --

100 St. Paul Street, #300, Denver, CO 80206

Client: ** same as Property Owner **

Total Due: \$265.00
Total Amount Paid: \$265.00

Receipt Number: WR2017-0275 Total Amount Paid: \$265.00
Payer Name: Robert Clark-Riddell Paid By: VISA PAID IN FULL

Works Requesting Permits:

Well Destruction-Vapor monitoring well - 32 Wells

Driller: Cascade Drilling - Lic #: 938110 - Method: over Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2017- 0501	06/14/2017	09/13/2017	SV-1	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-10	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-11	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-12	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-13	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-14	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-15	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-16	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-17	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-18	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-19	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-2	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017- 0501	06/14/2017	09/13/2017	SV-23	2.25 in.	0.25 in.	4.50 ft	5.50 ft			
W2017-	06/14/2017	09/13/2017	SV-24	2.25 in.	0.25 in.	4.50 ft	5.50 ft			

Alameda County Public Works Agency - Water Resources Well Permit

0501							
W2017- 0501	06/14/2017	09/13/2017	SV-25	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-26	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-27	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-3	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-33	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-34	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-35	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-36	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-37	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-4	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-55	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-56	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-63	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-64	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-65	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-7	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-8	2.25 in.	0.25 in.	4.50 ft	5.50 ft
W2017- 0501	06/14/2017	09/13/2017	SV-9	2.25 in.	0.25 in.	4.50 ft	5.50 ft

Specific Work Permit Conditions

- 1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
- 2. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 3. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

Alameda County Public Works Agency - Water Resources Well Permit

- 4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 5. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
- 6. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 7. Remove the Christy box or similar structure. Destroy well(s) by overdrilling the upper 5ft. below ground surface (bgs) and then tremie grouting with neat cement. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil. After the seal has set, backfill the remaining hole by approved encroachment permit concrete material and asphalt material by Caltrans Spec or County/City Codes.
- 8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 9. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.
- 10. Vapor monitoring wells constructed with tubing shall be decomissioned by complete removal of tubing, grout seal, and fill material of sand or bentonite. Fill material may be removed by hand auger if material can be removed completely.

Vapor monitoring wells constructed with pvc pipe less than 2" shall be overdrilled to total depth.

Vapor monitoring wells constructed with 2" pvc pipe or larger may be grouted by tremie pipe (any depth) or pressure grouted (less than 30', 25 psi for 5 min).

APPENDIX E

Air and Dust Monitoring Records



AIR AND DUST MONITORING LOG

Site: 1233	Bockman	Recorded By:	Wilson	
Station ID:	.0	Date: //- /-		

Perimeter Dust Monitor Model: TSI Dust Trak 11, 8530

Perimeter Dust Monitor Serial Number: 8530 | 3 3 70 |

Portable Dust Monitor Model: TSI Side PAK

Portable Dust Monitor Serial Number: 1136006
PID Meter Model: M:ni RAE 3000

PID Meter Serial Number: 592 - 909292

Time	Wind Direction	Wind Speed (mph)	PM10 Concentration (ug/m3)			PID	
			Upwind, Excavation	Downwind, Excavation	Downwind. Perimeter	Reading (ppmv)	Notes
1210	SE	3.9	27	10	8	ō	Begin excavation. Excavating Batch 1,2,3; 0'-1'.
1220	SE	5.1	29	8	12	0.0	7
1230	SE	7.0	35	13	29	6.0	
1240	SE	8.5	36	26	18	0.0	
1250	E	8.5	41	48	15	0.0	+
1310	E	10.8	26	41	9	0.0	skipped \$300 reading to help mark excavation
1320	S E	3.5	36	239	28	0.0	High dust while breaking asphalt. Readings 750 sustained less than I m
1330	E	6.0	25	117	25	0.0	Readings > 50 sustained less than Im
1340	SE	6.5	31	43	16	0.0	
1350	E	7.1	40	46	40	0.0	<u> </u>
1400	E	8.5	29	69	19	0.0	Stockpiling soil.
1410	SE	6.0	36	48	6	0.0	distorbing asphalt
1420	SE	10.1	25	31	19	0.0	1
1425	_		_	_	_	-	Covering stockpile
							Daily Perimeter Aug. = 16
							7,11,10



AIR AND DUST MONITORING LOG

Site: 1233 Bockman Recorded By: Jake Wilson								
Station I						120/17		
	Dust Monito			Just Tra	K 11, 8			
	Dust Monito			30 1337				
	Dust Monitor		TSI Si	de Pax				
Portable D	Oust Monitor	Serial Nun	nber: 1130 (5006				
PID Meter	Model: Mir	ri RAE	3000					
PID Meter	Serial Numb	er: 592-	909292		V			
Wind Speed Time Direction (mph)		PM10 Concentration (ug/m3) Upwind, Downwind, Excavation Excavation Perimeter			PID Reading (ppmv)	Notes		
0805	E	2.6	18	26	7	0.0	Begin Excavation Excavating Batch 1:	11-21
0830	E	3.8	28	45	8	0.0	DATE:	, ,
0900	E	1.8	16	26	7			
0930	F	5.6	38	48	13	0.0		
1000	E	5.3	18	69	8	0.0	- 1. 2114	
1030	E	2.2	80	110	15	0.0	Executing Batch 1;	3-5
1100	E	3.8	18		7	0.0		
1130		J.8	18	53		0.0		
	E		20.	"-	5	1 - T		
1200		4.7	29	45	5	0,0	Excavating Batch 1;	5-6.5
1230	E	7.3	27	20	8	0.0		
1300	SE	8.9	33	41	9	0.0	上	
1320	_	-	_	_	-		Covering Stockpiles	
							Daily Perimeter Avg. =	- 8
							1	
+								
	4 9		/ U					N. C.



AIR AND DUST MONITORING LOG

Site: 1233	Bockman	Recorded By: Jake	Wilson
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Station ID: Date: 6/21/17
Perimeter Dust Monitor Model: TSI Dust Trak II, 8530

Perimeter Dust Monitor Serial Number: 8530 | 3370 |

Portable Dust Monitor Model: TS1 Portable Dust Monitor Serial Number: 1130600 6

PID Meter Model: MiniRAE 3000

Time	Wind Direction	Wind Speed (mph)	PM10 Concentration (ug/m3)			PID	
			Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0730	E	1.1	8	31	7	6.0	Begin excavation Excavating Bookh 2: 1'-5'
0800	~	0.0	5	9	6	0.0	
0830	E	2.0	10	21	7	0.0	
900	E	3.1	17	40	7	0.0	
0930	E	3.4	12	22	5	0.0	e
1000	E	2.4	11	25	6	0.0	
1030	E	4.4	23	54	11	0.0	Excavating Batch 2; 5'-6.5'
1100	SE.	5.8	10	24	7	6.0	T
1130	-		-	,0	3	-	Lunch
1200	5E	3.9	12	15	4	0.0	Water truck sprays area. Excavating Batch 3: 1-5
1230	SE	2,2	22	46	4	0.0	
1300	E	5.1	30	45	8	0.0	
1330	SE	8.7	20	38	10	0.0	
1350	_	-	_	_	-	-	Covering Stockpiles
		74					Daily Perimeter Aug. = 6
			¥				/
	- 19				4		
,						0	



Site:	1233	Bockman	Recorded By: Ma	H Bernard
-------	------	---------	-----------------	-----------

Station ID: Date: 6/72/17
Perimeter Dust Monitor Model: TSI Dustrak II, 8530

Perimeter Dust Monitor Serial Number: 853013370

Portable Dust Monitor Model: TSI Side Pak

Portable Dust Monitor Serial Number: 11306006 PID Meter Model: MiniRAF 3060

PID Meter Serial Number: 592-969292

		Wind	PM10 Cd	oncentration	n (ug/m3)	PID	
Time	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0730	E	1.0	23	40	13	0.6	Begin excavation Back 3: 5'-6.
0800	SE	0.6	37	36	16	6.0	Water truck spraying excavates
0830	-	_	_	_	15	_	
6900	E	1.5	25	47	27	0.0	
0936	E	3.1	18	53	9	0.0	
1000	E	2.2	37	21	8	0.0	~
1030	E	2.9	40	43	9	0.0	
1100	E	1.3	36	72	11	0.0	
1130	E	0.9	15	35	8	0.0	4
1215	E	3.5	30	60	18	0.0	Excavating Batch 4
1245	E	2.5	47	55	16	0.0	
1315	E	1.8	44	32	6	6.0	1
1330	-			_	_	_	Covering Stockpiles
							Covering Stockpiles Daily Perimeter Avg. = 13
							1
					£ - 1		
						7.7	
-							



Site: 1	Bockman	^			Recorde	d By: N	1B
Station	ID:			-	Date: 6	126/17	+
Perimeter	Dust Monit	or Model:	TSI	Dust Tra	x A'c	Manstor	
Perimeter	Dust Monito	or Serial Nu	umber: FA	200943	1853013	33701	The second second
Portable D	Dust Monitor	Model: A	MSIA-	Side Pal	E (TE	T	No.
Portable D	Oust Monitor	Serial Nur	nber: FA	00810/	1130 600		
	Model: M			/ can 0-9	2404	an en	
ib meter	Jeriai Nullii	PAC	21648/	592-909	1212		
		Wind	PM10 C	oncentration	n (ug/m3)	PID	
Time	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0730	■ E	2.1	23	323	6	0.0	Excavating BI-A-3-6.5'
0 800	E	1.7	13	11	10	0.0	3 and
- Br	eat for	planni	ng (0815)- (085	-)		3
0900	NE	4.2	34	17	4	0.0	
0930	E	5.3	26	21	3	0.0	
1000	ϵ	4.8	18	22	1	0.0	
1030	E	5.2	11	17	2	0.0	
1100	E	2.5	13	10	2	0.0	1
Lunch							The state of the s
1200	SE	3.3	12	5	1	0.0	Building ramp for equipment
1230	SE	4.1	37	17	2	0.0	linto excavation for backfill
1300	6	4.7	77	43	4	0.0	
1350	SE	5.8	11	24	4	0.0	The second second
1400	€	3.3	28	50	10	0.0	
1430	E	4.6	41	27	10	0.0	No. 100 Concession
1440	E	6.0	12	8		0.0	
7.575							Daily Perimeter Avg. = 3.0
	1000			Billion (0
				x - 1 1 2 1	The state of		
			9-1-1				
		1	-	No. of Street			



Site: 1233 Bockman Recorded By: E	 -	The second secon	and the same of th		120000000
Site. 1233 100CLmoun 10001aca by.	 P	Recorded By:	Rockmen	1233	Site:

Station ID: Date: 6 - 27 - 17

Perimeter Dust Monitor Model: TSI Oust Trake

Perimeter Dust Monitor Serial Number: FA 00943/8530133701

Portable Dust Monitor Model: Am 5 10 - Side Pak (TSI)

Portable Dust Monitor Serial Number: FA00810/11306006

PID Meter Model: minikal 3000
PID Meter Serial Number: FA 01648/592-909292

		Wind	PM10 Cc	oncentration	n (ug/m3)	PID	
Time	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0130	E	2.2	17	16	7	0.0	A STATE OF THE STA
0000	E	2.3	12	14	10	0.0	Y Y
0830	E	1.5	31	22	14	0.0	
0900	SE	4.5	14	16	8	0.0	
0930	E	4.8	16	22	9	0.0	
1000	8	4. (27	13	. 7	0.0	
1030	E	3.5	0	1	1	0.0	
00 1	NE	4. (5	7	3	0.0	
1130	8	4.9	11	16	15	0.0	
1200	SE	5.2	36	22	11	0.0	
1730	E	5.8	41	31	18	8.0	
1300	E	5.4	22	11	4	0.0	
1330	E	5.3	30	47	43	0.0	Geotech testing passed. begin backfill
						5.0	begin backfill
						Lot il	
		1					Daily Perimeter Aug. = 5.0
Y Car							0
7						T. A	
						1 2	
The same of the sa							



Site: 1233 Boekman	Recorded By: EL
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Station ID: Date: 06 · 28 - 17

Perimeter Dust Monitor Model: TSI Oust Trak

Perimeter Dust Monitor Serial Number: FAO 0943/8538133781

Portable Dust Monitor Model: Am 510 - Side Pak

Portable Dust Monitor Serial Number: FA00810 / 1130 6006

PID Meter Model: Mini Rae 3000

PID Meter Serial Number: FAO 1648 1592-90 92 92

	E installe	Wind	PM10 Concentration (ug/m3)		PID	£		
Time	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes	
0715	E	2.6	3 3	9	٦	0.0		
0730	E	2.8	17	16	5	0.0	Dirt movement	start
0800	E	3.3	14	10	4	0.0		4
0830	હ	5.8	21	63	40	0.0	WW	
0900	E	4.9	18	23	10	0.0	Province A PA	
2936	E	3.1	17	11	2	0.0		2 1 1
1000	ENNE	5.9	11	19	14	0.0		
1030	NE	5.3	4	27	19	0.0	wind quality to	8
1100	NE	7.5	27	56	42	0.0	3	
1130	E	5.1	16	21	11	0.0	7 4 Y	
1200	3	6.1	1.3	1.0	1.0	0.0	Lunch	38
1230	8	5.5	11	21	12	0.0		
1300	8	6.0	14	19	13	0.0		
330	E	6-3	21	17	ط	0,0		
400	E	5.5	14	23	11	0.0	Gusts to 8	
							Daily Perineter Ave	7. = 18
-1507500								
	The Control		duzalis					
		44						



Site: 1233	Barran	Recorded By: Jake Wilson
1233	DOLKMAN	Jake Wilbert

Station ID: — Date: 6/29/17

Perimeter Dust Monitor Model: TSI Dust Track II, 8530

Perimeter Dust Monitor Serial Number: 8530133701

Portable Dust Monitor Model: TS1 AM 510 Side Pak

Portable Dust Monitor Serial Number: 11 306006

PID Meter Model: Mini RAE 3000
PID Meter Serial Number: 692 - 912 8 4 3

Time		Wind	PM10 Concentration (ug/m3)			PID	
	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0715	SE	5.6	8	29	8	0.0	Loading trucks
0745	SE	3.5	13	8	9	0.0	
0815	SE	5.5	8	9	8	0.0	
0645	SE	3.8	26	31	8	0.0	The state of the s
0915	SE	8.0	8	36	8	0.0	
0945	SE	4.4	12	46	- 11	0.0	Watering work area
1015	SE	6.0	6	10	8	0.0	1
1045	SE	5.3	9	26	5	0.0	
1115	SE	4.4	6	29	6	0.0	Watering work area
1145	SE	5.6	19	43	8	0.0	
1215	SE	5.8	8	26	9	0.6	100
1245	SE	6.1	11	36	10	0.0	7
1315	5	7.8	17	2.8	14	0.0	Moving perimeter starten = 75 south.
13 45	SE	5.3	20	44	15	0.0	
1415	SE	4.9	16	22	5	0.0	4.
1445	SE	4-2	21	24	6	0.0	
1508							Taking moniter Journ.
							Daily Perimeter Aug. = 7.0
-100			4 4 4 4				



Site: 12:	33 BOCKW	nan		-	Recorde	ed By: Ja	ke Wilson
Station	ID: —				Date: 6		
	Dust Monito		TSI DA	ext Track	T. 85	30	
	Dust Monito	or Serial Nu	mber: 85	30133	701		
Portable D	Oust Monitor	Model: T.	SI Side R	K AMSIO	, '		
Portable D	Oust Monitor	Serial Num	nber: 1130 (∞6			
PID Meter	Model: Min	RAE :	5000				
PID Meter	Serial Numb	er: 542-	912843				
		Wind	PM10 C	oncentration	n (ug/m3)	PID	, , , , , , , , , , , , , , , , , , ,
Time	Wind Direction	Speed (mph)	Upwind, Excavation	Downwind, Excavation	Downwind, Perimeter	Reading (ppmv)	Notes
0715	E	3.0	1	10	3	0.0	Loading truck
0745	E	3.4	6	6	6	0.0	Compacting excavation backtill
0815	E	3.0	6	15	13	0.0	
0845	E	5.6	2	18	6	0.0	
0915	E	7.6	13	47	36	0,0	Latering Work area.
0945	E	6.7	3	36	17	8.0	
1015	E	4.7	6	36	22	0.0	
1045	E	6.2	6	24	7	0.0	hockey stick backfilling complete.
1115	Ε	5.1	5	15	-11	0.0	Backfilling hockey puck
1145	E	5.7	7	12	7	0.0	3 , ,
1215	E	9.8	37	46	19	0.0	
1245	E	8.0	11	37	9	0.0	
1315	E	11.2	45	47	26	0.0	
1340							Equipment turned off
							Daily Perimeter Avg. =11



Site: 123	3 Bock	man			Recorde	d By: Jak	ie Wilson	
Station I						3/17		
Perimeter	Dust Monito	r Model:	rsi D.	et Trak	T 86 30	, ,		
Perimeter	Dust Monito	r Serial Nu	mber: 85	301337	10			
Portable D	Dust Monitor	Model: 75	SI Siden	K AMS	0			
Portable D	oust Monitor	Serial Num	ber: 113600	+ 113060	06	-		
PID Meter	Model: Mir	I RAE	3000				1 2	
PID Meter	Serial Numb	er: 592 - 9	12 843					
PID Meter Serial Number: 592 - 912 843 Wind Wind Speed Upwind, Downwind					Downwind,	PID Reading		
Time	Direction	(mph)	Excavation	Excavation	Perimeter	(ppmv)	Notes	
0730	SE	4.2	17	43	13	0.0	Back Filling Small excau	ation
0860	5	3.1	18	28	17	0.0		
0830	SE	2.2	9	23	8	0.0		
0900	E	5.1	19	27	18	0.0		
0930	E	4.6	17	37	14	0.0		
0950							Backfilling complete.	
				120 10			2 campaign	
							X 1 D - J 1	-0-
							Daily Perimeter A	19. = 8.0
					- 40			
		2						
					1			
	1.0							
74.7	10.00					-		
			-					
							- A	
	12							
		, l _e						

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_001 **Test Start Time** 11:26:05 AM **Test Start Date** 6/19/2017 Test Length [D:H:M] 0:03:18 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.016 Mass Minimum [mg/m3] 0.004 Mass Maximum [mg/m3] 0.331 Mass TWA [mg/m3] 0.007 Photometric User Cal 1 Flow User Cal 0

Errors

Time	Mass [mg/m3]	Alarms	Errors
11:26:05 AM	0.009		
11:27:05 AM	0.008		
11:28:05 AM	0.007		
11:29:05 AM	0.007		
11:30:05 AM	0.007		
11:31:05 AM	0.007		
11:32:05 AM	0.01		
11:33:05 AM	0.007		
11:34:05 AM	0.007		
11:35:05 AM	0.008		
11:36:05 AM	0.007		
11:37:05 AM	0.006		
11:38:05 AM	0.007		
11:39:05 AM	0.007		
11:40:05 AM	0.007		
11:41:05 AM	0.006		
11:42:05 AM	0.006		
11:43:05 AM	0.007		
11:44:05 AM	0.007		
11:45:05 AM	0.007		
11:46:05 AM	0.008		
11:47:05 AM	0.007		
11:48:05 AM	0.007		
11:49:05 AM	0.007		
11:50:05 AM	0.006		
11:51:05 AM	0.006		
11:52:05 AM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
11:53:05 AM	0.006		
11:54:05 AM	0.007		
11:55:05 AM	0.006		
11:56:05 AM	0.006		
11:57:05 AM	0.006		
11:58:05 AM	0.006		
11:59:05 AM	0.007		
12:00:05 PM	0.007		
12:01:05 PM	0.007		
12:02:05 PM	0.01		
12:03:05 PM	0.008		
12:04:05 PM	0.009		
12:05:05 PM	0.01		
12:06:05 PM	0.011		
12:07:05 PM	0.011		
12:08:05 PM	0.009		
12:09:05 PM	0.008		
12:10:05 PM	0.008		
12:11:05 PM	0.016		
12:12:05 PM	0.013		
12:13:05 PM	0.011		
12:14:05 PM	0.009		
12:15:05 PM	0.008		
12:16:05 PM	0.007		
12:17:05 PM	0.011		
12:18:05 PM	0.01		
12:19:05 PM 12:20:05 PM	0.019 0.012		
12:21:05 PM	0.012		
12:22:05 PM	0.011		
12:23:05 PM	0.010		
12:24:05 PM	0.013		
12:25:05 PM	0.011		
12:26:05 PM	0.017		
12:27:05 PM	0.013		
12:28:05 PM	0.014		
12:29:05 PM	0.013		
12:30:05 PM	0.029		
12:31:05 PM	0.018		
12:32:05 PM	0.019		
12:33:05 PM	0.014		
12:34:05 PM	0.018		
12:35:05 PM	0.017		
12:36:05 PM	0.018		
12:37:05 PM	0.024		
12:38:05 PM	0.016		

Time	Mass [mg/m3]	Alarms	Errors
12:39:05 PM	0.011		
12:40:05 PM	0.018		
12:41:05 PM	0.013		
12:42:05 PM	0.007		
12:43:05 PM	0.011		
12:44:05 PM	0.017		
12:45:05 PM	0.008		
12:46:05 PM	0.024		
12:47:05 PM	0.015		
12:48:05 PM	0.018		
12:49:05 PM	0.015		
12:50:05 PM	0.015		
12:51:05 PM	0.014		
12:52:05 PM	0.01		
12:53:05 PM	0.02		
12:54:05 PM	0.022		
12:55:05 PM	0.011		
12:56:05 PM	0.011		
12:57:05 PM	0.017		
12:58:05 PM	0.014		
12:59:05 PM	0.01		
1:00:05 PM	0.015		
1:01:05 PM	0.013		
1:02:05 PM	0.013		
1:03:05 PM	0.013		
1:04:05 PM	0.017		
1:05:05 PM	0.01		
1:06:05 PM	0.019		
1:07:05 PM	0.01		
1:08:05 PM	0.008		
1:09:05 PM	0.008		
1:10:05 PM	0.009		
1:11:05 PM	0.017		
1:12:05 PM	0.025		
1:13:05 PM	0.012		
1:14:05 PM	0.01		
1:15:05 PM	0.053		
1:16:05 PM	0.176		
1:17:05 PM	0.331		
1:18:05 PM	0.067		
1:19:05 PM	0.047		
1:20:05 PM	0.027		
1:21:05 PM	0.028		
1:22:05 PM	0.029		
1:23:05 PM	0.024		
1:24:05 PM	0.033		

Time	Mass [mg/m3]	Alarms	Errors
1:25:05 PM	0.036	711011113	LITOIS
1:26:05 PM	0.029		
1:27:05 PM	0.03		
1:28:05 PM	0.02		
1:29:05 PM	0.028		
1:30:05 PM	0.025		
1:31:05 PM	0.031		
1:32:05 PM	0.02		
1:33:05 PM	0.032		
1:34:05 PM	0.018		
1:35:05 PM	0.019		
1:36:05 PM	0.013		
1:37:05 PM	0.017		
1:38:05 PM	0.022		
1:39:05 PM	0.038		
1:40:05 PM	0.016		
1:41:05 PM	0.019		
1:42:05 PM	0.016		
1:43:05 PM	0.024		
1:44:05 PM	0.022		
1:45:05 PM	0.017		
1:46:05 PM	0.019		
1:47:05 PM	0.023		
1:48:05 PM	0.026		
1:49:05 PM	0.02		
1:50:05 PM	0.04		
1:51:05 PM	0.028		
1:52:05 PM	0.04		
1:53:05 PM 1:54:05 PM	0.021 0.009		
1:55:05 PM	0.009		
1:56:05 PM	0.008		
1:57:05 PM	0.017		
1:58:05 PM	0.015		
1:59:05 PM	0.011		
2:00:05 PM	0.019		
2:01:05 PM	0.011		
2:02:05 PM	0.015		
2:03:05 PM	0.008		
2:04:05 PM	0.011		
2:05:05 PM	0.008		
2:06:05 PM	0.006		
2:07:05 PM	0.005		
2:08:05 PM	0.005		
2:09:05 PM	0.005		
2:10:05 PM	0.006		

Time	Mass [mg/m3]	Alarms	Errors
2:11:05 PM	0.006		
2:12:05 PM	0.008		
2:13:05 PM	0.01		
2:14:05 PM	0.012		
2:15:05 PM	0.019		
2:16:05 PM	0.005		
2:17:05 PM	0.006		
2:18:05 PM	0.008		
2:19:05 PM	0.005		
2:20:05 PM	0.019		
2:21:05 PM	0.005		
2:22:05 PM	0.005		
2:23:05 PM	0.006		
2:24:05 PM	0.005		
2:25:05 PM	0.005		
2:26:05 PM	0.007		
2:27:05 PM	0.006		
2:28:05 PM	0.007		
2:29:05 PM	0.006		
2:30:05 PM	0.008		
2:31:05 PM	0.007		
2:32:05 PM	0.011		
2:33:05 PM	0.013		
2:34:05 PM	0.008		
2:35:05 PM	0.006		
2:36:05 PM	0.005		
2:37:05 PM	0.005		
2:38:05 PM	0.005		
2:39:05 PM	0.006		
2:40:05 PM	0.004		
2:41:05 PM	0.006		
2:42:05 PM	0.004		
2:43:05 PM	0.004		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_002 **Test Start Time** 8:03:35 AM **Test Start Date** 6/20/2017 Test Length [D:H:M] 0:06:12 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.008 Mass Minimum [mg/m3] 0.004 Mass Maximum [mg/m3] 0.069 0.006 Mass TWA [mg/m3] Photometric User Cal 1 Flow User Cal 0

Errors

Time	Mass [mg/m3]	Alarms	Errors
8:03:35 AM	0.008		
8:04:35 AM	0.008		
8:05:35 AM	0.007		
8:06:35 AM	0.007		
8:07:35 AM	0.012		
8:08:35 AM	0.008		
8:09:35 AM	0.015		
8:10:35 AM	0.008		
8:11:35 AM	0.006		
8:12:35 AM	0.006		
8:13:35 AM	0.006		
8:14:35 AM	0.006		
8:15:35 AM	0.008		
8:16:35 AM	0.007		
8:17:35 AM	0.006		
8:18:35 AM	0.015		
8:19:35 AM	0.008		
8:20:35 AM	0.005		
8:21:35 AM	0.005		
8:22:35 AM	0.005		
8:23:35 AM	0.008		
8:24:35 AM	0.01		
8:25:35 AM	0.008		
8:26:35 AM	0.01		
8:27:35 AM	0.006		
8:28:35 AM	0.006		
8:29:35 AM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
8:30:35 AM	0.008		
8:31:35 AM	0.006		
8:32:35 AM	0.007		
8:33:35 AM	0.007		
8:34:35 AM	0.007		
8:35:35 AM	0.006		
8:36:35 AM	0.007		
8:37:35 AM	0.008		
8:38:35 AM	0.007		
8:39:35 AM	0.006		
8:40:35 AM	0.006		
8:41:35 AM	0.006		
8:42:35 AM	0.008		
8:43:35 AM	0.006		
8:44:35 AM	0.009		
8:45:35 AM	0.007		
8:46:35 AM	0.013		
8:47:35 AM	0.01		
8:48:35 AM	0.009		
8:49:35 AM	0.007		
8:50:35 AM	0.006		
8:51:35 AM	0.006		
8:52:35 AM	0.006		
8:53:35 AM	0.007		
8:54:35 AM	0.006		
8:55:35 AM	0.006		
8:56:35 AM	0.006		
8:57:35 AM	0.006		
8:58:35 AM 8:59:35 AM	0.006		
	0.007		
9:00:35 AM 9:01:35 AM	0.007		
9:01:35 AM	0.005 0.006		
9:03:35 AM	0.009		
9:04:35 AM	0.009		
9:05:35 AM	0.018		
9:06:35 AM	0.007		
9:07:35 AM	0.008		
9:08:35 AM	0.006		
9:09:35 AM	0.007		
9:10:35 AM	0.007		
9:11:35 AM	0.005		
9:12:35 AM	0.009		
9:13:35 AM	0.003		
9:14:35 AM	0.008		
9:15:35 AM	0.006		
5.25.557111	0.000		

Time	Mass [mg/m3]	Alarms	Errors
9:16:35 AM	0.006		
9:17:35 AM	0.011		
9:18:35 AM	0.005		
9:19:35 AM	0.008		
9:20:35 AM	0.008		
9:21:35 AM	0.005		
9:22:35 AM	0.006		
9:23:35 AM	0.007		
9:24:35 AM	0.007		
9:25:35 AM	0.011		
9:26:35 AM	0.009		
9:27:35 AM	0.006		
9:28:35 AM	0.006		
9:29:35 AM	0.007		
9:30:35 AM	0.013		
9:31:35 AM	0.007		
9:32:35 AM	0.011		
9:33:35 AM	0.008		
9:34:35 AM	0.008		
9:35:35 AM	0.007		
9:36:35 AM	0.011		
9:37:35 AM	0.02		
9:38:35 AM	0.008		
9:39:35 AM	0.006		
9:40:35 AM	0.007		
9:41:35 AM	0.007		
9:42:35 AM	0.009		
9:43:35 AM	0.013		
9:44:35 AM	0.01		
9:45:35 AM	0.01		
9:46:35 AM	0.021		
9:47:35 AM	0.018		
9:48:35 AM	0.015		
9:49:35 AM	0.005		
9:50:35 AM	0.018		
9:51:35 AM	0.016		
9:52:35 AM	0.006		
9:53:35 AM	0.005		
9:54:35 AM	0.008		
9:55:35 AM	0.009		
9:56:35 AM	0.009		
9:57:35 AM	0.008		
9:58:35 AM	0.007		
9:59:35 AM	0.008		
10:00:35 AM	0.008		
10:01:35 AM	0.011		

Time	Mass [mg/m3]	Alarms	Errors
10:02:35 Al	√l 0.02		
10:03:35 Al	VI 0.009		
10:04:35 AN	0.006		
10:05:35 Al	VI 0.007		
10:06:35 Al			
10:07:35 Al			
10:08:35 Al			
10:09:35 Al			
10:10:35 Al			
10:11:35 AN			
10:11:35 /\l			
10:12:35 Al			
10:14:35 AN			
10:15:35 AN			
10:16:35 AN			
10:10:35 AI			
10:17:35 AI			
10:10:35 Al			
10:19:35 Al			
10:21:35 AN			
10:22:35 AN			
10:23:35 AN			
10:24:35 AN			
10:25:35 AN			
10:26:35 AN			
10:27:35 AN			
10:28:35 AN			
10:29:35 AN			
10:30:35 AN			
10:31:35 AN			
10:32:35 AN			
10:33:35 Al			
10:34:35 Al			
10:35:35 Al			
10:36:35 Al			
10:37:35 Al			
10:38:35 Al			
10:39:35 A			
10:40:35 A	M 0.007		
10:41:35 A	VI 0.005		
10:42:35 Al	VI 0.005		
10:43:35 A	VI 0.005		
10:44:35 Af	0.006		
10:45:35 Al	vi 0.007		
10:46:35 AN	M 0.007		
10:47:35 Al	0.006		

Time	Mass [mg/m3]	Alarms	Errors
10:48:35 AM	0.008		
10:49:35 AM	0.009		
10:50:35 AM	0.007		
10:51:35 AM	0.007		
10:52:35 AM	0.007		
10:53:35 AM	0.005		
10:54:35 AM	0.007		
10:55:35 AM	0.007		
10:56:35 AM	0.01		
10:57:35 AM	0.006		
10:58:35 AM	0.008		
10:59:35 AM	0.007		
11:00:35 AM	0.007		
11:01:35 AM	0.008		
11:02:35 AM	0.011		
11:02:35 AM	0.011		
11:03:35 AW	0.013		
11:04:35 AW	0.008		
11:05:35 AW	0.008		
11:07:35 AM	0.011		
11:08:35 AM	0.006		
11:09:35 AM	0.004		
11:10:35 AM	0.006		
11:11:35 AM	0.007		
11:12:35 AM	0.007		
11:13:35 AM	0.006		
11:14:35 AM	0.008		
11:15:35 AM	0.007		
11:16:35 AM	0.015		
11:17:35 AM	0.008		
11:18:35 AM	0.005		
11:19:35 AM	0.005		
11:20:35 AM	0.005		
11:21:35 AM	0.004		
11:22:35 AM	0.005		
11:23:35 AM	0.005		
11:24:35 AM	0.005		
11:25:35 AM	0.005		
11:26:35 AM	0.005		
11:27:35 AM	0.005		
11:28:35 AM	0.005		
11:29:35 AM	0.005		
11:30:35 AM	0.005		
11:31:35 AM	0.005		
11:32:35 AM	0.005		
11:33:35 AM	0.005		
	-		

Time	Mass [mg/m3]	Alarms	Errors
11:34:35 AM	0.005		
11:35:35 AM	0.005		
11:36:35 AM	0.005		
11:37:35 AM	0.005		
11:38:35 AM	0.005		
11:39:35 AM	0.005		
11:40:35 AM	0.005		
11:41:35 AM	0.005		
11:42:35 AM	0.005		
11:43:35 AM	0.005		
11:44:35 AM	0.005		
11:45:35 AM	0.005		
11:46:35 AM	0.005		
11:47:35 AM	0.005		
11:48:35 AM	0.005		
11:49:35 AM	0.005		
11:50:35 AM	0.005		
11:51:35 AM	0.005		
11:52:35 AM	0.005		
11:53:35 AM	0.005		
11:54:35 AM	0.005		
11:55:35 AM	0.005		
11:56:35 AM	0.005		
11:57:35 AM	0.005		
11:58:35 AM	0.005		
11:59:35 AM	0.005		
12:00:35 PM	0.005		
12:01:35 PM	0.005		
12:02:35 PM 12:03:35 PM	0.005		
	0.005		
12:04:35 PM 12:05:35 PM	0.005 0.005		
12:05:35 PM	0.003		
12:07:35 PM	0.007		
12:08:35 PM	0.005		
12:09:35 PM	0.006		
12:10:35 PM	0.007		
12:11:35 PM	0.006		
12:11:35 PM	0.006		
12:13:35 PM	0.01		
12:14:35 PM	0.006		
12:15:35 PM	0.006		
12:16:35 PM	0.005		
12:17:35 PM	0.006		
12:18:35 PM	0.008		
12:19:35 PM	0.01		
	0.01		

Time	Mass [mg/m3]	Alarms	Errors
12:20:35 PM	0.008		
12:21:35 PM	0.006		
12:22:35 PM	0.009		
12:23:35 PM	0.015		
12:24:35 PM	0.01		
12:25:35 PM	0.007		
12:26:35 PM	0.008		
12:27:35 PM	0.011		
12:28:35 PM	0.007		
12:29:35 PM	0.009		
12:30:35 PM	0.008		
12:31:35 PM	0.007		
12:31:35 PM	0.009		
12:33:35 PM	0.006		
12:34:35 PM	0.009		
12:35:35 PM	0.009		
12:36:35 PM			
12:37:35 PM	0.006		
	0.008		
12:38:35 PM	0.008		
12:39:35 PM	0.008		
12:40:35 PM	0.025		
12:41:35 PM	0.055		
12:42:35 PM	0.01		
12:43:35 PM	0.007		
12:44:35 PM	0.005		
12:45:35 PM	0.007		
12:46:35 PM	0.005		
12:47:35 PM	0.004		
12:48:35 PM	0.006		
12:49:35 PM	0.005		
12:50:35 PM	0.008		
12:51:35 PM	0.015		
12:52:35 PM	0.011		
12:53:35 PM	0.006		
12:54:35 PM	0.01		
12:55:35 PM	0.008		
12:56:35 PM	0.007		
12:57:35 PM	0.005		
12:58:35 PM	0.007		
12:59:35 PM	0.014		
1:00:35 PM	0.009		
1:01:35 PM	0.011		
1:02:35 PM	0.008		
1:03:35 PM	0.006		
1:04:35 PM	0.008		
1:05:35 PM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
1:06:35 PM	0.008		
1:07:35 PM	0.008		
1:08:35 PM	0.008		
1:09:35 PM	0.007		
1:10:35 PM	0.008		
1:11:35 PM	0.01		
1:12:35 PM	0.008		
1:13:35 PM	0.009		
1:14:35 PM	0.005		
1:15:35 PM	0.005		
1:16:35 PM	0.005		
1:17:35 PM	0.006		
1:18:35 PM	0.005		
1:19:35 PM	0.005		
1:20:35 PM 1:21:35 PM	0.005 0.005		
1:21:35 PM	0.005		
1:23:35 PM	0.005		
1:24:35 PM	0.005		
1:25:35 PM	0.005		
1:26:35 PM	0.005		
1:27:35 PM	0.009		
1:28:35 PM	0.005		
1:29:35 PM	0.005		
1:30:35 PM	0.005		
1:31:35 PM	0.007		
1:32:35 PM	0.008		
1:33:35 PM	0.009		
1:34:35 PM	0.01		
1:35:35 PM	0.013		
1:36:35 PM	0.015		
1:37:35 PM	0.016		
1:38:35 PM	0.005		
1:39:35 PM	0.008		
1:40:35 PM	0.009		
1:41:35 PM	0.006 0.008		
1:42:35 PM 1:43:35 PM	0.008		
1:44:35 PM	0.007		
1:45:35 PM	0.014		
1:46:35 PM	0.013		
1:47:35 PM	0.012		
1:48:35 PM	0.002		
1:49:35 PM	0.006		
1:50:35 PM	0.007		
1:51:35 PM	0.007		
	0.30,		

Mass [ma/m3]	Alarms	Errors
	Alaillis	LIIUIS
0.009		
0.006		
0.019		
0.025		
0.007		
0.008		
0.006		
0.005		
0.005		
0.006		
0.006		
0.005		
0.006		
0.006		
0.008		
0.008		
0.005		
0.007		
0.069		
0.049		
0.015		
	0.014 0.008 0.009 0.006 0.019 0.025 0.007 0.008 0.006 0.005 0.006 0.006 0.006 0.006 0.006 0.008 0.008 0.008 0.008 0.009 0.009 0.009	0.008 0.009 0.006 0.019 0.025 0.007 0.008 0.006 0.005 0.005 0.006 0.006 0.006 0.006 0.006 0.006 0.008 0.008 0.008 0.008 0.009

Instrument Name DustTrak II **Model Number** 8530 **Serial Number** 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_003 **Test Start Time** 7:15:19 AM **Test Start Date** 6/21/2017 Test Length [D:H:M] 0:07:31 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.006 Mass Minimum [mg/m3] 0.003 Mass Maximum [mg/m3] 0.043 Mass TWA [mg/m3] 0.006 Photometric User Cal 1 Flow User Cal 0 Errors

Time	Mass [mg/m3]	Alarms	Errors
7:15:19 AM	0.008		
7:16:19 AM	0.006		
7:17:19 AM	0.006		
7:18:19 AM	0.006		
7:19:19 AM	0.006		
7:20:19 AM	0.006		
7:21:19 AM	0.006		
7:22:19 AM	0.006		
7:23:19 AM	0.006		
7:24:19 AM	0.007		
7:25:19 AM	0.006		
7:26:19 AM	0.006		
7:27:19 AM	0.007		
7:28:19 AM	0.009		
7:29:19 AM	0.009		
7:30:19 AM	0.007		
7:31:19 AM	0.01		
7:32:19 AM	0.013		
7:33:19 AM	0.01		
7:34:19 AM	0.005		
7:35:19 AM	0.005		
7:36:19 AM	0.006		
7:37:19 AM	0.007		
7:38:19 AM	0.011		
7:39:19 AM	0.007		
7:40:19 AM	0.01		
7:41:19 AM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
7:42:19 AM	0.008		
7:43:19 AM	0.008		
7:44:19 AM	0.008		
7:45:19 AM	0.008		
7:46:19 AM	0.006		
7:47:19 AM	0.005		
7:48:19 AM	0.005		
7:49:19 AM	0.006		
7:50:19 AM	0.005		
7:51:19 AM	0.005		
7:52:19 AM	0.016		
7:53:19 AM	0.007		
7:54:19 AM	0.009		
7:55:19 AM	0.005		
7:56:19 AM	0.004		
7:57:19 AM	0.005		
7:58:19 AM	0.004		
7:59:19 AM	0.004		
8:00:19 AM	0.006		
8:01:19 AM 8:02:19 AM	0.005 0.004		
8:03:19 AM	0.004		
8:04:19 AM	0.004		
8:05:19 AM	0.004		
8:06:19 AM	0.004		
8:07:19 AM	0.004		
8:08:19 AM	0.006		
8:09:19 AM	0.005		
8:10:19 AM	0.005		
8:11:19 AM	0.005		
8:12:19 AM	0.004		
8:13:19 AM	0.004		
8:14:19 AM	0.003		
8:15:19 AM	0.003		
8:16:19 AM	0.003		
8:17:19 AM	0.004		
8:18:19 AM	0.004		
8:19:19 AM	0.008		
8:20:19 AM	0.005		
8:21:19 AM	0.008		
8:22:19 AM	0.006		
8:23:19 AM	0.008		
8:24:19 AM	0.004		
8:25:19 AM	0.005		
8:26:19 AM	0.011		
8:27:19 AM	0.017		

Time	Mass [mg/m3]	Alarms	Errors
8:28:19 AM	0.004		
8:29:19 AM	0.007		
8:30:19 AM	0.007		
8:31:19 AM	0.004		
8:32:19 AM	0.003		
8:33:19 AM	0.003		
8:34:19 AM	0.003		
8:35:19 AM	0.004		
8:36:19 AM	0.004		
8:37:19 AM	0.004		
8:38:19 AM	0.004		
8:39:19 AM			
8:40:19 AM	0.003 0.003		
8:41:19 AM			
	0.01		
8:42:19 AM	0.004		
8:43:19 AM	0.003		
8:44:19 AM	0.003		
8:45:19 AM	0.003		
8:46:19 AM	0.003		
8:47:19 AM	0.004		
8:48:19 AM	0.003		
8:49:19 AM	0.004		
8:50:19 AM	0.005		
8:51:19 AM	0.003		
8:52:19 AM	0.007		
8:53:19 AM	0.004		
8:54:19 AM	0.004		
8:55:19 AM	0.003		
8:56:19 AM	0.003		
8:57:19 AM	0.003		
8:58:19 AM	0.004		
8:59:19 AM	0.005		
9:00:19 AM	0.007		
9:01:19 AM	0.006		
9:02:19 AM	0.007		
9:03:19 AM	0.005		
9:04:19 AM	0.005		
9:05:19 AM	0.004		
9:06:19 AM	0.004		
9:07:19 AM	0.004		
9:08:19 AM	0.003		
9:09:19 AM	0.003		
9:10:19 AM	0.003		
9:11:19 AM	0.004		
9:12:19 AM	0.004		
9:13:19 AM	0.006		

Time	Mass [mg/m3]	Alarms	Errors
9:14:19 AM	0.003		
9:15:19 AM	0.003		
9:16:19 AM	0.004		
9:17:19 AM	0.003		
9:18:19 AM	0.003		
9:19:19 AM	0.003		
9:20:19 AM	0.007		
9:21:19 AM	0.006		
9:22:19 AM	0.004		
9:23:19 AM	0.004		
9:24:19 AM	0.004		
9:25:19 AM	0.015		
9:26:19 AM	0.005		
9:27:19 AM	0.003		
9:28:19 AM	0.003		
9:29:19 AM	0.005		
9:30:19 AM	0.005		
9:31:19 AM	0.003		
9:32:19 AM	0.003		
9:33:19 AM	0.003		
9:34:19 AM	0.003		
9:35:19 AM	0.003		
9:36:19 AM	0.003		
9:37:19 AM	0.004		
9:38:19 AM	0.004		
9:39:19 AM	0.007		
9:40:19 AM	0.003		
9:41:19 AM	0.003		
9:42:19 AM	0.003		
9:43:19 AM	0.003		
9:44:19 AM	0.008		
9:45:19 AM	0.013		
9:46:19 AM	0.011		
9:47:19 AM	0.008		
9:48:19 AM	0.008		
9:49:19 AM	0.008		
9:50:19 AM	0.01		
9:51:19 AM	0.004		
9:52:19 AM	0.004		
9:53:19 AM	0.012		
9:54:19 AM	0.008		
9:55:19 AM	0.004		
9:56:19 AM	0.004 0.003		
9:57:19 AM			
9:58:19 AM	0.003		
9:59:19 AM	0.003		

Time	Mass [mg/m3]	Alarms	Errors
10:00:19 AM	0.006	711011113	211013
10:01:19 AM	0.005		
10:02:19 AM	0.005		
10:03:19 AM	0.008		
10:04:19 AM	0.01		
10:05:19 AM	0.006		
10:06:19 AM	0.004		
10:07:19 AM	0.003		
10:08:19 AM	0.006		
10:09:19 AM	0.005		
10:10:19 AM	0.004		
10:11:19 AM	0.005		
10:12:19 AM	0.004		
10:13:19 AM	0.004		
10:14:19 AM	0.006		
10:15:19 AM	0.043		
10:16:19 AM	0.007		
10:17:19 AM	0.007		
10:18:19 AM	0.004		
10:19:19 AM	0.003		
10:20:19 AM	0.003		
10:21:19 AM	0.005		
10:22:19 AM	0.01		
10:23:19 AM	0.008		
10:24:19 AM	0.008		
10:25:19 AM	0.008		
10:26:19 AM	0.007		
10:27:19 AM	0.004		
10:28:19 AM	0.039		
10:29:19 AM	0.015		
10:30:19 AM	0.011		
10:31:19 AM	0.015		
10:32:19 AM	0.01		
10:33:19 AM	0.005		
10:34:19 AM	0.004		
10:35:19 AM	0.004		
10:36:19 AM	0.004		
10:37:19 AM 10:38:19 AM	0.007 0.007		
10:39:19 AM	0.007		
10:40:19 AM	0.008		
10:41:19 AM	0.00		
10:41:19 AM	0.01		
10:42:19 AM	0.001		
10:44:19 AM	0.008		
10:45:19 AM	0.003		
TO2.13 WIN	0.003		

Time	Mass [mg/m3]	Alarms	Errors
10:46:19 AM	0.005		
10:47:19 AM	0.005		
10:48:19 AM	0.006		
10:49:19 AM	0.005		
10:50:19 AM	0.005		
10:51:19 AM	0.004		
10:52:19 AM	0.008		
10:53:19 AM	0.006		
10:54:19 AM	0.007		
10:55:19 AM	0.005		
10:56:19 AM	0.011		
10:57:19 AM	0.005		
10:58:19 AM	0.005		
10:59:19 AM	0.006		
11:00:19 AM	0.007		
11:01:19 AM	0.008		
11:02:19 AM	0.006		
11:03:19 AM 11:04:19 AM	0.005 0.004		
11:04:19 AM	0.004		
11:05:19 AM	0.006		
11:00:19 AW 11:07:19 AM	0.007		
11:07:19 AM	0.007		
11:09:19 AM	0.004		
11:10:19 AM	0.004		
11:11:19 AM	0.004		
11:12:19 AM	0.003		
11:13:19 AM	0.003		
11:14:19 AM	0.003		
11:15:19 AM	0.003		
11:16:19 AM	0.003		
11:17:19 AM	0.004		
11:18:19 AM	0.004		
11:19:19 AM	0.004		
11:20:19 AM	0.003		
11:21:19 AM	0.003		
11:22:19 AM	0.004		
11:23:19 AM	0.004		
11:24:19 AM	0.004		
11:25:19 AM	0.003		
11:26:19 AM	0.003		
11:27:19 AM	0.003		
11:28:19 AM	0.003		
11:29:19 AM	0.004		
11:30:19 AM	0.003		
11:31:19 AM	0.003		

Time	Mass [mg/m3]	Alarms	Errors
11:32:19 AM	0.003		
11:33:19 AM	0.003		
11:34:19 AM	0.004		
11:35:19 AM	0.004		
11:36:19 AM	0.004		
11:37:19 AM	0.004		
11:38:19 AM	0.004		
11:39:19 AM	0.004		
11:40:19 AM	0.004		
11:41:19 AM	0.004		
11:42:19 AM	0.004		
11:43:19 AM	0.004		
11:44:19 AM	0.004		
11:45:19 AM	0.004		
11:46:19 AM	0.004		
11:47:19 AM	0.004		
11:48:19 AM	0.004		
11:49:19 AM	0.004		
11:50:19 AM	0.004		
11:51:19 AM	0.004		
11:52:19 AM	0.004		
11:53:19 AM	0.004		
11:54:19 AM	0.004		
11:55:19 AM	0.004		
11:56:19 AM	0.004		
11:57:19 AM	0.004		
11:58:19 AM	0.004		
11:59:19 AM	0.004		
12:00:19 PM	0.004		
12:01:19 PM	0.004		
12:02:19 PM	0.004		
12:03:19 PM	0.004		
12:04:19 PM	0.004		
12:05:19 PM	0.005		
12:06:19 PM	0.004		
12:07:19 PM	0.004		
12:08:19 PM	0.004		
12:09:19 PM 12:10:19 PM	0.004		
	0.005		
12:11:19 PM	0.004		
12:12:19 PM	0.004		
12:13:19 PM 12:14:19 PM	0.004 0.005		
12:14:19 PM 12:15:19 PM	0.005		
12:15:19 PM 12:16:19 PM			
	0.004		
12:17:19 PM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
12:18:19 PM	0.013		
12:19:19 PM	0.004		
12:20:19 PM	0.005		
12:21:19 PM	0.013		
12:22:19 PM	0.015		
12:23:19 PM	0.012		
12:24:19 PM	0.014		
12:25:19 PM	0.013		
12:26:19 PM	0.005		
12:27:19 PM	0.008		
12:28:19 PM	0.011		
12:29:19 PM	0.008		
12:30:19 PM	0.004		
12:31:19 PM	0.004		
12:32:19 PM	0.007		
12:33:19 PM	0.012		
12:34:19 PM	0.005		
12:35:19 PM	0.007		
12:36:19 PM	0.006		
12:37:19 PM	0.008		
12:38:19 PM	0.007		
12:39:19 PM	0.011		
12:40:19 PM	0.007		
12:41:19 PM	0.018		
12:42:19 PM	0.008		
12:43:19 PM	0.012		
12:44:19 PM	0.009		
12:45:19 PM	0.007		
12:46:19 PM	0.009		
12:47:19 PM	0.02		
12:48:19 PM	0.008		
12:49:19 PM	0.008		
12:50:19 PM	0.012		
12:51:19 PM	0.009		
12:52:19 PM	0.006		
12:53:19 PM	0.008		
12:54:19 PM	0.005		
12:55:19 PM	0.009		
12:56:19 PM	0.01		
12:57:19 PM	0.009		
12:58:19 PM	0.011		
12:59:19 PM	0.011		
1:00:19 PM	0.008		
1:01:19 PM	0.006		
1:02:19 PM	0.006		
1:03:19 PM	0.006		

Time	Mass [mg/m3]	Alarms	Errors
1:04:19 PM	0.011		
1:05:19 PM	0.006		
1:06:19 PM	0.007		
1:07:19 PM	0.008		
1:08:19 PM	0.004		
1:09:19 PM	0.007		
1:10:19 PM	0.008		
1:11:19 PM	0.006		
1:12:19 PM	0.035		
1:13:19 PM	0.008		
1:14:19 PM	0.007		
1:15:19 PM	0.01		
1:16:19 PM	0.014		
1:17:19 PM	0.005		
1:18:19 PM	0.004		
1:19:19 PM	0.006		
1:20:19 PM	0.007		
1:21:19 PM	0.007		
1:22:19 PM	0.009		
1:23:19 PM	0.007		
1:24:19 PM	0.008		
1:25:19 PM	0.005		
1:26:19 PM	0.006		
1:27:19 PM	0.006		
1:28:19 PM	0.006		
1:29:19 PM	0.004		
1:30:19 PM	0.01		
1:31:19 PM 1:32:19 PM	0.007 0.006		
1:33:19 PM	0.005		
1:34:19 PM	0.003		
1:35:19 PM	0.004		
1:36:19 PM	0.005		
1:37:19 PM	0.006		
1:38:19 PM	0.008		
1:39:19 PM	0.007		
1:40:19 PM	0.005		
1:41:19 PM	0.005		
1:42:19 PM	0.004		
1:43:19 PM	0.005		
1:44:19 PM	0.006		
1:45:19 PM	0.005		
1:46:19 PM	0.005		
1:47:19 PM	0.006		
1:48:19 PM	0.007		
1:49:19 PM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
1:50:19 PM	0.005		
1:51:19 PM	0.005		
1:52:19 PM	0.007		
1:53:19 PM	0.005		
1:54:19 PM	0.005		
1:55:19 PM	0.005		
1:56:19 PM	0.006		
1:57:19 PM	0.006		
1:58:19 PM	0.009		
1:59:19 PM	0.012		
2:00:19 PM	0.006		
2:01:19 PM	0.008		
2:02:19 PM	0.006		
2:03:19 PM	0.005		
2:04:19 PM	0.004		
2:05:19 PM	0.004		
2:06:19 PM	0.014		
2:07:19 PM	0.005 0.005		
2:08:19 PM 2:09:19 PM	0.005		
2:10:19 PM	0.004		
2:11:19 PM	0.003		
2:12:19 PM	0.005		
2:13:19 PM	0.005		
2:14:19 PM	0.005		
2:15:19 PM	0.005		
2:16:19 PM	0.005		
2:17:19 PM	0.005		
2:18:19 PM	0.006		
2:19:19 PM	0.005		
2:20:19 PM	0.005		
2:21:19 PM	0.005		
2:22:19 PM	0.005		
2:23:19 PM	0.005		
2:24:19 PM	0.005		
2:25:19 PM	0.005		
2:26:19 PM	0.005		
2:27:19 PM	0.005		
2:28:19 PM	0.005		
2:29:19 PM	0.005		
2:30:19 PM	0.004		
2:31:19 PM	0.005		
2:32:19 PM	0.005		
2:33:19 PM	0.005		
2:34:19 PM	0.005		
2:35:19 PM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
2:36:19 PM	0.005		
2:37:19 PM	0.005		
2:38:19 PM	0.005		
2:39:19 PM	0.005		
2:40:19 PM	0.005		
2:41:19 PM	0.005		
2:42:19 PM	0.005		
2:43:19 PM	0.006		
2:44:19 PM	0.005		
2:45:19 PM	0.005		

Instrument Name DustTrak II **Model Number** 8530 **Serial Number** 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_004 **Test Start Time** 7:10:49 AM **Test Start Date** 6/22/2017 Test Length [D:H:M] 0:06:09 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.013 Mass Minimum [mg/m3] 0.005 Mass Maximum [mg/m3] 0.045 Mass TWA [mg/m3] 0.01 Photometric User Cal 1 0 Flow User Cal Errors

Time	Mass [mg/m3]	Alarms	Errors
7:10:49 AM	0.015		
7:11:49 AM	0.017		
7:12:49 AM	0.019		
7:13:49 AM	0.013		
7:14:49 AM	0.013		
7:15:49 AM	0.02		
7:16:49 AM	0.015		
7:17:49 AM	0.013		
7:18:49 AM	0.013		
7:19:49 AM	0.012		
7:20:49 AM	0.013		
7:21:49 AM	0.012		
7:22:49 AM	0.012		
7:23:49 AM	0.013		
7:24:49 AM	0.012		
7:25:49 AM	0.013		
7:26:49 AM	0.013		
7:27:49 AM	0.013		
7:28:49 AM	0.013		
7:29:49 AM	0.013		
7:30:49 AM	0.013		
7:31:49 AM	0.012		
7:32:49 AM	0.012		
7:33:49 AM	0.013		
7:34:49 AM	0.012		
7:35:49 AM	0.012		
7:36:49 AM	0.012		

Time	Mass [mg/m3]	Alarms	Errors
7:37:49 AM	0.012	,	2.10.0
7:38:49 AM	0.013		
7:39:49 AM	0.013		
7:40:49 AM	0.012		
7:41:49 AM	0.013		
7:42:49 AM	0.012		
7:43:49 AM	0.012		
7:44:49 AM	0.013		
7:45:49 AM	0.012		
7:46:49 AM	0.013		
7:47:49 AM	0.013		
7:48:49 AM	0.012		
7:49:49 AM	0.012		
7:50:49 AM	0.013		
7:51:49 AM	0.012		
7:52:49 AM	0.012		
7:53:49 AM	0.012		
7:54:49 AM	0.013		
7:55:49 AM	0.015		
7:56:49 AM	0.012		
7:57:49 AM	0.02		
7:58:49 AM	0.02		
7:59:49 AM	0.013		
8:00:49 AM 8:01:49 AM	0.016 0.015		
8:02:49 AM	0.013		
8:03:49 AM	0.012		
8:04:49 AM	0.012		
8:05:49 AM	0.012		
8:06:49 AM	0.013		
8:07:49 AM	0.013		
8:08:49 AM	0.013		
8:09:49 AM	0.019		
8:10:49 AM	0.015		
8:11:49 AM	0.015		
8:12:49 AM	0.016		
8:13:49 AM	0.015		
8:14:49 AM	0.016		
8:15:49 AM	0.018		
8:16:49 AM	0.015		
8:17:49 AM	0.014		
8:18:49 AM	0.015		
8:19:49 AM	0.015		
8:20:49 AM	0.016		
8:21:49 AM	0.023		
8:22:49 AM	0.014		

Time	Mass [mg/m3]	Alarms	Errors
8:23:49 AM	0.014		
8:24:49 AM	0.015		
8:25:49 AM	0.014		
8:26:49 AM	0.013		
8:27:49 AM	0.013		
8:28:49 AM	0.013		
8:29:49 AM	0.013		
8:30:49 AM	0.015		
8:31:49 AM	0.013		
8:32:49 AM	0.013		
8:33:49 AM	0.013		
8:34:49 AM	0.02		
8:35:49 AM	0.014		
8:36:49 AM	0.012		
8:37:49 AM	0.012		
8:38:49 AM	0.014		
8:39:49 AM	0.019		
8:40:49 AM	0.019		
8:41:49 AM 8:42:49 AM	0.014 0.023		
8:43:49 AM	0.023		
8:44:49 AM	0.022		
8:45:49 AM	0.019		
8:46:49 AM	0.013		
8:47:49 AM	0.014		
8:48:49 AM	0.012		
8:49:49 AM	0.045		
8:50:49 AM	0.021		
8:51:49 AM	0.021		
8:52:49 AM	0.025		
8:53:49 AM	0.028		
8:54:49 AM	0.02		
8:55:49 AM	0.027		
8:56:49 AM	0.022		
8:57:49 AM	0.03		
8:58:49 AM	0.03		
8:59:49 AM	0.014		
9:00:49 AM	0.027		
9:01:49 AM	0.014		
9:02:49 AM	0.012		
9:03:49 AM	0.013		
9:04:49 AM	0.011		
9:05:49 AM	0.024		
9:06:49 AM	0.026		
9:07:49 AM	0.02		
9:08:49 AM	0.016		

Time	Mass [mg/m3]	Alarms	Errors
9:09:49 AM	0.012		
9:10:49 AM	0.014		
9:11:49 AM	0.02		
9:12:49 AM	0.022		
9:13:49 AM	0.015		
9:14:49 AM	0.015		
9:15:49 AM	0.016		
9:16:49 AM	0.015		
9:17:49 AM	0.015		
9:18:49 AM	0.01		
9:19:49 AM	0.017		
9:20:49 AM	0.015		
9:21:49 AM	0.014		
9:22:49 AM	0.014		
9:23:49 AM	0.009		
9:24:49 AM	0.009		
9:25:49 AM	0.018		
9:26:49 AM	0.016		
9:27:49 AM	0.014		
9:28:49 AM	0.01		
9:29:49 AM	0.009		
9:30:49 AM	0.009		
9:31:49 AM	0.009		
9:32:49 AM	0.009		
9:33:49 AM	0.009		
9:34:49 AM	0.009		
9:35:49 AM	0.009		
9:36:49 AM	0.01		
9:37:49 AM	0.009		
9:38:49 AM	0.009		
9:39:49 AM	0.009		
9:40:49 AM	0.009		
9:41:49 AM	0.009		
9:42:49 AM	0.009		
9:43:49 AM	0.01		
9:44:49 AM	0.01		
9:45:49 AM	0.009		
9:46:49 AM 9:47:49 AM	0.008 0.01		
9:48:49 AM	0.001		
9:49:49 AM	0.008		
9:50:49 AM	0.008		
9:51:49 AM	0.008		
9:52:49 AM	0.008		
9:52:49 AM	0.008		
9:54:49 AM	0.008		
J.J4.43 AIVI	0.000		

Mass [mg/m3]	Alarms	Errors
0.008		
0.008		
0.008		
0.008		
0.009		
0.008		
0.008		
0.008		
0.008		
0.009		
0.009		
0.008		
0.008		
0.009		
0.009		
0.017		
0.013		
0.009		
	0.008 0.008 0.008 0.008 0.009 0.008 0.008 0.008 0.009 0.009 0.009 0.009 0.009 0.009	0.008 0.008 0.008 0.008 0.009 0.008 0.008 0.008 0.008 0.009 0.009 0.009 0.009 0.017 0.013 0.015 0.013 0.015 0.013 0.015 0.013 0.015 0.017 0.014 0.01 0.013 0.015 0.017 0.014 0.01 0.008 0.009

Time	Mass [mg/m3]	Alarms	Errors
10:41:49 AM	0.009		
10:42:49 AM	0.01		
10:43:49 AM	0.009		
10:44:49 AM	0.009		
10:45:49 AM	0.01		
10:46:49 AM	0.009		
10:47:49 AM	0.009		
10:48:49 AM	0.003		
10:49:49 AM	0.014		
10:50:49 AM	0.02		
10:51:49 AM	0.018		
10:52:49 AM	0.023		
10:53:49 AM	0.011		
10:54:49 AM	0.01		
10:55:49 AM	0.01		
10:56:49 AM	0.009		
10:57:49 AM	0.01		
10:58:49 AM	0.01		
10:59:49 AM	0.012		
11:00:49 AM	0.011		
11:01:49 AM	0.011		
11:02:49 AM	0.012		
11:03:49 AM	0.017		
11:04:49 AM	0.01		
11:05:49 AM	0.015		
11:06:49 AM	0.012		
11:07:49 AM	0.017		
11:07:49 AM	0.01		
11:09:49 AM	0.016		
11:10:49 AM	0.015		
11:11:49 AM	0.008		
11:12:49 AM	0.008		
11:13:49 AM	0.008		
11:14:49 AM	0.016		
11:15:49 AM	0.014		
11:16:49 AM	0.016		
11:17:49 AM	0.021		
11:18:49 AM	0.023		
11:19:49 AM	0.026		
11:20:49 AM	0.02		
11:21:49 AM	0.013		
11:22:49 AM	0.009		
11:23:49 AM	0.012		
11:24:49 AM	0.01		
11:25:49 AM	0.009		
11:26:49 AM	0.003		
11.20.43 AIVI	0.000		

Mass [mg/m3]	Alarms	Errors
0.008		
0.011		
0.009		
0.008		
0.007		
0.008		
0.007		
0.008		
0.007		
0.007		
0.007		
0.007		
0.007		
0.007		
0.007		
0.007		
0.007		
0.028		
0.02		
0.022		
0.022		
0.023		
0.024		
0.014		
0.019		
	0.008 0.011 0.009 0.008 0.007 0.008 0.007 0.008 0.009 0.008 0.007 0.008 0.008 0.008 0.002 0.022 0.022 0.022 0.023 0.024	0.011 0.009 0.008 0.007 0.008 0.007 0.008 0.009 0.008 0.007 0.008 0.008 0.008 0.008 0.002 0.022 0.022 0.022 0.023 0.024 0.014

Time	Mass [mg/m3]	Alarms	Errors
12:13:49 PM	0.017		
12:14:49 PM	0.022		
12:15:49 PM	0.018		
12:16:49 PM	0.014		
12:17:49 PM	0.012		
12:18:49 PM	0.008		
12:19:49 PM	0.017		
12:20:49 PM	0.015		
12:21:49 PM	0.014		
12:22:49 PM	0.013		
12:23:49 PM	0.009		
12:24:49 PM	0.016		
12:25:49 PM 12:26:49 PM	0.018 0.009		
12:27:49 PM	0.009		
12:27:49 PM	0.008		
12:29:49 PM	0.013		
12:30:49 PM	0.021		
12:31:49 PM	0.026		
12:32:49 PM	0.022		
12:33:49 PM	0.022		
12:34:49 PM	0.011		
12:35:49 PM	0.01		
12:36:49 PM	0.021		
12:37:49 PM	0.016		
12:38:49 PM	0.017		
12:39:49 PM	0.009		
12:40:49 PM	0.013		
12:41:49 PM	0.014		
12:42:49 PM	0.019		
12:43:49 PM	0.012		
12:44:49 PM 12:45:49 PM	0.015 0.016		
12:46:49 PM	0.016		
12:47:49 PM	0.013		
12:48:49 PM	0.016		
12:49:49 PM	0.01		
12:50:49 PM	0.014		
12:51:49 PM	0.033		
12:52:49 PM	0.032		
12:53:49 PM	0.018		
12:54:49 PM	0.016		
12:55:49 PM	0.018		
12:56:49 PM	0.012		
12:57:49 PM	0.008		
12:58:49 PM	0.012		

Time	Mass [mg/m3]	Alarms	Errors
12:59:49 PM	0.007		
1:00:49 PM	0.007		
1:01:49 PM	0.012		
1:02:49 PM	0.007		
1:03:49 PM	0.007		
1:04:49 PM	0.006		
1:05:49 PM	0.008		
1:06:49 PM	0.006		
1:07:49 PM	0.008		
1:08:49 PM	0.008		
1:09:49 PM	0.006		
1:10:49 PM	0.006		
1:11:49 PM	0.006		
1:12:49 PM	0.006		
1:13:49 PM	0.006		
1:14:49 PM	0.006		
1:15:49 PM	0.006		
1:16:49 PM	0.007		
1:17:49 PM	0.006		
1:18:49 PM	0.005		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_005 **Test Start Time** 7:15:52 AM **Test Start Date** 6/26/2017 Test Length [D:H:M] 0:07:30 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.003 Mass Minimum [mg/m3] 0 Mass Maximum [mg/m3] 0.042 0.003 Mass TWA [mg/m3] Photometric User Cal 1 Flow User Cal 0 Errors

Number of Samples 450

Time	Mass [mg/m3]	Alarms	Errors
7:16:52 AM	0.029		
7:17:52 AM	0.002		
7:18:52 AM	0.001		
7:19:52 AM	0.001		
7:20:52 AM	0.001		
7:21:52 AM	0.002		
7:22:52 AM	0.002		
7:23:52 AM	0.001		
7:24:52 AM	0.001		
7:25:52 AM	0.003		
7:26:52 AM	0.002		
7:27:52 AM	0.001		
7:28:52 AM	0.001		
7:29:52 AM	0.001		
7:30:52 AM	0.002		
7:31:52 AM	0.001		
7:32:52 AM	0.001		
7:33:52 AM	0.001		
7:34:52 AM	0.001		
7:35:52 AM	0.001		
7:36:52 AM	0.001		
7:37:52 AM	0.001		
7:38:52 AM	0.001		
7:39:52 AM	0.001		
7:40:52 AM	0.001		
7:41:52 AM	0.001		
7:42:52 AM	0.001		

Time	Mass [mg/m3]	Alarms	Errors
7:43:52 AM	0.001		
7:44:52 AM	0.001		
7:45:52 AM	0.001		
7:46:52 AM	0.001		
7:47:52 AM	0.002		
7:48:52 AM	0.001		
7:49:52 AM	0.001		
7:50:52 AM	0.001		
7:51:52 AM	0.001		
7:52:52 AM	0.001		
7:53:52 AM	0.001		
7:54:52 AM	0.001		
7:55:52 AM	0.001		
7:56:52 AM	0.001		
7:57:52 AM	0.001		
7:58:52 AM	0.002		
7:59:52 AM	0.001		
8:00:52 AM 8:01:52 AM	0.002 0.003		
8:02:52 AM	0.003		
8:03:52 AM	0.002		
8:04:52 AM	0.002		
8:05:52 AM	0.001		
8:06:52 AM	0.001		
8:07:52 AM	0.001		
8:08:52 AM	0.001		
8:09:52 AM	0.004		
8:10:52 AM	0.001		
8:11:52 AM	0.001		
8:12:52 AM	0.001		
8:13:52 AM	0.001		
8:14:52 AM	0.001		
8:15:52 AM	0.001		
8:16:52 AM	0.002		
8:17:52 AM	0.002		
8:18:52 AM	0.001		
8:19:52 AM	0.002		
8:20:52 AM	0.001		
8:21:52 AM	0.001		
8:22:52 AM 8:23:52 AM	0.001 0.001		
8:24:52 AM	0.001		
8:25:52 AM	0.002		
8:26:52 AM	0.001		
8:27:52 AM	0.001		
8:28:52 AM	0.001		
0.20.32 AIVI	0.001		

Time	N4000 [100 m/100 2]	A la mas a	Гинана
Time	Mass [mg/m3]	Alarms	Errors
8:29:52 AM	0.002		
8:30:52 AM	0.002		
8:31:52 AM	0.001		
8:32:52 AM	0.001		
8:33:52 AM	0.002		
8:34:52 AM	0.002		
8:35:52 AM	0.001		
8:36:52 AM	0.001		
8:37:52 AM	0.001		
8:38:52 AM	0.001		
8:39:52 AM	0.001		
8:40:52 AM 8:41:52 AM	0.001 0.001		
8:42:52 AM			
8:43:52 AM	0.001 0.001		
8:44:52 AM	0.001		
8:45:52 AM	0.001		
8:46:52 AM	0.001		
8:47:52 AM	0.001		
8:48:52 AM	0.001		
8:49:52 AM	0.001		
8:50:52 AM	0.001		
8:51:52 AM	0.002		
8:52:52 AM	0.003		
8:53:52 AM	0.003		
8:54:52 AM	0.003		
8:55:52 AM	0.003		
8:56:52 AM	0.001		
8:57:52 AM	0.001		
8:58:52 AM	0.002		
8:59:52 AM	0.002		
9:00:52 AM	0.001		
9:01:52 AM	0.001		
9:02:52 AM	0.001		
9:03:52 AM	0.001		
9:04:52 AM	0.001		
9:05:52 AM	0.002		
9:06:52 AM	0.003		
9:07:52 AM	0.003		
9:08:52 AM	0.001		
9:09:52 AM	0.001		
9:10:52 AM	0.001		
9:11:52 AM	0.001		
9:12:52 AM	0.001		
9:13:52 AM	0.002		
9:14:52 AM	0.002		
_ := :: - · ····	3.002		

Time	Mass [mg/m3]	Alarms	Errors
9:15:52 AM	0.001	Alaillis	EIIOIS
9:16:52 AM	0.001		
9:17:52 AM	0.001		
9:18:52 AM	0.001		
9:19:52 AM	0.001		
9:20:52 AM	0.001		
9:21:52 AM	0.003		
9:22:52 AM	0.003		
9:23:52 AM	0.003		
9:24:52 AM	0.002		
9:25:52 AM	0.001		
9:26:52 AM	0.002		
9:27:52 AM	0.001		
9:28:52 AM	0.001		
9:29:52 AM	0.005		
9:30:52 AM	0.005		
9:31:52 AM	0.007		
9:32:52 AM	0.002		
9:33:52 AM	0.001		
9:34:52 AM	0.001		
9:35:52 AM	0.001		
9:36:52 AM	0.001		
9:37:52 AM	0.001		
9:38:52 AM	0.001		
9:39:52 AM	0.001		
9:40:52 AM	0.001		
9:41:52 AM	0.001		
9:42:52 AM	0.001		
9:43:52 AM	0.001		
9:44:52 AM	0.001		
9:45:52 AM	0.001		
9:46:52 AM	0.001		
9:47:52 AM	0.001		
9:48:52 AM	0.001		
9:49:52 AM	0.003		
9:50:52 AM	0.003		
9:51:52 AM	0.002		
9:52:52 AM	0.002		
9:53:52 AM	0.001		
9:54:52 AM	0.002		
9:55:52 AM 9:56:52 AM	0.001 0.001		
9:57:52 AM	0.001		
9:58:52 AM	0.001		
9:58:52 AM 9:59:52 AM	0.001		
10:00:52 AM	0.001		
10.00.32 AIVI	0.001		

Time	Mass [mg/m3]	Alarms	Errors
10:01:52 AM	0.001		
10:02:52 AM	0.001		
10:03:52 AM	0.001		
10:04:52 AM	0.002		
10:05:52 AM	0.001		
10:06:52 AM	0.001		
10:07:52 AM	0.001		
10:08:52 AM	0.001		
10:09:52 AM	0.001		
10:10:52 AM	0.001		
10:11:52 AM	0.001		
10:12:52 AM	0.001		
10:13:52 AM	0.001		
10:14:52 AM	0.001		
10:15:52 AM	0.001		
10:16:52 AM 10:17:52 AM	0.001		
10:17:52 AM	0.001 0.001		
10:19:52 AM	0.001		
10:19:52 AM	0.001		
10:21:52 AM	0.001		
10:21:52 AM	0.001		
10:23:52 AM	0.001		
10:24:52 AM	0.002		
10:25:52 AM	0.001		
10:26:52 AM	0.001		
10:27:52 AM	0.001		
10:28:52 AM	0.001		
10:29:52 AM	0.001		
10:30:52 AM	0.001		
10:31:52 AM	0.001		
10:32:52 AM	0.001		
10:33:52 AM	0.001		
10:34:52 AM	0.001		
10:35:52 AM	0.002		
10:36:52 AM	0.001		
10:37:52 AM	0.001		
10:38:52 AM	0.001		
10:39:52 AM	0.001		
10:40:52 AM 10:41:52 AM	0.001 0.001		
10:41:52 AM	0.001		
10:43:52 AM	0.001		
10:44:52 AM	0.001		
10:45:52 AM	0.001		
10:46:52 AM	0.001		
	0.001		

Time	Mass [mg/m3]	Alarms	Errors
10:47:52 AM	0.001		
10:48:52 AM	0.002		
10:49:52 AM	0.002		
10:50:52 AM	0.001		
10:51:52 AM	0.003		
10:52:52 AM	0.001		
10:53:52 AM	0.001		
10:54:52 AM	0.001		
10:55:52 AM	0.001		
10:56:52 AM	0.001		
10:57:52 AM	0.001		
10:58:52 AM	0.001		
10:59:52 AM	0.001		
11:00:52 AM	0.001		
11:01:52 AM	0.001		
11:02:52 AM	0.001		
11:03:52 AM	0.003		
11:04:52 AM	0.001		
11:05:52 AM	0.001		
11:06:52 AM	0.001		
11:07:52 AM	0.001		
11:08:52 AM	0.001		
11:09:52 AM	0.001		
11:10:52 AM	0.001		
11:11:52 AM 11:12:52 AM	0.001 0.001		
11:12:52 AM	0.001		
11:14:52 AM	0.001		
11:14:52 AM	0.001		
11:16:52 AM	0.001		
11:17:52 AM	0.001		
11:18:52 AM	0.001		
11:19:52 AM	0.001		
11:20:52 AM	0.001		
11:21:52 AM	0.001		
11:22:52 AM	0.001		
11:23:52 AM	0.001		
11:24:52 AM	0.001		
11:25:52 AM	0.001		
11:26:52 AM	0.001		
11:27:52 AM	0.001		
11:28:52 AM	0.001		
11:29:52 AM	0.001		
11:30:52 AM	0.001		
11:31:52 AM	0.002		
11:32:52 AM	0.001		

Time	Mass [mg/m3]	Alarms	Errors
11:33:52 AM	0.001		
11:34:52 AM	0.001		
11:35:52 AM	0.001		
11:36:52 AM	0.001		
11:37:52 AM	0.001		
11:38:52 AM	0.001		
11:39:52 AM	0.001		
11:40:52 AM	0.001		
11:41:52 AM	0.001		
11:42:52 AM	0.001		
11:43:52 AM	0.001		
11:44:52 AM	0.001		
11:45:52 AM 11:46:52 AM	0.001 0.001		
11:47:52 AM	0.001		
11:47:52 AM	0.001		
11:49:52 AM	0.001		
11:50:52 AM	0.001		
11:51:52 AM	0.001		
11:52:52 AM	0.002		
11:53:52 AM	0.001		
11:54:52 AM	0.001		
11:55:52 AM	0.001		
11:56:52 AM	0.001		
11:57:52 AM	0.001		
11:58:52 AM	0.001		
11:59:52 AM	0.001		
12:00:52 PM	0.001		
12:01:52 PM	0.002		
12:02:52 PM	0.002		
12:03:52 PM 12:04:52 PM	0.001		
12:04:52 PM 12:05:52 PM	0.001 0.002		
12:06:52 PM	0.002		
12:07:52 PM	0		
12:08:52 PM	0.001		
12:09:52 PM	0.001		
12:10:52 PM	0.001		
12:11:52 PM	0		
12:12:52 PM	0.001		
12:13:52 PM	0.001		
12:14:52 PM	0.001		
12:15:52 PM	0.001		
12:16:52 PM	0.001		
12:17:52 PM	0.001		
12:18:52 PM	0.001		

Time	Mass [mg/m3]	Alarms	Errors
12:19:52 PM	0.004	,	211010
12:20:52 PM	0.001		
12:21:52 PM	0.001		
12:22:52 PM	0		
12:23:52 PM	0.001		
12:24:52 PM	0.001		
12:25:52 PM	0.042		
12:26:52 PM	0.022		
12:27:52 PM	0.009		
12:28:52 PM	0.007		
12:29:52 PM	0.008		
12:30:52 PM	0.013		
12:31:52 PM	0.005		
12:32:52 PM	0.024		
12:33:52 PM	0.029		
12:34:52 PM	0.025		
12:35:52 PM	0.011		
12:36:52 PM	0.008		
12:37:52 PM	0.012		
12:38:52 PM	0.008		
12:39:52 PM	0.002		
12:40:52 PM	0.001		
12:41:52 PM	0.002		
12:42:52 PM	0.018		
12:43:52 PM 12:44:52 PM	0.008 0.011		
12:44.52 PM	0.011		
12:46:52 PM	0.023		
12:47:52 PM	0.02		
12:48:52 PM	0.008		
12:49:52 PM	0.004		
12:50:52 PM	0.003		
12:51:52 PM	0.004		
12:52:52 PM	0.004		
12:53:52 PM	0.006		
12:54:52 PM	0.005		
12:55:52 PM	0.004		
12:56:52 PM	0.006		
12:57:52 PM	0.005		
12:58:52 PM	0.009		
12:59:52 PM	0.007		
1:00:52 PM	0.01		
1:01:52 PM	0.017		
1:02:52 PM	0.01		
1:03:52 PM	0.005		
1:04:52 PM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
1:05:52 PM	0.007	Alaillis	LIIUIS
1:06:52 PM	0.022		
1:07:52 PM	0.022		
1:08:52 PM	0.017		
1:09:52 PM	0.001		
1:10:52 PM	0.004		
1:11:52 PM	0.002		
1:12:52 PM	0.002		
1:13:52 PM	0.001		
1:14:52 PM	0.001		
1:15:52 PM	0.006		
1:16:52 PM	0.007		
1:17:52 PM	0.007		
1:18:52 PM	0.001		
1:19:52 PM	0.001		
1:20:52 PM	0.001		
1:21:52 PM	0.004		
1:22:52 PM	0.003		
1:23:52 PM	0.003		
1:24:52 PM	0.004		
1:25:52 PM	0.009		
1:26:52 PM	0.001		
1:27:52 PM	0.001		
1:28:52 PM	0.006		
1:29:52 PM	0.005		
1:30:52 PM	0.021		
1:31:52 PM	0.009		
1:32:52 PM	0.011		
1:33:52 PM	0.015		
1:34:52 PM	0.015		
1:35:52 PM	0.015		
1:36:52 PM	0.012		
1:37:52 PM	0.007		
1:38:52 PM	0.001		
1:39:52 PM	0.004		
1:40:52 PM	0.004		
1:41:52 PM	0.003		
1:42:52 PM	0.002		
1:43:52 PM	0.004		
1:44:52 PM	0.002		
1:45:52 PM	0		
1:46:52 PM	0.001		
1:47:52 PM	0.002		
1:48:52 PM	0.006		
1:49:52 PM	0.01		
1:50:52 PM	0.016		

Time	Mass [mg/m3]	Alarms	Errors
1:51:52 PM	0.005		
1:52:52 PM	0.026		
1:53:52 PM	0.008		
1:54:52 PM	0.011		
1:55:52 PM	0.005		
1:56:52 PM	0.011		
1:57:52 PM	0.008		
1:58:52 PM	0.015		
1:59:52 PM	0.008		
2:00:52 PM	0.008		
2:01:52 PM	0.006		
2:02:52 PM	0.003		
2:03:52 PM	0.023		
2:04:52 PM	0.01		
2:05:52 PM 2:06:52 PM	0.014 0.01		
2:06:52 PM	0.01		
2:07:52 PM	0.009		
2:09:52 PM	0.013		
2:10:52 PM	0.007		
2:11:52 PM	0.006		
2:12:52 PM	0.006		
2:13:52 PM	0.006		
2:14:52 PM	0.002		
2:15:52 PM	0.002		
2:16:52 PM	0.002		
2:17:52 PM	0.002		
2:18:52 PM	0.001		
2:19:52 PM	0.001		
2:20:52 PM	0.001		
2:21:52 PM	0.001		
2:22:52 PM	0.003		
2:23:52 PM	0.007		
2:24:52 PM	0.006		
2:25:52 PM	0.007		
2:26:52 PM	0.009 0.009		
2:27:52 PM 2:28:52 PM	0.009		
2:29:52 PM	0.009		
2:30:52 PM	0.004		
2:31:52 PM	0.002		
2:32:52 PM	0.001		
2:33:52 PM	0.001		
2:34:52 PM	0.002		
2:35:52 PM	0.009		
2:36:52 PM	0.002		

Time	Mass [mg/m3]	Alarms	Errors
2:37:52 PM	0.005		
2:38:52 PM	0.005		
2:39:52 PM	0.001		
2:40:52 PM	0.001		
2:41:52 PM	0.002		
2:42:52 PM	0.002		
2:43:52 PM	0.003		
2:44:52 PM	0.004		
2:45:52 PM	0.002		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_006 **Test Start Time** 7:27:51 AM **Test Start Date** 6/27/2017 Test Length [D:H:M] 0:07:12 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.005 Mass Minimum [mg/m3] 0 0.04 Mass Maximum [mg/m3] Mass TWA [mg/m3] 0.005 Photometric User Cal 1 Flow User Cal 0 **Errors**

Number of Samples 432

Time	Mass [mg/m3]	Alarms	Errors
7:28:51 AM	0.013		
7:29:51 AM	0.001		
7:30:51 AM	0.001		
7:31:51 AM	0.001		
7:32:51 AM	0.001		
7:33:51 AM	0.001		
7:34:51 AM	0.003		
7:35:51 AM	0.001		
7:36:51 AM	0.001		
7:37:51 AM	0.001		
7:38:51 AM	0.001		
7:39:51 AM	0.001		
7:40:51 AM	0.001		
7:41:51 AM	0.001		
7:42:51 AM	0.001		
7:43:51 AM	0.001		
7:44:51 AM	0.001		
7:45:51 AM	0.001		
7:46:51 AM	0		
7:47:51 AM	0.001		
7:48:51 AM	0.002		
7:49:51 AM	0.001		
7:50:51 AM	0.002		
7:51:51 AM	0.003		
7:52:51 AM	0.002		
7:53:51 AM	0.002		
7:54:51 AM	0.002		

Time	Mass [mg/m3]	Alarms	Errors
7:55:51 AM	0.001		
7:56:51 AM	0.001		
7:57:51 AM	0.001		
7:58:51 AM	0.001		
7:59:51 AM	0.001		
8:00:51 AM	0		
8:01:51 AM	0.006		
8:02:51 AM	0.005		
8:03:51 AM	0.003		
8:04:51 AM	0.007		
8:05:51 AM	0.002		
8:06:51 AM	0.004		
8:07:51 AM	0.004		
8:08:51 AM	0.004		
8:09:51 AM	0.004		
8:10:51 AM	0.004		
8:11:51 AM	0.003		
8:12:51 AM	0.004		
8:13:51 AM	0.005		
8:14:51 AM	0.004		
8:15:51 AM	0.003		
8:16:51 AM	0.004		
8:17:51 AM	0.004 0.005		
8:18:51 AM 8:19:51 AM	0.003		
8:20:51 AM	0.004		
8:21:51 AM	0.002		
8:22:51 AM	0.001		
8:23:51 AM	0.001		
8:24:51 AM	0.002		
8:25:51 AM	0.004		
8:26:51 AM	0.001		
8:27:51 AM	0.004		
8:28:51 AM	0.002		
8:29:51 AM	0.001		
8:30:51 AM	0.001		
8:31:51 AM	0.004		
8:32:51 AM	0.004		
8:33:51 AM	0.007		
8:34:51 AM	0.002		
8:35:51 AM	0.003		
8:36:51 AM	0.002		
8:37:51 AM	0.004		
8:38:51 AM	0.002		
8:39:51 AM	0.003		
8:40:51 AM	0.004		

Time	Mass [mg/m2]	Alarmo	Errors
8:41:51 AM	Mass [mg/m3] 0.002	Aldillis	EIIUIS
8:42:51 AM	0.002		
8:43:51 AM	0.003		
8:44:51 AM	0.002		
8:45:51 AM	0.002		
8:46:51 AM	0.003		
8:47:51 AM			
	0.002 0.009		
8:48:51 AM 8:49:51 AM	0.009		
8:50:51 AM	0.004		
8:51:51 AM			
	0.002		
8:52:51 AM 8:53:51 AM	0.002 0.004		
8:54:51 AM			
8:55:51 AM	0.003		
	0.003		
8:56:51 AM	0.002		
8:57:51 AM	0.003		
8:58:51 AM	0.003		
8:59:51 AM	0.002		
9:00:51 AM	0.001		
9:01:51 AM	0.003		
9:02:51 AM	0.001		
9:03:51 AM	0.001		
9:04:51 AM	0.005		
9:05:51 AM	0.007		
9:06:51 AM	0.005		
9:07:51 AM	0.014		
9:08:51 AM 9:09:51 AM	0.005		
	0.002		
9:10:51 AM	0.002		
9:11:51 AM 9:12:51 AM	0.007		
9:12:51 AM 9:13:51 AM	0.002		
	0.002		
9:14:51 AM	0.002		
9:15:51 AM	0.001		
9:16:51 AM	0.001		
9:17:51 AM	0.001		
9:18:51 AM	0.001		
9:19:51 AM	0.002		
9:20:51 AM	0.001		
9:21:51 AM	0.001		
9:22:51 AM	0.001		
9:23:51 AM	0.001		
9:24:51 AM	0.014		
9:25:51 AM	0.004		
9:26:51 AM	0.007		

Time	Mass [mg/m3]	Δlarms	Errors
9:27:51 AM	0.001	7 ((0) (1)	LITOIS
9:28:51 AM	0.003		
9:29:51 AM	0.004		
9:30:51 AM	0.003		
9:31:51 AM	0.004		
9:32:51 AM	0.002		
9:33:51 AM	0.002		
9:34:51 AM	0.003		
9:35:51 AM	0.001		
9:36:51 AM	0.003		
9:37:51 AM	0.003		
9:38:51 AM	0.005		
9:39:51 AM	0.002		
9:40:51 AM	0.004		
9:41:51 AM	0.003		
9:42:51 AM	0.004		
9:43:51 AM	0.002		
9:44:51 AM	0.003		
9:45:51 AM	0.003		
9:46:51 AM	0.004		
9:47:51 AM	0.003		
9:48:51 AM	0.002		
9:49:51 AM	0.006		
9:50:51 AM 9:51:51 AM	0.002 0.002		
9:52:51 AM	0.002		
9:53:51 AM	0.002		
9:54:51 AM	0.006		
9:55:51 AM	0.003		
9:56:51 AM	0.003		
9:57:51 AM	0.004		
9:58:51 AM	0.005		
9:59:51 AM	0.005		
10:00:51 AM	0.002		
10:01:51 AM	0.003		
10:02:51 AM	0.004		
10:03:51 AM	0.003		
10:04:51 AM	0.001		
10:05:51 AM	0.001		
10:06:51 AM	0.001		
10:07:51 AM	0.002		
10:08:51 AM	0.003		
10:09:51 AM	0.002		
10:10:51 AM	0.003		
10:11:51 AM	0.002		
10:12:51 AM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
10:13:51 AM	0.004		
10:14:51 AM	0.002		
10:15:51 AM	0.001		
10:16:51 AM	0.001		
10:17:51 AM	0.001		
10:18:51 AM	0.002		
10:19:51 AM	0.003		
10:20:51 AM	0.003		
10:21:51 AM	0.003		
10:22:51 AM	0.002		
10:23:51 AM	0.003		
10:24:51 AM	0.004		
10:25:51 AM	0.003		
10:26:51 AM	0.003		
10:27:51 AM	0.002		
10:28:51 AM	0.002		
10:29:51 AM	0.003		
10:30:51 AM	0.002		
10:31:51 AM	0.003		
10:32:51 AM	0.002		
10:33:51 AM	0.002		
10:34:51 AM	0.001		
10:35:51 AM	0.001		
10:36:51 AM	0.001		
10:37:51 AM	0.001		
10:38:51 AM	0.001		
10:39:51 AM	0.001		
10:40:51 AM	0.001 0.001		
10:41:51 AM 10:42:51 AM	0.001		
10:43:51 AM	0.007		
10:44:51 AM	0.004		
10:45:51 AM	0.003		
10:46:51 AM	0.001		
10:47:51 AM	0.014		
10:48:51 AM	0.005		
10:49:51 AM	0.001		
10:50:51 AM	0.001		
10:51:51 AM	0.004		
10:52:51 AM	0.004		
10:53:51 AM	0.005		
10:54:51 AM	0.001		
10:55:51 AM	0.002		
10:56:51 AM	0.002		
10:57:51 AM	0.001		
10:58:51 AM	0.001		

Time	Mass [mg/m3]	Alarms	Errors
10:59:51 AM	0.001		
11:00:51 AM	0.001		
11:01:51 AM	0.001		
11:02:51 AM	0.001		
11:02:51 AM	0.001		
11:04:51 AM	0.001		
11:05:51 AM	0.001		
11:06:51 AM	0.001		
11:07:51 AM	0.001		
11:08:51 AM	0.001		
11:09:51 AM	0.001		
11:10:51 AM	0.001		
11:11:51 AM	0.001		
11:12:51 AM	0.001		
11:13:51 AM	0.001		
11:14:51 AM	0.001		
11:14:51 AM	0.001		
11:16:51 AM	0.001		
11:17:51 AM	0.001		
11:18:51 AM	0.002		
11:19:51 AM	0.001		
11:20:51 AM	0.001		
11:21:51 AM	0.002		
11:22:51 AM	0.001		
11:23:51 AM	0.001		
11:24:51 AM	0.001		
11:25:51 AM	0.001		
11:26:51 AM	0.001		
11:27:51 AM	0.001		
11:27:51 AM			
	0.002		
11:29:51 AM	0.001		
11:30:51 AM	0.002		
11:31:51 AM	0.001		
11:32:51 AM	0.001		
11:33:51 AM	0.001		
11:34:51 AM	0.001		
11:35:51 AM	0.001		
11:36:51 AM	0.001		
11:37:51 AM	0.001		
11:38:51 AM	0.001		
11:39:51 AM	0.001		
11:40:51 AM	0.001		
11:41:51 AM	0.001		
11:42:51 AM	0.002		
11:43:51 AM	0.001		
11:44:51 AM	0.001		

Time	Mass [mg/m3]	Alarms	Errors
11:45:51 AM	0.001		
11:46:51 AM	0.001		
11:47:51 AM	0.001		
11:48:51 AM	0.001		
11:49:51 AM	0.001		
11:50:51 AM	0.001		
11:51:51 AM	0.001		
11:52:51 AM	0.001		
11:53:51 AM	0.001		
11:54:51 AM	0.001		
11:55:51 AM	0.001		
11:56:51 AM	0.001		
11:57:51 AM	0.001		
11:58:51 AM	0.001		
11:59:51 AM	0.001		
12:00:51 PM	0.001		
12:01:51 PM	0.001		
12:02:51 PM	0.001		
	0.001		
12:03:51 PM			
12:04:51 PM	0.001		
12:05:51 PM	0.001		
12:06:51 PM	0.001		
12:07:51 PM	0.002		
12:08:51 PM	0.001		
12:09:51 PM	0.002		
12:10:51 PM	0.001		
12:11:51 PM	0.001		
12:12:51 PM	0.002		
12:13:51 PM	0.002		
12:14:51 PM	0.002		
12:15:51 PM	0.001		
12:16:51 PM	0.002		
12:17:51 PM	0.001		
12:18:51 PM	0.001		
12:19:51 PM	0.002		
12:20:51 PM	0.002		
12:20:51 PM	0.002		
12:22:51 PM	0.001		
12:23:51 PM	0.001		
12:24:51 PM	0.002		
12:25:51 PM	0.009		
12:26:51 PM	0.004		
12:27:51 PM	0.003		
12:28:51 PM	0.001		
12:29:51 PM	0.002		
12:30:51 PM	0.006		

Time	Mass [mg/m3]	Alarms	Errors
12:31:51 PM	0.014		
12:32:51 PM	0.015		
12:33:51 PM	0.017		
12:34:51 PM	0.014		
12:35:51 PM	0.016		
12:36:51 PM	0.026		
12:37:51 PM	0.003		
12:38:51 PM	0.001		
12:39:51 PM	0.012		
12:40:51 PM	0.015		
12:41:51 PM	0.022		
12:42:51 PM	0.013		
12:43:51 PM	0.003		
12:44:51 PM	0.008		
12:45:51 PM	0.001		
12:46:51 PM	0.002		
12:47:51 PM	0.004		
12:48:51 PM	0.005		
12:49:51 PM	0.007		
12:50:51 PM	0.012		
12:51:51 PM	0.006		
12:52:51 PM	0.009		
12:53:51 PM	0.009		
12:54:51 PM	0.02		
12:55:51 PM	0.026		
12:56:51 PM 12:57:51 PM	0.023		
12:58:51 PM	0.04 0.036		
12:59:51 PM	0.030		
1:00:51 PM	0.003		
1:01:51 PM	0.005		
1:02:51 PM	0.016		
1:03:51 PM	0.017		
1:04:51 PM	0.014		
1:05:51 PM	0.002		
1:06:51 PM	0.002		
1:07:51 PM	0.005		
1:08:51 PM	0.011		
1:09:51 PM	0.017		
1:10:51 PM	0.009		
1:11:51 PM	0.008		
1:12:51 PM	0.015		
1:13:51 PM	0.017		
1:14:51 PM	0.015		
1:15:51 PM	0.009		
1:16:51 PM	0.009		

Time	Mass [mg/m3]	Alarms	Errors
1:17:51 PM	0.009		
1:18:51 PM	0.002		
1:19:51 PM	0.002		
1:20:51 PM	0.002		
1:21:51 PM	0.001		
1:22:51 PM	0.001		
1:23:51 PM	0.002		
1:24:51 PM	0.012		
1:25:51 PM	0.018		
1:26:51 PM	0.01		
1:27:51 PM	0.005		
1:28:51 PM	0.001		
1:29:51 PM	0.001		
1:30:51 PM	0.008		
1:31:51 PM	0.006		
1:32:51 PM	0.006		
1:33:51 PM	0.004		
1:34:51 PM	0.005		
1:35:51 PM	0.004		
1:36:51 PM	0.005		
1:37:51 PM	0.002		
1:38:51 PM	0.007		
1:39:51 PM	0.021		
1:40:51 PM	0.013		
1:41:51 PM	0.004		
1:42:51 PM	0.005		
1:43:51 PM	0.001		
1:44:51 PM	0.015		
1:45:51 PM	0.015		
1:46:51 PM	0.006		
1:47:51 PM	0.001		
1:48:51 PM	0.001		
1:49:51 PM	0.003		
1:50:51 PM	0.002		
1:51:51 PM	0.001		
1:52:51 PM	0.001		
1:53:51 PM	0.001		
1:54:51 PM	0.001		
1:55:51 PM	0.004		
1:56:51 PM	0.007		
1:57:51 PM	0.016		
1:58:51 PM	0.022		
1:59:51 PM	0.018		
2:00:51 PM	0.017		
2:01:51 PM	0.02		
2:02:51 PM	0.037		

Time	Mass [mg/m3]	Alarms	Errors
2:03:51 PM	0.029		
2:04:51 PM	0.019		
2:05:51 PM	0.008		
2:06:51 PM	0.022		
2:07:51 PM	0.018		
2:08:51 PM	0.003		
2:09:51 PM	0.008		
2:10:51 PM	0.019		
2:11:51 PM	0.029		
2:12:51 PM	0.038		
2:13:51 PM	0.03		
2:14:51 PM	0.031		
2:15:51 PM	0.011		
2:16:51 PM	0.01		
2:17:51 PM	0.023		
2:18:51 PM	0.006		
2:19:51 PM	0.039		
2:20:51 PM	0.021		
2:21:51 PM	0.012		
2:22:51 PM	0.011		
2:23:51 PM	0.008		
2:24:51 PM	0.009		
2:25:51 PM	0.007		
2:26:51 PM	0.018		
2:27:51 PM	0.009		
2:28:51 PM	0.021		
2:29:51 PM	0.016		
2:30:51 PM	0.016		
2:31:51 PM	0.007		
2:32:51 PM	0.011		
2:33:51 PM	0.002		
2:34:51 PM	0.001		
2:35:51 PM	0.003		
2:36:51 PM	0.01		
2:37:51 PM	0.005		
2:38:51 PM	0.007		
2:39:51 PM	0.015		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_007 **Test Start Time** 7:31:02 AM **Test Start Date** 6/28/2017 Test Length [D:H:M] 0:07:31 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.018 Mass Minimum [mg/m3] 0.003 Mass Maximum [mg/m3] 0.1 Mass TWA [mg/m3] 0.017 Photometric User Cal 1 Flow User Cal 0 **Errors**

Number of Samples 451

Time	Mass [mg/m3]	Alarms	Errors
7:32:02 AM	0.005		
7:33:02 AM	0.004		
7:34:02 AM	0.019		
7:35:02 AM	0.008		
7:36:02 AM	0.004		
7:37:02 AM	0.008		
7:38:02 AM	0.005		
7:39:02 AM	0.005		
7:40:02 AM	0.01		
7:41:02 AM	0.015		
7:42:02 AM	0.009		
7:43:02 AM	0.008		
7:44:02 AM	0.004		
7:45:02 AM	0.004		
7:46:02 AM	0.013		
7:47:02 AM	0.005		
7:48:02 AM	0.004		
7:49:02 AM	0.003		
7:50:02 AM	0.004		
7:51:02 AM	0.005		
7:52:02 AM	0.004		
7:53:02 AM	0.004		
7:54:02 AM	0.005		
7:55:02 AM	0.005		
7:56:02 AM	0.003		
7:57:02 AM	0.003		
7:58:02 AM	0.003		

Time	Mass [mg/m3]	Alarms	Errors
7:59:02 AM	0.004		
8:00:02 AM	0.003		
8:01:02 AM	0.004		
8:02:02 AM	0.005		
8:03:02 AM	0.003		
8:04:02 AM	0.005		
8:05:02 AM	0.003		
8:06:02 AM	0.004		
8:07:02 AM	0.016		
8:08:02 AM	0.017		
8:09:02 AM	0.037		
8:10:02 AM	0.035		
8:11:02 AM	0.034		
8:12:02 AM	0.026		
8:13:02 AM	0.011		
8:14:02 AM	0.013		
8:15:02 AM	0.005		
8:16:02 AM	0.005		
8:17:02 AM 8:18:02 AM	0.006 0.015		
8:19:02 AM	0.015		
8:20:02 AM	0.008		
8:21:02 AM	0.006		
8:22:02 AM	0.009		
8:23:02 AM	0.011		
8:24:02 AM	0.007		
8:25:02 AM	0.008		
8:26:02 AM	0.008		
8:27:02 AM	0.015		
8:28:02 AM	0.012		
8:29:02 AM	0.006		
8:30:02 AM	0.006		
8:31:02 AM	0.017		
8:32:02 AM	0.049		
8:33:02 AM	0.031		
8:34:02 AM	0.031		
8:35:02 AM	0.013		
8:36:02 AM	0.018		
8:37:02 AM	0.009		
8:38:02 AM	0.009		
8:39:02 AM	0.005		
8:40:02 AM	0.005		
8:41:02 AM	0.017		
8:42:02 AM	0.023		
8:43:02 AM	0.019		
8:44:02 AM	0.021		

Time	Mass [mg/m3]	Alarms	Errors
8:45:02 AM	0.009		
8:46:02 AM	0.015		
8:47:02 AM	0.014		
8:48:02 AM	0.02		
8:49:02 AM	0.035		
8:50:02 AM	0.021		
8:51:02 AM	0.006		
8:52:02 AM	0.043		
8:53:02 AM	0.057		
8:54:02 AM	0.039		
8:55:02 AM	0.027		
8:56:02 AM	0.046		
8:57:02 AM	0.034		
8:58:02 AM	0.018		
8:59:02 AM	0.019		
9:00:02 AM	0.04		
9:01:02 AM	0.027		
9:02:02 AM	0.024		
9:03:02 AM	0.041		
9:04:02 AM	0.061		
9:05:02 AM	0.063		
9:06:02 AM	0.058		
9:07:02 AM	0.059		
9:08:02 AM	0.05		
9:09:02 AM	0.048		
9:10:02 AM	0.016		
9:11:02 AM	0.008		
9:12:02 AM	0.025		
9:13:02 AM	0.1		
9:14:02 AM	0.016		
9:15:02 AM	0.036		
9:16:02 AM	0.005		
9:17:02 AM	0.009		
9:18:02 AM	0.028		
9:19:02 AM	0.008		
9:20:02 AM	0.017		
9:21:02 AM	0.02		
9:22:02 AM 9:23:02 AM	0.048 0.041		
9:24:02 AM	0.041		
9:25:02 AM	0.027		
9:26:02 AM	0.029		
9:27:02 AM	0.008		
9:28:02 AM	0.013		
9:29:02 AM	0.007		
9:30:02 AM	0.009		
J.JU.U2 AIVI	0.030		

Time	Mass [mg/m3]	Alarms	Errors
9:31:02 AM	0.017		
9:32:02 AM	0.004		
9:33:02 AM	0.006		
9:34:02 AM	0.038		
9:35:02 AM	0.017		
9:36:02 AM	0.018		
9:37:02 AM	0.003		
9:38:02 AM	0.006		
9:39:02 AM	0.006		
9:40:02 AM	0.005		
9:41:02 AM	0.006		
9:42:02 AM	0.005		
9:43:02 AM	0.005		
9:44:02 AM	0.004		
9:45:02 AM 9:46:02 AM	0.004 0.004		
9:46:02 AM	0.004		
9:48:02 AM	0.004		
9:49:02 AM	0.009		
9:50:02 AM	0.005		
9:51:02 AM	0.007		
9:52:02 AM	0.006		
9:53:02 AM	0.005		
9:54:02 AM	0.005		
9:55:02 AM	0.006		
9:56:02 AM	0.009		
9:57:02 AM	0.005		
9:58:02 AM	0.004		
9:59:02 AM	0.004		
10:00:02 AM	0.01		
10:01:02 AM	0.008		
10:02:02 AM	0.01		
10:03:02 AM	0.01		
10:04:02 AM	0.007		
10:05:02 AM	0.016		
10:06:02 AM	0.007		
10:07:02 AM	0.005		
10:08:02 AM	0.007		
10:09:02 AM 10:10:02 AM	0.015 0.01		
10:10:02 AW 10:11:02 AM	0.005		
10:11:02 AW 10:12:02 AM	0.005		
10:12:02 AW 10:13:02 AM	0.032		
10:14:02 AM	0.032		
10:15:02 AM	0.013		
10:16:02 AM	0.045		
10.10.02 / ((V)	0.045		

Time	Mass [mg/m3]	Alarms	Errors
10:17:02 AM	0.039		
10:18:02 AM	0.009		
10:19:02 AM	0.012		
10:20:02 AM	0.019		
10:21:02 AM	0.012		
10:22:02 AM	0.012		
10:23:02 AM	0.012		
10:24:02 AM	0.013		
10:24:02 AW	0.014		
10:26:02 AM	0.025		
10:27:02 AM	0.017		
10:28:02 AM	0.012		
10:29:02 AM	0.014		
10:30:02 AM	0.011		
10:31:02 AM	0.01		
10:32:02 AM	0.008		
10:33:02 AM	0.015		
10:34:02 AM	0.004		
10:35:02 AM	0.014		
10:36:02 AM	0.021		
10:37:02 AM	0.021		
10:38:02 AM	0.018		
10:39:02 AM	0.01		
10:40:02 AM	0.014		
10:41:02 AM	0.009		
10:42:02 AM	0.01		
10:43:02 AM	0.011		
10:44:02 AM	0.035		
10:45:02 AM	0.023		
10:46:02 AM	0.023		
10:47:02 AM			
	0.02		
10:48:02 AM	0.012		
10:49:02 AM	0.014		
10:50:02 AM	0.018		
10:51:02 AM	0.019		
10:52:02 AM	0.015		
10:53:02 AM	0.023		
10:54:02 AM	0.047		
10:55:02 AM	0.078		
10:56:02 AM	0.078		
10:57:02 AM	0.067		
10:58:02 AM	0.034		
10:59:02 AM	0.049		
11:00:02 AM	0.066		
11:01:02 AM	0.053		
11:02:02 AM	0.048		
	0.0.0		

Time	Mass [mg/m3]	Alarms	Errors
11:03:02 AM	0.045	Alaillis	LIIUIS
11:04:02 AM	0.055		
11:05:02 AM	0.024		
11:06:02 AM	0.023		
11:07:02 AM	0.025		
11:08:02 AM	0.016		
11:09:02 AM	0.009		
11:10:02 AM	0.005		
11:11:02 AM	0.006		
11:12:02 AM	0.004		
11:13:02 AM	0.006		
11:14:02 AM	0.007		
11:15:02 AM	0.019		
11:16:02 AM	0.016		
11:17:02 AM	0.004		
11:18:02 AM	0.016		
11:19:02 AM	0.026		
11:20:02 AM	0.028		
11:21:02 AM	0.018		
11:22:02 AM	0.009		
11:23:02 AM	0.005		
11:24:02 AM	0.004		
11:25:02 AM	0.004		
11:26:02 AM	0.004		
11:27:02 AM	0.004		
11:28:02 AM	0.004		
11:29:02 AM	0.004		
11:30:02 AM	0.004		
11:31:02 AM	0.003		
11:32:02 AM	0.003		
11:33:02 AM	0.003		
11:34:02 AM	0.003		
11:35:02 AM	0.003		
11:36:02 AM	0.004		
11:37:02 AM	0.004		
11:38:02 AM	0.004		
11:39:02 AM	0.005		
11:40:02 AM	0.004		
11:41:02 AM	0.004		
11:42:02 AM	0.003		
11:43:02 AM	0.004		
11:44:02 AM	0.004		
11:45:02 AM	0.003		
11:46:02 AM	0.004		
11:47:02 AM	0.004		
11:48:02 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
11:49:02 AM	0.003		
11:50:02 AM	0.003		
11:51:02 AM	0.003		
11:52:02 AM	0.003		
11:53:02 AM	0.004		
11:54:02 AM	0.003		
11:55:02 AM	0.003		
11:56:02 AM	0.003		
11:57:02 AM	0.004		
11:58:02 AM	0.005		
11:59:02 AM	0.004		
12:00:02 PM	0.004		
12:01:02 PM	0.004		
12:02:02 PM	0.004		
12:03:02 PM	0.004		
12:04:02 PM	0.004		
12:05:02 PM	0.004		
12:06:02 PM	0.003		
12:07:02 PM	0.004		
12:08:02 PM	0.03		
12:09:02 PM	0.01		
12:10:02 PM	0.007		
12:11:02 PM	0.013		
12:12:02 PM	0.014		
12:13:02 PM	0.015		
12:14:02 PM	0.02		
12:15:02 PM	0.009		
12:16:02 PM	0.01		
12:17:02 PM	0.024		
12:18:02 PM	0.013		
12:19:02 PM	0.025		
12:20:02 PM	0.021		
12:21:02 PM	0.026		
12:22:02 PM	0.045		
12:23:02 PM	0.046		
12:24:02 PM	0.036		
12:25:02 PM	0.044		
12:26:02 PM	0.039		
12:27:02 PM	0.012		
12:28:02 PM	0.034		
12:29:02 PM	0.02		
12:30:02 PM	0.027		
12:31:02 PM	0.04		
12:32:02 PM	0.042		
12:33:02 PM	0.024		
12:34:02 PM	0.017		
	0.017		

Time	Mass [mg/m3]	Alarms	Errors
12:35:02 PM	0.011		
12:36:02 PM	0.011		
12:37:02 PM	0.008		
12:38:02 PM	0.016		
12:39:02 PM	0.018		
12:40:02 PM	0.012		
12:41:02 PM	0.008		
12:42:02 PM	0.01		
12:43:02 PM	0.009		
12:44:02 PM	0.008		
12:45:02 PM	0.011		
12:46:02 PM	0.009		
12:47:02 PM	0.009		
12:48:02 PM	0.011		
12:49:02 PM	0.009		
12:50:02 PM	0.01		
12:51:02 PM	0.01		
12:52:02 PM	0.008		
12:53:02 PM	0.009		
12:54:02 PM	0.008		
12:55:02 PM	0.015		
12:56:02 PM	0.023		
12:57:02 PM	0.03		
12:58:02 PM	0.022		
12:59:02 PM	0.007		
1:00:02 PM	0.012		
1:01:02 PM	0.041		
1:02:02 PM	0.031		
1:03:02 PM	0.021		
1:04:02 PM	0.046		
1:05:02 PM	0.016		
1:06:02 PM	0.029		
1:07:02 PM	0.011		
1:08:02 PM	0.025		
1:09:02 PM	0.007		
1:10:02 PM	0.015		
1:11:02 PM	0.018		
1:12:02 PM	0.009		
1:13:02 PM	0.016		
1:14:02 PM	0.05		
1:15:02 PM	0.021		
1:16:02 PM	0.033		
1:17:02 PM	0.012		
1:18:02 PM	0.012		
1:19:02 PM	0.022		
1:20:02 PM	0.012		

Time	Mass [mg/m3]	Alarms	Errors
1:21:02 PM	0.018		
1:22:02 PM	0.022		
1:23:02 PM	0.021		
1:24:02 PM	0.023		
1:25:02 PM	0.016		
1:26:02 PM	0.03		
1:27:02 PM	0.023		
1:28:02 PM	0.027		
1:29:02 PM	0.015		
1:30:02 PM	0.038		
1:31:02 PM	0.016		
1:32:02 PM	0.011		
1:33:02 PM	0.01		
1:34:02 PM	0.01		
1:35:02 PM	0.011		
1:36:02 PM	0.011		
1:37:02 PM	0.011		
1:38:02 PM	0.017		
1:39:02 PM	0.053		
1:40:02 PM	0.021		
1:41:02 PM	0.036		
1:42:02 PM	0.016		
1:43:02 PM	0.011		
1:44:02 PM	0.01		
1:45:02 PM	0.012		
1:46:02 PM	0.009		
1:47:02 PM	0.014		
1:48:02 PM	0.014		
1:49:02 PM	0.008		
1:50:02 PM	0.03		
1:51:02 PM	0.029		
1:52:02 PM	0.042		
1:53:02 PM	0.035		
1:54:02 PM	0.026		
1:55:02 PM	0.031		
1:56:02 PM	0.054		
1:57:02 PM	0.028		
1:58:02 PM	0.012		
1:59:02 PM	0.019		
2:00:02 PM	0.021		
2:01:02 PM	0.068		
2:02:02 PM	0.053		
2:03:02 PM	0.017		
2:04:02 PM	0.029		
2:05:02 PM	0.035		
2:06:02 PM	0.02		

Time	Mass [mg/m3]	Alarms	Errors
2:07:02 PM	0.024		
2:08:02 PM	0.012		
2:09:02 PM	0.007		
2:10:02 PM	0.014		
2:11:02 PM	0.041		
2:12:02 PM	0.08		
2:13:02 PM	0.025		
2:14:02 PM	0.027		
2:15:02 PM	0.021		
2:16:02 PM	0.034		
2:17:02 PM	0.033		
2:18:02 PM	0.031		
2:19:02 PM	0.038		
2:20:02 PM	0.041		
2:21:02 PM	0.011		
2:22:02 PM	0.028		
2:23:02 PM	0.01		
2:24:02 PM	0.016		
2:25:02 PM	0.021		
2:26:02 PM	0.024		
2:27:02 PM	0.042		
2:28:02 PM	0.016		
2:29:02 PM	0.023		
2:30:02 PM 2:31:02 PM	0.037 0.022		
2:32:02 PM	0.022		
2:33:02 PM	0.012		
2:34:02 PM	0.011		
2:35:02 PM	0.013		
2:36:02 PM	0.014		
2:37:02 PM	0.028		
2:38:02 PM	0.029		
2:39:02 PM	0.019		
2:40:02 PM	0.017		
2:41:02 PM	0.012		
2:42:02 PM	0.015		
2:43:02 PM	0.007		
2:44:02 PM	0.019		
2:45:02 PM	0.014		
2:46:02 PM	0.017		
2:47:02 PM	0.015		
2:48:02 PM	0.01		
2:49:02 PM	0.023		
2:50:02 PM	0.021		
2:51:02 PM	0.009		
2:52:02 PM	0.024		

Time	Mass [mg/m3]	Alarms	Errors
2:53:02 PM	0.049		
2:54:02 PM	0.028		
2:55:02 PM	0.044		
2:56:02 PM	0.035		
2:57:02 PM	0.02		
2:58:02 PM	0.007		
2:59:02 PM	0.028		
3:00:02 PM	0.031		
3:01:02 PM	0.036		
3:02:02 PM	0.035		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 TEST 1_008 **Test Name Test Start Time** 7:03:47 AM **Test Start Date** 6/29/2017 Test Length [D:H:M] 0:08:02 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.007 Mass Minimum [mg/m3] 0.004 Mass Maximum [mg/m3] 0.048 Mass TWA [mg/m3] 0.007 Photometric User Cal 1 Flow User Cal 0 **Errors**

Number of Samples 482

Time	Mass [mg/m3]	Alarms	Errors
7:04:47 AM	0.007		
7:05:47 AM	0.006		
7:06:47 AM	0.006		
7:07:47 AM	0.006		
7:08:47 AM	0.006		
7:09:47 AM	0.006		
7:10:47 AM	0.009		
7:11:47 AM	0.028		
7:12:47 AM	0.007		
7:13:47 AM	0.007		
7:14:47 AM	0.008		
7:15:47 AM	0.009		
7:16:47 AM	0.006		
7:17:47 AM	0.007		
7:18:47 AM	0.007		
7:19:47 AM	0.007		
7:20:47 AM	0.007		
7:21:47 AM	0.016		
7:22:47 AM	0.009		
7:23:47 AM	0.015		
7:24:47 AM	0.009		
7:25:47 AM	0.007		
7:26:47 AM	0.008		
7:27:47 AM	0.008		
7:28:47 AM	0.018		
7:29:47 AM	0.016		
7:30:47 AM	0.014		

Time	Mass [mg/m3]	Alarms	Errors
7:31:47 AM	0.012	Alaillis	EIIOIS
7:32:47 AM	0.012		
7:33:47 AM	0.012		
7:34:47 AM	0.011		
7:35:47 AM	0.012		
7:36:47 AM	0.007		
7:37:47 AM	0.007		
7:38:47 AM	0.007		
7:39:47 AM	0.008		
7:40:47 AM	0.008		
7:41:47 AM	0.008		
7:42:47 AM	0.008		
7:43:47 AM	0.008		
7:44:47 AM	0.008		
7:45:47 AM	0.008		
7:46:47 AM	0.008		
7:47:47 AM	0.008		
7:48:47 AM	0.015		
7:49:47 AM	0.013		
7:50:47 AM	0.019		
7:51:47 AM	0.013		
7:52:47 AM	0.012		
7:53:47 AM	0.013		
7:54:47 AM	0.009		
7:55:47 AM	0.014		
7:56:47 AM	0.007		
7:57:47 AM	0.008		
7:58:47 AM	0.009		
7:59:47 AM	0.01		
8:00:47 AM	0.013		
8:01:47 AM	0.01		
8:02:47 AM	0.009		
8:03:47 AM	0.007		
8:04:47 AM	0.007		
8:05:47 AM	0.006		
8:06:47 AM	0.007		
8:07:47 AM	0.01		
8:08:47 AM	0.007		
8:09:47 AM	0.006		
8:10:47 AM	0.006		
8:11:47 AM	0.006		
8:12:47 AM	0.006		
8:13:47 AM	0.006		
8:14:47 AM	0.007		
8:15:47 AM	0.007		
8:16:47 AM	0.008		

Time	Mass [mg/m3]	Alarms	Errors
8:17:47 AM	0.008		
8:18:47 AM	0.009		
8:19:47 AM	0.016		
8:20:47 AM	0.008		
8:21:47 AM	0.008		
8:22:47 AM	0.006		
8:23:47 AM	0.006		
8:24:47 AM	0.006		
8:25:47 AM	0.005		
8:26:47 AM	0.006		
8:27:47 AM	0.006		
8:28:47 AM	0.006		
8:29:47 AM	0.006		
8:30:47 AM	0.006		
8:31:47 AM	0.007		
8:32:47 AM	0.012		
8:33:47 AM	0.009		
8:34:47 AM	0.007		
8:35:47 AM 8:36:47 AM	0.009 0.006		
8:37:47 AM	0.006		
8:38:47 AM	0.000		
8:39:47 AM	0.003		
8:40:47 AM	0.008		
8:41:47 AM	0.006		
8:42:47 AM	0.006		
8:43:47 AM	0.014		
8:44:47 AM	0.005		
8:45:47 AM	0.007		
8:46:47 AM	0.009		
8:47:47 AM	0.008		
8:48:47 AM	0.018		
8:49:47 AM	0.009		
8:50:47 AM	0.009		
8:51:47 AM	0.007		
8:52:47 AM	0.005		
8:53:47 AM	0.013		
8:54:47 AM	0.006		
8:55:47 AM	0.005		
8:56:47 AM	0.005		
8:57:47 AM	0.005		
8:58:47 AM	0.005		
8:59:47 AM	0.005		
9:00:47 AM	0.005		
9:01:47 AM	0.005		
9:02:47 AM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
9:03:47 AM	0.005		
9:04:47 AM	0.005		
9:05:47 AM	0.005		
9:06:47 AM	0.006		
9:07:47 AM	0.006		
9:08:47 AM	0.007		
9:09:47 AM	0.005		
9:10:47 AM	0.005		
9:11:47 AM	0.005		
9:12:47 AM	0.005		
9:13:47 AM	0.005		
9:14:47 AM	0.006		
9:15:47 AM	0.007		
9:16:47 AM	0.005		
9:17:47 AM	0.008		
9:18:47 AM	0.005		
9:19:47 AM	0.01		
9:20:47 AM	0.007		
9:21:47 AM	0.005		
9:22:47 AM	0.01		
9:23:47 AM	0.006		
9:24:47 AM	0.009		
9:25:47 AM	0.005		
9:26:47 AM	0.006		
9:27:47 AM	0.015 0.01		
9:28:47 AM 9:29:47 AM	0.007		
9:30:47 AM	0.007		
9:31:47 AM	0.005		
9:32:47 AM	0.005		
9:33:47 AM	0.005		
9:34:47 AM	0.005		
9:35:47 AM	0.005		
9:36:47 AM	0.006		
9:37:47 AM	0.007		
9:38:47 AM	0.005		
9:39:47 AM	0.005		
9:40:47 AM	0.005		
9:41:47 AM	0.006		
9:42:47 AM	0.006		
9:43:47 AM	0.005		
9:44:47 AM	0.008		
9:45:47 AM	0.006		
9:46:47 AM	0.005		
9:47:47 AM	0.005		
9:48:47 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
9:49:47 AM	0.004		
9:50:47 AM	0.004		
9:51:47 AM	0.004		
9:52:47 AM	0.004		
9:53:47 AM	0.004		
9:54:47 AM	0.004		
9:55:47 AM	0.004		
9:56:47 AM	0.004		
9:57:47 AM	0.004		
9:58:47 AM	0.006		
9:59:47 AM	0.004		
10:00:47 AM	0.005		
10:01:47 AM	0.007		
10:02:47 AM	0.005		
10:03:47 AM	0.004		
10:04:47 AM	0.004		
10:05:47 AM	0.004		
10:06:47 AM	0.004		
10:07:47 AM	0.004		
10:08:47 AM	0.005		
10:09:47 AM	0.005		
10:10:47 AM	0.004		
10:11:47 AM	0.004		
10:12:47 AM	0.004		
10:13:47 AM	0.004		
10:14:47 AM	0.004		
10:15:47 AM	0.006		
10:16:47 AM	0.006		
10:17:47 AM	0.004		
10:18:47 AM	0.004		
10:19:47 AM	0.004		
10:20:47 AM	0.004		
10:21:47 AM	0.004		
10:22:47 AM	0.004		
10:23:47 AM	0.004		
10:24:47 AM	0.004		
10:25:47 AM	0.004		
10:26:47 AM	0.004		
10:27:47 AM	0.004		
10:28:47 AM	0.006		
10:29:47 AM	0.005		
10:30:47 AM	0.004		
10:31:47 AM	0.004		
10:32:47 AM	0.004		
10:33:47 AM	0.004		
10:34:47 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
10:35:47 AM	0.004		
10:36:47 AM	0.004		
10:37:47 AM	0.005		
10:38:47 AM	0.006		
10:39:47 AM	0.006		
10:40:47 AM	0.004		
10:41:47 AM	0.009		
10:42:47 AM	0.006		
10:43:47 AM	0.007		
10:44:47 AM	0.005		
10:45:47 AM	0.004		
10:46:47 AM	0.004		
10:47:47 AM	0.004		
10:48:47 AM	0.004		
10:49:47 AM	0.004		
10:50:47 AM	0.004		
10:51:47 AM	0.004		
10:52:47 AM	0.004		
10:53:47 AM	0.004		
10:54:47 AM	0.004		
10:55:47 AM	0.006		
10:56:47 AM	0.007		
10:57:47 AM	0.006		
10:58:47 AM	0.017		
10:59:47 AM	0.005		
11:00:47 AM	0.011		
11:01:47 AM	0.005		
11:02:47 AM	0.005 0.005		
11:03:47 AM 11:04:47 AM	0.005		
11:04:47 AM	0.003		
11:06:47 AM	0.009		
11:00:47 AM 11:07:47 AM	0.005		
11:07:47 AM	0.007		
11:09:47 AM	0.005		
11:10:47 AM	0.004		
11:11:47 AM	0.004		
11:12:47 AM	0.004		
11:13:47 AM	0.004		
11:14:47 AM	0.005		
11:15:47 AM	0.004		
11:16:47 AM	0.005		
11:17:47 AM	0.006		
11:18:47 AM	0.004		
11:19:47 AM	0.004		
11:20:47 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
11:21:47 AM	0.004		
11:22:47 AM	0.004		
11:23:47 AM	0.004		
11:24:47 AM	0.004		
11:25:47 AM	0.004		
11:26:47 AM	0.004		
11:27:47 AM	0.004		
11:28:47 AM	0.004		
11:29:47 AM	0.004		
11:30:47 AM	0.004		
11:31:47 AM	0.004		
11:32:47 AM	0.004		
11:33:47 AM	0.004		
11:34:47 AM	0.004		
11:35:47 AM	0.004		
11:36:47 AM	0.004		
11:37:47 AM	0.004		
11:38:47 AM	0.004		
11:39:47 AM	0.004		
11:40:47 AM	0.004		
11:41:47 AM	0.004		
11:42:47 AM	0.004		
11:43:47 AM	0.004		
11:44:47 AM	0.004		
11:45:47 AM	0.004		
11:46:47 AM	0.005		
11:47:47 AM	0.004		
11:48:47 AM	0.004		
11:49:47 AM	0.004		
11:50:47 AM	0.004		
11:51:47 AM	0.004		
11:52:47 AM	0.006		
11:53:47 AM	0.004		
11:54:47 AM	0.004		
11:55:47 AM	0.004		
11:56:47 AM	0.004		
11:57:47 AM	0.004		
11:58:47 AM	0.004		
11:59:47 AM	0.005		
12:00:47 PM	0.004		
12:01:47 PM	0.004		
12:02:47 PM	0.005		
12:03:47 PM	0.006		
12:04:47 PM	0.007		
12:05:47 PM	0.004		
12:06:47 PM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
12:07:47 PM	0.012		
12:08:47 PM	0.004		
12:09:47 PM	0.006		
12:10:47 PM	0.004		
12:11:47 PM	0.006		
12:12:47 PM	0.006		
12:13:47 PM	0.004		
12:14:47 PM	0.004		
12:15:47 PM	0.004		
12:16:47 PM	0.004		
12:17:47 PM	0.012		
12:18:47 PM	0.006		
12:19:47 PM	0.005		
12:20:47 PM	0.004		
12:21:47 PM	0.006		
12:22:47 PM	0.008		
12:23:47 PM	0.011		
12:24:47 PM 12:25:47 PM	0.004 0.004		
12:25:47 PM 12:26:47 PM			
12:20:47 PM 12:27:47 PM	0.004 0.004		
12:27:47 PM	0.004		
12:29:47 PM	0.004		
12:30:47 PM	0.004		
12:30:47 PM	0.005		
12:31:47 PM	0.004		
12:33:47 PM	0.004		
12:34:47 PM	0.004		
12:35:47 PM	0.004		
12:36:47 PM	0.004		
12:37:47 PM	0.004		
12:38:47 PM	0.004		
12:39:47 PM	0.004		
12:40:47 PM	0.005		
12:41:47 PM	0.009		
12:42:47 PM	0.005		
12:43:47 PM	0.008		
12:44:47 PM	0.004		
12:45:47 PM	0.004		
12:46:47 PM	0.012		
12:47:47 PM	0.006		
12:48:47 PM	0.008		
12:49:47 PM	0.008		
12:50:47 PM	0.007		
12:51:47 PM	0.008		
12:52:47 PM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
12:53:47 PM	0.011		
12:54:47 PM	0.014		
12:55:47 PM	0.007		
12:56:47 PM	0.005		
12:57:47 PM	0.008		
12:58:47 PM	0.007		
12:59:47 PM	0.011		
1:00:47 PM	0.005		
1:01:47 PM	0.006		
1:02:47 PM	0.01		
1:03:47 PM	0.006		
1:04:47 PM	0.007		
1:05:47 PM	0.007		
1:06:47 PM	0.005		
1:07:47 PM	0.005		
1:08:47 PM	0.006		
1:09:47 PM	0.005		
1:10:47 PM	0.005		
1:11:47 PM	0.008		
1:12:47 PM	0.008		
1:13:47 PM	0.007		
1:14:47 PM	0.007		
1:15:47 PM	0.006		
1:16:47 PM	0.006		
1:17:47 PM	0.01		
1:18:47 PM	0.01		
1:19:47 PM	0.007		
1:20:47 PM	0.006		
1:21:47 PM	0.005		
1:22:47 PM	0.005		
1:23:47 PM	0.005		
1:24:47 PM	0.006		
1:25:47 PM	0.006		
1:26:47 PM	0.006		
1:27:47 PM	0.005		
1:28:47 PM	0.004		
1:29:47 PM	0.006		
1:30:47 PM	0.006		
1:31:47 PM	0.007		
1:32:47 PM	0.006		
1:33:47 PM	0.005		
1:34:47 PM	0.006		
1:35:47 PM	0.006		
1:36:47 PM	0.005		
1:37:47 PM	0.014		
1:38:47 PM	0.009		

Time	Mass [mg/m3]	Alarms	Errors
1:39:47 PM	0.01		
1:40:47 PM	0.011		
1:41:47 PM	0.019		
1:42:47 PM	0.014		
1:43:47 PM	0.015		
1:44:47 PM	0.011		
1:45:47 PM	0.015		
1:46:47 PM	0.013		
1:47:47 PM	0.015		
1:48:47 PM	0.015		
1:49:47 PM	0.013		
1:50:47 PM	0.032		
1:51:47 PM	0.042		
1:52:47 PM	0.021		
1:53:47 PM	0.007		
1:54:47 PM	0.01		
1:55:47 PM	0.017		
1:56:47 PM	0.008		
1:57:47 PM	0.014		
1:58:47 PM 1:59:47 PM	0.012 0.01		
2:00:47 PM	0.012		
2:01:47 PM	0.012		
2:02:47 PM	0.014		
2:03:47 PM	0.014		
2:04:47 PM	0.015		
2:05:47 PM	0.013		
2:06:47 PM	0.012		
2:07:47 PM	0.007		
2:08:47 PM	0.005		
2:09:47 PM	0.005		
2:10:47 PM	0.02		
2:11:47 PM	0.008		
2:12:47 PM	0.006		
2:13:47 PM	0.005		
2:14:47 PM	0.006		
2:15:47 PM	0.004		
2:16:47 PM	0.048		
2:17:47 PM	0.011		
2:18:47 PM	0.006		
2:19:47 PM	0.009		
2:20:47 PM	0.006		
2:21:47 PM	0.009		
2:22:47 PM	0.006		
2:23:47 PM	0.005		
2:24:47 PM	0.007		

Time	Mass [mg/m3]	Alarms	Errors
2:25:47 PM	0.017		
2:26:47 PM	0.011		
2:27:47 PM	0.004		
2:28:47 PM	0.005		
2:29:47 PM	0.005		
2:30:47 PM	0.006		
2:31:47 PM	0.004		
2:32:47 PM	0.009		
2:33:47 PM	0.005		
2:34:47 PM	0.004		
2:35:47 PM	0.006		
2:36:47 PM	0.009		
2:37:47 PM	0.012		
2:38:47 PM	0.005		
2:39:47 PM	0.006		
2:40:47 PM	0.006		
2:41:47 PM	0.014		
2:42:47 PM	0.009		
2:43:47 PM	0.008		
2:44:47 PM	0.011		
2:45:47 PM	0.005		
2:46:47 PM	0.005		
2:47:47 PM	0.006		
2:48:47 PM	0.006		
2:49:47 PM	0.006		
2:50:47 PM	0.005		
2:51:47 PM	0.006		
2:52:47 PM	0.015		
2:53:47 PM	0.014		
2:54:47 PM	0.017		
2:55:47 PM	0.019		
2:56:47 PM	0.023		
2:57:47 PM	0.007		
2:58:47 PM	0.013		
2:59:47 PM	0.017		
3:00:47 PM	0.018		
3:01:47 PM	0.016		
3:02:47 PM	0.025		
3:03:47 PM	0.018		
3:04:47 PM	0.012		
3:05:47 PM	0.01		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_009 **Test Start Time** 7:07:59 AM **Test Start Date** 6/30/2017 Test Length [D:H:M] 0:06:48 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.011 Mass Minimum [mg/m3] 0.003 Mass Maximum [mg/m3] 0.09 Mass TWA [mg/m3] 0.01 Photometric User Cal 1 Flow User Cal 0

Errors

Number of Samples 408

Time	Mass [mg/m3]	Alarms	Errors
7:08:59 AM	0.004		
7:09:59 AM	0.003		
7:10:59 AM	0.003		
7:11:59 AM	0.003		
7:12:59 AM	0.003		
7:13:59 AM	0.004		
7:14:59 AM	0.004		
7:15:59 AM	0.003		
7:16:59 AM	0.003		
7:17:59 AM	0.005		
7:18:59 AM	0.004		
7:19:59 AM	0.004		
7:20:59 AM	0.003		
7:21:59 AM	0.004		
7:22:59 AM	0.007		
7:23:59 AM	0.004		
7:24:59 AM	0.003		
7:25:59 AM	0.003		
7:26:59 AM	0.003		
7:27:59 AM	0.003		
7:28:59 AM	0.003		
7:29:59 AM	0.003		
7:30:59 AM	0.003		
7:31:59 AM	0.003		
7:32:59 AM	0.004		
7:33:59 AM	0.003		
7:34:59 AM	0.003		

Time	Mass [mg/m3]	Alarms	Errors
7:35:59 AM	0.003	7	
7:36:59 AM	0.003		
7:37:59 AM	0.003		
7:38:59 AM	0.003		
7:39:59 AM	0.003		
7:40:59 AM	0.005		
7:41:59 AM	0.004		
7:42:59 AM	0.006		
7:43:59 AM	0.003		
7:44:59 AM	0.003		
7:45:59 AM	0.009		
7:46:59 AM	0.006		
7:47:59 AM	0.004		
7:48:59 AM	0.006		
7:49:59 AM	0.005		
7:50:59 AM	0.005		
7:51:59 AM	0.004		
7:52:59 AM	0.004		
7:53:59 AM	0.005		
7:54:59 AM	0.011		
7:55:59 AM	0.011		
7:56:59 AM	0.009		
7:57:59 AM	0.005		
7:58:59 AM 7:59:59 AM	0.005 0.005		
8:00:59 AM	0.005		
8:01:59 AM	0.004		
8:02:59 AM	0.005		
8:03:59 AM	0.005		
8:04:59 AM	0.012		
8:05:59 AM	0.013		
8:06:59 AM	0.004		
8:07:59 AM	0.004		
8:08:59 AM	0.005		
8:09:59 AM	0.008		
8:10:59 AM	0.005		
8:11:59 AM	0.003		
8:12:59 AM	0.003		
8:13:59 AM	0.005		
8:14:59 AM	0.007		
8:15:59 AM	0.007		
8:16:59 AM	0.006		
8:17:59 AM	0.005		
8:18:59 AM	0.003		
8:19:59 AM	0.005		
8:20:59 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
8:21:59 AM	0.005		
8:22:59 AM	0.007		
8:23:59 AM	0.003		
8:24:59 AM	0.003		
8:25:59 AM	0.005		
8:26:59 AM	0.006		
8:27:59 AM	0.007		
8:28:59 AM	0.005		
8:29:59 AM	0.007		
8:30:59 AM	0.006		
8:31:59 AM	0.007		
8:32:59 AM	0.007		
8:33:59 AM	0.006		
8:34:59 AM	0.023		
8:35:59 AM	0.052		
8:36:59 AM	0.026		
8:37:59 AM	0.013		
8:38:59 AM	0.008		
8:39:59 AM	0.014		
8:40:59 AM	0.036		
8:41:59 AM	0.034		
8:42:59 AM	0.051		
8:43:59 AM	0.017		
8:44:59 AM	0.022		
8:45:59 AM	0.02		
8:46:59 AM	0.023		
8:47:59 AM	0.024		
8:48:59 AM	0.013		
8:49:59 AM	0.012		
8:50:59 AM	0.012		
8:51:59 AM	0.017		
8:52:59 AM	0.005		
8:53:59 AM	0.007		
8:54:59 AM	0.017		
8:55:59 AM	0.007		
8:56:59 AM	0.008		
8:57:59 AM	0.018		
8:58:59 AM	0.007		
8:59:59 AM	0.044		
9:00:59 AM	0.04		
9:01:59 AM	0.016		
9:02:59 AM	0.006		
9:03:59 AM	0.005		
9:04:59 AM	0.011		
9:05:59 AM	0.015		
9:06:59 AM	0.016		

Time	Mass [mg/m3]	Alarms	Errors
9:07:59 AM	0.04		
9:08:59 AM	0.025		
9:09:59 AM	0.019		
9:10:59 AM	0.018		
9:11:59 AM	0.013		
9:12:59 AM	0.017		
9:13:59 AM	0.008		
9:14:59 AM	0.007		
9:15:59 AM	0.004		
9:16:59 AM	0.005		
9:17:59 AM	0.004		
9:18:59 AM	0.004		
9:19:59 AM	0.005		
9:20:59 AM	0.006		
9:21:59 AM	0.004		
9:22:59 AM	0.017		
9:23:59 AM	0.04		
9:24:59 AM	0.019		
9:25:59 AM	0.02		
9:26:59 AM	0.006		
9:27:59 AM	0.009		
9:28:59 AM	0.013		
9:29:59 AM	0.004		
9:30:59 AM	0.004		
9:31:59 AM	0.004		
9:32:59 AM 9:33:59 AM	0.007 0.012		
9:34:59 AM	0.012		
9:35:59 AM	0.05		
9:36:59 AM	0.038		
9:37:59 AM	0.023		
9:38:59 AM	0.014		
9:39:59 AM	0.016		
9:40:59 AM	0.014		
9:41:59 AM	0.007		
9:42:59 AM	0.013		
9:43:59 AM	0.024		
9:44:59 AM	0.007		
9:45:59 AM	0.015		
9:46:59 AM	0.021		
9:47:59 AM	0.029		
9:48:59 AM	0.014		
9:49:59 AM	0.014		
9:50:59 AM	0.04		
9:51:59 AM	0.013		
9:52:59 AM	0.015		

Time	Mass [mg/m3]	l Alarms	Errors
9:53:59 AM	0.02	,	
9:54:59 AM	0.005		
9:55:59 AM	0.004		
9:56:59 AM	0.004		
9:57:59 AM	0.009		
9:58:59 AM	0.021		
9:59:59 AM	0.018		
10:00:59 AM			
10:01:59 AM			
10:02:59 AM			
10:03:59 AM			
10:04:59 AM			
10:05:59 AM			
10:06:59 AN			
10:07:59 AM 10:08:59 AM			
10:08:59 AN			
10:10:59 AN			
10:10:55 AN			
10:12:59 AM			
10:13:59 AM			
10:14:59 AM			
10:15:59 AM	0.011		
10:16:59 AM	0.014		
10:17:59 AM	0.018		
10:18:59 AM	0.017		
10:19:59 AM	0.031		
10:20:59 AM	0.011		
10:21:59 AM			
10:22:59 AM			
10:23:59 AM			
10:24:59 AM			
10:25:59 AM			
10:26:59 AM			
10:27:59 AN			
10:28:59 AM 10:29:59 AM			
10:29:59 AIV			
10:30:59 AN			
10:31:59 AN			
10:32:59 AN			
10:34:59 AM			
10:35:59 AM			
10:36:59 AM			
10:37:59 AM	0.006		
10:38:59 AM	0.005		

Time	Mass [mg/m3]	Alarms	Errors
10:39:59 AM	0.018		
10:40:59 AM	0.013		
10:41:59 AM	0.01		
10:42:59 AM	0.006		
10:43:59 AM	0.006		
	0.007		
10:44:59 AM			
10:45:59 AM	0.005		
10:46:59 AM	0.005		
10:47:59 AM	0.004		
10:48:59 AM	0.005		
10:49:59 AM	0.004		
10:50:59 AM	0.014		
10:51:59 AM	0.006		
10:52:59 AM	0.008		
10:53:59 AM	0.008		
10:54:59 AM	0.015		
10:55:59 AM	0.007		
10:56:59 AM	0.004		
10:57:59 AM	0.005		
10:58:59 AM	0.01		
10:59:59 AM	0.006		
11:00:59 AM	0.004		
11:01:59 AM	0.004		
11:02:59 AM	0.004		
11:03:59 AM	0.003		
11:04:59 AM	0.006		
11:05:59 AM	0.008		
11:05:59 AW	0.008		
11:07:59 AM	0.01		
11:08:59 AM	0.01		
11:09:59 AM	0.007		
11:10:59 AM	0.005		
11:11:59 AM	0.005		
11:12:59 AM	0.004		
11:13:59 AM	0.004		
11:14:59 AM	0.005		
11:15:59 AM	0.005		
11:16:59 AM	0.006		
11:17:59 AM	0.006		
11:18:59 AM	0.019		
11:19:59 AM	0.029		
11:20:59 AM	0.005		
11:21:59 AM	0.006		
11:22:59 AM	0.005		
11:23:59 AM	0.004		
11:24:59 AM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
11:25:59 AM	0.004		
11:26:59 AM	0.004		
11:27:59 AM	0.004		
11:28:59 AM	0.004		
11:29:59 AM	0.004		
11:30:59 AM	0.005		
11:31:59 AM	0.004		
11:32:59 AM	0.004		
11:33:59 AM	0.004		
11:34:59 AM	0.004		
11:35:59 AM	0.004		
11:36:59 AM	0.005		
11:37:59 AM	0.005		
11:38:59 AM	0.004		
11:39:59 AM	0.004		
11:40:59 AM	0.004		
11:40:59 AM	0.004		
11:41:59 AM	0.004		
11:42:59 AM	0.004		
11:44:59 AM	0.004		
11:45:59 AM	0.004		
11:46:59 AM	0.004		
11:47:59 AM	0.004		
11:48:59 AM	0.004		
11:49:59 AM	0.005		
11:50:59 AM	0.005		
11:51:59 AM	0.004		
11:52:59 AM	0.004		
11:53:59 AM	0.004		
11:54:59 AM	0.004		
11:55:59 AM	0.005		
11:56:59 AM	0.004		
11:57:59 AM	0.004		
11:58:59 AM	0.004		
11:59:59 AM	0.009		
12:00:59 PM	0.01		
12:01:59 PM	0.004		
12:02:59 PM	0.006		
12:03:59 PM	0.007		
12:04:59 PM	0.007		
12:05:59 PM	0.01		
12:06:59 PM	0.005		
12:07:59 PM	0.004		
12:08:59 PM	0.004		
12:09:59 PM	0.005		
12:10:59 PM	0.01		

Time	Mass [mg/m3]	Alarms	Errors
12:11:59 PM	0.008		
12:12:59 PM	0.01		
12:13:59 PM	0.022		
12:14:59 PM	0.023		
12:15:59 PM	0.008		
12:16:59 PM	0.005		
12:17:59 PM	0.009		
12:18:59 PM	0.02		
12:19:59 PM	0.028		
12:20:59 PM	0.028		
12:21:59 PM	0.012		
12:22:59 PM	0.012		
12:23:59 PM	0.012		
12:24:59 PM	0.018		
12:25:59 PM	0.024		
12:26:59 PM	0.023		
12:27:59 PM	0.017		
12:27:59 PM 12:28:59 PM			
	0.021		
12:29:59 PM	0.025		
12:30:59 PM	0.019		
12:31:59 PM	0.014		
12:32:59 PM	0.035		
12:33:59 PM	0.018		
12:34:59 PM	0.009		
12:35:59 PM	0.005		
12:36:59 PM	0.004		
12:37:59 PM	0.007		
12:38:59 PM	0.01		
12:39:59 PM	0.012		
12:40:59 PM	0.011		
12:41:59 PM	0.013		
12:42:59 PM	0.005		
12:43:59 PM	0.007		
12:44:59 PM	0.005		
12:45:59 PM	0.027		
12:46:59 PM	0.008		
12:47:59 PM	0.032		
12:48:59 PM	0.006		
12:49:59 PM	0.01		
12:50:59 PM	0.022		
12:51:59 PM	0.016		
12:52:59 PM	0.006		
12:53:59 PM	0.006		
12:54:59 PM	0.009		
12:55:59 PM	0.013		
12:56:59 PM	0.014		

Time	Mass [mg/m3]	Alarms	Errors
12:57:59 PM	0.008		
12:58:59 PM	0.007		
12:59:59 PM	0.033		
1:00:59 PM	0.013		
1:01:59 PM	0.01		
1:02:59 PM	0.007		
1:03:59 PM	0.006		
1:04:59 PM	0.012		
1:05:59 PM	0.022		
1:06:59 PM	0.022		
1:07:59 PM	0.024		
1:08:59 PM	0.025		
1:09:59 PM	0.019		
1:10:59 PM	0.007		
1:11:59 PM	0.005		
1:12:59 PM	0.02		
1:13:59 PM	0.022		
1:14:59 PM	0.015		
1:15:59 PM	0.009		
1:16:59 PM	0.009		
1:17:59 PM	0.008		
1:18:59 PM	0.058		
1:19:59 PM	0.026		
1:20:59 PM	0.012		
1:21:59 PM	0.006		
1:22:59 PM	0.007		
1:23:59 PM	0.048		
1:24:59 PM	0.015		
1:25:59 PM	0.022		
1:26:59 PM	0.031		
1:27:59 PM	0.027		
1:28:59 PM	0.027		
1:29:59 PM	0.018		
1:30:59 PM	0.01		
1:31:59 PM	0.005		
1:32:59 PM	0.011		
1:33:59 PM	0.023		
1:34:59 PM	0.01		
1:35:59 PM	0.021		
1:36:59 PM	0.01		
1:37:59 PM	0.017		
1:38:59 PM	0.006		
1:39:59 PM	0.009		
1:40:59 PM	0.005		
1:41:59 PM	0.004		
1:42:59 PM	0.004		

Time	Mass [mg/m3]	Alarms	Errors
1:43:59 PM	0.005		
1:44:59 PM	0.004		
1:45:59 PM	0.005		
1:46:59 PM	0.006		
1:47:59 PM	0.005		
1:48:59 PM	0.005		
1:49:59 PM	0.004		
1:50:59 PM	0.004		
1:51:59 PM	0.004		
1:52:59 PM	0.004		
1:53:59 PM	0.005		
1:54:59 PM	0.005		
1:55:59 PM	0.006		

Instrument Name DustTrak II **Model Number** 8530 Serial Number 8530133701 Firmware Version 3.4 **Calibration Date** 11/30/2016 **Test Name** TEST 1_010 **Test Start Time** 7:22:27 AM **Test Start Date** 7/3/2017 Test Length [D:H:M] 0:02:37 Test Interval [M:S] 1:00 Mass Average [mg/m3] 0.008 Mass Minimum [mg/m3] 0.005 Mass Maximum [mg/m3] 0.032 Mass TWA [mg/m3] 0.003 Photometric User Cal 1 Flow User Cal 0 **Errors**

Number of Samples 157

Time	Mass [mg/m3]	Alarms	Errors
7:23:27 AM	0.008		
7:24:27 AM	0.007		
7:25:27 AM	0.018		
7:26:27 AM	0.032		
7:27:27 AM	0.01		
7:28:27 AM	0.008		
7:29:27 AM	0.008		
7:30:27 AM	0.008		
7:31:27 AM	0.008		
7:32:27 AM	0.007		
7:33:27 AM	0.007		
7:34:27 AM	0.007		
7:35:27 AM	0.007		
7:36:27 AM	0.009		
7:37:27 AM	0.008		
7:38:27 AM	0.007		
7:39:27 AM	0.007		
7:40:27 AM	0.007		
7:41:27 AM	0.007		
7:42:27 AM	0.007		
7:43:27 AM	0.007		
7:44:27 AM	0.007		
7:45:27 AM	0.007		
7:46:27 AM	0.007		
7:47:27 AM	0.007		
7:48:27 AM	0.007		
7:49:27 AM	0.006		

Time	Mass [mg/m3]	Alarms	Errors
7:50:27 AM	0.006		
7:51:27 AM	0.006		
7:52:27 AM	0.006		
7:53:27 AM	0.007		
7:54:27 AM	0.007		
7:55:27 AM	0.007		
7:56:27 AM	0.007		
7:57:27 AM	0.006		
7:58:27 AM	0.007		
7:59:27 AM	0.007		
8:00:27 AM	0.006		
8:01:27 AM	0.006		
8:02:27 AM	0.006		
8:03:27 AM	0.007		
8:04:27 AM	0.007		
8:05:27 AM	0.007		
8:06:27 AM	0.007		
8:07:27 AM	0.008		
8:08:27 AM	0.008		
8:09:27 AM	0.015		
8:10:27 AM 8:11:27 AM	0.007 0.006		
8:12:27 AM	0.007		
8:13:27 AM	0.007		
8:14:27 AM	0.008		
8:15:27 AM	0.006		
8:16:27 AM	0.006		
8:17:27 AM	0.006		
8:18:27 AM	0.006		
8:19:27 AM	0.006		
8:20:27 AM	0.006		
8:21:27 AM	0.006		
8:22:27 AM	0.006		
8:23:27 AM	0.006		
8:24:27 AM	0.006		
8:25:27 AM	0.006		
8:26:27 AM	0.006		
8:27:27 AM	0.006		
8:28:27 AM	0.006		
8:29:27 AM	0.006		
8:30:27 AM	0.006		
8:31:27 AM	0.006		
8:32:27 AM	0.006		
8:33:27 AM	0.008		
8:34:27 AM	0.008		
8:35:27 AM	0.014		

Time	Mass [mg/m3]	Alarms	Errors
8:36:27 AM	0.014		
8:37:27 AM	0.009		
8:38:27 AM	0.01		
8:39:27 AM	0.008		
8:40:27 AM	0.006		
8:41:27 AM	0.006		
8:42:27 AM	0.006		
8:43:27 AM	0.007		
8:44:27 AM	0.007		
8:45:27 AM	0.007		
8:46:27 AM	0.008		
8:47:27 AM	0.007		
8:48:27 AM	0.008		
8:49:27 AM	0.007		
8:50:27 AM	0.007		
8:51:27 AM	0.01		
8:52:27 AM	0.01		
8:53:27 AM	0.009		
8:54:27 AM	0.008		
8:55:27 AM	0.01		
8:56:27 AM	0.007		
8:57:27 AM	0.01		
8:58:27 AM	0.008		
8:59:27 AM	0.011		
9:00:27 AM	0.01		
9:01:27 AM	0.017		
9:02:27 AM	0.011		
9:03:27 AM	0.015		
9:04:27 AM	0.019		
9:05:27 AM	0.008		
9:06:27 AM	0.018		
9:07:27 AM	0.01		
9:08:27 AM	0.007		
9:09:27 AM	0.016		
9:10:27 AM	0.008		
9:11:27 AM	0.01		
9:12:27 AM	0.011		
9:13:27 AM	0.007		
9:14:27 AM	0.005		
9:15:27 AM	0.006		
9:16:27 AM	0.007		
9:17:27 AM	0.007		
9:18:27 AM	0.006		
9:19:27 AM	0.006		
9:20:27 AM	0.008		
9:21:27 AM	0.016		

Mass [mg/m3]	Alarms	Errors
0.014		
0.013		
0.012		
0.01		
0.01		
0.009		
0.013		
0.01		
0.007		
0.007		
0.011		
0.005		
0.006		
0.005		
0.005		
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	0.014 0.013 0.012 0.01 0.001 0.009 0.013 0.007 0.007 0.007 0.0011 0.005	0.013 0.012 0.01 0.001 0.009 0.013 0.007 0.007 0.007 0.001 0.005