Environmental Consultants
and Contractors

4222 East Thomas Road
Suite 310
Phoenix, AZ 85018-7609

602 840-2596
FAX 602 224-0572
www.scsengineers.com

SCS ENGINEERS

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File No. 01210126.07

Mr. Karl Moyers
Santa Cruz County Public Works
2150 N. Congress Drive, Room 117
Nogales, Arizona 85621

Subject: **Evaluation of Potential Air, Water and Soil Impacts from Sludge-Related Operations at Rio Rico Sanitary Landfill (RRSL), Santa Cruz County, AZ**

Dear Karl:

SCS Engineers (SCS) was retained by Santa Cruz County (SCC), Arizona to provide professional engineering services for Rio Rico Sanitary Landfill (RRSL). Work required performing air, water, soil sampling, laboratory analysis and subsequent evaluation of the results to assess the potential environmental impacts of sludge-related operations at the RRSL.

BACKGROUND

SCC began disposal operations at the RRSL in June 1981. On February 6, 2012, the Arizona Department of Environmental Quality (ADEQ) approved a Type III change to the facility, which allowed the disposal of dewatered sewage sludge at the RRSL. On behalf of SCC, SCS conducted various environmental sampling and performed an evaluation of the potential air, water, and soil impacts from these sludge-related operations based on a review of the laboratory data.

On December 15 and 16, 2014, SCS completed a multifaceted sampling event that included testing parameters from on-site air, water, and soil media. SCS's intent is to provide SCC with the data and evaluation needed for making a sound assessment of potential environmental impacts resulting from the site's sludge-related operations.

SAMPLING METHODOLOGY AND RESULTS

Task 1 – Assess Soil Impacts from Sludge-Related Operations

Soil Sample Collection Methodology

Based on a site reconnaissance and facility details provided by Mr. Karl Moyers of SCC, sludge operations at the RRSL are limited to distinct and concentrated areas of surface disposal. Based on this knowledge and with guidance from Mr. Moyers, SCS selected soil sampling locations using the assumption that the potential sludge-derived pollutants would travel via surface and/or subsurface water flow downgradient within the landfill. Therefore, the following three (3) locations were selected for soil sample collection:

1) **Site 6** – One (1) soil sample upstream of sludge and landfill operations (background)
2) **Site 7** – One (1) soil sample between areas of sludge operations on landfill (landfill impacts)
3) **Site 8** – One (1) soil sample downstream of sludge operations on landfill (sludge impacts)

On December 16, 2014, SCS collected samples from native soil at these three (3) locations (Sites 6, 7, and 8). Each sample was collected from the ground surface directly into a laboratory-supplied 8-ounce glass sample jar that was sealed with a Teflon-lined plastic lid. Each container was labeled with the sample location, date and time of sampling, and name of the sampler. Sample locations are shown on Figure 1: RRSL Sampling Map.

Filled sample containers were placed into an insulated cooler with ice and chilled to approximately 1-6 degrees Celsius (°C). Samples were transported to ESC Lab Sciences in Tempe, Arizona, which shipped the samples via Federal Express (FedEx) to their laboratory in Mt. Juliet, Tennessee (Arizona Department of Health Services [ADHS] license number AZ0612) under proper Chain of Custody (COC) procedures, arriving at the laboratory on December 18, 2014.

Laboratory Analysis of Samples

Soil samples were analyzed for total priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) using Environmental Protection Agency (EPA) Methods 6010B/7471. The proposal indicated that barium and molybdenum would also be analyzed; however, these metals were not included in the analysis due to an inadvertent omission by the laboratory.

The samples were also analyzed for eight (8) leached Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using the toxicity characteristic leaching procedure (TCLP) per 40 Code of Federal Regulations (CFR) Part 261 using EPA Methods 1311/6010B/7470A. A copy of the laboratory report from ESC Lab Sciences is provided in Attachment 1. Note that the location numbers in the laboratory report are not completely accurate (the descriptors for Sites 7 and 8 are switched in the laboratory report).

Results

The analytical results show that total priority pollutant metals were detected in all three (3) samples, as listed in Table 1 below. The results were compared to Arizona Residential and Non-Residential Soil Remediation Levels (RSRLs and NRSRLs). The results for the TCLP were below the laboratory reporting limits for all analyzed metals.

Table 1: Total Priority Pollutant Metals in Soil Samples for RRSL, Santa Cruz Co, Arizona

Parameter	Site 6 (Background) 12/16/2014	Site 7 (Landfill Impacts) 12/16/2014	Site 8 (Sludge Impacts) 12/16/2014	Arizona Soil Remediation Levels (SRLs)	
				RSRL	NRSRL
Mercury	<0.020	**0.026**	<0.020	23	310
Antimony	<2.0	<2.0	<2.0	31	410

Parameter	Site 6 (Background) 12/16/2014	Site 7 (Landfill Impacts) 12/16/2014	Site 8 (Sludge Impacts) 12/16/2014	Arizona Soil Remediation Levels (SRLs)	
				RSRL	NRSRL
Arsenic	**6.7**	**6.1**	**6.0**	10	10
Beryllium	**1.4**	**0.94**	**0.33**	150	1,900
Cadmium	<0.50	<0.50	<0.50	39	510
Chromium	**10**	**9.2**	**7.3**	None	None
Copper	**15**	**19**	**15**	3,100	41,000
Lead	**15**	**12**	**13**	400	800
Nickel	**10**	**9.8**	**6.1**	1,600	20,000
Selenium	<2.0	<2.0	<2.0	390	5,100
Silver	<1.0	<1.0	<1.0	390	5,100
Thallium	<2.0	<2.0	<2.0	5.2	67
Zinc	**39**	**39**	**35**	23,000	310,000

Notes: All results in mg/kg = milligrams per kilogram

Results show that no metal concentrations in soil from Sites 6, 7, or 8 exceeded the Arizona RSRLs or NRSRLs or the Federal (RCRA-TCLP) Hazardous Waste Criteria. Furthermore, there is no appreciable difference between the background and potential impact area concentrations. Based on the analytical results for the three (3) soil samples, evidence does not indicate that sludge operations at the RRSL have impacted the priority pollutant metal concentrations of the site soils.

Task 2 – Odor Detection and Characterization

Odor Sample Collection Methodology

In order to characterize the gases emitting from the ground surface of the landfill and to assess the potential impacts of the sludge operations on these surface emissions, SCS conducted surface emission air sampling at Sites 6, 7, and 8. A total of six (6) air samples were collected at the three sites selected for air testing:

1) **Site 6** – Two (2) air samples upstream of sludge and landfill operations (background)
2) **Site 7** – Two (2) air samples upstream of sludge operations on landfill (landfill impacts)
3) **Site 8** – Two (2) air samples downstream of sludge operations on landfill (sludge impacts)

On December 16, 2014, SCS utilized an emission isolation flux chamber to collect two (2) air samples each at Sites 6, 7, and 8. The following sampling protocol was followed for all six (6) air samples taken from Sites 6, 7, and 8:

- Before set-up at each location, the inner surface of the flux hood was wiped clean with a non-lotion baby wipe.
- The flux hood was then shimmied into the ground surface between 2-3 inches to create a seal with the ground before turning on the sweep gas pump.

- The sweep gas pump was then turned on, and the flow rate into the flux hood was set and calibrated at two (2) liters/minute.
- Before turning on the sample vacuum pump, the flux hood was conditioned with the sweep gas for fifteen (15) minutes.
- The sample vacuum pump was then turned on with a flow rate of one (1) liter/minute.
- After turning on the sample vacuum pump, it took approximately 10 minutes to fill each 10 liter sample bag to the desired capacity.

Laboratory Analysis of Samples

At each site, one (1) sample was collected for odor analysis and one (1) for testing of sulfur compounds and Volatile Organic Compounds (VOCs). The sample bags were labeled with the location, date, time, and sampler's name. All sample bags were placed in laboratory supplied boxes for shipment and sent to the respective laboratories under proper COC controls. The air samples were shipped overnight to ensure that the laboratory tests were completed within twenty four (24) hours.

The odor samples were shipped to a laboratory in Minnesota (St. Croix Sensory, Inc.) that specializes in odor/air analysis. The analytical services included analysis for odor by the American Society for Testing and Materials (ASTM) standard E679, "Standard Practice for Determination of Odor and Taste Thresholds By a Forced-Choice Ascending Concentration Series Method of Limits." The chemical samples were shipped to a laboratory in Simi Valley, California (ALS Environmental) for chemical analysis of Speciated Reduced Sulfur Compounds and VOCs.

Results

Based on the report provided by St. Croix Laboratory, Inc. (see Attachment 2), the results from the air samples collected at Sites 6, 7, and 8 for odor analysis provided no evidence that the air levels exceeded a "faint" description in the sensation and odor categories. Using a relative scale of 1-5 for describing odor strength, St. Croix only reported detections in two odor categories (medicinal and chemical) that exceeded a score of 1 (see Table 2. below). No descriptors in the sensation category from the air samples received a score exceeding 0.4. There is no regulatory threshold for odor using the scale provided by St. Croix Laboratory, Inc., but the low magnitude of the detected odors (i.e., most values below 1 and all values below 2) suggest that odor from the landfill and sludge would be insignificant. Furthermore, the odor levels detected at the potential impact areas are within the range of levels detected in background samples. Off-site odor levels would be expected to be lower at the background locations than at the potential impact areas; therefore, this also suggests no odor impact.

Table 2: Surface Emissions: Odor Analysis for RRSL, Santa Cruz County, Arizona

Odor Descriptor	Site 6 (Background) 12/16/2014	Site 7 (Landfill Impacts) 12/16/2014	Site 8 (Sludge Impacts) 12/16/2014
Medicinal	**1.6**	**0.2**	**0.2**
Chemical	**0.4**	**1.6**	**1.2**

The analytical report provided by ALS Environmental (see Attachment 3) included results from the air samples taken at Sites 6, 7, and 8 for Speciated Reduced Sulfur Compounds using method ASTM D 5504-12 and VOCs using EPA Method TO-15 Modified. All Speciated Reduced Sulfur Compounds test results were below laboratory reporting limits. Most of the VOC concentrations were also below laboratory reporting limits; however, two (2) compounds were detected from Sites 6, 7, and 8, as listed in Table 3 below. Also, it may or may not be important to note that some tentatively identified compounds (TICs) were detected, including 1-methoxy-2-propyl acetate and unknown siloxane compounds from the surface emission air samples collected from Sites 6, 7, and 8. These compounds may be present, but cannot be affirmatively identified.

Table 3: Surface Emissions: Detected VOCs for RRSL, Santa Cruz County, Arizona

CAS #	Compound	Site 6 (Background) 12/16/2014	Site 7 (Landfill Impacts) 12/16/2014	Site 8 (Sludge Impacts) 12/16/2014	Odor Detection Threshold
108-88-3	Toluene	**8.9**	**8.7**	**8.9**	11,000
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	**57**	ND	55,000

Notes: All results in $\mu g/m^3$ = micrograms per cubic meter
ND indicates compound was not detected

Ultimately, the analytical results of the air samples collected at Sites 6, 7, and 8 do not provide evidence that the sludge operations impact the odor and/or volatile gas concentrations emitting from the ground surface at the RRSL. Detected concentrations were well below the odor detection thresholds for the detected chemicals. Toluene was also detected in the background sample, which suggests that there are other sources of toluene in the area in addition to the landfill and sludge operations. The detected concentration of isopropyl alcohol at Site 7 could be the result of the field technician using an alcohol pad to clean the inside of the flux hood instead of the recommended non-lotion baby wipe. An alcohol pad used in combination with an insufficient time for the inside of the flux hood to dry could be the cause of the isopropyl alcohol concentration detected in the Site 7 air sample. Even if real, the detected concentration is insignificant in terms of potential odor or air impact, and isopropyl alcohol was not detected at the sludge location.

Task 3 – Ambient Air Sampling For Metals Analysis

Ambient Air Sampling Methodology

In order to assess the potential airborne impacts of the sludge operations to particulates within and around the RRSL, SCS staff utilized TSI DustTrak instruments to monitor levels for total

particulates during an eight (8) hour sample period during sludge operations on December 16, 2014. SCS set up five (5) TSI DustTrak instruments at five (5) separate locations (Sites 1-5). Sites 1-5 were determined by Mr. Moyers and were communicated to the SCS Field Technician during a client provided tour of the facility on December 15, 2014. SCS's original intent for the five (5) DustTrak locations was to collect data at locations that provided the following:

1) One (1) sample upwind of sludge and landfill operations
2) One (1) sample downwind of sludge and landfill operations, along fence line
3) Three (3) samples downwind of sludge and landfill operations, off-site in the surrounding neighborhood (at locations directed by SCC)

However, due to wind patterns prevalent on December 15 and 16, 2014, the five (5) locations selected by SCC for particulate analysis did not include the sample characteristics originally intended. Instead, the proximity to the active sludge and landfill operations in comparison to the wind patterns for Sites 1-5 are described as follows:

1) **Site 1** – Downwind of sludge and landfill operations on property fence line
2) **Site 2** – Downwind of sludge and landfill operations on property fence line
3) **Site 3** – Upwind of sludge and landfill operations on property fence line
4) **Site 4** – Upwind of sludge and landfill operations on property fence line
5) **Site 5** – Downwind of sludge and landfill operations within the landfill

Results

The 8-hour average of total particulate data recorded by the DustTrak instruments at Sites 1-5 is outlined in Table 4 below. The complete DustTrak data is provided in Attachment 4.

Table 4: Ambient Air: Total Particulates Results for RRSL, Santa Cruz County, Arizona

Location	Total Particulates	
	8-Hour Average	Maximum
Site 1	**0.002**	**0.084**
Site 2	**0.006**	**0.063**
Site 3*	**0.008**	**0.171**
Site 4	**0.004**	**0.066**
Site 5	**0.008**	**0.116**

Notes: All results in mg/m^3 = milligrams per cubic meter
* Isolated high reading obtained at 9:58 am

In order to calculate airborne concentrations of metals potentially impacted from the sludge operations and to assess on-site or off-site exposure, SCS used the metal concentrations detected in the soil samples collected from Sites 6-8 and the total particulate data recorded using the DustTrak instruments from Sites 1-5 to calculate concentrations of airborne metals at Sites 1-5. Under a conservative assumption, the airborne particulates would have the same metal concentrations as the soil. The calculated airborne metals concentrations based on the 8-hour average particulate readings for each site and the maximum detected concentration of each metal

are provided in Table 5. The Regional Screening Level (RSL) from the EPA is utilized to evaluate potential impacts.

Table 5: Ambient Air: Calculated Airborne Concentrations of Priority Pollutant Metals for RRSL, Santa Cruz County, Arizona

Metal	Site					EPA RSL
	1	2	3	4	5	
Mercury	**5.20E-08**	**1.56E-07**	**2.08E-07**	**1.04E-07**	**2.08E-07**	1.3E-01
Antimony	ND	ND	ND	ND	ND	None
Arsenic	**1.34E-05**	**4.02E-05**	**5.36E-05**	**2.68E-05**	**5.36E-05**	2.9E-03
Beryllium	**2.80E-06**	**8.40E-06**	**1.12E-05**	**5.60E-06**	**1.12E-05**	5.1E-03
Cadmium	ND	ND	ND	ND	ND	4.4E-03
Chromium	**2.00E-05**	**6.00E-05**	**8.00E-05**	**4.00E-05**	**8.00E-05**	1.5E-04
Copper	**3.80E-05**	**1.14E-04**	**1.52E-04**	**7.60E-05**	**1.52E-04**	None
Lead	**3.00E-05**	**9.00E-05**	**1.20E-04**	**6.00E-05**	**1.20E-04**	None
Nickel	**2.00E-05**	**6.00E-05**	**8.00E-05**	**4.00E-05**	**8.00E-05**	4.7E-02
Selenium	ND	ND	ND	ND	ND	8.8E-00
Silver	ND	ND	ND	ND	ND	None
Thallium	ND	ND	ND	ND	ND	None
Zinc	**7.80E-05**	**2.34E-04**	**3.12E-04**	**1.56E-04**	**3.12E-04**	None

Notes: All results in µg/m3 = micrograms per cubic meter
ND indicates metal was not detected in any soil sample

Based on the metal concentrations detected in the soil samples from Sites 6-8 and the 8-hour average total particulate data measured by the DustTrak instruments from Sites 1-5, there is no evidence that the sludge operations impact the airborne metal concentrations in the particulate dust originating from the RRSL nor do the metals concentrations exceed EPA RSL values for health-based exposure.

Task 4 – Ambient Air Sampling for Odor, Chemical, Microbial and Dust Analysis

Ambient Air Sample Collection Methodology – Odor and Chemical

In order to assess the potential impacts of the sludge operations on the ambient air quality at the RRSL, SCS retained the services of RES Environmental (RES) to provide ambient air sampling related services on December 16, 2014. RES set up a portable meteorological station to record wind direction and velocity during sampling (see meteorological station location in Figure 1). The results of the wind speed and direction measurements can be reviewed in detail and a windrose diagram is provided in Figure 2, as well as in Attachment 5. In summary, between 4:00 pm December 15 and 4:00 pm December 16, 2014, the wind direction was primarily coming from the south and southwest 70 percent of the time at speeds of 0-10 miles per hour (mph). The maximum wind speed recorded was ten (10) mph coming directly from the south at 2:00 pm on December 16, 2014.

RES was also assigned the task of collecting ambient air samples into 10-liter Tedlar bags utilizing a lung sampler from Sites 1-5. Two samples were collected from each site location over

a twenty four (24) hour sampling period, starting on December 15 and ending on December 16, 2014, for a total of ten (10) air samples. As discussed under the Task 3 particulate sampling section, Sites 1-5 are described as follows:

1) **Site 1** – Downwind of sludge and landfill operations on property fence line
2) **Site 2** – Downwind of sludge and landfill operations on property fence line
3) **Site 3** – Upwind of sludge and landfill operations on property fence line
4) **Site 4** – Upwind of sludge and landfill operations on property fence line
5) **Site 5** – Downwind of sludge and landfill operations within Landfill

Laboratory Analysis of Samples – Odor and Chemical

One (1) sample was collected from each of Sites 1-5 for odor analysis and one (1) sample was collected from each site for testing of sulfur compounds and VOCs. The sample bags were labeled with the location, date, time, and sampler's name. All sample bags were placed in laboratory supplied boxes for shipment and sent to the respective laboratories under proper COC controls. The air samples were shipped overnight to ensure that the laboratory tests were completed within twenty four (24) hours.

The odor samples were shipped to a laboratory in Minnesota (St. Croix Sensory, Inc.) that specializes in odor/air analysis. The analytical services included analysis for odor by the ASTM standard E679, "Standard Practice for Determination of Odor and Taste Thresholds By a Forced-Choice Ascending Concentration Series Method of Limits." The chemical samples were shipped to a laboratory in Simi Valley, California (ALS Environmental) for chemical analysis of Speciated Reduced Sulfur Compounds and VOCs. All laboratory testing was completed within twenty four (24) hours except for the Site 1 chemical analysis. Due to failure of the chemical sample bag during shipment, the odor sample bag from Site 1 was shipped from St. Croix to ALS for the sulfur compounds and VOCs analyses; therefore, these tests were not completed on December 19, 2014.

Results – Odor and Chemical

Based on the report provided by St. Croix Laboratory, Inc. (see Attachment 2), the results from the air samples collected at Sites 1-5 for odor analysis provided no evidence that the air levels exceeded a "faint" description in the sensation and odor categories. Using a relative scale of 1-5 for describing odor strength, St. Croix only reported detections in three odor categories (medicinal, chemical, and offensive). The chemical category is the only descriptor that exceeded a score of 1 (see Table 6 below). No descriptors in the sensation category from the air samples received a score exceeding 0.4. Furthermore, the detected odors are consistent between upwind and downwind locations, suggesting that landfill and sludge operations contributions to detected odors were insignificant. Site 1 was potentially the most impacted, but that impact was less than 1 on the St. Croix Laboratory scale for offensiveness.

Table 6: Ambient Air: Odor Analysis for RRSL, Santa Cruz County, Arizona

Odor Descriptor	Site 1[1] (Downwind Sludge and Landfill) 12/16/2014	Site 2[1] (Downwind Sludge and Landfill) 12/16/2014	Site 3[1] (Upwind Sludge and Landfill) 12/16/2014	Site 4[1] (Upwind Sludge and Landfill) 12/16/2014	Site 5 (Downwind Sludge and Landfill) 12/16/2014
Medicinal	**0.4**	**0.2**	**0.2**	**0.0**	**0.2**
Chemical	**1.6**	**1.4**	**1.2**	**1.4**	**1.6**
Offensive	**0.6**	**0.2**	**0.2**	**0.4**	**0.2**

Notes: 1. Located at fence line of RRSL property

The analytical report provided by ALS Environmental (see Attachment 3) included results from the air samples collected at Sites 1-5 for Speciated Reduced Sulfur Compounds using method ASTM D 5504-12 and VOCs using EPA Method TO-15 Modified. All Speciated Reduced Sulfur Compounds test results were below laboratory reporting limits. Most of the VOC concentrations were also below laboratory reporting limits; however two (2) compounds were detected from Sites 1-5, as listed in Table 7 below. Also, it may or may not be important to note that some TICs were detected, including 1-methoxy-2-propyl acetate and unknown siloxane compounds from the surface emission air samples collected from Sites 1-5. These compounds may be present, but cannot be affirmatively identified by the laboratory.

Table 7: Ambient Air: Detected VOCs for RRSL, Santa Cruz County, Arizona

CAS #	Compound	Site 1[1,2] (Sludge & Landfill)	Site 2[2] (Sludge & Landfill)	Site 3[2] (Sludge & Landfill)	Site 4[2] (Sludge & Landfill)	Site 5 (Sludge & Landfill)	Odor Detection Threshold
		Downwind 12/16/2014		Upwind 12/16/2014		Downwind 12/16/2014	
156-59-2	Ethyl Acetate	**11**	ND	ND	ND	ND	14,000
108-88-3	Toluene	**18**	**8.4**	**7.9**	**8.1**	**9.7**	11,000

Notes: All results in µg/m3 = micrograms per cubic meter
ND indicates compound was not detected
1. Not tested within 24 hours of sample collection
2. Located on fence line of RRSL property

Ultimately, the analytical results of the air samples collected at Sites 1-5 do not provide evidence that the sludge operations impact the odor and/or volatile gas concentrations of the air within and around the proximity of the RRSL. Toluene was detected in all five samples; however, its presence in the upwind samples suggests that there are sources other than the sludge and landfill operations. Detected concentrations were well below the odor detection thresholds for each chemical.

Microbial Sample Methodology, Analysis, and Results

In order to assess the potential impacts of the sludge operations on ambient air and airborne microbial species, SCS used a single phase impactor sampler to collect microbial samples at Sites 1-5. Originally, microbial samples were to be collected and tested for *Clostridium difficile* and *Staphylococcus aureus* bacteria as recommended by RRSL's academic contact at the

University of Georgia, Professor David L. Lewis. However, due to the unavailability of the petri culture required for *Clostridium difficile* at the time of sampling, SCS was only able to sample for *Staphylococcus aureus*.

The five microbial samples were collected using a single phase impactor sampler supplied by EMSL Laboratories (EMSL). Samples were collected according to the sampling procedures provided by EMSL. The only variance from the supplied sampling procedures was a sample flow rate used of twenty four (24) liters per minute (LPM) instead of the 28.3 LPM outlined in the procedures. The 24-LPM sample rate was the maximum rate achievable when collecting the samples; therefore, the sample period was adjusted to seven (7) minutes per sample instead of the 2-5 minute sample time described in the sampling procedures. Before collecting the samples from Sites 1-5, the impactor sampler was wiped clean with a 70 percent isopropyl alcohol wipe and allowed to dry before use. After each sample was collected, the petri dish lid was replaced and scotch tape was used to form a seal. The petri dishes were placed in a chilled cooler and shipped overnight to the EMSL laboratory in Cinnaminson, New Jersey.

The analytical report supplied by EMSL for the microbial testing of samples from Sites 1-5 identified *Staphylococcus aureus* as Non Detectable for all five (5) samples, indicating no bacterial impacts from sludge operations. The EMSL report is included as Attachment 6.

Dust Analysis

The air sampling included in the proposal for dust analysis is covered under Task 3, as discussed previously in this report.

Task 5 – Groundwater Sampling for Metals

Groundwater Level Measurements and Estimated Conditions

On December 11, 2014, SCS measured groundwater levels in monitoring wells MW-1, MW-3, and MW-4 using an electrical sounder; MW-2 (a.k.a. piezometer P-1) was not monitored during this event. The well locations and datum elevations for MW-1 and MW-3 were surveyed in September 2007 by Precision Land Surveying, Inc. and MW-4 was installed in April 2008 and surveyed by Hugh Duncan and Associates in May 2008. The groundwater level monitoring results are as follows:

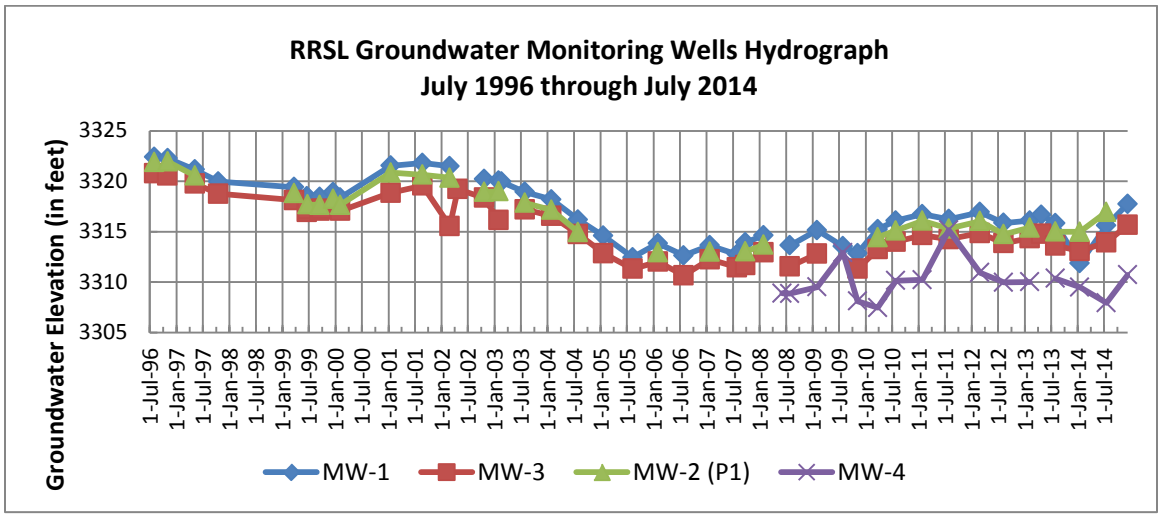
Table 8: Groundwater Elevations in Monitoring Wells for RRSL, Santa Cruz County, Arizona

Well ID	Date of Measurement	Depth to Groundwater (in feet BTOC)	Datum Elevation (in feet above msl)	Groundwater Elevation (in feet above msl)
MW-1	12/11/2014	111.4	3,429.14	3,317.74
MW-3	12/11/2014	137.8	3,453.46	3,315.66
MW-4	12/11/2014	375.2	3,685.91	3,310.71

Notes: BTOC = Below top of casing
msl = Mean sea level

Monitoring well locations and calculated groundwater elevations for this reporting period are shown on Figure 3. The groundwater flow direction appeared to be generally toward the west;

however, because the three wells are generally in line with each other, it could not be determined if the gradient is toward the west, southwest, or northwest. During previous monitoring events when MW-2 was also measured, the groundwater flow has consistently been estimated to be toward the west-northwest until the January 2014 monitoring event, which was toward the southwest, south, and southeast, and the July 2014 monitoring event, which was toward the southwest. Using a general flow direction toward the west, the groundwater gradient was calculated to be approximately 0.0041 feet per foot.



As shown on the hydrograph above, the groundwater elevations for the four groundwater wells have generally shown similar increases and decreases relative to each other over time. The reasons for variations shown on the hydrograph are unknown.

Groundwater Sample Collection Methodology

On December 11, 2014, SCS collected groundwater samples for laboratory analyses from monitoring wells MW-1, MW-3, and MW-4. SCS does not collect samples from MW-2 due to roots within the well casing. Following depth to water measurements, each well was purged. Measurements of pH, conductivity, and temperature were recorded during purging. Samples were collected after measurements had stabilized. Copies of water sampling logs are included in Attachment 7.

MW-1 and MW-3 were purged using a 2-inch diameter portable submersible pump that was decontaminated before beginning purging and after sampling each of the two wells. A non-phosphate detergent was circulated through the pump and discharge tubing followed by one rinse with tap water and one rinse with purified water prior to sampling; new unused tubing was used at each well. The pump intake was set approximately midway between the bottom of each well and the measured static water level. The wells were purged at rates of about 3 to 4 gallons per minute (gpm) for more than 3 well volumes. The pumping rate was then reduced to less than 1 gpm during collection of the groundwater sample from the discharge tubing of the well.

MW-4 was purged using a dedicated submersible pump set at approximately 385 feet below ground surface (bgs). The well was purged at a rate of about 3.5 gpm for more than 3 well volumes. The sample was collected from a bleeder valve on the main discharge line.

Samples were collected into laboratory-provided sample containers, consisting of 500-milliliter polyethylene bottles. Samples were not field filtered and were not field preserved. Each container was filled, capped, and labeled with the sample well location; date and time of sampling; and analytical method to be used. Filled sample containers were placed into an insulated cooler with ice and chilled to approximately 1-6°C. Samples were transported to ESC Lab Sciences in Tempe, Arizona, which shipped the samples via FedEx to their laboratory in Mt. Juliet, Tennessee (ADHS license number AZ0612) under chain of custody procedures, arriving at the laboratory on December 13, 2014.

Laboratory Analysis of Samples

Groundwater samples were analyzed for priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) using EPA Methods 6010B/6020/7470A. The proposal indicated that barium and molybdenum would also be analyzed; however, these metals were not included in the analysis due to an inadvertent omission by the laboratory. A copy of the laboratory report from ESC Lab Sciences is included in Attachment 7.

Results

SCS reviewed the laboratory analytical results and compared them to the Arizona Aquifer Water Quality Standards (AWQS). Arsenic was the only one of the 13 priority pollutant metals detected in the samples above laboratory reporting limits. The laboratory results for detected compounds are summarized in the table below.

Table 9: Priority Pollutant Metals in Groundwater Samples, RRSL, Santa Cruz Co, Arizona

Parameter	MW-1	MW-3	MW-4	AWQS
Arsenic	**0.0040**	**0.0043**	**0.0039**	**0.05**

Notes: All results in mg/L = milligrams per liter

Arsenic is not currently one of the constituents being monitored during the semi-annual groundwater sampling at the landfill. However, a summary of arsenic laboratory results for samples collected from site wells MW-1 and MW-3 from July 1996 through January 2001 is provided in the table below.

Table 10: Historic Concentrations of Arsenic in RRSL Monitoring Wells, RRSL, Santa Cruz County, Arizona

Sample Collection Date	Concentration of Arsenic (in mg/L)	
	MW-1	MW-3
31-Jul-1996	<0.0030	<0.0030
30-Oct-1996	---	**0.0050**
2-Nov-1996	**0.003**	---

Sample Collection Date	Concentration of Arsenic (in mg/L)	
	MW-1	MW-3
7-May-1997	**0.0032**	<0.0030
16-Oct-1997	**0.0040**	**0.0036**
23-Mar-1999	<0.050	<0.050
18-Jun-1999	<0.050	<0.050
14-Sep-1999	<0.050	---
29-Sep-1999	---	<0.050
16-Dec-1999	<0.050	<0.050
16-Jan-2001	<0.050	<0.050
AWQS	**0.05**	**0.05**

Based on the laboratory results for analysis of priority pollutant metals in samples from the three groundwater monitoring wells at the landfill, evidence of impacts to groundwater from the sludge operations was not identified.

Task 6 – Water and Sediment Sampling

Basin Sediment and Water Sample Collection Methodology

The RRSL stormwater retention basin is approximately 360 feet long and 150 feet wide and is located within the eastern portion of the site, as shown in Figure 1. Because stormwater runoff from the landfill is directed toward and stored in the basin, runoff from areas where sludge-related operations are performed can potentially carry constituents that may impact the quality of the retention water.

During the monitoring activities conducted on December 16, 2014, SCS collected grab samples of water and sediment from the retention basin. At the time of sampling, the water in the basin was measured to be approximately 4 feet deep and the surface area of the water was measured to be approximately 1,200 square feet (40 feet long x 30 feet wide). Sample locations are shown on Figure 1.

From the edge of the water, SCS collected two (2) water samples (Basin Water #1 and Basin Water #2) and two (2) sediment samples (Basin Sediment #1 and Basin Sediment #2) for laboratory analysis. Both sets of samples were collected as grab samples using laboratory-supplied bottles and jars. Each container was labeled with the sample location, date and time of sampling, and name of the sampler.

Filled sample containers were placed into an insulated cooler with ice and chilled to approximately 1-6°C. Samples were transported to ESC Lab Sciences in Tempe, Arizona, which shipped the samples via FedEx to their laboratory in Mt. Juliet, Tennessee (ADHS license number AZ0612) under proper COC procedures, arriving at the laboratory on December 18, 2014.

Laboratory Analysis of Samples

Basin water samples (Basin Water #1 and Basin Water #2) were analyzed for priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) using EPA Methods 6020/6010B/7470A. Basin sediment samples (Basin Sediment #1 and Basin Sediment #2) were analyzed for total priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc), barium, and molybdenum using EPA Methods 6010B/7471. In addition, the two basin sediment samples were analyzed for eight leached RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using the TCLP per 40 CFR Part 261 using EPA Methods 1311/6010B/7470A. A copy of the laboratory report from ESC Lab Sciences is provided in Attachment 8.

Results – Retention Basin Water Samples

The analytical results for the two basin water samples showed that total priority pollutant metals were detected in both samples, as listed in the table below; only detected parameters are shown. The results are compared to effluent limitation guidelines from the ADEQ Arizona Pollutant Discharge Elimination System (AZPDES) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity from Non-Mining Facilities, Subpart L – Sector L – Landfills, Land Application Sites, and Open Dumps.*

Table 11: Priority Pollutant Metals in Retention Basin Water for RRSL, Santa Cruz Co, Arizona

Parameter	Basin Water #1 12/16/2014	Basin Water #2 12/16/2014	MSGP 2010 General Permit Benchmarks[1]
Antimony	<0.018	**0.0031**	Not applicable
Arsenic	**0.082**	**0.043**	Not applicable
Lead	**0.076**	**0.0036**	Not applicable
Mercury	**0.0011**	<0.00020	Not applicable
Chromium	**0.028**	<0.010	Not applicable
Nickel	**0.240**	**0.14**	Not applicable
Zinc	**0.21**	<0.050	0.20 mg/L, daily maximum 0.11 mg/L, monthly avg. maximum

Notes: All results in mg/L = milligrams per liter
1. Based on Effluent Limitations Guidelines, Table 8.L-2, Stormwater Discharges Associated with Industrial Activity – Sector L, MSGP 2010 General Permit, ADEQ

As shown in the above table, only zinc is listed in the Multi-Sector General Permit (MSGP) with respect to effluent limitations. Based on the laboratory results, zinc was above the monthly average maximum and was slightly above the daily maximum concentrations in one basin water sample (Basin Water #1). The results were also compared to previous wastewater sample results from laboratory reports provided by SCC. Previous wastewater samples contained cadmium, calcium, copper, magnesium, nickel, and selenium (#1500-001-BI-W-AZP WW Composite, sampled 2/14/2012).

Based on the laboratory analytical results for the basin water samples and the discussion below for the basin sediment samples, it is possible that sludge (or landfill) operations at the RRSL

have impacted the total metal concentrations in the basin water, particularly with respect to zinc. However, zinc is a common pollutant in surface water at landfills without sludge disposal, so its presence may not be a positive indication of sludge impacts.

Results – Retention Basin Sediment Samples

The analytical results for the two basin sediment samples showed that total priority pollutant metals, plus barium and molybdenum, were detected in both samples, as listed in the table below; the results are compared to Arizona RSRLs and NRSRLs. The results for the TCLP were below the laboratory reporting limits for all analyzed metals.

Table 12: Total Priority Pollutant Metals in Retention Basin Sediments for RRSL, Santa Cruz County, Arizona

Parameter	Basin Sediment #1	Basin Sediment #2	Arizona Soil Remediation Levels (SRLs)	
			RSRL	NRSRL
Mercury	<0.020	**0.023**	23	310
Arsenic	<2.0	**2.6**	10	10
Barium	**0.96**	**71**	15,000	170,000
Beryllium	<0.20	**0.33**	150	1,900
Cadmium	<0.50	**0.53**	39	510
Chromium	<1.0	**14**	none	none
Copper	<2.0	**50**	3,100	41,000
Lead	<0.50	**5.9**	400	800
Molybdenum	<0.50	**0.85**	390	5,100
Nickel	<2.0	**22**	1,600	20,000
Zinc	<5.0	**64**	23,000	310,000

Notes: All results in mg/kg = milligrams per kilogram

No metal concentrations in sediment from the two retention basin sample locations exceeded the Arizona RSRLs or NRSRLs or the Federal (RCRA-TCLP) Hazardous Waste Criteria. The results were then compared to previous sludge sample results from laboratory reports provided by SCC.

Based on comparison with the sludge results, the metals analyzed in the retention basin samples had generally lower concentrations than in the sludge samples, except for barium and beryllium, which had concentrations within the range of concentrations detected in the sludge samples. Arsenic and molybdenum were detected in one of the basin samples, but were not detected in the sludge samples.

Comparison of the basin sediment sample results with the soil sample results discussed in Task 1 (see Table 1) indicated that chromium, copper, nickel, and zinc had generally elevated concentrations in the basin samples compared to site soil samples, particularly copper, nickel, and zinc, which had results that were doubled or nearly doubled in one of the basin sediment samples. The detected metals concentrations in the sludge samples are shown in the table below.

Table 13: Total Priority Pollutant Metals in Sludge Samples from Previous Laboratory Reports for RRSL, Santa Cruz County, Arizona

Parameter	#1600-001-60D-AZP (-02) (3/4/2014)	#1600-001-60D-AZP (-03) (3/4/2014)	#1600-001-A-AZP (-01) (1/3/2012)	#1600-001-A-AZP (-02) (1/3/2012)	#1600-002-A-AZP (-03) (1/3/2012)	#1600-001-W-AZP WET (-01) (9/19/2012)	#1600-001-W-AZP (-02) (9/19/2012)
	Solid Composite	Solid Composite	Solid Composite	Solid Composite	Solid Grab	Solid Composite	Solid Composite
Mercury	ND	ND	**0.27**	**1.61**	**0.48**	ND	ND
Barium	ND	ND	**32.2**	**210**	**54.1**	ND	ND
Beryllium	ND	ND	**0.083**	**0.530**	**0.122**	ND	ND
Cadmium	**5.20**	**0.854**	**12.3**	**75.0**	**18.5**	**4.27**	**17.7**
Chromium	ND	ND	**26.1**	**164**	**38.1**	ND	ND
Copper	ND	ND	**103**	**680**	**149**	ND	ND
Lead	ND	ND	**5.94**	**37.1**	**10.1**	ND	ND
Nickel	ND	ND	**26.4**	**168**	**44.0**	ND	ND
Silver	ND	ND	**2.07**	**12.4**	**2.92**	ND	ND
Zinc	ND	ND	**138**	**845**	**212**	ND	ND

Notes: All results in mg/kg = milligrams per kilogram
ND = Not detected

Based on the analytical results for the two sediment samples from the basin, one sample (Basin Sediment #2) showed possible evidence that sludge (or landfill) operations at the RRSL have impacted the total metal concentrations in the basin sediment with respect to chromium, copper, nickel, and zinc. However, the concentrations of these metals in the two basin samples did not exceed Arizona SRLs. In addition, it is not unknown for pond sediments to contain elevated metals due to continued settlement of solids out of the liquid phase. The noted metals are common at all landfills, including those without sludge disposal.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

SCS performed air, water, soil sampling, laboratory analysis and subsequent evaluation of the results to assess the potential impacts of sludge-related operations at the RRSL. The conclusions for the performed tasks are summarized below.

- **Task 1 – Assess Soil Impacts from Sludge-Related Operations:** Surface samples were collected from native soil at three locations (Sites 6-8); one location represented background conditions, one location represented areas with landfill impacts, and one location represented areas with sludge impacts. The samples were analyzed for total priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) and for eight leached RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using the TCLP. Total priority pollutant metals were detected in all three samples, but were below the Arizona RSRLs and NRSRLs. The results for the TCLP were below the laboratory reporting limits for all analyzed metals. Based on the

analytical results, evidence did not indicate that sludge operations at the RRSL have impacted the priority pollutant metal concentrations of the site soils.

- **Task 2 – Odor Detection and Characterization:** Surface emission air sampling was performed at the three locations discussed in Task 1 (Sites 6-8). Two samples were collected at each location; one sample from each location was analyzed for odor and one sample from each location was analyzed for Speciated Reduced Sulfur Compounds and VOCs. The odor analysis provided no evidence that the air levels exceeded a "faint" description in the sensation and odor categories. All Speciated Reduced Sulfur Compounds test results were below laboratory reporting limits. Toluene was detected in all three samples; however, its presence in the background sample suggests that there are sources other than the sludge and landfill operations. Isopropyl alcohol was detected in two of the samples, but may have been a result of the sampling procedures. Detected concentrations were well below the odor detection threshold. The analytical results of the air samples do not provide evidence that the sludge operations impact the odor and/or volatile gas concentrations emitting from the ground surface at the RRSL.

- **Task 3 – Ambient Air Sampling For Metals Analysis:** Five locations upwind and downwind of sludge and landfill operations (Sites 1-5) were monitored for particulates during sludge operations over an 8-hour period. In addition, these results were compared to soil sample results in order to calculate concentrations of airborne metals, which were compared to EPA RSLs. No evidence was found that the sludge operations impact the airborne metal concentrations in the particulate dust originating from the RRSL or that the metals concentrations exceed EPA RSL values.

- **Task 4 – Ambient Air Sampling for Odor, Chemical, Microbial and Dust Analysis:** Two samples were collected from each of five locations upwind and downwind of sludge and landfill operations (Sites 1-5) over a 24-hour sampling period. During sampling, wind speed and direction were also monitored. The samples were analyzed for Speciated Reduced Sulfur Compounds and VOCs. The odor analysis provided no evidence that the air levels exceeded a "faint" description in the sensation and odor categories. All Speciated Reduced Sulfur Compounds test results were below laboratory reporting limits. Toluene was detected in all five samples; however, its presence in the upwind samples suggests that there are sources other than the sludge and landfill operations. Ethyl acetate was detected in one downwind sample. Detected VOC concentrations were well below the odor detection threshold. In addition, one air sample was collected from each of the five locations (Sites 1-5) and analyzed for the microbe *Staphylococcus aureus*, which was not detected in the samples. The analytical results of the air samples do not provide evidence that the sludge operations impact the odor, volatile gas, and/or microbe concentrations in ambient air at the RRSL.

- **Task 5 – Groundwater Sampling for Metals:** Groundwater samples were collected from site monitoring wells MW-1, MW-3, and MW-4 and analyzed for priority

pollutant metals. Arsenic was the only one of the 13 priority pollutant metals detected in the samples above laboratory reporting limits, but all results were below the AWQS. The results were similar to analytical results for arsenic detected in previous site groundwater samples collected from 1996-2001. Based on the results, evidence of impacts to groundwater by priority pollutant metals from the sludge operations was not identified.

- **Task 6 – Water and Sediment Sampling:** Two grab samples of water were collected from the retention basin and analyzed for priority pollutant metals, which were detected in both samples. The results were compared to the AZPDES MSGP effluent limitation guidelines for landfills; only zinc was identified in the MSGP with respect to effluent limitations, with the results for one sample above the monthly average maximum and slightly above the daily maximum concentration. Based on the laboratory analytical results, it is possible that sludge (or landfill) operations at the RRSL have impacted the total metal concentrations in the basin water, particularly with respect to zinc.

  In addition, two grab samples of sediment were collected from the retention basin and analyzed for total priority pollutant metals, plus barium and molybdenum, and for eight leached RCRA metals using the TCLP. Total priority pollutant metals, plus barium and molybdenum, were detected in both samples and the results were compared to Arizona RSRLs and NRSRLs; none of the results exceeded these regulatory levels. The results for the TCLP were below the laboratory reporting limits for all analyzed metals. Based on the analytical results for the two sediment samples from the basin and comparison with sludge and Task 1 soil sample results, one sample showed possible evidence that sludge (or landfill) operations at the RRSL have impacted the total metal concentrations in the basin sediment with respect to chromium, copper, nickel, and zinc.

Recommendations

Based on the results of this study, environmental impacts from the sludge operations were not indicated for most medial. However, potential sludge or general landfill impacts may have occurred in pond water and sludge, as indicated by detected metals. Although SCS does not consider these impacts significant, we have the following recommendations:

- Annual sampling and analysis of pond water and sludge for priority pollutant metals and comparison to previous concentrations to assess contaminant trends.

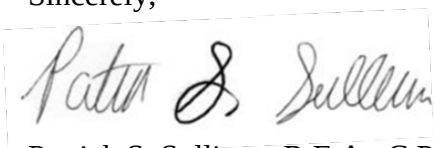
- In accordance with storm water permits, sampling and analysis for priority pollutant metals in storm water samples to evaluate potential impacts to storm water discharges leaving the site.

- Adherence to site operational plans to ensure that sludge material is properly disposed and covered.

CLOSING

SCS appreciates the opportunity to continue to provide professional engineering services to the County. If you have any questions or need additional information, please contact Pat Sullivan at (916) 361-1297.

Sincerely,



Patrick S. Sullivan, R.E.A., C.P.P.
Senior Vice President
SCS ENGINEERS

sv/pss
SCC RRSL Sludge Impact Final Report 03-04-2015.docx

cc: Lucas Marsalek, SCS Field Services
Dan Vidal, SCS Field Services
John Henkelman, SCS Engineers
Patricia Hartshorne, SCS Engineers
Randy Bauer, SCS Engineers

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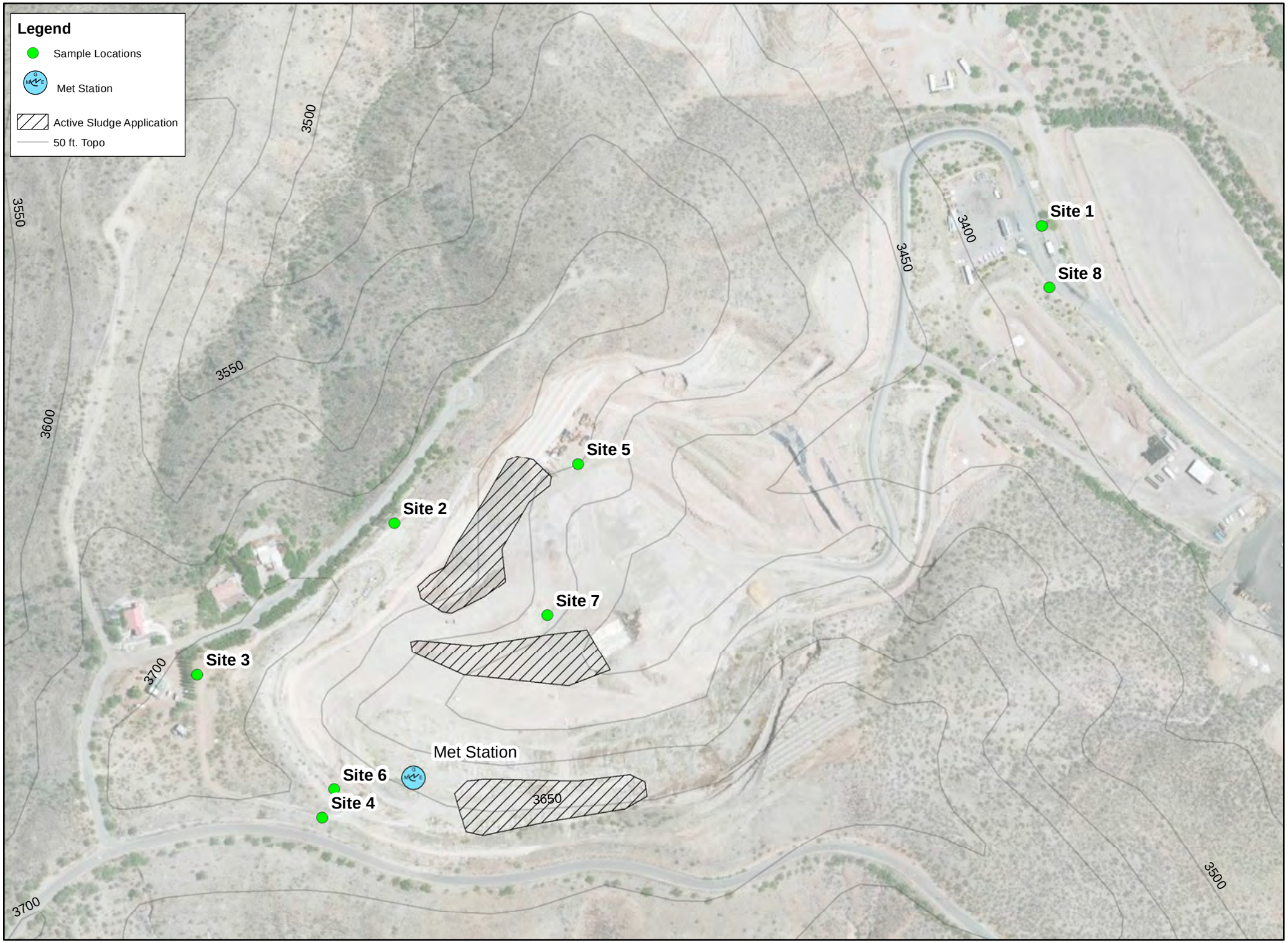
1. Figures 1-3
2. Attachments 1-8

FIGURES



SCS ENGINEERS

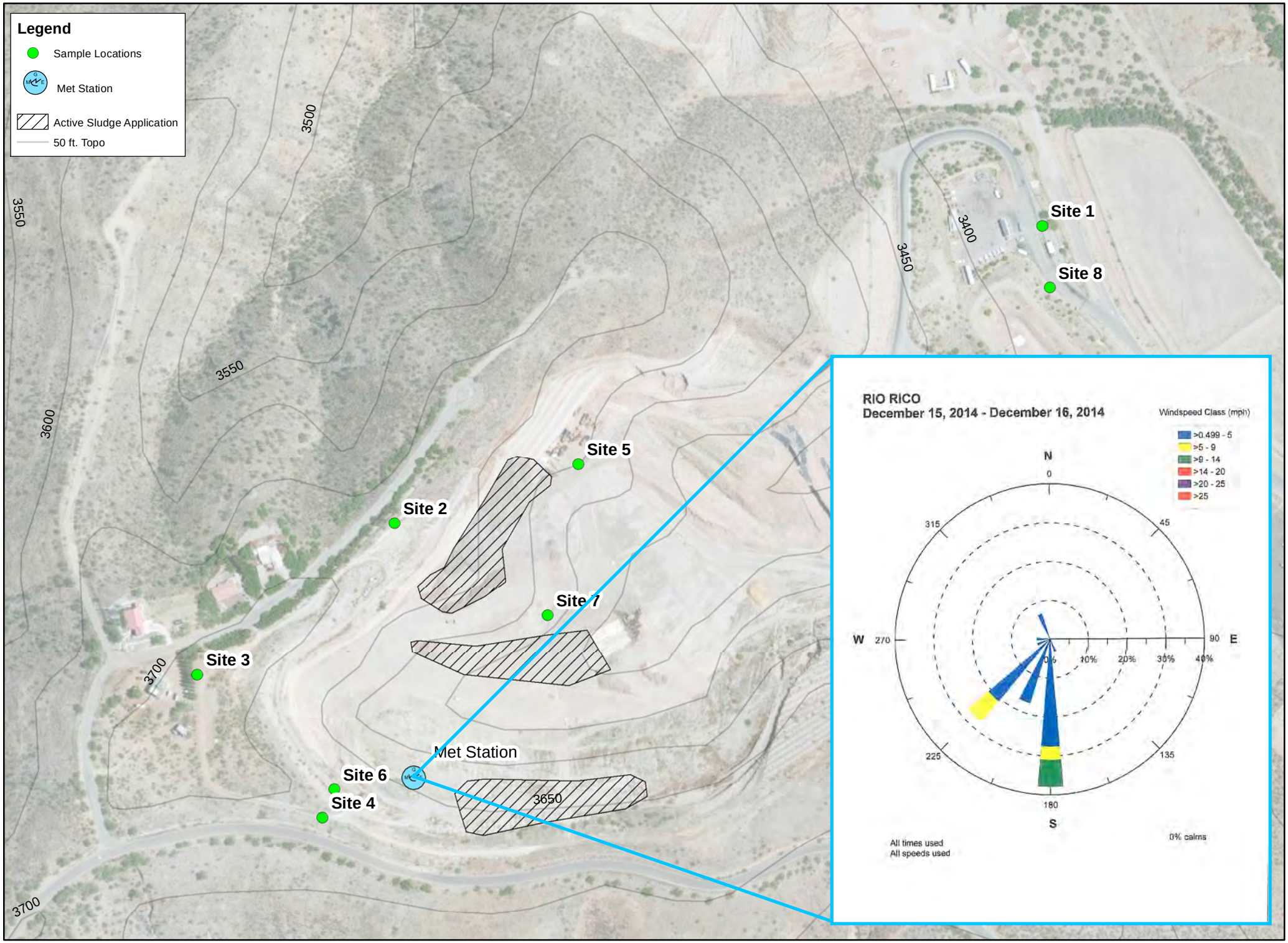
Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

RRSL - Air, Water, & Soil Sampling for Sludge Application Impacts

For: Santa Cruz County, AZ
By: SCS Engineers
Date: 12/22/2015
Sources: ArcGIS Online; AZGEO Clearinghouse

N W E S

0 125 250 500 Feet



SCS ENGINEERS

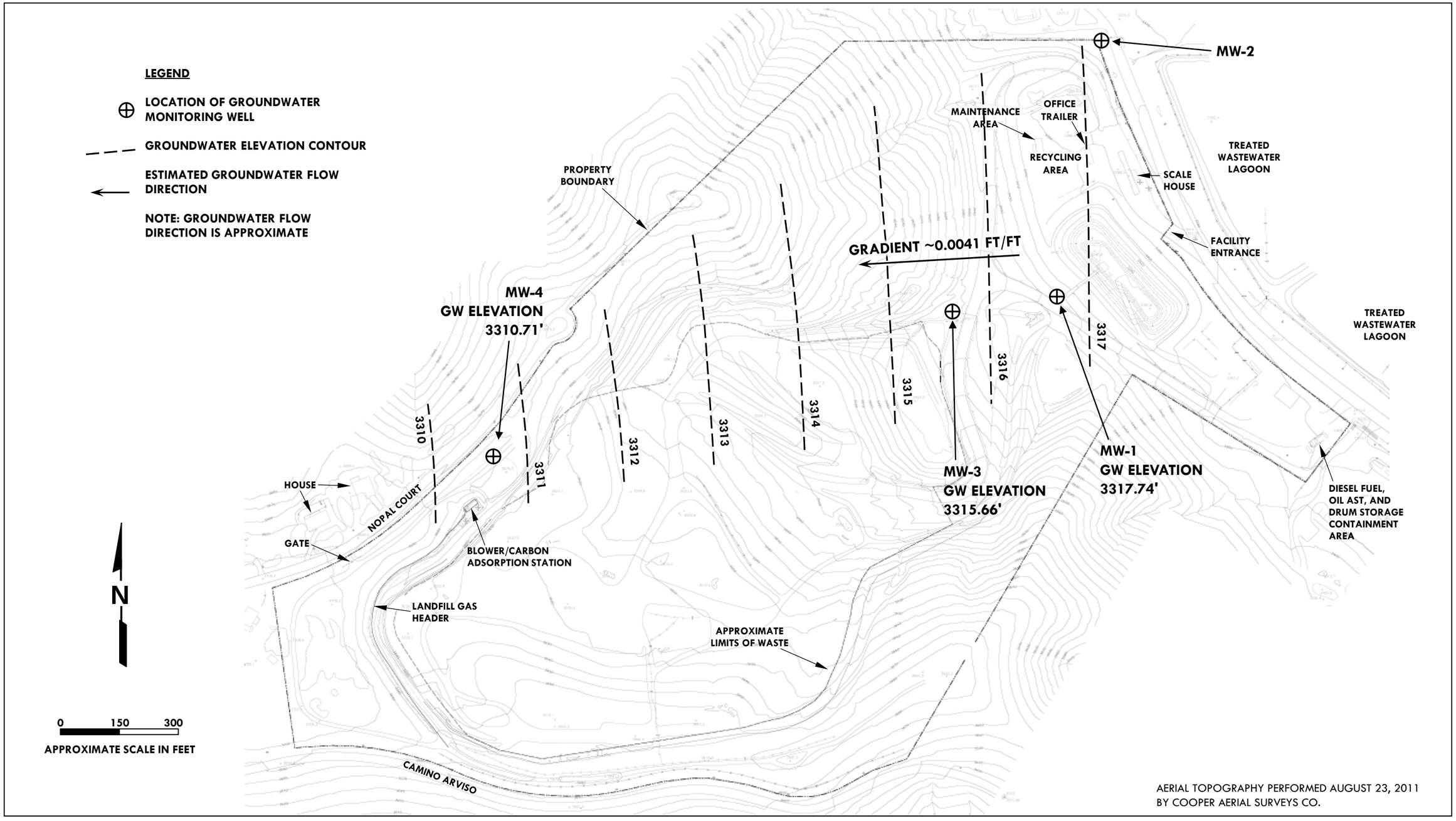
Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

RRSL - Air Sampling & Wind Patterns for Sludge Application Impacts

For: Santa Cruz County, AZ
By: SCS Engineers
Date: 12/22/2015
Sources: ArcGIS Online; AZGEO Clearinghouse

N W E S

0 125 250 500 Feet


LEGEND
LOCATION OF GROUNDWATER MONITORING WELL
GROUNDWATER ELEVATION CONTOUR
ESTIMATED GROUNDWATER FLOW DIRECTION
NOTE: GROUNDWATER FLOW DIRECTION IS APPROXIMATE
MW-2
MAINTENANCE AREA
OFFICE TRAILER
RECYCLING AREA
TREATED WASTEWATER LAGOON
SCALE HOUSE
PROPERTY BOUNDARY
FACILITY ENTRANCE
GRADIENT ~0.0041 FT/FT
MW-4
GW ELEVATION
3310.71'
TREATED WASTEWATER LAGOON
3317
3316
3315
3314
3313
3312
3311
3310
MW-3
GW ELEVATION
3315.66'
MW-1
GW ELEVATION
3317.74'
DIESEL FUEL, OIL AST, AND DRUM STORAGE CONTAINMENT AREA
HOUSE
NOPAL COURT
GATE
BLOWER/CARBON ADSORPTION STATION
LANDFILL GAS HEADER
APPROXIMATE LIMITS OF WASTE
N
0 150 300
APPROXIMATE SCALE IN FEET
CAMINO ARVISO
AERIAL TOPOGRAPHY PERFORMED AUGUST 23, 2011
BY COOPER AERIAL SURVEYS CO.

ATTACHMENTS

ATTACHMENT 1

SOIL SAMPLES – ESC LAB SCIENCES

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

Report Summary

Tuesday December 23, 2014

Report Number: L739686
Samples Received: 12/18/14
Client Project:

Description: Rio Rico Landfill

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Alan Harvill

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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Fax (615) 758-5859

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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23, 2014

ESC Sample # : L739686-01

Site ID :

Project :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : BACKGROUND SITE 6

Collected By : Rick Roberts
Collection Date : 12/16/14 13:25

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	12/21/14 0936	BG	1
Mercury	BDL	0.010	mg/l	0.20	7470A	12/23/14 0927	CCS	1
Arsenic	BDL	0.45	mg/l	5.0	6010B	12/22/14 1411	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	12/22/14 1411	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1411	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	12/22/14 1411	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	12/22/14 1411	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1411	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	12/22/14 1411	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 12/23/14 14:31 Printed: 12/23/14 14:31

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Est. 1970

REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23,2014

ESC Sample # : L739686-02

Date Received : December 18, 2014
Description : Rio Rico Landfill

Site ID :

Sample ID : BACKGROUND SITE 6

Project # :

Collected By : Rick Roberts
Collection Date : 12/16/14 13:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	BDL	0.020	mg/kg	7471	12/19/14	1
Antimony	BDL	2.0	mg/kg	6010B	12/19/14	1
Arsenic	6.7	2.0	mg/kg	6010B	12/19/14	1
Beryllium	1.4	0.20	mg/kg	6010B	12/19/14	1
Cadmium	BDL	0.50	mg/kg	6010B	12/19/14	1
Chromium	10.	1.0	mg/kg	6010B	12/19/14	1
Copper	15.	2.0	mg/kg	6010B	12/19/14	1
Lead	15.	0.50	mg/kg	6010B	12/19/14	1
Nickel	10.	2.0	mg/kg	6010B	12/19/14	1
Selenium	BDL	2.0	mg/kg	6010B	12/19/14	1
Silver	BDL	1.0	mg/kg	6010B	12/19/14	1
Thallium	BDL	2.0	mg/kg	6010B	12/19/14	1
Zinc	39.	5.0	mg/kg	6010B	12/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 12/23/14 14:31 Printed: 12/23/14 14:31

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1-800-767-5859
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Est. 1970

REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23, 2014

ESC Sample # : L739686-03

Site ID :

Project :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : LANDFILL IMPACTS SITE 8

Collected By : Rick Roberts
Collection Date : 12/16/14 14:55

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	12/21/14 0936	BG	1
Mercury	BDL	0.010	mg/l	0.20	7470A	12/23/14 0929	CCS	1
Arsenic	BDL	0.45	mg/l	5.0	6010B	12/22/14 1416	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	12/22/14 1416	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1416	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	12/22/14 1416	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	12/22/14 1416	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1416	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	12/22/14 1416	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 12/23/14 14:31 Printed: 12/23/14 14:31

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23,2014

ESC Sample # : L739686-04

Date Received : December 18, 2014
Description : Rio Rico Landfill

Site ID :

Sample ID : LANDFILL IMPACTS SITE 8

Project # :

Collected By : Rick Roberts
Collection Date : 12/16/14 14:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	BDL	0.020	mg/kg	7471	12/19/14	1
Antimony	BDL	2.0	mg/kg	6010B	12/19/14	1
Arsenic	6.0	2.0	mg/kg	6010B	12/19/14	1
Beryllium	0.33	0.20	mg/kg	6010B	12/19/14	1
Cadmium	BDL	0.50	mg/kg	6010B	12/19/14	1
Chromium	7.3	1.0	mg/kg	6010B	12/19/14	1
Copper	15.	2.0	mg/kg	6010B	12/19/14	1
Lead	13.	0.50	mg/kg	6010B	12/19/14	1
Nickel	6.1	2.0	mg/kg	6010B	12/19/14	1
Selenium	BDL	2.0	mg/kg	6010B	12/19/14	1
Silver	BDL	1.0	mg/kg	6010B	12/19/14	1
Thallium	BDL	2.0	mg/kg	6010B	12/19/14	1
Zinc	35.	5.0	mg/kg	6010B	12/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23, 2014

ESC Sample # : L739686-05

Site ID :

Project :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : SLUDGE IMPACTS SITE 7

Collected By : Rick Roberts
Collection Date : 12/16/14 14:09

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	12/21/14 0936	BG	1
Mercury	BDL	0.010	mg/l	0.20	7470A	12/23/14 0932	CCS	1
Arsenic	BDL	0.45	mg/l	5.0	6010B	12/22/14 1421	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	12/22/14 1421	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1421	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	12/22/14 1421	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	12/22/14 1421	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1421	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	12/22/14 1421	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
The reported analytical results relate only to the sample submitted.
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 23, 2014

ESC Sample # : L739686-06

Site ID :

Project # :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : SLUDGE IMPACTS SITE 7

Collected By : Rick Roberts
Collection Date : 12/16/14 14:09

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	0.026	0.020	mg/kg	7471	12/19/14	1
Antimony	BDL	2.0	mg/kg	6010B	12/19/14	1
Arsenic	6.1	2.0	mg/kg	6010B	12/19/14	1
Beryllium	0.94	0.20	mg/kg	6010B	12/19/14	1
Cadmium	BDL	0.50	mg/kg	6010B	12/19/14	1
Chromium	9.2	1.0	mg/kg	6010B	12/19/14	1
Copper	19.	2.0	mg/kg	6010B	12/19/14	1
Lead	12.	0.50	mg/kg	6010B	12/19/14	1
Nickel	9.8	2.0	mg/kg	6010B	12/19/14	1
Selenium	BDL	2.0	mg/kg	6010B	12/19/14	1
Silver	BDL	1.0	mg/kg	6010B	12/19/14	1
Thallium	BDL	2.0	mg/kg	6010B	12/19/14	1
Zinc	39.	5.0	mg/kg	6010B	12/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 12/23/14 14:31 Printed: 12/23/14 14:31

Summary of Remarks For Samples Printed
12/23/14 at 14:31:32

TSR Signing Reports: 288

Sample: L739686-01 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Sample: L739686-02 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Sample: L739686-03 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Sample: L739686-04 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Sample: L739686-05 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Sample: L739686-06 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/26/14 00:00 RPT Date: 12/23/14 14:31

Company Name/Address:
SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

Billing Information:

Report to:

Email To:

Project Description: RIO RICO LANDFILL

City/State Collected: RIO RICO AZ.

Phone: 858-571-5500 Ext. 250
Fax: 858-571-5357

Client Project #

Lab Project #

Collected by (print): RICK ROBERTS

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABS
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L739686

B051

Acctnum: SCSENGSDCA
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Priority Pollutant Metals*/ 2oz jar	TCLP Metals (As, Ba, Cd, Cr, Pb, HG, Se, Ag)/ 8oz jar	Rem./Contaminant	Sample # (lab only)
Background SITE #6		SS		12-16-14	1325	1	X	X		-01/-02
Landfill Impacts SITE #8		SS		12-16-14	1455	1	X	X		-03/-04
Sludge Impacts SITE #7		SS		12-16-14	1409	1	X	X		-05/-06

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other 6200 8044 1670

Remarks: Total Metals= Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn, Mo

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
[signature]	12-17-14	1319	[signature]
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
[signature]	12/17/14	1830	FedEx
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.6 °C Bottles Received: 3

Date: 12/18/14 Time: 09:00

Condition: (lab use only) AW OK

COC Seal Intact: ___Y ___N ✓ NA

pH Checked: NCF:

ATTACHMENT 2

ODOR REPORT – ST. CROIX LABORATORY, INC.

St. Croix Sensory, Inc.

SCS Engineers

Rio Rico Landfill

Odor Evaluation Report

Report No. 1435103

12/17/14

Data Release Authorization:

Michelle Harty
Laboratory Associate

Reviewed and Approved:

Charles M. McGinley, P.E.
Technical Director

St. Croix Sensory is a laboratory dedicated to practicing state-of-the-art sensory evaluation and to advancing the science of sensory perception.

We are a family owned and operated business providing our clients with personal customer service, flexible scheduling, timely results.

Our focus is to provide the best professional services available to help make your project or product a success.

ISO/IEC 17025:2005 Accredited

PJLA Testing

Accreditation #81047

1150 Stillwater Boulevard North
Stillwater, Minnesota 55082 U.S.A

www.fivesenses.com

Tel: 800-879-9231

Fax: 651-439-1065

Email: stcroix@fivesenses.com

St. Croix Sensory, Inc. **Odor Evaluation Report**

Client: SCS Engineers

Project: Rio Rico Landfill

Report No.: **1435103**

Evaluation Date: 12/17/14

			ASTM E679 & EN13725		ASTM E544	PERSISTENCY	CHARACTERIZATION		
#	Field No.	Sample Description	Detection Threshold	Recognition Threshold	Intensity	Dose-Response Slope	Hedonic Tone	Principal Odor Descriptors	**Comments**
1		Site #1 Odor Sample	45	25			-1.6	Chemical, Offensive, Medicinal	**Sample Field Number was not provided.**
2		Site #2 Odor Sample	35	15			-0.8	Chemical, Medicinal, Offensive	**Sample Field Number was not provided.**
3		Site #3 Odor Sample	35	15			-1.0	Chemical, Medicinal, Offensive	**Sample Field Number was not provided.**
4		Site #4 Odor Sample	45	25			-1.2	Chemical, Offensive	**Sample Field Number was not provided.**
5		Site #5 Odor Sample	40	20			-1.2	Chemical, Medicinal, Offensive	**Sample Field Number was not provided.**
6		Site #6 Odor Sample	310	150			-2.0	Medicinal, Chemical, Offensive	**Sample Field Number was not provided.**
7		Site #7 Odor Sample	60	30			-1.6	Chemical, Offensive, Medicinal	**Sample Field Number was not provided.**
8		Site #8 Odor Sample	45	25			-0.8	Chemical, Medicinal, Offensive	**Sample Field Number was not provided.**
9									
10									

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Report No.: **1435103**

Project: Rio Rico Landfill

Evaluation Date: 12/17/14

			ASTM E679 & EN13725		ASTM E544	PERSISTENCY	CHARACTERIZATION		
#	Field No.	Sample Description	Detection Threshold	Recognition Threshold	Intensity	Dose-Response Slope	Hedonic Tone	Principal Odor Descriptors	**Comments**
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

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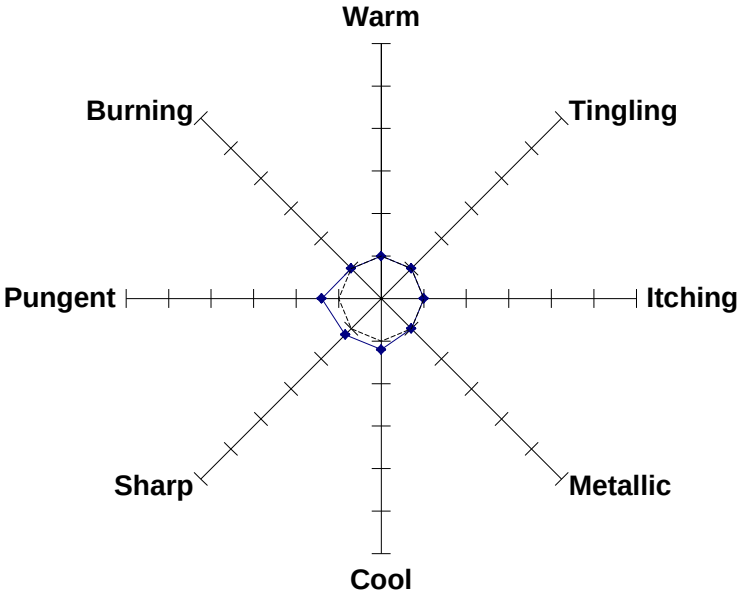
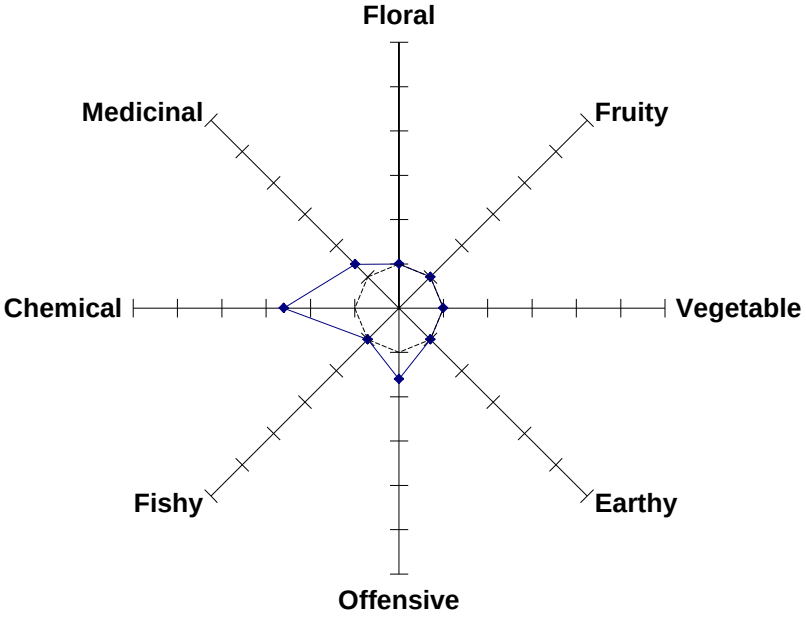
St. Croix Sensory, Inc. **Odor Evaluation Report**

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #1 Odor Sample	Evaluation Date:	12/17/14

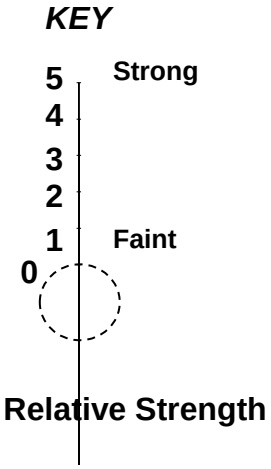
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.6
Fishy	0.0
Chemical	1.6
Medicinal	0.4

1150 Stillwater Blvd N, Stillwater, MN 55082 U.S.A. Tel:800-879-9231 Fax:651-439-1065 E-mail:stcroix@fivesenses.com Web:www.fivesenses.com

St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #1 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal	**********
Soapy	**********
Alcohol	**********
Chemical	**********
Paint	**********
Plastic	**********
Solvent	**********
Vinyl	**********
Offensive	**********

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

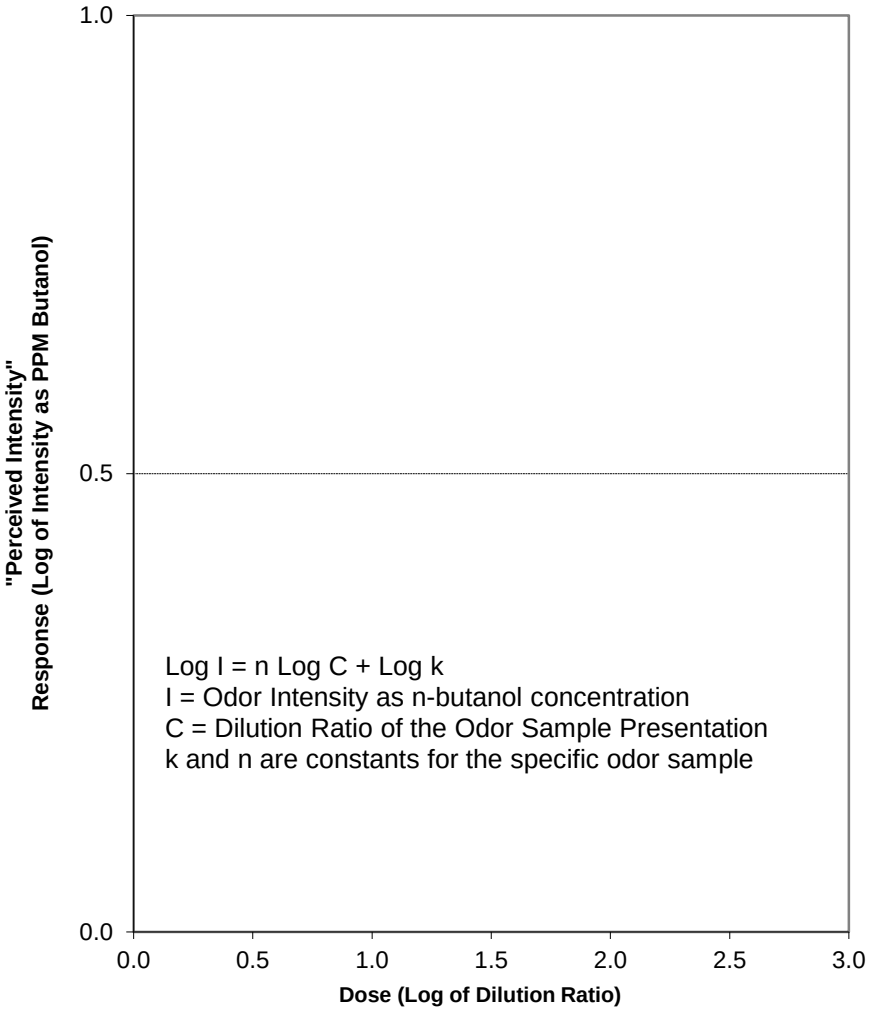
Report No.: **1435103**

Project: Rio Rico Landfill

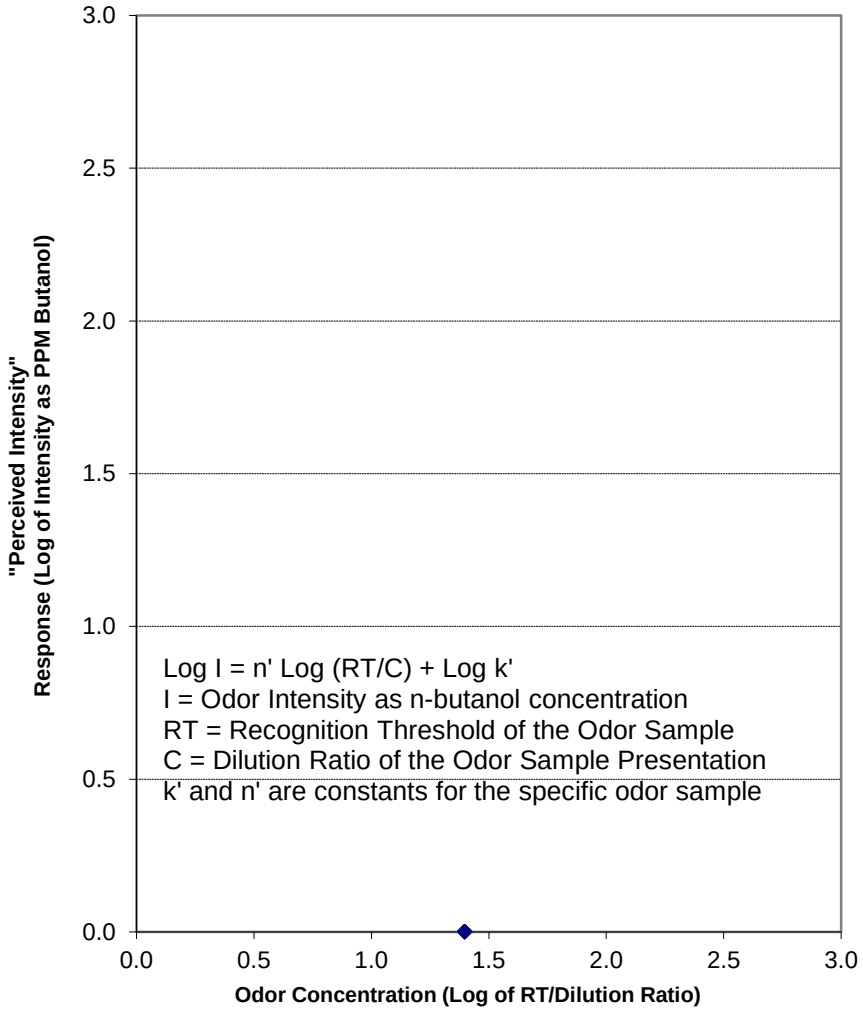
Description: Site #1 Odor Sample

Evaluation Date: 12/17/14

Dose-Response



Dose-Response as Power Law



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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

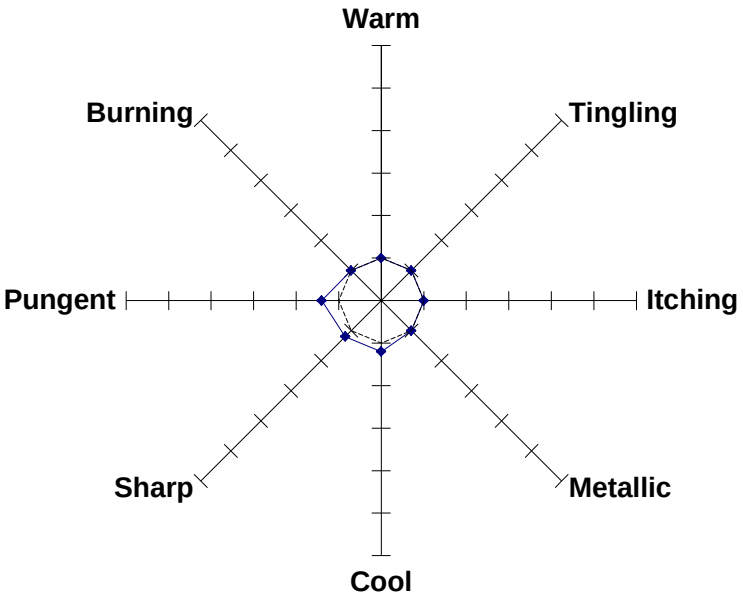
Report No.: **1435103**

Project: Rio Rico Landfill

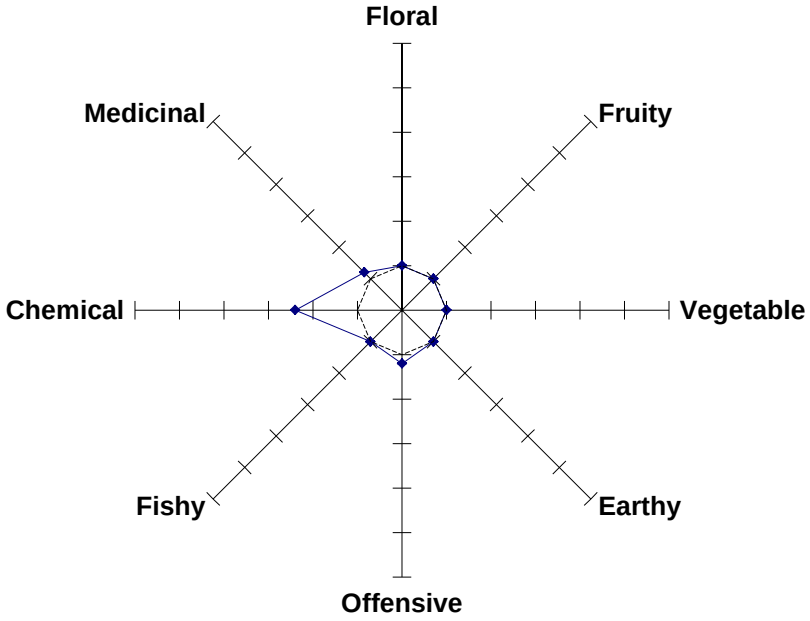
Description: Site #2 Odor Sample

Evaluation Date: 12/17/14

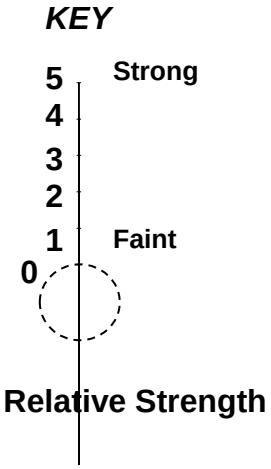
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.2
Fishy	0.0
Chemical	1.4
Medicinal	0.2

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #2 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal **********
Alcohol **********
Chemical **********
Plastic **********
Varnish **********
Vinyl **********
Offensive **********

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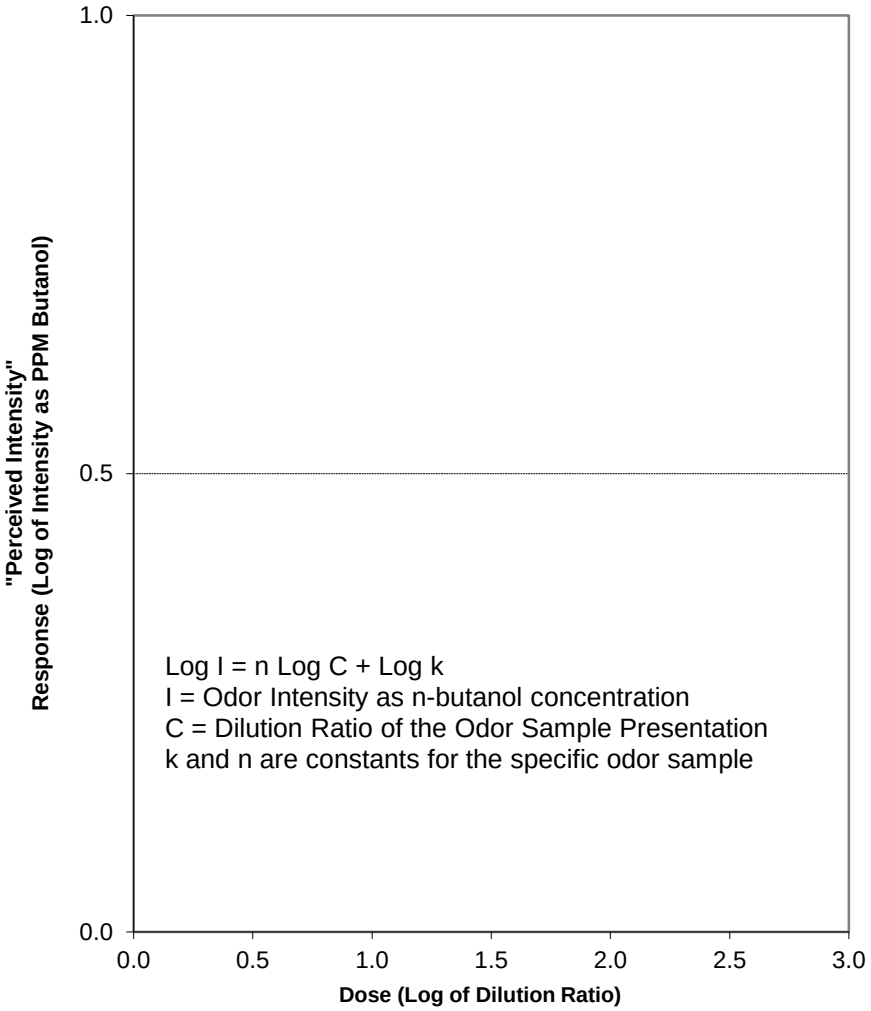
St. Croix Sensory, Inc.

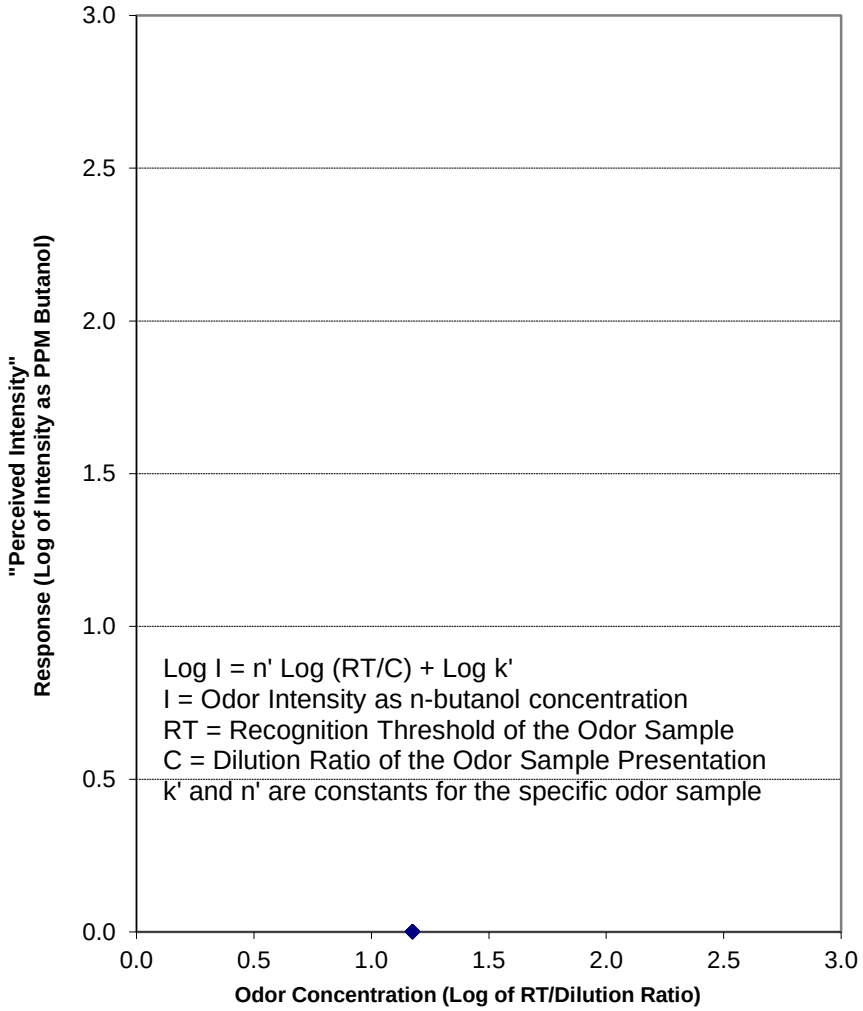
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #2 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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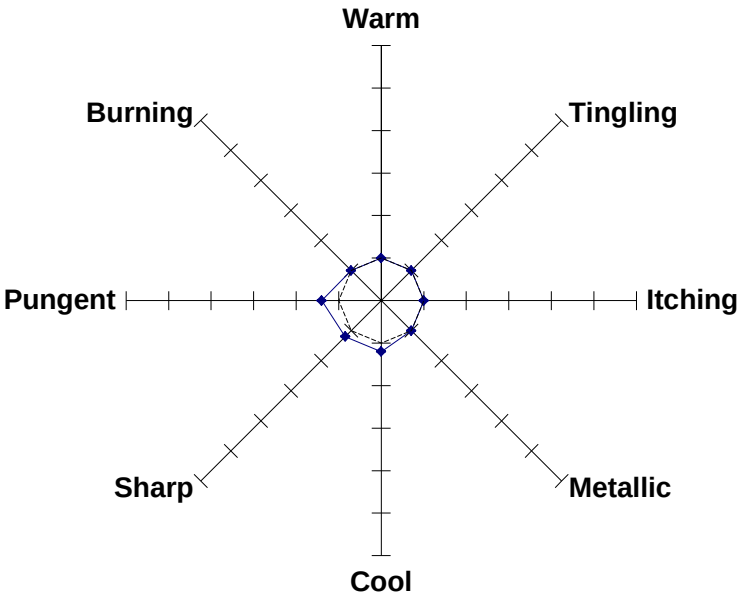
St. Croix Sensory, Inc.

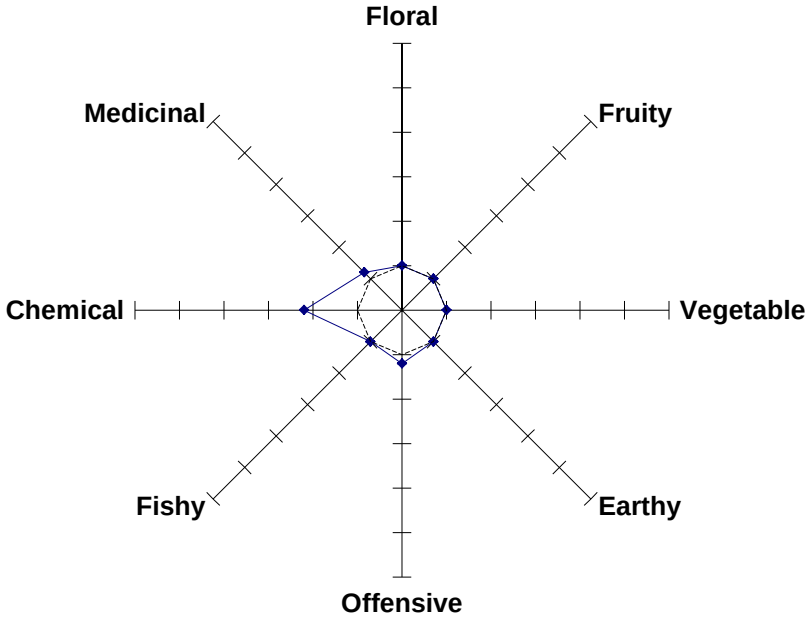
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #3 Odor Sample	Evaluation Date:	12/17/14

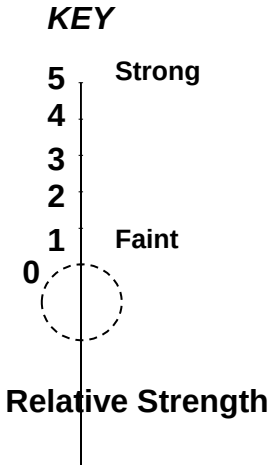
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.2
Fishy	0.0
Chemical	1.2
Medicinal	0.2

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #3 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Chemical **********
Plastic **********
Varnish **********
Solvent **********
Vinyl **********
Offensive **********

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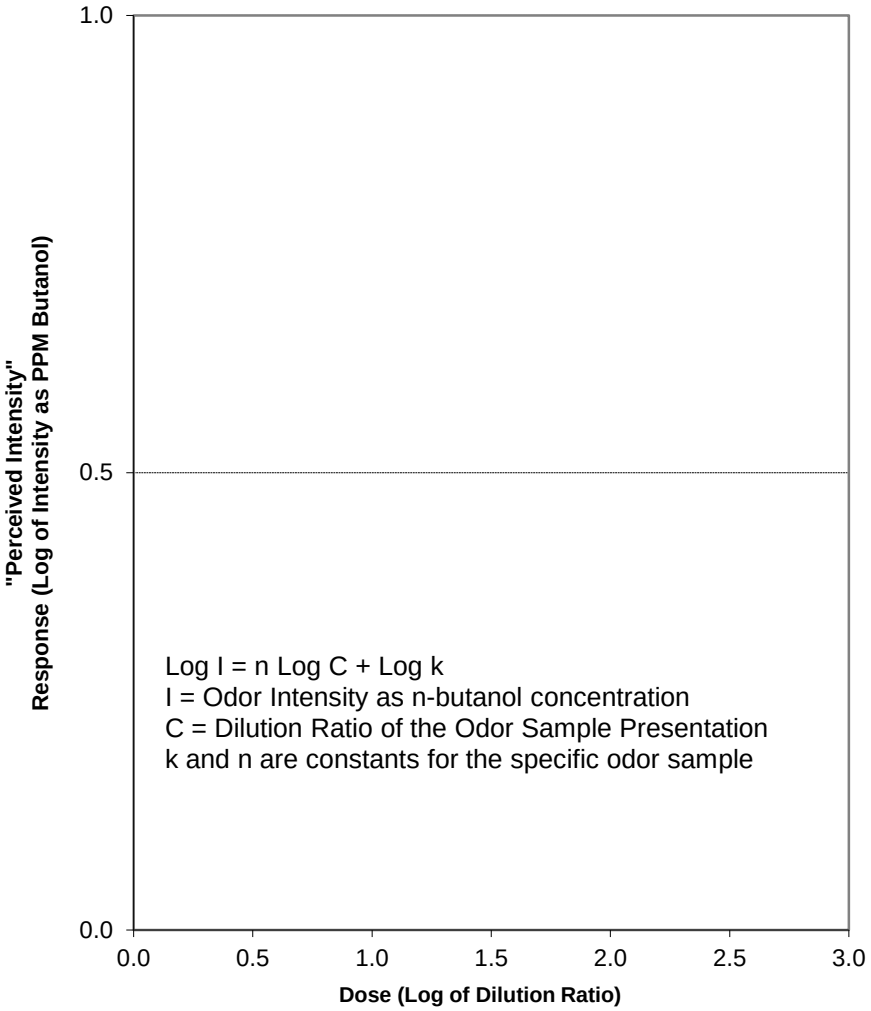
St. Croix Sensory, Inc.

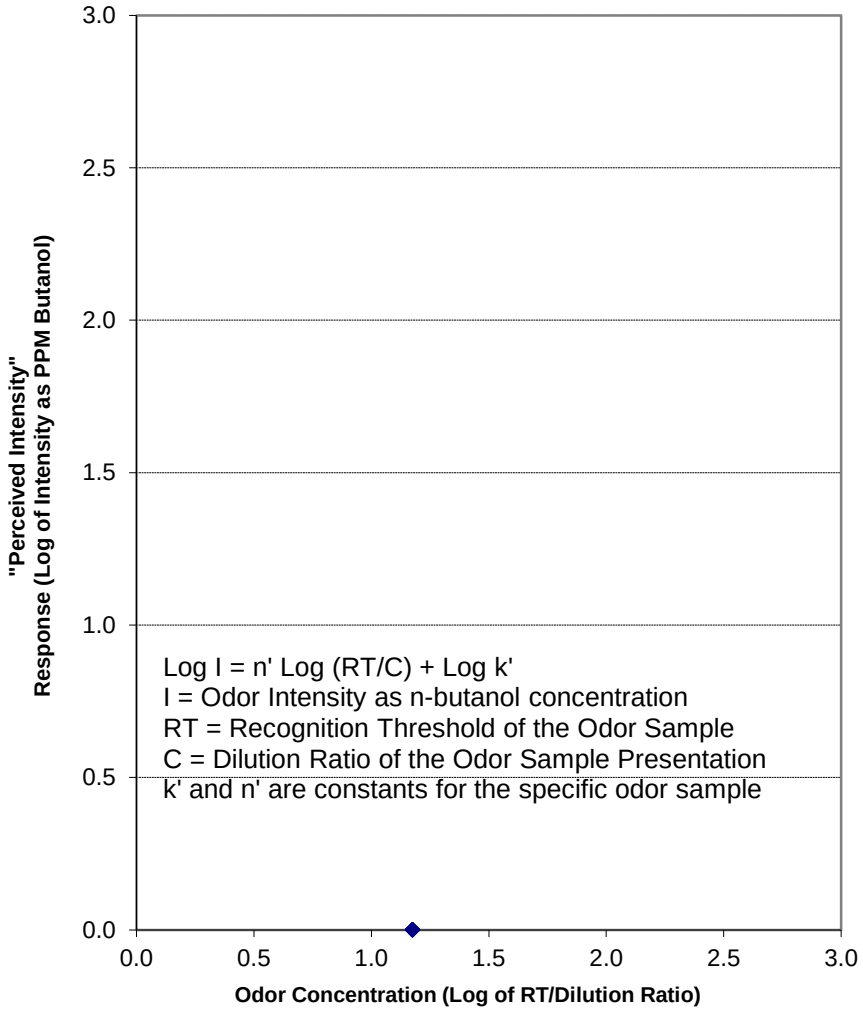
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #3 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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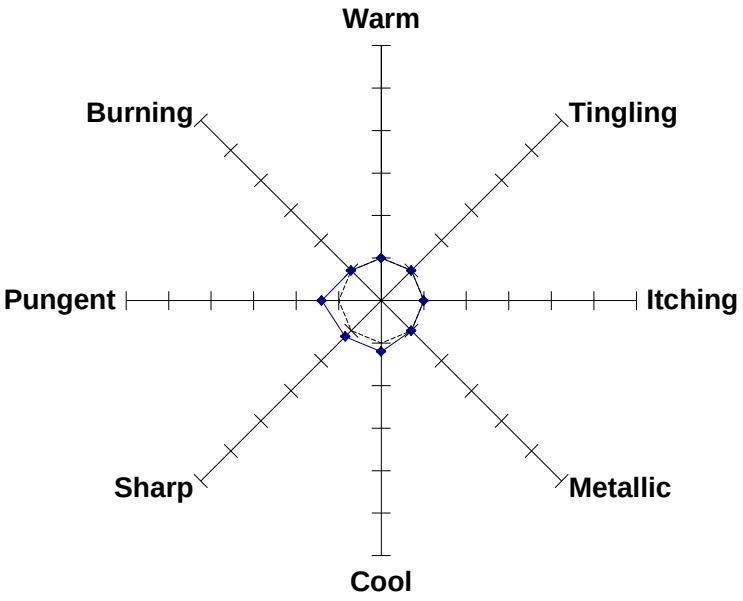
St. Croix Sensory, Inc.

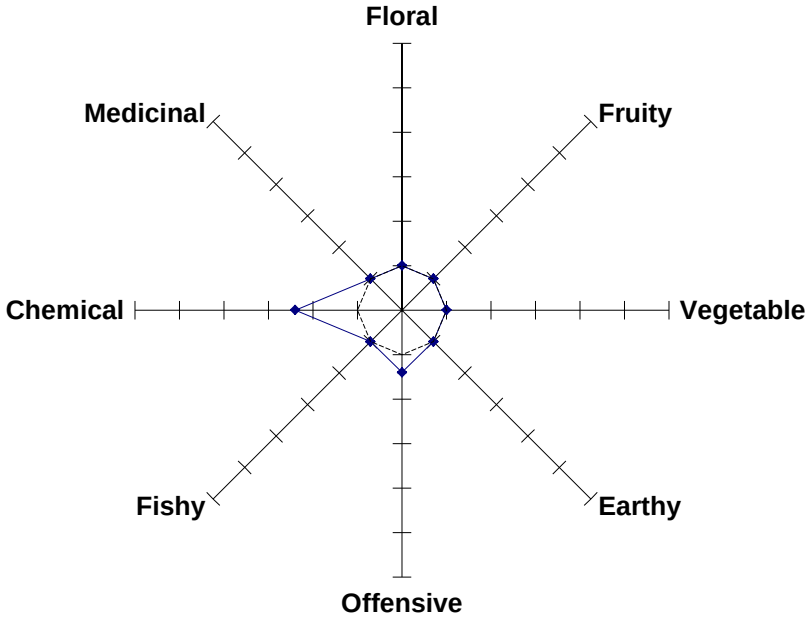
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #4 Odor Sample	Evaluation Date:	12/17/14

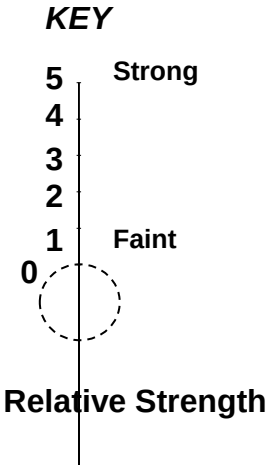
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.4
Fishy	0.0
Chemical	1.4
Medicinal	0.0

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #4 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal **********
Alcohol **********
Chemical **********
Plastic **********
Solvent **********
Vinyl **********
Offensive **********

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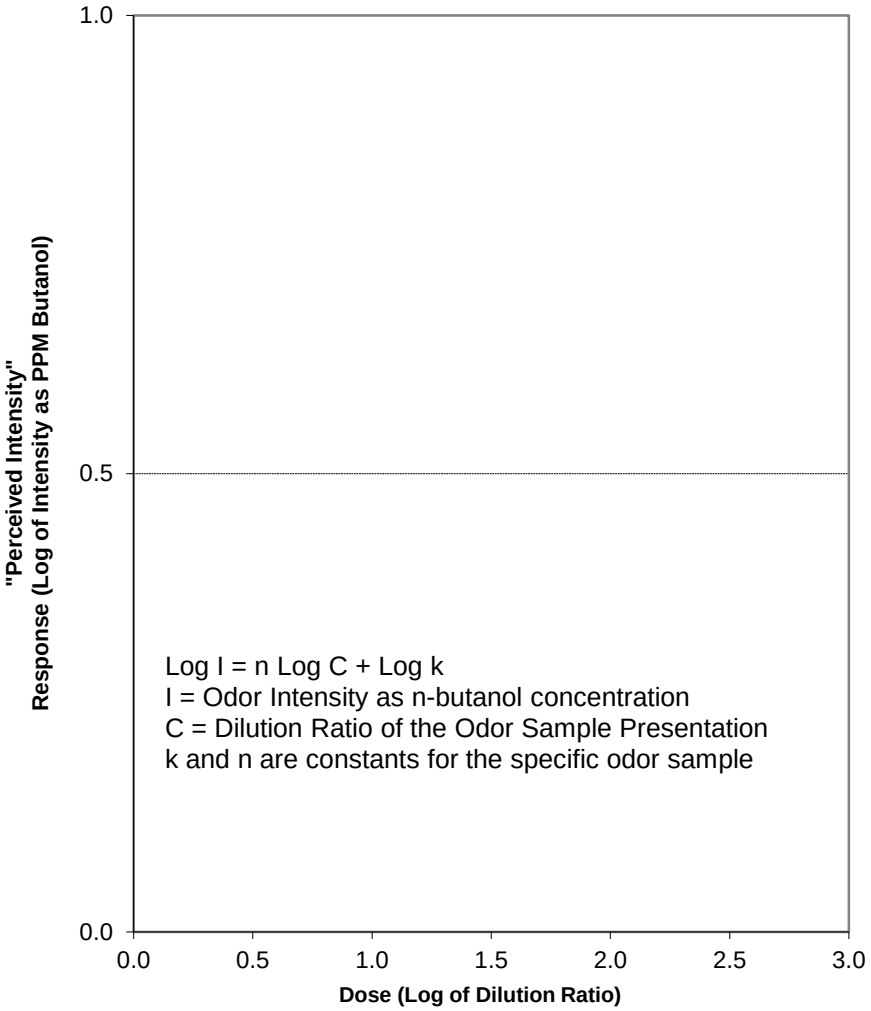
St. Croix Sensory, Inc.

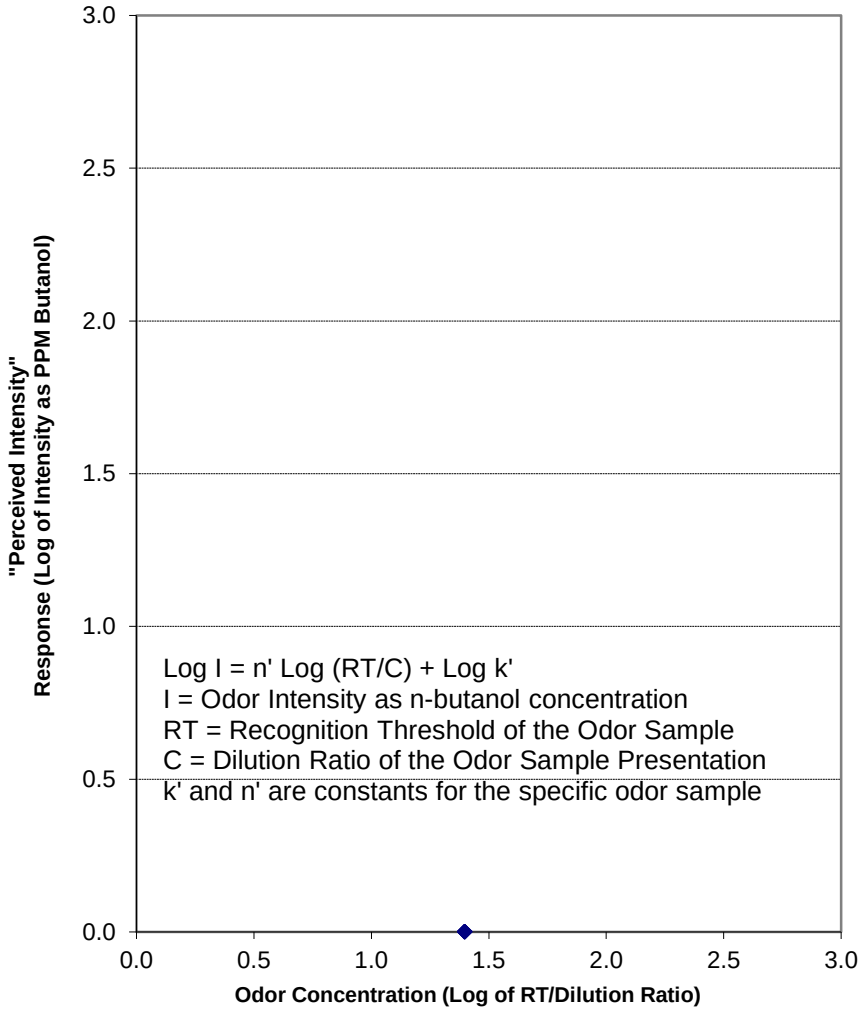
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #4 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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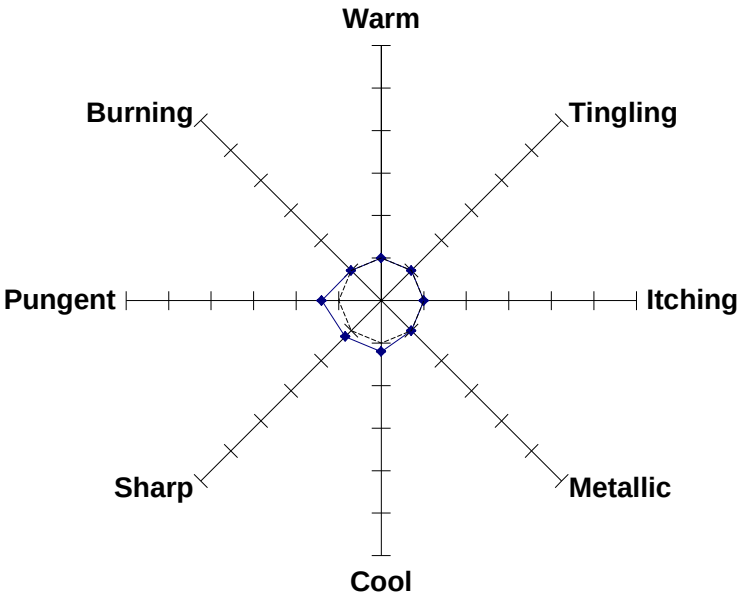
St. Croix Sensory, Inc.

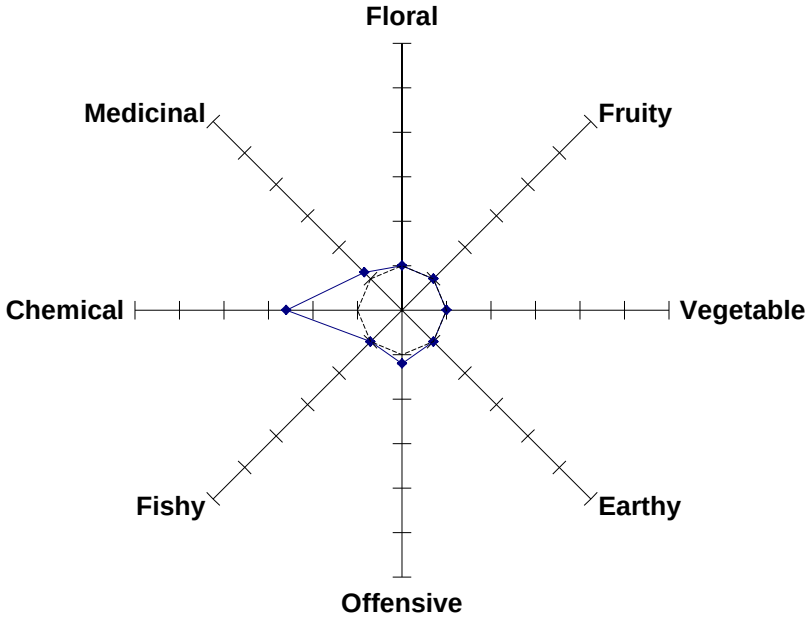
Odor Evaluation Report

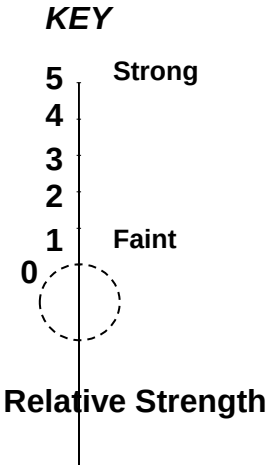
Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #5 Odor Sample	Evaluation Date:	12/17/14

Sensation Descriptor Graph



Odor Descriptor Graph





	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0

	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.2
Fishy	0.0
Chemical	1.6
Medicinal	0.2

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #5 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Chemical	**********
Plastic	**********
Varnish	**********
Solvent	**********
Vinyl	**********
Offensive	**********

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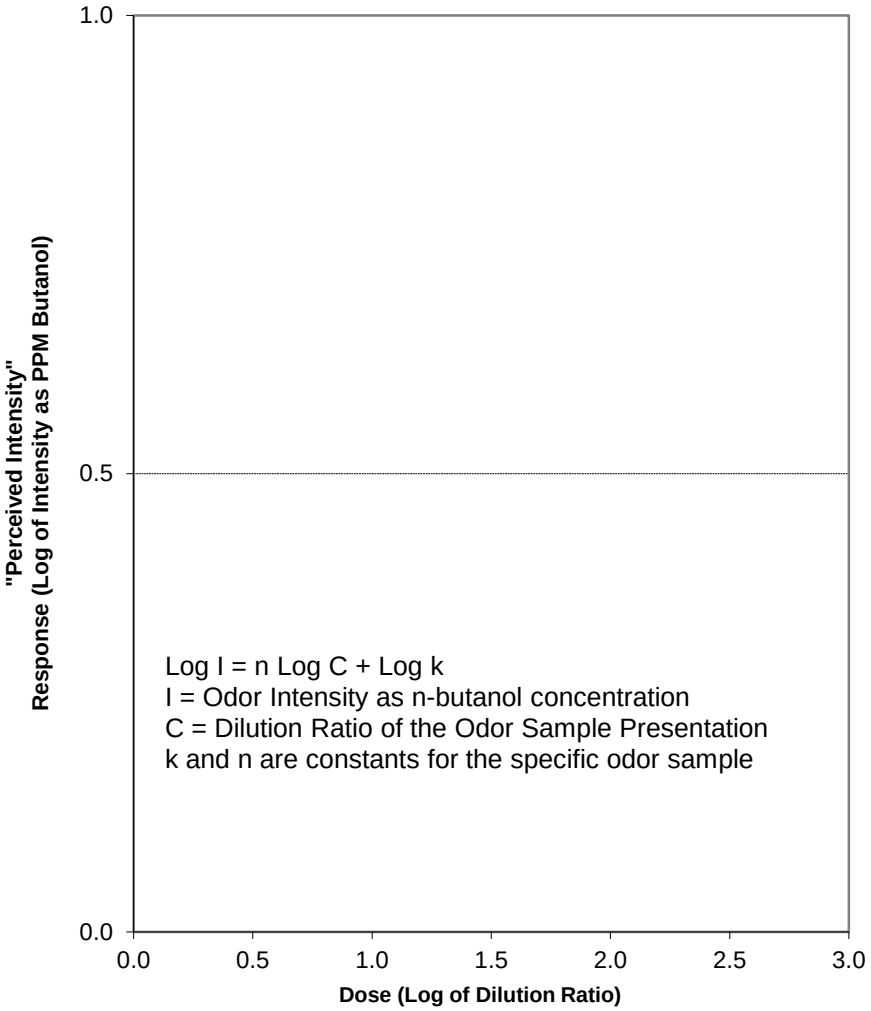
St. Croix Sensory, Inc.

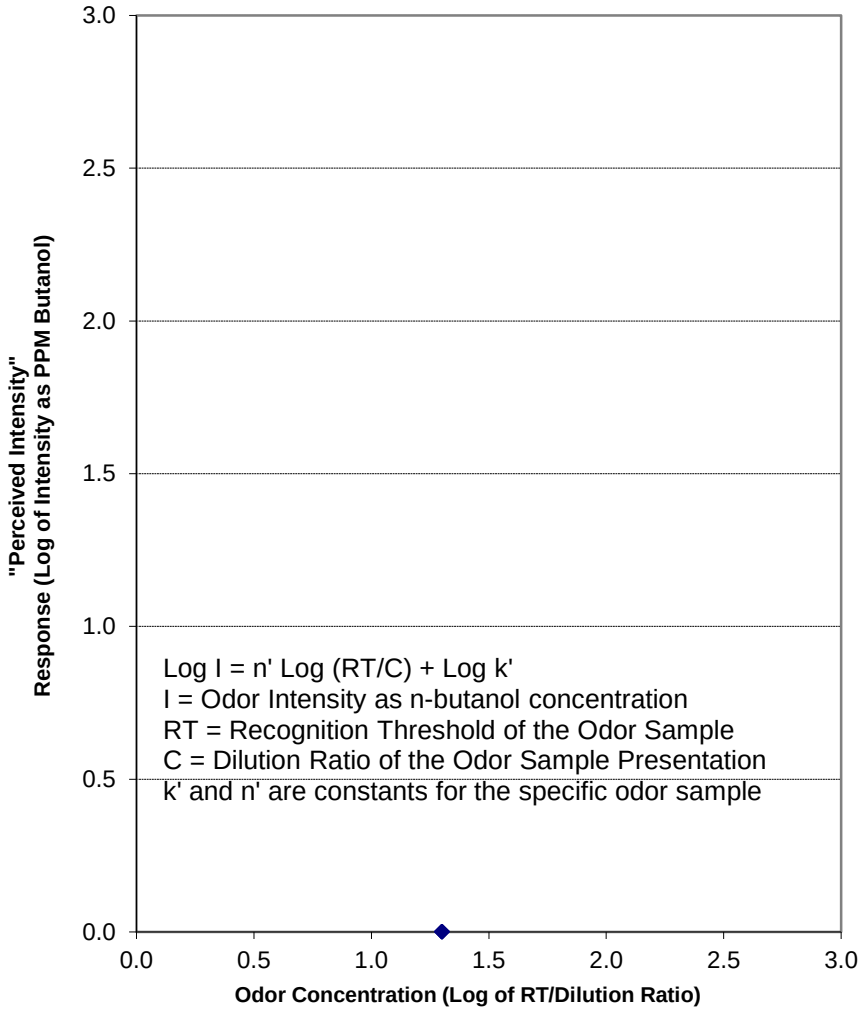
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #5 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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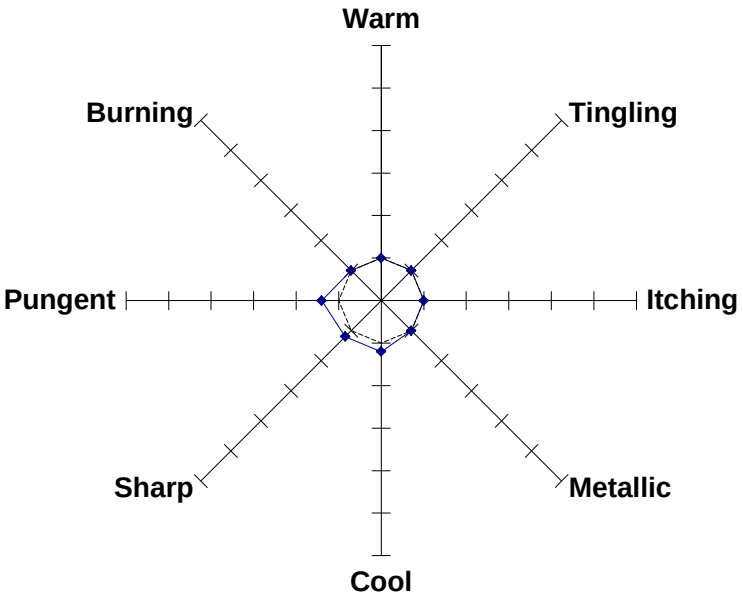
St. Croix Sensory, Inc.

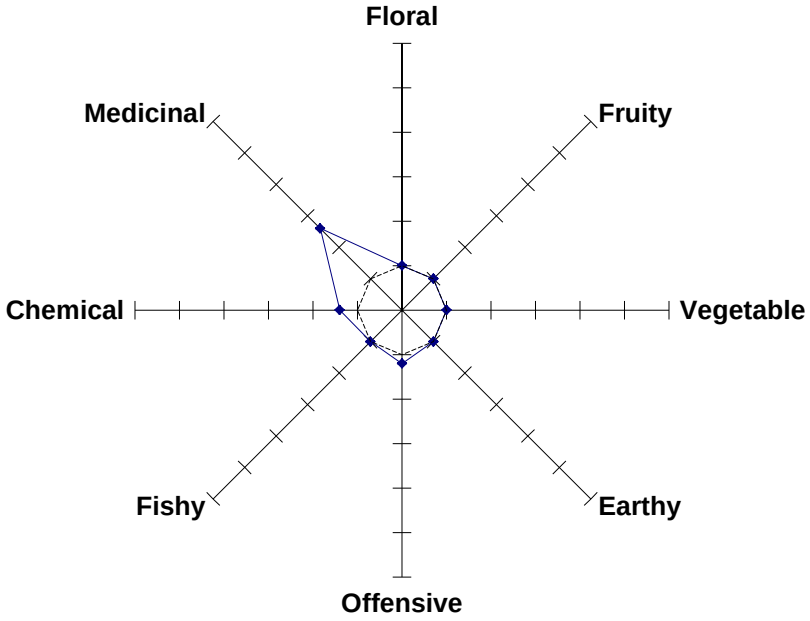
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #6 Odor Sample	Evaluation Date:	12/17/14

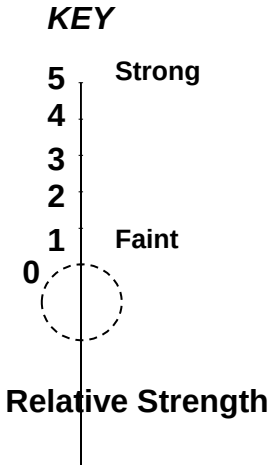
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.2
Fishy	0.0
Chemical	0.4
Medicinal	1.6

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #6 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal	**********
Alcohol	**********
Ammonia	**********
Chlorinous	**********
Chemical	**********
Plastic	**********
Vinyl	**********
Offensive	**********

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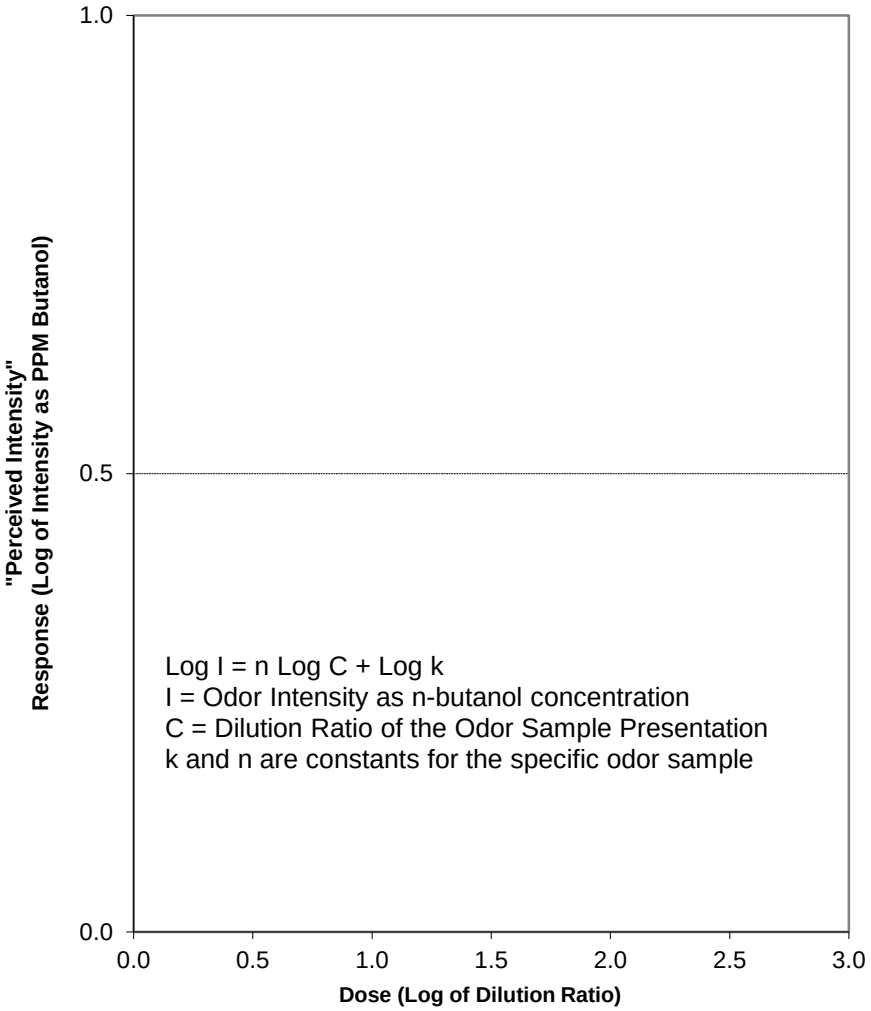
St. Croix Sensory, Inc.

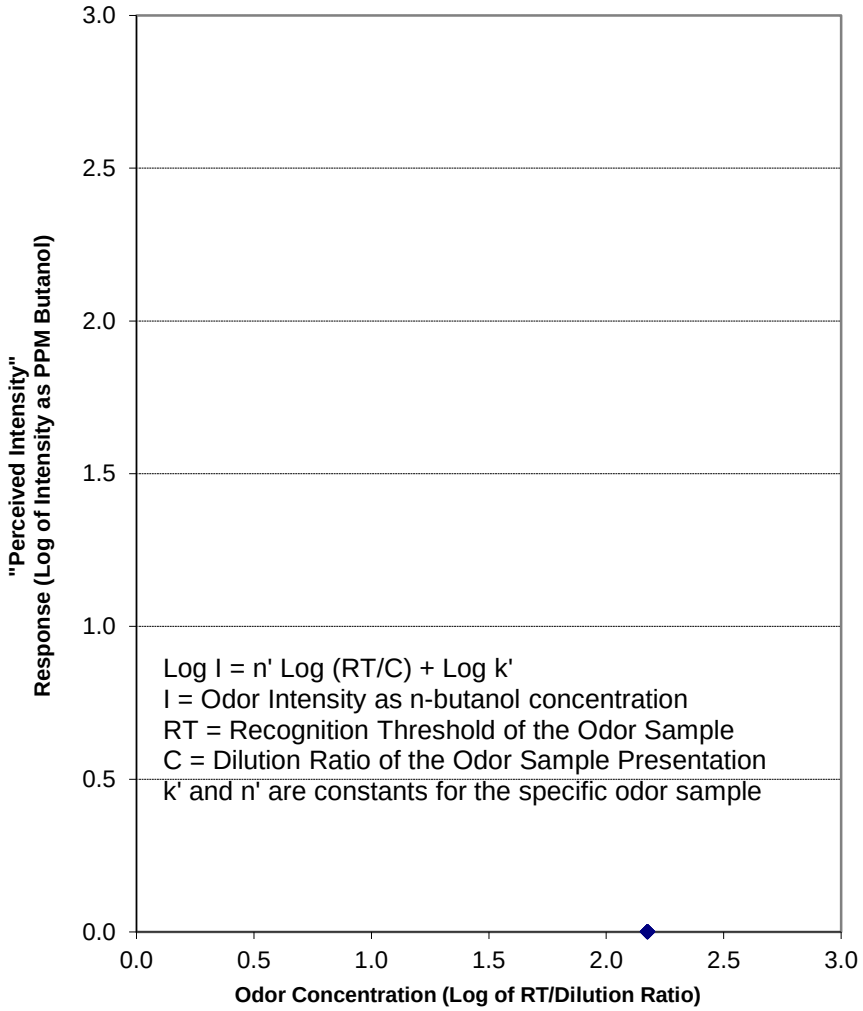
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #6 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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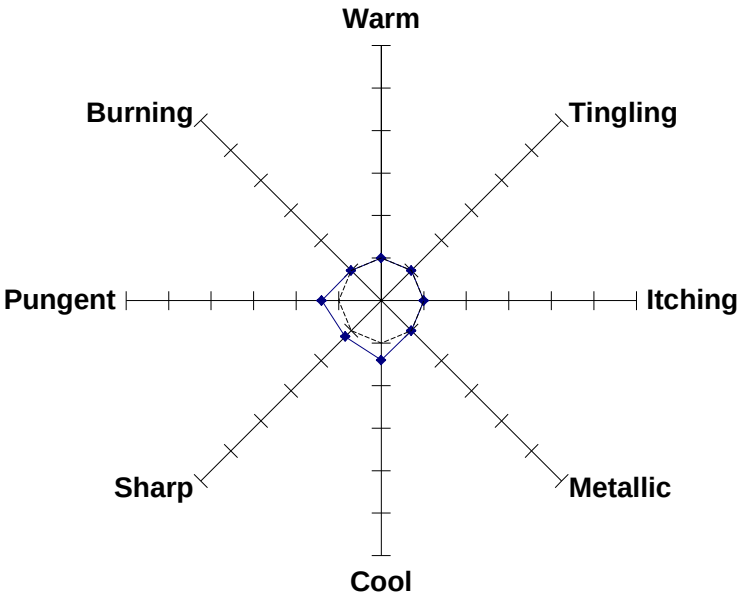
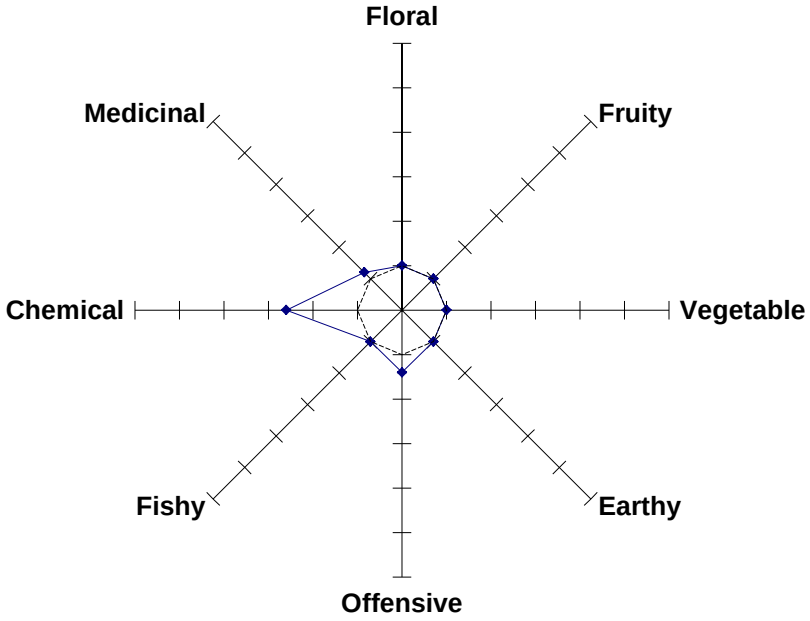
St. Croix Sensory, Inc. **Odor Evaluation Report**

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #7 Odor Sample	Evaluation Date:	12/17/14

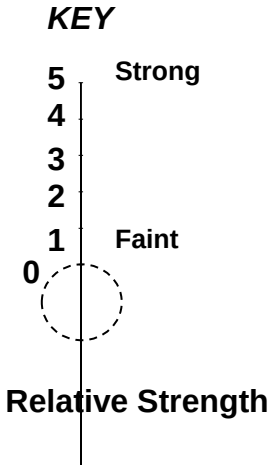
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.4
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.4
Fishy	0.0
Chemical	1.6
Medicinal	0.2

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #7 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal	**********
Alcohol	**********
Chemical	**********
Paint	**********
Plastic	**********
Varnish	**********
Solvent	**********
Vinyl	**********
Offensive	**********

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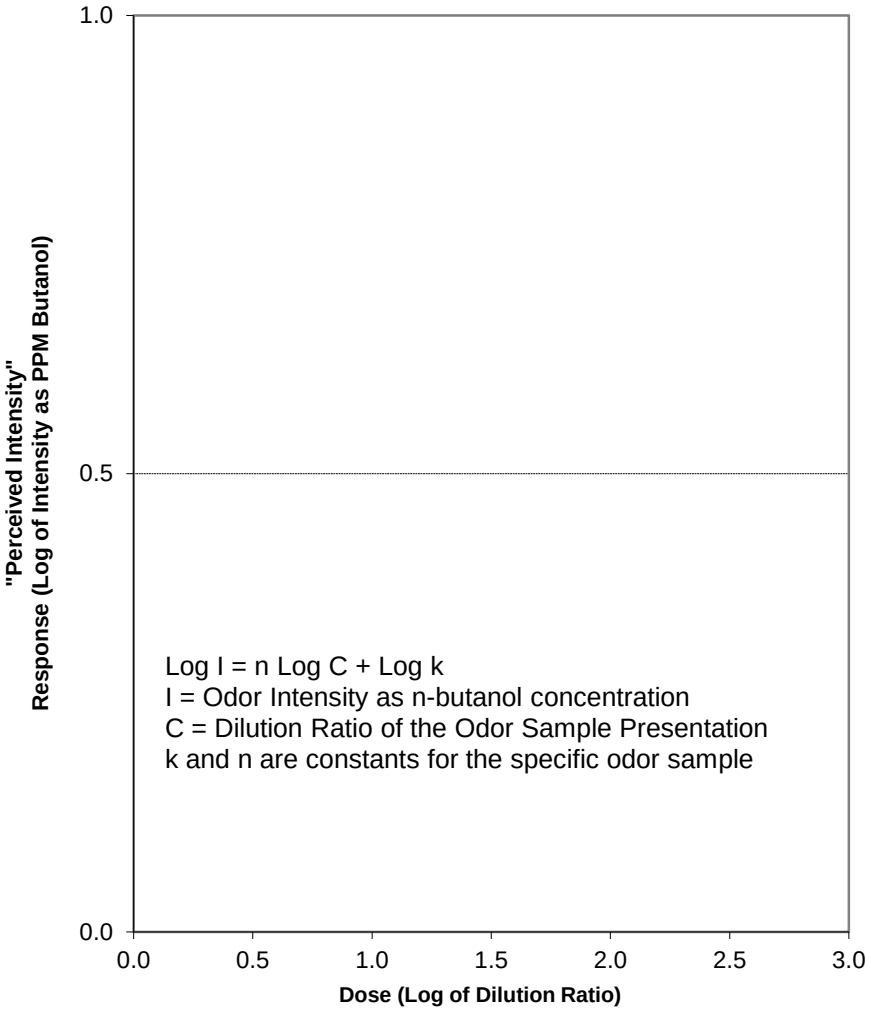
St. Croix Sensory, Inc.

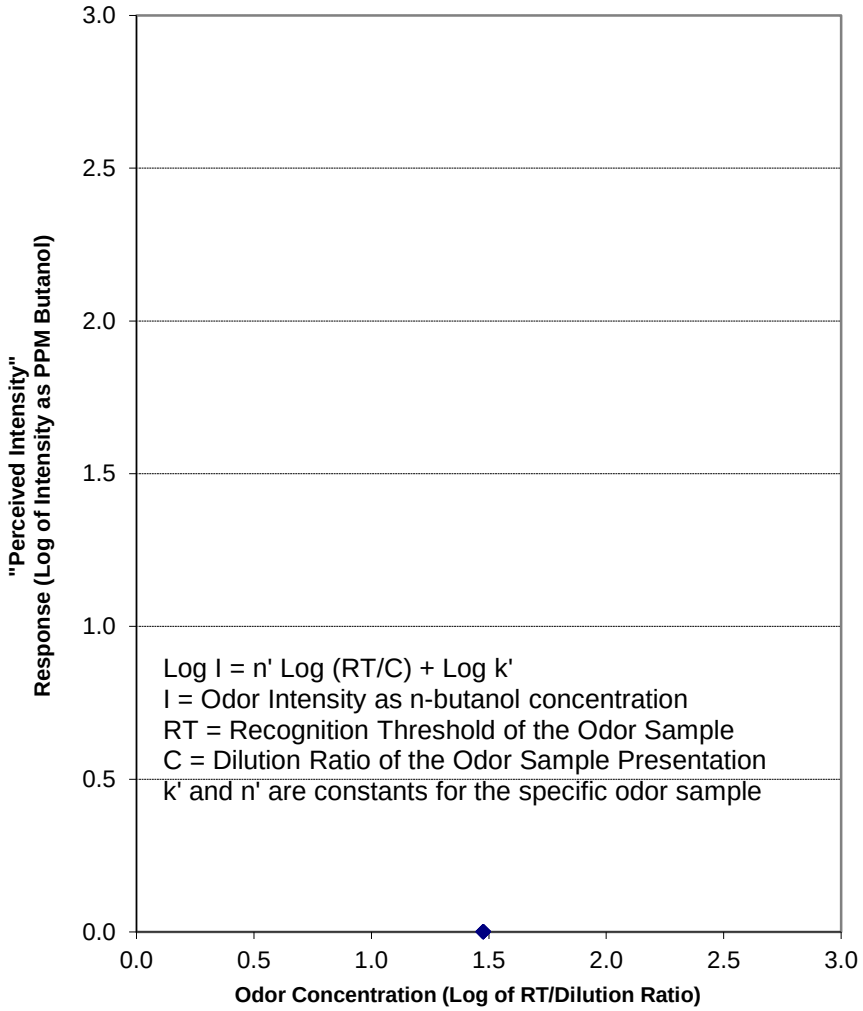
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #7 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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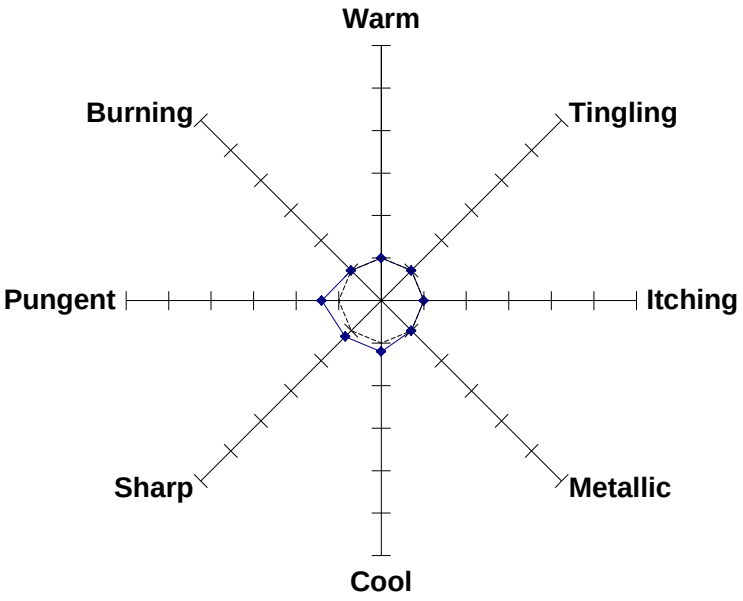
St. Croix Sensory, Inc.

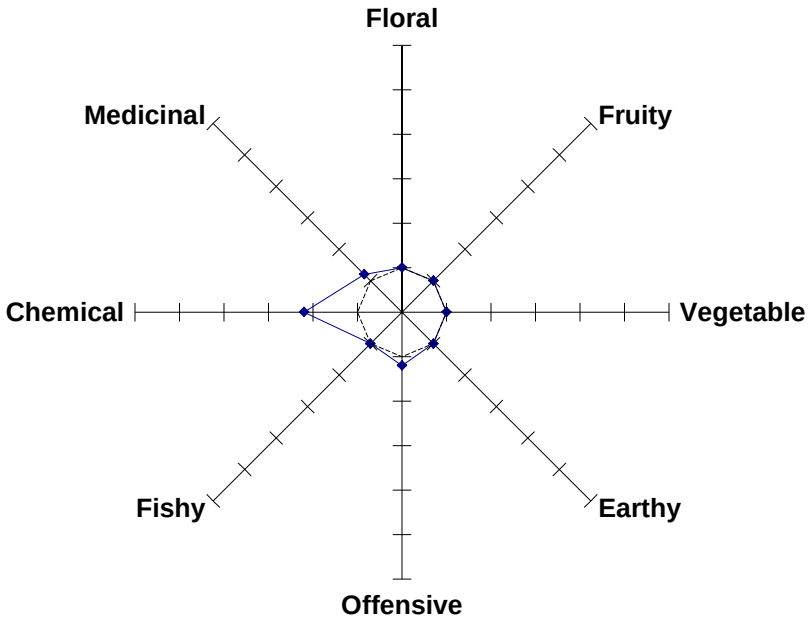
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #8 Odor Sample	Evaluation Date:	12/17/14

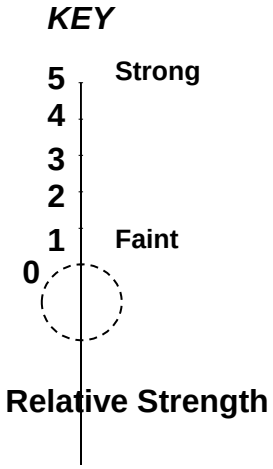
Sensation Descriptor Graph



Odor Descriptor Graph



	Average Relative Strength
Warm	0.0
Tingling	0.0
Itching	0.0
Metallic	0.0
Cool	0.2
Sharp	0.2
Pungent	0.4
Burning	0.0



	Average Relative Strength
Floral	0.0
Fruity	0.0
Vegetable	0.0
Earthy	0.0
Offensive	0.2
Fishy	0.0
Chemical	1.2
Medicinal	0.2

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St. Croix Sensory, Inc.

Odor Evaluation Report

Client: SCS Engineers

Field No.:

Report No.: **1435103**

Project: Rio Rico Landfill

Description: Site #8 Odor Sample

Evaluation Date: 12/17/14

% of Assessors |**********|**********|**********|**********| 100%

Medicinal	**********
Alcohol	**********
Chemical	**********
Plastic	**********
Varnish	**********
Vinyl	**********
Offensive	**********

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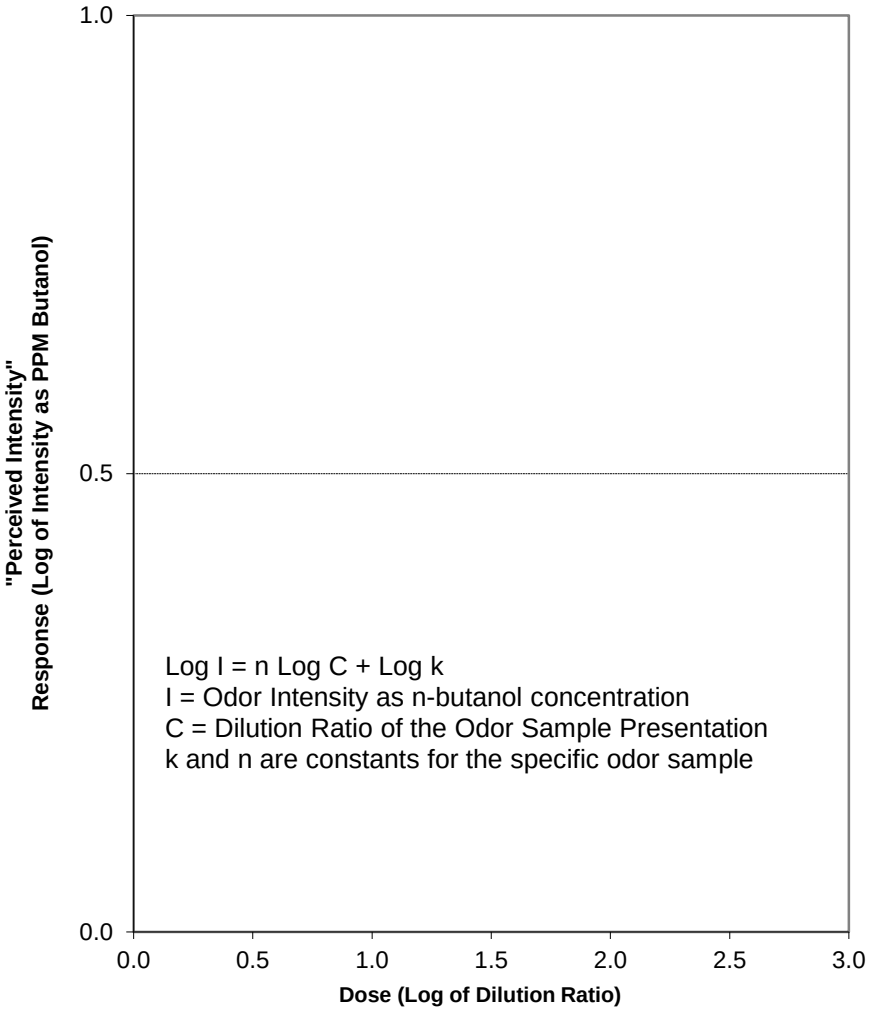
St. Croix Sensory, Inc.

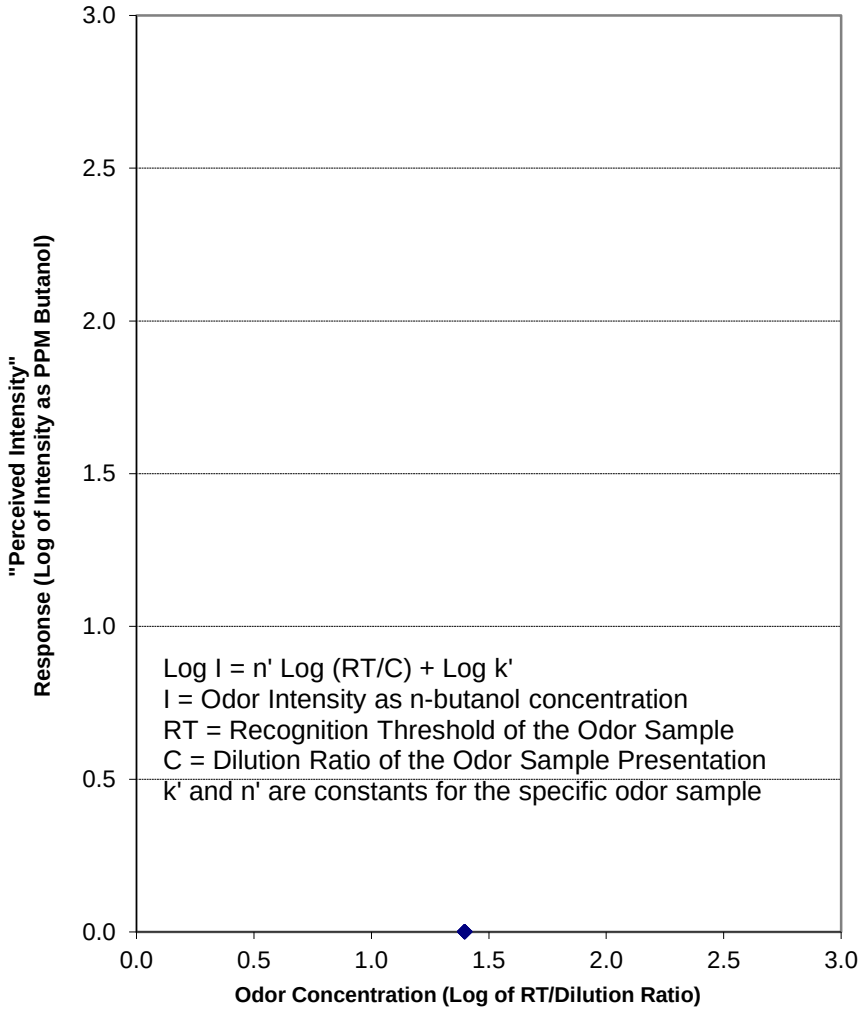
Odor Evaluation Report

Client:	SCS Engineers	Field No.:		Report No.:	**1435103**
Project:	Rio Rico Landfill	Description:	Site #8 Odor Sample	Evaluation Date:	12/17/14

Dose-Response



Dose-Response as Power Law



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St. Croix Sensory, Inc.

CHAIN OF CUSTODY RECORD FOR ODOR SAMPLES

Client: SANTA CRUZ COUNTY

Sampled By: RICK ROBERTS

Project Name: RIO RICO LANDFILL

Sampling Date: 12-15/16-2014

Comments:

Odor Evaluations Requested: (X)

For Laboratory use Only

Odor Evaluation Report No. 1435103

Line No.	Field No.	Sample Description	Sample Time	Field H_2S (ppm)	Odor Concentration* (Detection & Recognition Threshold)	Odor Intensity* (PPM 1-Butanol)	Odor Characterization (Hedonic Tone & Descriptors)	Odor Persistency ("Dose-Response")	Laboratory Sample No. LN	Laboratory Sample No. FN
1		SITE #1 ODOR SAMPLE 12-15/16-2014	1330 – 1330		X		X			
2		SITE #2 ODOR SAMPLE 12-15/16-2014	1330 – 1330		X		X			
3		SITE #3 ODOR SAMPLE 12-15/16-2014	1330 – 1330		X		X			
4		SITE #4 ODOR SAMPLE 12-15/16-2014	1330 – 1330		X		X			
5		SITE #5 ODOR SAMPLE 12-15/16-2014	1330 – 1330		X		X			
6		SITE #6 ODOR SAMPLE 12-16-14	1348 – 1359		X		X			
7		SITE #7 ODOR SAMPLE 12-16-14	1425 – 1435		X		X			
8		SITE #8 ODOR SAMPLE 12-16-14	1452 – 1502		X		X			
9										
10										
11										
12										

Transmittal

Number of Shipping Boxes _____

Relinquished By	Date	Time	Accepted By	Date	Time	Comments & Exceptions Noted
[signature]	12-16-14	3:46 PM				
Received at St. Croix Sensory Laboratory			[signature]	12/17/14	10:40 AM	

*Odor Concentration: ASTM E679-04 & EN13725:2003 and Odor Intensity: ASTM E544-10

St. Croix Sensory, Inc. ◆ 1150 Stillwater Blvd. N. ◆ Stillwater, MN 55082 U.S.A. ◆ Tel:800-879-9231 ◆ Fax:651-439-1065 ◆ Email:reports@fivesenses.com ◆ Web:www.fivesenses.com

LAB COPIES WHITE & YELLOW

CLIENT COPY PINK

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-15-14 PREPARED BY: RC ROBERTS

SAMPLER #: AA-1 RUN DATE: 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: RC ROBERTS DATE: 12-15-14

FLOW READING: 10cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #1 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: RC ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 10cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: WORKING (✓) NOT WORKING ( ) (Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: _____

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-15-14 PREPARED BY: R. ROBERTS

SAMPLER #: AA-2 RUN DATE: 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS DATE: 12-15-14

FLOW READING: 10cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #2 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 10cc

BAG STATUS: FULL (✓) 1 / 2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: WORKING (✓) NOT WORKING ( )
(Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: M

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-15-14 PREPARED BY: R. ROBERTS

SAMPLER #: AA-3 RUN DATE: 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS DATE: 12-15-14

FLOW READING: 10 cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #3 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 10cc

BAG STATUS: FULL (✓) 1 / 2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: WORKING (✓) NOT WORKING ( ) (Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: M

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-15-14 PREPARED BY: R. ROBERTS

SAMPLER #: AA-4 RUN DATE: 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS DATE: 12-15-14

FLOW READING: 10cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #4 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 10cc

BAG STATUS: FULL (✓) 1 / 2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: WORKING (✓) NOT WORKING ( ) (Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-15-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: AA-5 **RUN DATE:** 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-15-14

FLOW READING: 10cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #5 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 10cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: _____

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-16-14 **PREPARED BY:** R ROBERTS

SAMPLER #: FLUX BOX CHAMBER **RUN DATE:** 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 800 cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1349

LOCATION: SITE #6 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 800 cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1359

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 800cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1425

LOCATION: SITE #7 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 800cc

BAG STATUS: **FULL** (✓) **1/2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1435

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( )
(Specify in comments)

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-16-14 PREPARED BY: R. ROBERTS

SAMPLER #: _____ RUN DATE: 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS DATE: 12-16-14

FLOW READING: 800cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1452

LOCATION: SITE #8 ODOR SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 800 cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1502

SAMPLER STATUS: WORKING (✓) NOT WORKING ( ) (Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: R

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ATTACHMENT 3

SPECIATED REDUCED SULFUR COMPOUNDS & VOLATILE ORGANIC COMPOUNDS – ALS ENVIRONMENTAL

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

January 6, 2015

Donna McGinley
St Croix Sensory, Inc.
1150 Stillwater Blvd
Stillwater, MN 55082

RE: SCS Engineers/ Rio Rico Landfill

Dear Donna:

Enclosed are the results of the samples submitted to our laboratory on December 17, 2014. For your reference, these analyses have been assigned our service request number P1405075.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Samantha Henningsen at 2:27 pm, Jan 06, 2015

For Kate Aguilera
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: St Croix Sensory, Inc. Service Request No: P1405075
Project: SCS Engineers/ Rio Rico Landfill

CASE NARRATIVE

The samples were received intact under chain of custody on December 17, 2014 and were stored in accordance with the analytical method requirements. The bag for sample Site # 1 Chemical (P1405075-001) was received flat and could not be analyzed. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per ASTM D 5504-12 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. This method is not included on the laboratory's NELAP, DoD-ELAP, or AIHA-LAP scope of accreditation.

Volatile Organic Compound Analysis

The samples were also analyzed for volatile organic compounds and tentatively identified compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. According to the method, the use of Tedlar bags is considered a method modification. This method is not included on the laboratory's AIHA-LAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP scope of accreditation.

The secondary sample labeled "Site #1", received on 12/19/2014, was received with insufficient hold time remaining to complete the analysis within the recommended limit. The analysis was performed as soon as possible after receipt by the laboratory and the data flagged to indicate the holding time exceedance.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or

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T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	838341
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-14-5
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272014-4
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: St Croix Sensory, Inc. Service Request: P1405075

Project ID: SCS Engineers/ Rio Rico Landfill

Date Received: 12/17/2014

Time Received: 10:53

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	ASTM D5504-01 - Sulfur Bag	TO-15 Modified - VOC Bags
Site # 2 Chemical	P1405075-002	Air	12/16/2014	15:30	X	X
Site # 3 Chemical	P1405075-003	Air	12/16/2014	15:30	X	X
Site # 4 Chemical	P1405075-004	Air	12/16/2014	15:30	X	X
Site # 5 Chemical	P1405075-005	Air	12/16/2014	15:30	X	X
Site # 6 Chemical	P1405075-006	Air	12/16/2014	13:40	X	X
Site # 7 Chemical	P1405075-007	Air	12/16/2014	14:25	X	X
Site # 8 Chemical	P1405075-008	Air	12/16/2014	14:52	X	X
Site #1	P1405075-009	Air	12/16/2014	15:30	X	X

Columbia Analytical Services
2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No. P1405075

CAS Contact:

Company Name & Address (Reporting Information): St Croix Sensory, Inc, 1150 Stillwater Blvd No, Stillwater, MN 55082

Project Name: SCS Engineers / Rio Rico Landfill

Project Number:

Project Manager: Donna McGinley

P.O. # / Billing Information:

Phone: 651-439-0177 Fax: 651-439-1065

Email Address for Result Reporting: donna@fivesenses.com

Sampler (Print & Sign): Rick Roberts

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	30 Reduced Sulfurs ASTM D5504-01 GC/SCD	VOC's (Standard 75 Comps + 70 additional TICS)	Comments e.g. Actual Preservative or specific instructions
SITE #1 CHEMICAL	1	12-15/16 2014	1530/1530						X	X	
SITE #2 CHEMICAL	2	12-15/16 2014	1530-1530						X	X	
SITE #3 CHEMICAL	3	12-15/16 2014	1530-1530						X	X	
SITE #4 CHEMICAL	4	12-15/16 2014	1530-1530						X	X	
SITE #5 CHEMICAL	5	12-15/16 2014	1530-1530						X	X	
SITE #6 CHEMICAL	6	12-16-14	1330-1340						X	X	
SITE #7 CHEMICAL	7	12-16-14	1415-1425						X	X	
SITE #8 CHEMICAL	8	12-16-14	1442-1452						X	X	

Report Tier Levels - please select
Tier I - (Results/Default if not specified) ____
Tier II (Results + QC) ____
Tier III (Data Validation Package) 10% Surcharge ____
Tier V (client specified) ____
EDD required Yes / No
Type: ____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Time:
[signature]	12-16-14	3:46 pm	K. Kel[illegible] 12/17/14	1053
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Time:

Cooler / Blank Temperature ____°C

ALS Environmental
Sample Acceptance Check Form

Client: St Croix Sensory, Inc. Work order: P1405075

Project: SCS Engineers/ Rio Rico Landfill

Sample(s) received on: 12/17/14 Date opened: 12/17/14 by: KKELPE

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☐	☒	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1405075-001.01	10 L Tedlar Bag					
P1405075-002.01	10 L Tedlar Bag					
P1405075-003.01	10 L Tedlar Bag					
P1405075-004.01	10 L Tedlar Bag					
P1405075-005.01	10 L Tedlar Bag					
P1405075-006.01	10 L Tedlar Bag					
P1405075-007.01	10 L Tedlar Bag					
P1405075-008.01	10 L Tedlar Bag					

Explain any discrepancies: (include lab sample ID numbers):

Site #1 bag was received flat, Replacement sent on 12/19/14 out of hold time for sulfur

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: St Croix Sensory, Inc. Work order: P1405075

Project: SCS Engineers/ Rio Rico Landfill

Sample(s) received on: 12/17/14 Date opened: 12/17/14 by: KKELPE

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1405075-009.01	10 L Tedlar Bag					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 2 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-002

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 15:30
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 12:06
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 3 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-003

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 15:30
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 12:24
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 4 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-004

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 15:30
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 12:39
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 5 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-005

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 15:30
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 13:00
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 6 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-006

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 13:40
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 11:34
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 7 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-007

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 14:25
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 13:42
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 8 Chemical**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-008

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: 12/16/14
Time Collected: 14:52
Date Received: 12/17/14
Date Analyzed: 12/17/14
Time Analyzed: 13:58
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site #1**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P1405075-009

Test Code: ASTM D 5504-12
Instrument ID: Agilent 7890A/GC22/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes: **H3**

Date Collected: 12/16/14
Time Collected: 15:30
Date Received: 12/19/14
Date Analyzed: 12/19/14
Time Analyzed: 11:56
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H3 = Sample was received and analyzed past holding time.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P141217-MB

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: NA
Time Collected: NA
Date Received: NA
Date Analyzed: 12/17/14
Time Analyzed: 08:17
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **SCS Engineers/ Rio Rico Landfill**

ALS Project ID: P1405075
ALS Sample ID: P141219-MB

Test Code: ASTM D 5504-12
Instrument ID: Agilent 7890A/GC22/SCD
Analyst: Mike Conejo
Sample Type: 10 L Tedlar Bag
Test Notes:

Date Collected: NA
Time Collected: NA
Date Received: NA
Date Analyzed: 12/19/14
Time Analyzed: 07:57
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 2 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-002

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 2 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-002

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**8.4**	5.0	**2.2**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 2 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-002

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 2 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-002

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
15.51	1-Methoxy-2-propyl acetate	**77**	
20.34	unidentified siloxane	**37**	
22.07	unidentified siloxane	**82**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 3 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-003

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 3 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-003

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**7.9**	5.0	**2.1**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 3 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-003

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 3 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-003

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
15.51	1-Methoxy-2-propyl acetate	**55**	
20.34	unidentified siloxane	**26**	
21.70	unknown	**21**	
22.07	unidentified siloxane	**50**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 4 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-004

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 4 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-004

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**8.1**	5.0	**2.1**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 4 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-004

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 4 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-004

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
15.51	1-Methoxy-2-propyl acetate	**41**	
20.34	unidentified siloxane	**34**	
21.71	unknown	**23**	
22.07	unidentified siloxane	**57**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 5 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-005

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 5 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-005

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**9.7**	5.0	**2.6**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 5 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-005

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 5 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-005

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
15.51	1-Methoxy-2-propyl acetate	**71**	
20.34	unidentified siloxane	**25**	
21.71	unknown	**21**	
22.07	unidentified siloxane	**42**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 6 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-006

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 6 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-006

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**8.9**	5.0	**2.4**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 6 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-006

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 6 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-006

Tentatively Identified Compounds

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: **T**

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
4.25	Isobutane	**20**	
15.00	Cyclotrisiloxane, hexamethyl-	**35**	
18.28	unknown	**180**	
20.35	unidentified siloxane	**440**	
22.07	unidentified siloxane	**120**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 7 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-007

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	**57**	50	**23**	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 7 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-007

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**8.7**	5.0	**2.3**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 7 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-007

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 7 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-007

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
15.00	Cyclotrisiloxane, hexamethyl-	**21**	
18.28	unknown	**250**	
18.79	unidentified siloxane	**25**	
19.30	unknown	**23**	
20.35	unidentified siloxane	**460**	
21.71	unknown	**21**	
22.07	unidentified siloxane	**96**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 8 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-008

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 8 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-008

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**8.9**	5.0	**2.4**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site # 8 Chemical** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-008

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/17/14
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site # 8 Chemical** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-008

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/17/14
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
18.28	unknown	**240**	
18.79	unidentified siloxane	**26**	
19.30	unknown	**25**	
20.35	unidentified siloxane	**550**	
21.71	unknown	**21**	
22.07	unidentified siloxane	**100**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site #1** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-009

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 12/19/14
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: **H1**

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site #1** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-009

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 12/19/14
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: **H1**

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	**11**	10	**3.0**	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**18**	5.0	**4.7**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Site #1** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-009

Test Code: EPA TO-15 Modified Date Collected: 12/16/14
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 12/19/14
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: **H1**

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**

Client Sample ID: **Site #1** ALS Project ID: P1405075

Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P1405075-009

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	12/16/14
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13	Date Received:	12/19/14
Analyst:	Simon Cao	Date Analyzed:	12/19/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:	**H1, T**		

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
22.04	unidentified siloxane	**95**	
23.34	unknown	**22**	
23.68	unidentified siloxane	**110**	

T = Analyte is a tentatively identified compound, result is estimated.

H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141217-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141217-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141217-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/17/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client:	**St Croix Sensory, Inc.**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P1405075
Client Project ID:	**SCS Engineers/ Rio Rico Landfill**	ALS Sample ID:	P141217-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	12/17/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	No Compounds Detected		

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141219-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141219-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **St Croix Sensory, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1405075
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Sample ID: P141219-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/19/14
Sample Type: 10 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client:	**St Croix Sensory, Inc.**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P1405075
Client Project ID:	**SCS Engineers/ Rio Rico Landfill**	ALS Sample ID:	P141219-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15 Modified	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	12/19/14
Sample Type:	10 L Tedlar Bag	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	No Compounds Detected		

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **St Croix Sensory, Inc.**
Client Project ID: **SCS Engineers/ Rio Rico Landfill** ALS Project ID: P1405075

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 12/16/14
Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Received: 12/17 - 12/19/14
Analyst: Simon Cao Date(s) Analyzed: 12/17 - 12/19/14
Sample Type: 10 L Tedlar Bag(s)
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P141217-MB	**96**	**101**	**100**	70-130	
Method Blank	P141219-MB	**97**	**100**	**101**	70-130	
Site # 2 Chemical	P1405075-002	**96**	**91**	**99**	70-130	
Site # 3 Chemical	P1405075-003	**97**	**92**	**99**	70-130	
Site # 4 Chemical	P1405075-004	**97**	**92**	**99**	70-130	
Site # 5 Chemical	P1405075-005	**97**	**91**	**99**	70-130	
Site # 6 Chemical	P1405075-006	**96**	**91**	**98**	70-130	
Site # 7 Chemical	P1405075-007	**96**	**92**	**99**	70-130	
Site # 8 Chemical	P1405075-008	**97**	**92**	**99**	70-130	
Site #1	P1405075-009	**94**	**104**	**106**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL BAG #: _____

DATE PREPARED: 12-15-14 PREPARED BY: R. [illegible]

SAMPLER #: AA-1 RUN DATE: 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS DATE: 12-15-14

FLOW READING: 10cc ADJUSTED? ( ) NO (✓) OPEN VALVE (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #1 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS DATE: 12-16-14

CLOSE VALVE (✓) FLOW AT END: 10cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: WORKING (✓) NOT WORKING ( ) (Specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: [illegible]

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-15-14 **PREPARED BY:** R [illegible]

SAMPLER #: AA-2 **RUN DATE:** 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-15-14

FLOW READING: 10cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #2 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 10cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: JM

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: Santa Cruz County Landfill **BAG #:** _____

DATE PREPARED: 12-15-14 **PREPARED BY:** R. Roberts

SAMPLER #: SA-3 **RUN DATE:** 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. Roberts **DATE:** 12-15-14

FLOW READING: 10cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1530

LOCATION: Site #3 Chemical Sample

BAG REMOVAL

BAG REMOVED BY: R. Roberts **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 10cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: Santa Cruz County Landfill **BAG #:** _____

DATE PREPARED: 12-15-14 **PREPARED BY:** R. Roberts

SAMPLER #: AA-4 **RUN DATE:** 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. Roberts **DATE:** 12-15-14

FLOW READING: 10cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #4 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. Roberts **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 10cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-15-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: AA-5 **RUN DATE:** 12-15/16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-15-14

FLOW READING: 10cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1530

LOCATION: SITE #5 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 10cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1530

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: _____

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: FLUX BOX CHAMBER **RUN DATE:** 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 800 cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1330

LOCATION: SITE #6 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 800 cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1340

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: FLUX BOX CHAMBER **RUN DATE:** 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 800 cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1415

LOCATION: SITE #7 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 800 cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1425

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( )
(Specify in comments)

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL **BAG #:** _____

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: FLUX BOX CHAMBER **RUN DATE:** 12-16-14

BAG INSTALLATION

BAG INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 800cc **ADJUSTED?** ( ) **NO** (✓) **OPEN VALVE** (✓)

TIME STARTED:

LOCAL 1442

LOCATION: SITE #8 CHEMICAL SAMPLE

BAG REMOVAL

BAG REMOVED BY: R. ROBERTS **DATE:** 12-16-14

CLOSE VALVE (✓) **FLOW AT END:** 800cc

BAG STATUS: **FULL** (✓) **1 / 2 FULL** ( ) **EMPTY** ( )

TIME ENDED:

LOCAL 1452

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

BATTERY STATUS **GOOD** (✓) **BAD** ( )

COMMENTS: _____

REVIEWED BY: M

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ATTACHMENT 4

TSI DUSTTRAK DATA

SITE 1

TrakPro Version 4.61 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530123208
Test ID:	1
Test Abbreviation:	MANUAL_001
Start Date:	12/16/2014
Start Time:	6:32:41
Duration (dd:hh:mm:ss):	0:08:25:00
Log Interval (mm:ss):	1:00
Number of points:	505
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.002
	Minimum:	-0.063
	Time of Minimum:	14:46:41
	Date of Minimum:	12/16/2014
	Maximum:	0.084
	Time of Maximum:	8:44:41
	Date of Maximum:	12/16/2014

Calibration	Sensor:	AEROSOL
	Cal. date	4/15/2014

Date MM/dd/yyyy	Time hh:mm:ss	AEROSOL mg/m^3
12/16/2014	6:33:41	0.008
12/16/2014	6:34:41	0.007
12/16/2014	6:35:41	0.007
12/16/2014	6:36:41	0.008
12/16/2014	6:37:41	0.008
12/16/2014	6:38:41	0.007
12/16/2014	6:39:41	0.007
12/16/2014	6:40:41	0.007
12/16/2014	6:41:41	0.008
12/16/2014	6:42:41	0.009
12/16/2014	6:43:41	0.011
12/16/2014	6:44:41	0.012
12/16/2014	6:45:41	0.013
12/16/2014	6:46:41	0.012
12/16/2014	6:47:41	0.009
12/16/2014	6:48:41	0.006
12/16/2014	6:49:41	0.007

12/16/2014	6:50:41	0.007
12/16/2014	6:51:41	0.007
12/16/2014	6:52:41	0.007
12/16/2014	6:53:41	0.006
12/16/2014	6:54:41	0.006
12/16/2014	6:55:41	0.012
12/16/2014	6:56:41	0.022
12/16/2014	6:57:41	0.017
12/16/2014	6:58:41	0.006
12/16/2014	6:59:41	0.007
12/16/2014	7:00:41	0.01
12/16/2014	7:01:41	0.009
12/16/2014	7:02:41	0.007
12/16/2014	7:03:41	0.006
12/16/2014	7:04:41	0.035
12/16/2014	7:05:41	0.007
12/16/2014	7:06:41	0.02
12/16/2014	7:07:41	0.029
12/16/2014	7:08:41	0.013
12/16/2014	7:09:41	0.007
12/16/2014	7:10:41	0.009
12/16/2014	7:11:41	0.007
12/16/2014	7:12:41	0.006
12/16/2014	7:13:41	0.007
12/16/2014	7:14:41	0.007
12/16/2014	7:15:41	0.007
12/16/2014	7:16:41	0.007
12/16/2014	7:17:41	0.007
12/16/2014	7:18:41	0.007
12/16/2014	7:19:41	0.008
12/16/2014	7:20:41	0.034
12/16/2014	7:21:41	0.017
12/16/2014	7:22:41	0.008
12/16/2014	7:23:41	0.008
12/16/2014	7:24:41	0.007
12/16/2014	7:25:41	0.007
12/16/2014	7:26:41	0.007
12/16/2014	7:27:41	0.007
12/16/2014	7:28:41	0.008
12/16/2014	7:29:41	0.013
12/16/2014	7:30:41	0.008
12/16/2014	7:31:41	0.007
12/16/2014	7:32:41	0.009
12/16/2014	7:33:41	0.009
12/16/2014	7:34:41	0.007
12/16/2014	7:35:41	0.007
12/16/2014	7:36:41	0.006

12/16/2014	7:37:41	0.006
12/16/2014	7:38:41	0.007
12/16/2014	7:39:41	0.012
12/16/2014	7:40:41	0.019
12/16/2014	7:41:41	0.017
12/16/2014	7:42:41	0.018
12/16/2014	7:43:41	0.014
12/16/2014	7:44:41	0.018
12/16/2014	7:45:41	0.01
12/16/2014	7:46:41	0.009
12/16/2014	7:47:41	0.011
12/16/2014	7:48:41	0.014
12/16/2014	7:49:41	0.009
12/16/2014	7:50:41	0.02
12/16/2014	7:51:41	0.013
12/16/2014	7:52:41	0.013
12/16/2014	7:53:41	0.009
12/16/2014	7:54:41	0.009
12/16/2014	7:55:41	0.016
12/16/2014	7:56:41	0.014
12/16/2014	7:57:41	0.01
12/16/2014	7:58:41	0.01
12/16/2014	7:59:41	0.014
12/16/2014	8:00:41	0.009
12/16/2014	8:01:41	0.007
12/16/2014	8:02:41	0.008
12/16/2014	8:03:41	0.007
12/16/2014	8:04:41	0.008
12/16/2014	8:05:41	0.008
12/16/2014	8:06:41	0.008
12/16/2014	8:07:41	0.007
12/16/2014	8:08:41	0.008
12/16/2014	8:09:41	0.008
12/16/2014	8:10:41	0.009
12/16/2014	8:11:41	0.008
12/16/2014	8:12:41	0.009
12/16/2014	8:13:41	0.009
12/16/2014	8:14:41	0.009
12/16/2014	8:15:41	0.009
12/16/2014	8:16:41	0.01
12/16/2014	8:17:41	0.011
12/16/2014	8:18:41	0.011
12/16/2014	8:19:41	0.01
12/16/2014	8:20:41	0.01
12/16/2014	8:21:41	0.01
12/16/2014	8:22:41	0.01
12/16/2014	8:23:41	0.01

12/16/2014	8:24:41	0.01
12/16/2014	8:25:41	0.01
12/16/2014	8:26:41	0.01
12/16/2014	8:27:41	0.01
12/16/2014	8:28:41	0.01
12/16/2014	8:29:41	0.009
12/16/2014	8:30:41	0.009
12/16/2014	8:31:41	0.009
12/16/2014	8:32:41	0.01
12/16/2014	8:33:41	0.009
12/16/2014	8:34:41	0.009
12/16/2014	8:35:41	0.012
12/16/2014	8:36:41	0.009
12/16/2014	8:37:41	0.029
12/16/2014	8:38:41	0.015
12/16/2014	8:39:41	0.011
12/16/2014	8:40:41	0.018
12/16/2014	8:41:41	0.013
12/16/2014	8:42:41	0.015
12/16/2014	8:43:41	0.012
12/16/2014	8:44:41	0.084
12/16/2014	8:45:41	0.016
12/16/2014	8:46:41	0.012
12/16/2014	8:47:41	0.022
12/16/2014	8:48:41	0.018
12/16/2014	8:49:41	0.015
12/16/2014	8:50:41	0.017
12/16/2014	8:51:41	0.019
12/16/2014	8:52:41	0.018
12/16/2014	8:53:41	0.018
12/16/2014	8:54:41	0.017
12/16/2014	8:55:41	0.013
12/16/2014	8:56:41	0.01
12/16/2014	8:57:41	0.011
12/16/2014	8:58:41	0.009
12/16/2014	8:59:41	0.012
12/16/2014	9:00:41	0.01
12/16/2014	9:01:41	0.009
12/16/2014	9:02:41	0.009
12/16/2014	9:03:41	0.009
12/16/2014	9:04:41	0.008
12/16/2014	9:05:41	0.009
12/16/2014	9:06:41	0.009
12/16/2014	9:07:41	0.009
12/16/2014	9:08:41	0.009
12/16/2014	9:09:41	0.009
12/16/2014	9:10:41	0.009

12/16/2014	9:11:41	0.009
12/16/2014	9:12:41	0.008
12/16/2014	9:13:41	0.008
12/16/2014	9:14:41	0.009
12/16/2014	9:15:41	0.008
12/16/2014	9:16:41	0.009
12/16/2014	9:17:41	0.009
12/16/2014	9:18:41	0.008
12/16/2014	9:19:41	0.009
12/16/2014	9:20:41	0.009
12/16/2014	9:21:41	0.01
12/16/2014	9:22:41	0.009
12/16/2014	9:23:41	0.009
12/16/2014	9:24:41	0.009
12/16/2014	9:25:41	0.009
12/16/2014	9:26:41	0.01
12/16/2014	9:27:41	0.01
12/16/2014	9:28:41	0.01
12/16/2014	9:29:41	0.01
12/16/2014	9:30:41	0.01
12/16/2014	9:31:41	0.009
12/16/2014	9:32:41	0.008
12/16/2014	9:33:41	0.009
12/16/2014	9:34:41	0.008
12/16/2014	9:35:41	0.009
12/16/2014	9:36:41	0.008
12/16/2014	9:37:41	0.009
12/16/2014	9:38:41	0.01
12/16/2014	9:39:41	0.011
12/16/2014	9:40:41	0.01
12/16/2014	9:41:41	0.01
12/16/2014	9:42:41	0.008
12/16/2014	9:43:41	0.009
12/16/2014	9:44:41	0.008
12/16/2014	9:45:41	0.008
12/16/2014	9:46:41	0.008
12/16/2014	9:47:41	0.01
12/16/2014	9:48:41	0.015
12/16/2014	9:49:41	0.024
12/16/2014	9:50:41	0.009
12/16/2014	9:51:41	0.013
12/16/2014	9:52:41	0.012
12/16/2014	9:53:41	0.009
12/16/2014	9:54:41	0.011
12/16/2014	9:55:41	0.01
12/16/2014	9:56:41	0.014
12/16/2014	9:57:41	0.01

12/16/2014	9:58:41	0.008
12/16/2014	9:59:41	0.008
12/16/2014	10:00:41	0.008
12/16/2014	10:01:41	0.008
12/16/2014	10:02:41	0.009
12/16/2014	10:03:41	0.013
12/16/2014	10:04:41	0.007
12/16/2014	10:05:41	0.007
12/16/2014	10:06:41	0.008
12/16/2014	10:07:41	0.007
12/16/2014	10:08:41	0.007
12/16/2014	10:09:41	0.007
12/16/2014	10:10:41	0.009
12/16/2014	10:11:41	0.007
12/16/2014	10:12:41	0.007
12/16/2014	10:13:41	0.007
12/16/2014	10:14:41	0.008
12/16/2014	10:15:41	0.01
12/16/2014	10:16:41	0.011
12/16/2014	10:17:41	0.008
12/16/2014	10:18:41	0.008
12/16/2014	10:19:41	0.008
12/16/2014	10:20:41	0.008
12/16/2014	10:21:41	0.007
12/16/2014	10:22:41	0.007
12/16/2014	10:23:41	0.008
12/16/2014	10:24:41	0.009
12/16/2014	10:25:41	0.008
12/16/2014	10:26:41	0.008
12/16/2014	10:27:41	0.007
12/16/2014	10:28:41	0.007
12/16/2014	10:29:41	0.007
12/16/2014	10:30:41	0.008
12/16/2014	10:31:41	0.007
12/16/2014	10:32:41	0.007
12/16/2014	10:33:41	0.007
12/16/2014	10:34:41	0.007
12/16/2014	10:35:41	0.006
12/16/2014	10:36:41	0.006
12/16/2014	10:37:41	0.007
12/16/2014	10:38:41	0.006
12/16/2014	10:39:41	0.006
12/16/2014	10:40:41	0.006
12/16/2014	10:41:41	0.007
12/16/2014	10:42:41	0.006
12/16/2014	10:43:41	0.008
12/16/2014	10:44:41	0.008

12/16/2014	10:45:41	0.009
12/16/2014	10:46:41	0.006
12/16/2014	10:47:41	0.006
12/16/2014	10:48:41	0.006
12/16/2014	10:49:41	0.005
12/16/2014	10:50:41	0.005
12/16/2014	10:51:41	0.006
12/16/2014	10:52:41	0.006
12/16/2014	10:53:41	0.007
12/16/2014	10:54:41	0.007
12/16/2014	10:55:41	0.006
12/16/2014	10:56:41	0.006
12/16/2014	10:57:41	0.005
12/16/2014	10:58:41	0.005
12/16/2014	10:59:41	0.006
12/16/2014	11:00:41	0.005
12/16/2014	11:01:41	0.007
12/16/2014	11:02:41	0.007
12/16/2014	11:03:41	0.006
12/16/2014	11:04:41	0.006
12/16/2014	11:05:41	0.006
12/16/2014	11:06:41	0.007
12/16/2014	11:07:41	0.006
12/16/2014	11:08:41	0.006
12/16/2014	11:09:41	0.006
12/16/2014	11:10:41	0.006
12/16/2014	11:11:41	0.006
12/16/2014	11:12:41	0.005
12/16/2014	11:13:41	0.006
12/16/2014	11:14:41	0.007
12/16/2014	11:15:41	0.007
12/16/2014	11:16:41	0.007
12/16/2014	11:17:41	0.007
12/16/2014	11:18:41	0.008
12/16/2014	11:19:41	0.009
12/16/2014	11:20:41	0.007
12/16/2014	11:21:41	0.008
12/16/2014	11:22:41	0.007
12/16/2014	11:23:41	0.004
12/16/2014	11:24:41	0.005
12/16/2014	11:25:41	0
12/16/2014	11:26:41	0.007
12/16/2014	11:27:41	-0.001
12/16/2014	11:28:41	0
12/16/2014	11:29:41	0.024
12/16/2014	11:30:41	0.003
12/16/2014	11:31:41	0.009

12/16/2014	11:32:41	0.007
12/16/2014	11:33:41	0.008
12/16/2014	11:34:41	0.015
12/16/2014	11:35:41	0.007
12/16/2014	11:36:41	0.007
12/16/2014	11:37:41	0.006
12/16/2014	11:38:41	0.006
12/16/2014	11:39:41	0.007
12/16/2014	11:40:41	0.007
12/16/2014	11:41:41	0.009
12/16/2014	11:42:41	0.015
12/16/2014	11:43:41	0.007
12/16/2014	11:44:41	0.008
12/16/2014	11:45:41	0.007
12/16/2014	11:46:41	0.006
12/16/2014	11:47:41	0.007
12/16/2014	11:48:41	0.006
12/16/2014	11:49:41	0.007
12/16/2014	11:50:41	0.006
12/16/2014	11:51:41	0.006
12/16/2014	11:52:41	0.004
12/16/2014	11:53:41	0.002
12/16/2014	11:54:41	0.002
12/16/2014	11:55:41	0.003
12/16/2014	11:56:41	0
12/16/2014	11:57:41	0.008
12/16/2014	11:58:41	0.001
12/16/2014	11:59:41	0
12/16/2014	12:00:41	0
12/16/2014	12:01:41	-0.003
12/16/2014	12:02:41	-0.001
12/16/2014	12:03:41	0.016
12/16/2014	12:04:41	0.01
12/16/2014	12:05:41	0.008
12/16/2014	12:06:41	0.002
12/16/2014	12:07:41	-0.005
12/16/2014	12:08:41	-0.005
12/16/2014	12:09:41	-0.005
12/16/2014	12:10:41	-0.006
12/16/2014	12:11:41	0.008
12/16/2014	12:12:41	0.008
12/16/2014	12:13:41	0.008
12/16/2014	12:14:41	0.008
12/16/2014	12:15:41	0.008
12/16/2014	12:16:41	0.015
12/16/2014	12:17:41	0.067
12/16/2014	12:18:41	0.02

12/16/2014	12:19:41	0.009
12/16/2014	12:20:41	0.01
12/16/2014	12:21:41	0.016
12/16/2014	12:22:41	0.01
12/16/2014	12:23:41	0.009
12/16/2014	12:24:41	0.008
12/16/2014	12:25:41	0.009
12/16/2014	12:26:41	0.009
12/16/2014	12:27:41	0.009
12/16/2014	12:28:41	0.009
12/16/2014	12:29:41	0.008
12/16/2014	12:30:41	0.008
12/16/2014	12:31:41	0.01
12/16/2014	12:32:41	0.009
12/16/2014	12:33:41	0.008
12/16/2014	12:34:41	0.009
12/16/2014	12:35:41	0.01
12/16/2014	12:36:41	0.008
12/16/2014	12:37:41	0.013
12/16/2014	12:38:41	0.013
12/16/2014	12:39:41	0.009
12/16/2014	12:40:41	0.008
12/16/2014	12:41:41	0.01
12/16/2014	12:42:41	0.016
12/16/2014	12:43:41	0.01
12/16/2014	12:44:41	0.008
12/16/2014	12:45:41	0.008
12/16/2014	12:46:41	0.011
12/16/2014	12:47:41	0.009
12/16/2014	12:48:41	0.008
12/16/2014	12:49:41	0.008
12/16/2014	12:50:41	0.009
12/16/2014	12:51:41	0.007
12/16/2014	12:52:41	0.011
12/16/2014	12:53:41	0.012
12/16/2014	12:54:41	0.009
12/16/2014	12:55:41	0.008
12/16/2014	12:56:41	0.008
12/16/2014	12:57:41	0.009
12/16/2014	12:58:41	0.007
12/16/2014	12:59:41	0.007
12/16/2014	13:00:41	0.007
12/16/2014	13:01:41	0.007
12/16/2014	13:02:41	0.008
12/16/2014	13:03:41	0.008
12/16/2014	13:04:41	0.008
12/16/2014	13:05:41	0.009

12/16/2014	13:06:41	0.008
12/16/2014	13:07:41	0.006
12/16/2014	13:08:41	0.007
12/16/2014	13:09:41	0.001
12/16/2014	13:10:41	0
12/16/2014	13:11:41	0
12/16/2014	13:12:41	0.002
12/16/2014	13:13:41	-0.001
12/16/2014	13:14:41	0.009
12/16/2014	13:15:41	0.016
12/16/2014	13:16:41	0.009
12/16/2014	13:17:41	0.01
12/16/2014	13:18:41	-0.012
12/16/2014	13:19:41	-0.017
12/16/2014	13:20:41	-0.014
12/16/2014	13:21:41	0.004
12/16/2014	13:22:41	-0.011
12/16/2014	13:23:41	-0.014
12/16/2014	13:24:41	-0.013
12/16/2014	13:25:41	-0.007
12/16/2014	13:26:41	-0.013
12/16/2014	13:27:41	-0.013
12/16/2014	13:28:41	-0.015
12/16/2014	13:29:41	-0.012
12/16/2014	13:30:41	0.001
12/16/2014	13:31:41	0.003
12/16/2014	13:32:41	-0.015
12/16/2014	13:33:41	-0.018
12/16/2014	13:34:41	-0.017
12/16/2014	13:35:41	-0.015
12/16/2014	13:36:41	-0.016
12/16/2014	13:37:41	-0.014
12/16/2014	13:38:41	-0.002
12/16/2014	13:39:41	0
12/16/2014	13:40:41	0.002
12/16/2014	13:41:41	0
12/16/2014	13:42:41	-0.002
12/16/2014	13:43:41	-0.009
12/16/2014	13:44:41	-0.013
12/16/2014	13:45:41	-0.016
12/16/2014	13:46:41	-0.018
12/16/2014	13:47:41	-0.013
12/16/2014	13:48:41	-0.017
12/16/2014	13:49:41	-0.018
12/16/2014	13:50:41	-0.019
12/16/2014	13:51:41	-0.015
12/16/2014	13:52:41	-0.016

12/16/2014	13:53:41	-0.02
12/16/2014	13:54:41	-0.009
12/16/2014	13:55:41	-0.009
12/16/2014	13:56:41	-0.011
12/16/2014	13:57:41	-0.012
12/16/2014	13:58:41	-0.022
12/16/2014	13:59:41	-0.027
12/16/2014	14:00:41	-0.023
12/16/2014	14:01:41	-0.023
12/16/2014	14:02:41	-0.026
12/16/2014	14:03:41	-0.024
12/16/2014	14:04:41	-0.02
12/16/2014	14:05:41	-0.021
12/16/2014	14:06:41	-0.024
12/16/2014	14:07:41	-0.019
12/16/2014	14:08:41	-0.025
12/16/2014	14:09:41	-0.023
12/16/2014	14:10:41	-0.023
12/16/2014	14:11:41	-0.03
12/16/2014	14:12:41	-0.032
12/16/2014	14:13:41	-0.035
12/16/2014	14:14:41	-0.032
12/16/2014	14:15:41	-0.037
12/16/2014	14:16:41	-0.031
12/16/2014	14:17:41	-0.038
12/16/2014	14:18:41	-0.038
12/16/2014	14:19:41	-0.04
12/16/2014	14:20:41	-0.038
12/16/2014	14:21:41	-0.036
12/16/2014	14:22:41	-0.039
12/16/2014	14:23:41	-0.038
12/16/2014	14:24:41	-0.036
12/16/2014	14:25:41	-0.038
12/16/2014	14:26:41	-0.036
12/16/2014	14:27:41	-0.035
12/16/2014	14:28:41	-0.034
12/16/2014	14:29:41	-0.035
12/16/2014	14:30:41	-0.036
12/16/2014	14:31:41	-0.032
12/16/2014	14:32:41	-0.035
12/16/2014	14:33:41	-0.037
12/16/2014	14:34:41	-0.038
12/16/2014	14:35:41	-0.036
12/16/2014	14:36:41	-0.036
12/16/2014	14:37:41	-0.04
12/16/2014	14:38:41	-0.035
12/16/2014	14:39:41	-0.039

12/16/2014	14:40:41	-0.038
12/16/2014	14:41:41	-0.044
12/16/2014	14:42:41	-0.055
12/16/2014	14:43:41	-0.06
12/16/2014	14:44:41	-0.055
12/16/2014	14:45:41	-0.062
12/16/2014	14:46:41	-0.063
12/16/2014	14:47:41	-0.057
12/16/2014	14:48:41	-0.058
12/16/2014	14:49:41	-0.052
12/16/2014	14:50:41	-0.054
12/16/2014	14:51:41	-0.05
12/16/2014	14:52:41	-0.021
12/16/2014	14:53:41	-0.009
12/16/2014	14:54:41	-0.038
12/16/2014	14:55:41	-0.037
12/16/2014	14:56:41	-0.036
12/16/2014	14:57:41	-0.026

SITE 2

TrakPro Version 4.61 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530143323
Test ID:	1
Test Abbreviation:	MANUAL_001
Start Date:	12/16/2014
Start Time:	6:42:03
Duration (dd:hh:mm:ss):	0:08:18:00
Log Interval (mm:ss):	1:00
Number of points:	498
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.006
	Minimum:	0
	Time of Minimum:	13:46:03
	Date of Minimum:	12/16/2014
	Maximum:	0.063
	Time of Maximum:	14:02:03
	Date of Maximum:	12/16/2014

Calibration	Sensor:	AEROSOL
	Cal. date	8/18/2014

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
12/16/2014	6:43:03	0.01
12/16/2014	6:44:03	0.008
12/16/2014	6:45:03	0.007
12/16/2014	6:46:03	0.006
12/16/2014	6:47:03	0.007
12/16/2014	6:48:03	0.007
12/16/2014	6:49:03	0.007
12/16/2014	6:50:03	0.007
12/16/2014	6:51:03	0.008
12/16/2014	6:52:03	0.007
12/16/2014	6:53:03	0.006
12/16/2014	6:54:03	0.006
12/16/2014	6:55:03	0.007
12/16/2014	6:56:03	0.007
12/16/2014	6:57:03	0.006
12/16/2014	6:58:03	0.006
12/16/2014	6:59:03	0.006

12/16/2014	7:00:03	0.007
12/16/2014	7:01:03	0.006
12/16/2014	7:02:03	0.006
12/16/2014	7:03:03	0.007
12/16/2014	7:04:03	0.006
12/16/2014	7:05:03	0.007
12/16/2014	7:06:03	0.006
12/16/2014	7:07:03	0.006
12/16/2014	7:08:03	0.006
12/16/2014	7:09:03	0.006
12/16/2014	7:10:03	0.006
12/16/2014	7:11:03	0.007
12/16/2014	7:12:03	0.006
12/16/2014	7:13:03	0.006
12/16/2014	7:14:03	0.006
12/16/2014	7:15:03	0.006
12/16/2014	7:16:03	0.006
12/16/2014	7:17:03	0.006
12/16/2014	7:18:03	0.006
12/16/2014	7:19:03	0.006
12/16/2014	7:20:03	0.006
12/16/2014	7:21:03	0.006
12/16/2014	7:22:03	0.007
12/16/2014	7:23:03	0.006
12/16/2014	7:24:03	0.027
12/16/2014	7:25:03	0.006
12/16/2014	7:26:03	0.007
12/16/2014	7:27:03	0.005
12/16/2014	7:28:03	0.006
12/16/2014	7:29:03	0.009
12/16/2014	7:30:03	0.007
12/16/2014	7:31:03	0.007
12/16/2014	7:32:03	0.005
12/16/2014	7:33:03	0.005
12/16/2014	7:34:03	0.005
12/16/2014	7:35:03	0.005
12/16/2014	7:36:03	0.005
12/16/2014	7:37:03	0.005
12/16/2014	7:38:03	0.005
12/16/2014	7:39:03	0.005
12/16/2014	7:40:03	0.005
12/16/2014	7:41:03	0.005
12/16/2014	7:42:03	0.005
12/16/2014	7:43:03	0.005
12/16/2014	7:44:03	0.005
12/16/2014	7:45:03	0.005
12/16/2014	7:46:03	0.005

12/16/2014	7:47:03	0.006
12/16/2014	7:48:03	0.006
12/16/2014	7:49:03	0.005
12/16/2014	7:50:03	0.005
12/16/2014	7:51:03	0.005
12/16/2014	7:52:03	0.006
12/16/2014	7:53:03	0.006
12/16/2014	7:54:03	0.005
12/16/2014	7:55:03	0.005
12/16/2014	7:56:03	0.005
12/16/2014	7:57:03	0.004
12/16/2014	7:58:03	0.004
12/16/2014	7:59:03	0.005
12/16/2014	8:00:03	0.005
12/16/2014	8:01:03	0.004
12/16/2014	8:02:03	0.004
12/16/2014	8:03:03	0.004
12/16/2014	8:04:03	0.004
12/16/2014	8:05:03	0.004
12/16/2014	8:06:03	0.004
12/16/2014	8:07:03	0.004
12/16/2014	8:08:03	0.004
12/16/2014	8:09:03	0.004
12/16/2014	8:10:03	0.004
12/16/2014	8:11:03	0.004
12/16/2014	8:12:03	0.004
12/16/2014	8:13:03	0.004
12/16/2014	8:14:03	0.004
12/16/2014	8:15:03	0.004
12/16/2014	8:16:03	0.006
12/16/2014	8:17:03	0.012
12/16/2014	8:18:03	0.01
12/16/2014	8:19:03	0.016
12/16/2014	8:20:03	0.019
12/16/2014	8:21:03	0.015
12/16/2014	8:22:03	0.015
12/16/2014	8:23:03	0.019
12/16/2014	8:24:03	0.019
12/16/2014	8:25:03	0.014
12/16/2014	8:26:03	0.017
12/16/2014	8:27:03	0.021
12/16/2014	8:28:03	0.023
12/16/2014	8:29:03	0.016
12/16/2014	8:30:03	0.016
12/16/2014	8:31:03	0.015
12/16/2014	8:32:03	0.012
12/16/2014	8:33:03	0.017

12/16/2014	8:34:03	0.012
12/16/2014	8:35:03	0.01
12/16/2014	8:36:03	0.011
12/16/2014	8:37:03	0.012
12/16/2014	8:38:03	0.009
12/16/2014	8:39:03	0.009
12/16/2014	8:40:03	0.021
12/16/2014	8:41:03	0.037
12/16/2014	8:42:03	0.024
12/16/2014	8:43:03	0.017
12/16/2014	8:44:03	0.017
12/16/2014	8:45:03	0.02
12/16/2014	8:46:03	0.015
12/16/2014	8:47:03	0.01
12/16/2014	8:48:03	0.008
12/16/2014	8:49:03	0.008
12/16/2014	8:50:03	0.007
12/16/2014	8:51:03	0.007
12/16/2014	8:52:03	0.007
12/16/2014	8:53:03	0.006
12/16/2014	8:54:03	0.005
12/16/2014	8:55:03	0.005
12/16/2014	8:56:03	0.006
12/16/2014	8:57:03	0.007
12/16/2014	8:58:03	0.007
12/16/2014	8:59:03	0.007
12/16/2014	9:00:03	0.007
12/16/2014	9:01:03	0.007
12/16/2014	9:02:03	0.006
12/16/2014	9:03:03	0.006
12/16/2014	9:04:03	0.006
12/16/2014	9:05:03	0.006
12/16/2014	9:06:03	0.006
12/16/2014	9:07:03	0.006
12/16/2014	9:08:03	0.006
12/16/2014	9:09:03	0.006
12/16/2014	9:10:03	0.008
12/16/2014	9:11:03	0.007
12/16/2014	9:12:03	0.011
12/16/2014	9:13:03	0.012
12/16/2014	9:14:03	0.011
12/16/2014	9:15:03	0.011
12/16/2014	9:16:03	0.011
12/16/2014	9:17:03	0.011
12/16/2014	9:18:03	0.01
12/16/2014	9:19:03	0.01
12/16/2014	9:20:03	0.009

12/16/2014	9:21:03	0.01
12/16/2014	9:22:03	0.01
12/16/2014	9:23:03	0.01
12/16/2014	9:24:03	0.01
12/16/2014	9:25:03	0.01
12/16/2014	9:26:03	0.009
12/16/2014	9:27:03	0.01
12/16/2014	9:28:03	0.01
12/16/2014	9:29:03	0.008
12/16/2014	9:30:03	0.009
12/16/2014	9:31:03	0.009
12/16/2014	9:32:03	0.01
12/16/2014	9:33:03	0.012
12/16/2014	9:34:03	0.011
12/16/2014	9:35:03	0.011
12/16/2014	9:36:03	0.011
12/16/2014	9:37:03	0.011
12/16/2014	9:38:03	0.012
12/16/2014	9:39:03	0.01
12/16/2014	9:40:03	0.011
12/16/2014	9:41:03	0.011
12/16/2014	9:42:03	0.011
12/16/2014	9:43:03	0.013
12/16/2014	9:44:03	0.013
12/16/2014	9:45:03	0.014
12/16/2014	9:46:03	0.014
12/16/2014	9:47:03	0.015
12/16/2014	9:48:03	0.014
12/16/2014	9:49:03	0.016
12/16/2014	9:50:03	0.013
12/16/2014	9:51:03	0.011
12/16/2014	9:52:03	0.011
12/16/2014	9:53:03	0.013
12/16/2014	9:54:03	0.014
12/16/2014	9:55:03	0.033
12/16/2014	9:56:03	0.044
12/16/2014	9:57:03	0.018
12/16/2014	9:58:03	0.005
12/16/2014	9:59:03	0.005
12/16/2014	10:00:03	0.006
12/16/2014	10:01:03	0.01
12/16/2014	10:02:03	0.01
12/16/2014	10:03:03	0.007
12/16/2014	10:04:03	0.007
12/16/2014	10:05:03	0.009
12/16/2014	10:06:03	0.01
12/16/2014	10:07:03	0.012

12/16/2014	10:08:03	0.008
12/16/2014	10:09:03	0.006
12/16/2014	10:10:03	0.007
12/16/2014	10:11:03	0.008
12/16/2014	10:12:03	0.007
12/16/2014	10:13:03	0.006
12/16/2014	10:14:03	0.006
12/16/2014	10:15:03	0.006
12/16/2014	10:16:03	0.006
12/16/2014	10:17:03	0.006
12/16/2014	10:18:03	0.006
12/16/2014	10:19:03	0.005
12/16/2014	10:20:03	0.005
12/16/2014	10:21:03	0.005
12/16/2014	10:22:03	0.005
12/16/2014	10:23:03	0.005
12/16/2014	10:24:03	0.007
12/16/2014	10:25:03	0.008
12/16/2014	10:26:03	0.006
12/16/2014	10:27:03	0.006
12/16/2014	10:28:03	0.006
12/16/2014	10:29:03	0.006
12/16/2014	10:30:03	0.006
12/16/2014	10:31:03	0.007
12/16/2014	10:32:03	0.006
12/16/2014	10:33:03	0.005
12/16/2014	10:34:03	0.006
12/16/2014	10:35:03	0.005
12/16/2014	10:36:03	0.005
12/16/2014	10:37:03	0.005
12/16/2014	10:38:03	0.004
12/16/2014	10:39:03	0.004
12/16/2014	10:40:03	0.004
12/16/2014	10:41:03	0.004
12/16/2014	10:42:03	0.004
12/16/2014	10:43:03	0.006
12/16/2014	10:44:03	0.005
12/16/2014	10:45:03	0.004
12/16/2014	10:46:03	0.005
12/16/2014	10:47:03	0.005
12/16/2014	10:48:03	0.005
12/16/2014	10:49:03	0.004
12/16/2014	10:50:03	0.003
12/16/2014	10:51:03	0.004
12/16/2014	10:52:03	0.004
12/16/2014	10:53:03	0.007
12/16/2014	10:54:03	0.005

12/16/2014	10:55:03	0.006
12/16/2014	10:56:03	0.005
12/16/2014	10:57:03	0.003
12/16/2014	10:58:03	0.003
12/16/2014	10:59:03	0.003
12/16/2014	11:00:03	0.003
12/16/2014	11:01:03	0.006
12/16/2014	11:02:03	0.004
12/16/2014	11:03:03	0.004
12/16/2014	11:04:03	0.003
12/16/2014	11:05:03	0.003
12/16/2014	11:06:03	0.003
12/16/2014	11:07:03	0.002
12/16/2014	11:08:03	0.002
12/16/2014	11:09:03	0.002
12/16/2014	11:10:03	0.002
12/16/2014	11:11:03	0.002
12/16/2014	11:12:03	0.002
12/16/2014	11:13:03	0.002
12/16/2014	11:14:03	0.002
12/16/2014	11:15:03	0.002
12/16/2014	11:16:03	0.002
12/16/2014	11:17:03	0.002
12/16/2014	11:18:03	0.002
12/16/2014	11:19:03	0.002
12/16/2014	11:20:03	0.003
12/16/2014	11:21:03	0.002
12/16/2014	11:22:03	0.002
12/16/2014	11:23:03	0.002
12/16/2014	11:24:03	0.002
12/16/2014	11:25:03	0.002
12/16/2014	11:26:03	0.002
12/16/2014	11:27:03	0.002
12/16/2014	11:28:03	0.002
12/16/2014	11:29:03	0.002
12/16/2014	11:30:03	0.002
12/16/2014	11:31:03	0.002
12/16/2014	11:32:03	0.002
12/16/2014	11:33:03	0.002
12/16/2014	11:34:03	0.002
12/16/2014	11:35:03	0.002
12/16/2014	11:36:03	0.003
12/16/2014	11:37:03	0.002
12/16/2014	11:38:03	0.003
12/16/2014	11:39:03	0.002
12/16/2014	11:40:03	0.002
12/16/2014	11:41:03	0.002

12/16/2014	11:42:03	0.002
12/16/2014	11:43:03	0.003
12/16/2014	11:44:03	0.002
12/16/2014	11:45:03	0.002
12/16/2014	11:46:03	0.002
12/16/2014	11:47:03	0.002
12/16/2014	11:48:03	0.002
12/16/2014	11:49:03	0.002
12/16/2014	11:50:03	0.002
12/16/2014	11:51:03	0.003
12/16/2014	11:52:03	0.004
12/16/2014	11:53:03	0.003
12/16/2014	11:54:03	0.002
12/16/2014	11:55:03	0.002
12/16/2014	11:56:03	0.002
12/16/2014	11:57:03	0.002
12/16/2014	11:58:03	0.003
12/16/2014	11:59:03	0.003
12/16/2014	12:00:03	0.003
12/16/2014	12:01:03	0.003
12/16/2014	12:02:03	0.004
12/16/2014	12:03:03	0.005
12/16/2014	12:04:03	0.003
12/16/2014	12:05:03	0.003
12/16/2014	12:06:03	0.004
12/16/2014	12:07:03	0.003
12/16/2014	12:08:03	0.003
12/16/2014	12:09:03	0.003
12/16/2014	12:10:03	0.004
12/16/2014	12:11:03	0.004
12/16/2014	12:12:03	0.004
12/16/2014	12:13:03	0.004
12/16/2014	12:14:03	0.004
12/16/2014	12:15:03	0.004
12/16/2014	12:16:03	0.004
12/16/2014	12:17:03	0.005
12/16/2014	12:18:03	0.005
12/16/2014	12:19:03	0.004
12/16/2014	12:20:03	0.004
12/16/2014	12:21:03	0.004
12/16/2014	12:22:03	0.005
12/16/2014	12:23:03	0.004
12/16/2014	12:24:03	0.005
12/16/2014	12:25:03	0.005
12/16/2014	12:26:03	0.006
12/16/2014	12:27:03	0.005
12/16/2014	12:28:03	0.005

12/16/2014	12:29:03	0.004
12/16/2014	12:30:03	0.005
12/16/2014	12:31:03	0.004
12/16/2014	12:32:03	0.003
12/16/2014	12:33:03	0.003
12/16/2014	12:34:03	0.004
12/16/2014	12:35:03	0.004
12/16/2014	12:36:03	0.005
12/16/2014	12:37:03	0.004
12/16/2014	12:38:03	0.003
12/16/2014	12:39:03	0.003
12/16/2014	12:40:03	0.003
12/16/2014	12:41:03	0.004
12/16/2014	12:42:03	0.003
12/16/2014	12:43:03	0.003
12/16/2014	12:44:03	0.003
12/16/2014	12:45:03	0.004
12/16/2014	12:46:03	0.003
12/16/2014	12:47:03	0.003
12/16/2014	12:48:03	0.004
12/16/2014	12:49:03	0.003
12/16/2014	12:50:03	0.004
12/16/2014	12:51:03	0.003
12/16/2014	12:52:03	0.003
12/16/2014	12:53:03	0.003
12/16/2014	12:54:03	0.003
12/16/2014	12:55:03	0.003
12/16/2014	12:56:03	0.003
12/16/2014	12:57:03	0.004
12/16/2014	12:58:03	0.003
12/16/2014	12:59:03	0.002
12/16/2014	13:00:03	0.002
12/16/2014	13:01:03	0.003
12/16/2014	13:02:03	0.002
12/16/2014	13:03:03	0.002
12/16/2014	13:04:03	0.002
12/16/2014	13:05:03	0.003
12/16/2014	13:06:03	0.005
12/16/2014	13:07:03	0.003
12/16/2014	13:08:03	0.002
12/16/2014	13:09:03	0.003
12/16/2014	13:10:03	0.003
12/16/2014	13:11:03	0.002
12/16/2014	13:12:03	0.002
12/16/2014	13:13:03	0.002
12/16/2014	13:14:03	0.002
12/16/2014	13:15:03	0.002

12/16/2014	13:16:03	0.003
12/16/2014	13:17:03	0.005
12/16/2014	13:18:03	0.004
12/16/2014	13:19:03	0.004
12/16/2014	13:20:03	0.003
12/16/2014	13:21:03	0.003
12/16/2014	13:22:03	0.004
12/16/2014	13:23:03	0.004
12/16/2014	13:24:03	0.004
12/16/2014	13:25:03	0.003
12/16/2014	13:26:03	0.004
12/16/2014	13:27:03	0.003
12/16/2014	13:28:03	0.002
12/16/2014	13:29:03	0.003
12/16/2014	13:30:03	0.002
12/16/2014	13:31:03	0.002
12/16/2014	13:32:03	0.003
12/16/2014	13:33:03	0.001
12/16/2014	13:34:03	0.001
12/16/2014	13:35:03	0.001
12/16/2014	13:36:03	0.001
12/16/2014	13:37:03	0.001
12/16/2014	13:38:03	0.001
12/16/2014	13:39:03	0.001
12/16/2014	13:40:03	0.002
12/16/2014	13:41:03	0.001
12/16/2014	13:42:03	0.002
12/16/2014	13:43:03	0.001
12/16/2014	13:44:03	0.002
12/16/2014	13:45:03	0.001
12/16/2014	13:46:03	0
12/16/2014	13:47:03	0
12/16/2014	13:48:03	0
12/16/2014	13:49:03	0
12/16/2014	13:50:03	0
12/16/2014	13:51:03	0
12/16/2014	13:52:03	0
12/16/2014	13:53:03	0
12/16/2014	13:54:03	0
12/16/2014	13:55:03	0
12/16/2014	13:56:03	0
12/16/2014	13:57:03	0
12/16/2014	13:58:03	0
12/16/2014	13:59:03	0
12/16/2014	14:00:03	0
12/16/2014	14:01:03	0
12/16/2014	14:02:03	0.063

12/16/2014	14:03:03	0.003
12/16/2014	14:04:03	0
12/16/2014	14:05:03	0
12/16/2014	14:06:03	0
12/16/2014	14:07:03	0
12/16/2014	14:08:03	0
12/16/2014	14:09:03	0
12/16/2014	14:10:03	0
12/16/2014	14:11:03	0
12/16/2014	14:12:03	0
12/16/2014	14:13:03	0
12/16/2014	14:14:03	0
12/16/2014	14:15:03	0
12/16/2014	14:16:03	0
12/16/2014	14:17:03	0.001
12/16/2014	14:18:03	0
12/16/2014	14:19:03	0
12/16/2014	14:20:03	0.001
12/16/2014	14:21:03	0
12/16/2014	14:22:03	0
12/16/2014	14:23:03	0
12/16/2014	14:24:03	0
12/16/2014	14:25:03	0
12/16/2014	14:26:03	0
12/16/2014	14:27:03	0.001
12/16/2014	14:28:03	0.002
12/16/2014	14:29:03	0
12/16/2014	14:30:03	0.013
12/16/2014	14:31:03	0
12/16/2014	14:32:03	0
12/16/2014	14:33:03	0
12/16/2014	14:34:03	0
12/16/2014	14:35:03	0
12/16/2014	14:36:03	0
12/16/2014	14:37:03	0
12/16/2014	14:38:03	0
12/16/2014	14:39:03	0
12/16/2014	14:40:03	0
12/16/2014	14:41:03	0
12/16/2014	14:42:03	0
12/16/2014	14:43:03	0
12/16/2014	14:44:03	0
12/16/2014	14:45:03	0.047
12/16/2014	14:46:03	0.006
12/16/2014	14:47:03	0.001
12/16/2014	14:48:03	0
12/16/2014	14:49:03	0

12/16/2014	14:50:03	0
12/16/2014	14:51:03	0
12/16/2014	14:52:03	0
12/16/2014	14:53:03	0
12/16/2014	14:54:03	0.001
12/16/2014	14:55:03	0
12/16/2014	14:56:03	0
12/16/2014	14:57:03	0
12/16/2014	14:58:03	0
12/16/2014	14:59:03	0
12/16/2014	15:00:03	0

SITE 3

TrakPro Version 4.61 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530084510
Test ID:	1
Test Abbreviation:	MANUAL_001
Start Date:	12/16/2014
Start Time:	6:52:09
Duration (dd:hh:mm:ss):	0:08:15:00
Log Interval (mm:ss):	1:00
Number of points:	495
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.008
	Minimum:	0.003
	Time of Minimum:	13:53:09
	Date of Minimum:	12/16/2014
	Maximum:	0.171
	Time of Maximum:	9:58:09
	Date of Maximum:	12/16/2014

Calibration	Sensor:	AEROSOL
	Cal. date	10/8/2014

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
12/16/2014	6:53:09	0.072
12/16/2014	6:54:09	0.014
12/16/2014	6:55:09	0.019
12/16/2014	6:56:09	0.008
12/16/2014	6:57:09	0.008
12/16/2014	6:58:09	0.008
12/16/2014	6:59:09	0.008
12/16/2014	7:00:09	0.008
12/16/2014	7:01:09	0.008
12/16/2014	7:02:09	0.008
12/16/2014	7:03:09	0.008
12/16/2014	7:04:09	0.008
12/16/2014	7:05:09	0.008
12/16/2014	7:06:09	0.008
12/16/2014	7:07:09	0.008
12/16/2014	7:08:09	0.008
12/16/2014	7:09:09	0.008

12/16/2014	7:10:09	0.008
12/16/2014	7:11:09	0.008
12/16/2014	7:12:09	0.008
12/16/2014	7:13:09	0.008
12/16/2014	7:14:09	0.008
12/16/2014	7:15:09	0.008
12/16/2014	7:16:09	0.008
12/16/2014	7:17:09	0.008
12/16/2014	7:18:09	0.008
12/16/2014	7:19:09	0.007
12/16/2014	7:20:09	0.008
12/16/2014	7:21:09	0.008
12/16/2014	7:22:09	0.008
12/16/2014	7:23:09	0.008
12/16/2014	7:24:09	0.008
12/16/2014	7:25:09	0.008
12/16/2014	7:26:09	0.009
12/16/2014	7:27:09	0.008
12/16/2014	7:28:09	0.07
12/16/2014	7:29:09	0.013
12/16/2014	7:30:09	0.008
12/16/2014	7:31:09	0.008
12/16/2014	7:32:09	0.007
12/16/2014	7:33:09	0.007
12/16/2014	7:34:09	0.008
12/16/2014	7:35:09	0.008
12/16/2014	7:36:09	0.007
12/16/2014	7:37:09	0.007
12/16/2014	7:38:09	0.007
12/16/2014	7:39:09	0.007
12/16/2014	7:40:09	0.009
12/16/2014	7:41:09	0.007
12/16/2014	7:42:09	0.007
12/16/2014	7:43:09	0.014
12/16/2014	7:44:09	0.051
12/16/2014	7:45:09	0.007
12/16/2014	7:46:09	0.007
12/16/2014	7:47:09	0.021
12/16/2014	7:48:09	0.024
12/16/2014	7:49:09	0.007
12/16/2014	7:50:09	0.007
12/16/2014	7:51:09	0.007
12/16/2014	7:52:09	0.007
12/16/2014	7:53:09	0.006
12/16/2014	7:54:09	0.007
12/16/2014	7:55:09	0.007
12/16/2014	7:56:09	0.007

12/16/2014	7:57:09	0.007
12/16/2014	7:58:09	0.007
12/16/2014	7:59:09	0.006
12/16/2014	8:00:09	0.006
12/16/2014	8:01:09	0.006
12/16/2014	8:02:09	0.007
12/16/2014	8:03:09	0.007
12/16/2014	8:04:09	0.006
12/16/2014	8:05:09	0.007
12/16/2014	8:06:09	0.007
12/16/2014	8:07:09	0.006
12/16/2014	8:08:09	0.006
12/16/2014	8:09:09	0.007
12/16/2014	8:10:09	0.006
12/16/2014	8:11:09	0.006
12/16/2014	8:12:09	0.006
12/16/2014	8:13:09	0.006
12/16/2014	8:14:09	0.006
12/16/2014	8:15:09	0.006
12/16/2014	8:16:09	0.006
12/16/2014	8:17:09	0.006
12/16/2014	8:18:09	0.006
12/16/2014	8:19:09	0.005
12/16/2014	8:20:09	0.005
12/16/2014	8:21:09	0.006
12/16/2014	8:22:09	0.006
12/16/2014	8:23:09	0.006
12/16/2014	8:24:09	0.007
12/16/2014	8:25:09	0.007
12/16/2014	8:26:09	0.009
12/16/2014	8:27:09	0.013
12/16/2014	8:28:09	0.014
12/16/2014	8:29:09	0.012
12/16/2014	8:30:09	0.012
12/16/2014	8:31:09	0.026
12/16/2014	8:32:09	0.022
12/16/2014	8:33:09	0.027
12/16/2014	8:34:09	0.033
12/16/2014	8:35:09	0.015
12/16/2014	8:36:09	0.013
12/16/2014	8:37:09	0.013
12/16/2014	8:38:09	0.013
12/16/2014	8:39:09	0.015
12/16/2014	8:40:09	0.014
12/16/2014	8:41:09	0.013
12/16/2014	8:42:09	0.016
12/16/2014	8:43:09	0.014

12/16/2014	8:44:09	0.012
12/16/2014	8:45:09	0.011
12/16/2014	8:46:09	0.011
12/16/2014	8:47:09	0.01
12/16/2014	8:48:09	0.01
12/16/2014	8:49:09	0.01
12/16/2014	8:50:09	0.01
12/16/2014	8:51:09	0.009
12/16/2014	8:52:09	0.009
12/16/2014	8:53:09	0.009
12/16/2014	8:54:09	0.008
12/16/2014	8:55:09	0.009
12/16/2014	8:56:09	0.008
12/16/2014	8:57:09	0.007
12/16/2014	8:58:09	0.007
12/16/2014	8:59:09	0.007
12/16/2014	9:00:09	0.007
12/16/2014	9:01:09	0.007
12/16/2014	9:02:09	0.008
12/16/2014	9:03:09	0.008
12/16/2014	9:04:09	0.008
12/16/2014	9:05:09	0.008
12/16/2014	9:06:09	0.008
12/16/2014	9:07:09	0.008
12/16/2014	9:08:09	0.007
12/16/2014	9:09:09	0.007
12/16/2014	9:10:09	0.007
12/16/2014	9:11:09	0.007
12/16/2014	9:12:09	0.008
12/16/2014	9:13:09	0.007
12/16/2014	9:14:09	0.01
12/16/2014	9:15:09	0.01
12/16/2014	9:16:09	0.011
12/16/2014	9:17:09	0.011
12/16/2014	9:18:09	0.011
12/16/2014	9:19:09	0.011
12/16/2014	9:20:09	0.01
12/16/2014	9:21:09	0.01
12/16/2014	9:22:09	0.009
12/16/2014	9:23:09	0.01
12/16/2014	9:24:09	0.011
12/16/2014	9:25:09	0.011
12/16/2014	9:26:09	0.01
12/16/2014	9:27:09	0.011
12/16/2014	9:28:09	0.01
12/16/2014	9:29:09	0.011
12/16/2014	9:30:09	0.01

12/16/2014	9:31:09	0.009
12/16/2014	9:32:09	0.009
12/16/2014	9:33:09	0.01
12/16/2014	9:34:09	0.01
12/16/2014	9:35:09	0.011
12/16/2014	9:36:09	0.011
12/16/2014	9:37:09	0.011
12/16/2014	9:38:09	0.014
12/16/2014	9:39:09	0.014
12/16/2014	9:40:09	0.015
12/16/2014	9:41:09	0.017
12/16/2014	9:42:09	0.016
12/16/2014	9:43:09	0.014
12/16/2014	9:44:09	0.011
12/16/2014	9:45:09	0.013
12/16/2014	9:46:09	0.012
12/16/2014	9:47:09	0.012
12/16/2014	9:48:09	0.013
12/16/2014	9:49:09	0.013
12/16/2014	9:50:09	0.013
12/16/2014	9:51:09	0.01
12/16/2014	9:52:09	0.008
12/16/2014	9:53:09	0.008
12/16/2014	9:54:09	0.008
12/16/2014	9:55:09	0.007
12/16/2014	9:56:09	0.008
12/16/2014	9:57:09	0.007
12/16/2014	9:58:09	0.171
12/16/2014	9:59:09	0.027
12/16/2014	10:00:09	0.015
12/16/2014	10:01:09	0.008
12/16/2014	10:02:09	0.008
12/16/2014	10:03:09	0.006
12/16/2014	10:04:09	0.007
12/16/2014	10:05:09	0.007
12/16/2014	10:06:09	0.007
12/16/2014	10:07:09	0.008
12/16/2014	10:08:09	0.008
12/16/2014	10:09:09	0.008
12/16/2014	10:10:09	0.009
12/16/2014	10:11:09	0.012
12/16/2014	10:12:09	0.044
12/16/2014	10:13:09	0.021
12/16/2014	10:14:09	0.017
12/16/2014	10:15:09	0.009
12/16/2014	10:16:09	0.014
12/16/2014	10:17:09	0.014

12/16/2014	10:18:09	0.007
12/16/2014	10:19:09	0.007
12/16/2014	10:20:09	0.007
12/16/2014	10:21:09	0.017
12/16/2014	10:22:09	0.012
12/16/2014	10:23:09	0.021
12/16/2014	10:24:09	0.017
12/16/2014	10:25:09	0.006
12/16/2014	10:26:09	0.007
12/16/2014	10:27:09	0.006
12/16/2014	10:28:09	0.006
12/16/2014	10:29:09	0.007
12/16/2014	10:30:09	0.006
12/16/2014	10:31:09	0.006
12/16/2014	10:32:09	0.008
12/16/2014	10:33:09	0.008
12/16/2014	10:34:09	0.007
12/16/2014	10:35:09	0.006
12/16/2014	10:36:09	0.007
12/16/2014	10:37:09	0.006
12/16/2014	10:38:09	0.006
12/16/2014	10:39:09	0.006
12/16/2014	10:40:09	0.005
12/16/2014	10:41:09	0.007
12/16/2014	10:42:09	0.007
12/16/2014	10:43:09	0.006
12/16/2014	10:44:09	0.006
12/16/2014	10:45:09	0.006
12/16/2014	10:46:09	0.006
12/16/2014	10:47:09	0.007
12/16/2014	10:48:09	0.006
12/16/2014	10:49:09	0.006
12/16/2014	10:50:09	0.006
12/16/2014	10:51:09	0.006
12/16/2014	10:52:09	0.005
12/16/2014	10:53:09	0.005
12/16/2014	10:54:09	0.006
12/16/2014	10:55:09	0.006
12/16/2014	10:56:09	0.006
12/16/2014	10:57:09	0.006
12/16/2014	10:58:09	0.005
12/16/2014	10:59:09	0.006
12/16/2014	11:00:09	0.005
12/16/2014	11:01:09	0.005
12/16/2014	11:02:09	0.005
12/16/2014	11:03:09	0.005
12/16/2014	11:04:09	0.005

12/16/2014	11:05:09	0.005
12/16/2014	11:06:09	0.004
12/16/2014	11:07:09	0.005
12/16/2014	11:08:09	0.005
12/16/2014	11:09:09	0.005
12/16/2014	11:10:09	0.005
12/16/2014	11:11:09	0.005
12/16/2014	11:12:09	0.005
12/16/2014	11:13:09	0.005
12/16/2014	11:14:09	0.005
12/16/2014	11:15:09	0.005
12/16/2014	11:16:09	0.005
12/16/2014	11:17:09	0.005
12/16/2014	11:18:09	0.005
12/16/2014	11:19:09	0.005
12/16/2014	11:20:09	0.005
12/16/2014	11:21:09	0.005
12/16/2014	11:22:09	0.005
12/16/2014	11:23:09	0.005
12/16/2014	11:24:09	0.005
12/16/2014	11:25:09	0.005
12/16/2014	11:26:09	0.005
12/16/2014	11:27:09	0.005
12/16/2014	11:28:09	0.005
12/16/2014	11:29:09	0.005
12/16/2014	11:30:09	0.005
12/16/2014	11:31:09	0.005
12/16/2014	11:32:09	0.005
12/16/2014	11:33:09	0.005
12/16/2014	11:34:09	0.005
12/16/2014	11:35:09	0.005
12/16/2014	11:36:09	0.005
12/16/2014	11:37:09	0.005
12/16/2014	11:38:09	0.005
12/16/2014	11:39:09	0.006
12/16/2014	11:40:09	0.005
12/16/2014	11:41:09	0.005
12/16/2014	11:42:09	0.005
12/16/2014	11:43:09	0.005
12/16/2014	11:44:09	0.006
12/16/2014	11:45:09	0.005
12/16/2014	11:46:09	0.006
12/16/2014	11:47:09	0.005
12/16/2014	11:48:09	0.006
12/16/2014	11:49:09	0.005
12/16/2014	11:50:09	0.005
12/16/2014	11:51:09	0.005

12/16/2014	11:52:09	0.005
12/16/2014	11:53:09	0.005
12/16/2014	11:54:09	0.006
12/16/2014	11:55:09	0.005
12/16/2014	11:56:09	0.006
12/16/2014	11:57:09	0.006
12/16/2014	11:58:09	0.005
12/16/2014	11:59:09	0.006
12/16/2014	12:00:09	0.005
12/16/2014	12:01:09	0.006
12/16/2014	12:02:09	0.006
12/16/2014	12:03:09	0.006
12/16/2014	12:04:09	0.006
12/16/2014	12:05:09	0.006
12/16/2014	12:06:09	0.006
12/16/2014	12:07:09	0.006
12/16/2014	12:08:09	0.008
12/16/2014	12:09:09	0.007
12/16/2014	12:10:09	0.006
12/16/2014	12:11:09	0.006
12/16/2014	12:12:09	0.006
12/16/2014	12:13:09	0.006
12/16/2014	12:14:09	0.006
12/16/2014	12:15:09	0.006
12/16/2014	12:16:09	0.006
12/16/2014	12:17:09	0.006
12/16/2014	12:18:09	0.007
12/16/2014	12:19:09	0.006
12/16/2014	12:20:09	0.007
12/16/2014	12:21:09	0.006
12/16/2014	12:22:09	0.006
12/16/2014	12:23:09	0.006
12/16/2014	12:24:09	0.007
12/16/2014	12:25:09	0.007
12/16/2014	12:26:09	0.007
12/16/2014	12:27:09	0.007
12/16/2014	12:28:09	0.007
12/16/2014	12:29:09	0.007
12/16/2014	12:30:09	0.007
12/16/2014	12:31:09	0.008
12/16/2014	12:32:09	0.007
12/16/2014	12:33:09	0.006
12/16/2014	12:34:09	0.007
12/16/2014	12:35:09	0.006
12/16/2014	12:36:09	0.006
12/16/2014	12:37:09	0.006
12/16/2014	12:38:09	0.006

12/16/2014	12:39:09	0.006
12/16/2014	12:40:09	0.007
12/16/2014	12:41:09	0.007
12/16/2014	12:42:09	0.007
12/16/2014	12:43:09	0.007
12/16/2014	12:44:09	0.006
12/16/2014	12:45:09	0.006
12/16/2014	12:46:09	0.006
12/16/2014	12:47:09	0.006
12/16/2014	12:48:09	0.006
12/16/2014	12:49:09	0.006
12/16/2014	12:50:09	0.006
12/16/2014	12:51:09	0.006
12/16/2014	12:52:09	0.006
12/16/2014	12:53:09	0.006
12/16/2014	12:54:09	0.006
12/16/2014	12:55:09	0.006
12/16/2014	12:56:09	0.006
12/16/2014	12:57:09	0.006
12/16/2014	12:58:09	0.006
12/16/2014	12:59:09	0.006
12/16/2014	13:00:09	0.006
12/16/2014	13:01:09	0.006
12/16/2014	13:02:09	0.006
12/16/2014	13:03:09	0.006
12/16/2014	13:04:09	0.006
12/16/2014	13:05:09	0.006
12/16/2014	13:06:09	0.006
12/16/2014	13:07:09	0.005
12/16/2014	13:08:09	0.006
12/16/2014	13:09:09	0.005
12/16/2014	13:10:09	0.005
12/16/2014	13:11:09	0.006
12/16/2014	13:12:09	0.006
12/16/2014	13:13:09	0.005
12/16/2014	13:14:09	0.005
12/16/2014	13:15:09	0.006
12/16/2014	13:16:09	0.005
12/16/2014	13:17:09	0.005
12/16/2014	13:18:09	0.005
12/16/2014	13:19:09	0.005
12/16/2014	13:20:09	0.005
12/16/2014	13:21:09	0.005
12/16/2014	13:22:09	0.007
12/16/2014	13:23:09	0.007
12/16/2014	13:24:09	0.008
12/16/2014	13:25:09	0.006

12/16/2014	13:26:09	0.006
12/16/2014	13:27:09	0.007
12/16/2014	13:28:09	0.007
12/16/2014	13:29:09	0.006
12/16/2014	13:30:09	0.007
12/16/2014	13:31:09	0.006
12/16/2014	13:32:09	0.006
12/16/2014	13:33:09	0.006
12/16/2014	13:34:09	0.005
12/16/2014	13:35:09	0.005
12/16/2014	13:36:09	0.006
12/16/2014	13:37:09	0.005
12/16/2014	13:38:09	0.005
12/16/2014	13:39:09	0.004
12/16/2014	13:40:09	0.004
12/16/2014	13:41:09	0.004
12/16/2014	13:42:09	0.005
12/16/2014	13:43:09	0.005
12/16/2014	13:44:09	0.005
12/16/2014	13:45:09	0.005
12/16/2014	13:46:09	0.005
12/16/2014	13:47:09	0.005
12/16/2014	13:48:09	0.004
12/16/2014	13:49:09	0.006
12/16/2014	13:50:09	0.004
12/16/2014	13:51:09	0.004
12/16/2014	13:52:09	0.004
12/16/2014	13:53:09	0.003
12/16/2014	13:54:09	0.003
12/16/2014	13:55:09	0.003
12/16/2014	13:56:09	0.004
12/16/2014	13:57:09	0.003
12/16/2014	13:58:09	0.003
12/16/2014	13:59:09	0.003
12/16/2014	14:00:09	0.004
12/16/2014	14:01:09	0.003
12/16/2014	14:02:09	0.003
12/16/2014	14:03:09	0.003
12/16/2014	14:04:09	0.004
12/16/2014	14:05:09	0.003
12/16/2014	14:06:09	0.003
12/16/2014	14:07:09	0.003
12/16/2014	14:08:09	0.004
12/16/2014	14:09:09	0.003
12/16/2014	14:10:09	0.003
12/16/2014	14:11:09	0.003
12/16/2014	14:12:09	0.003

12/16/2014	14:13:09	0.003
12/16/2014	14:14:09	0.004
12/16/2014	14:15:09	0.003
12/16/2014	14:16:09	0.003
12/16/2014	14:17:09	0.003
12/16/2014	14:18:09	0.003
12/16/2014	14:19:09	0.004
12/16/2014	14:20:09	0.004
12/16/2014	14:21:09	0.003
12/16/2014	14:22:09	0.003
12/16/2014	14:23:09	0.003
12/16/2014	14:24:09	0.003
12/16/2014	14:25:09	0.004
12/16/2014	14:26:09	0.004
12/16/2014	14:27:09	0.004
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12/16/2014	14:30:09	0.004
12/16/2014	14:31:09	0.004
12/16/2014	14:32:09	0.003
12/16/2014	14:33:09	0.003
12/16/2014	14:34:09	0.003
12/16/2014	14:35:09	0.004
12/16/2014	14:36:09	0.003
12/16/2014	14:37:09	0.004
12/16/2014	14:38:09	0.004
12/16/2014	14:39:09	0.004
12/16/2014	14:40:09	0.004
12/16/2014	14:41:09	0.004
12/16/2014	14:42:09	0.003
12/16/2014	14:43:09	0.003
12/16/2014	14:44:09	0.003
12/16/2014	14:45:09	0.003
12/16/2014	14:46:09	0.003
12/16/2014	14:47:09	0.003
12/16/2014	14:48:09	0.004
12/16/2014	14:49:09	0.003
12/16/2014	14:50:09	0.003
12/16/2014	14:51:09	0.004
12/16/2014	14:52:09	0.003
12/16/2014	14:53:09	0.003
12/16/2014	14:54:09	0.003
12/16/2014	14:55:09	0.003
12/16/2014	14:56:09	0.003
12/16/2014	14:57:09	0.003
12/16/2014	14:58:09	0.003
12/16/2014	14:59:09	0.003

12/16/2014	15:00:09	0.004
12/16/2014	15:01:09	0.003
12/16/2014	15:02:09	0.003
12/16/2014	15:03:09	0.003
12/16/2014	15:04:09	0.004
12/16/2014	15:05:09	0.003
12/16/2014	15:06:09	0.004
12/16/2014	15:07:09	0.004

SITE 4
TrakPro Version 4.61 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133703
Test ID:	1
Test Abbreviatio	MANUAL_001
Start Date:	12/16/2014
Start Time:	6:53:44
Duration (dd:hh:	0:08:14:00
Log Interval (mm	1:00
Number of point	494
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.004
	Minimum:	0.001
	Time of Minimum:	13:48:44
	Date of Minimum:	12/16/2014
	Maximum:	0.066
	Time of Maximum:	7:51:44
	Date of Maximum:	12/16/2014

Calibration	Sensor:	AEROSOL
	Cal. date	10/8/2014

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
12/16/2014	6:54:44	0.029
12/16/2014	6:55:44	0.006
12/16/2014	6:56:44	0.006
12/16/2014	6:57:44	0.006
12/16/2014	6:58:44	0.006
12/16/2014	6:59:44	0.006
12/16/2014	7:00:44	0.005
12/16/2014	7:01:44	0.006
12/16/2014	7:02:44	0.005
12/16/2014	7:03:44	0.006
12/16/2014	7:04:44	0.005
12/16/2014	7:05:44	0.005
12/16/2014	7:06:44	0.006
12/16/2014	7:07:44	0.006
12/16/2014	7:08:44	0.006
12/16/2014	7:09:44	0.005
12/16/2014	7:10:44	0.005

12/16/2014	7:11:44	0.005
12/16/2014	7:12:44	0.005
12/16/2014	7:13:44	0.005
12/16/2014	7:14:44	0.005
12/16/2014	7:15:44	0.005
12/16/2014	7:16:44	0.006
12/16/2014	7:17:44	0.005
12/16/2014	7:18:44	0.005
12/16/2014	7:19:44	0.005
12/16/2014	7:20:44	0.005
12/16/2014	7:21:44	0.005
12/16/2014	7:22:44	0.005
12/16/2014	7:23:44	0.005
12/16/2014	7:24:44	0.005
12/16/2014	7:25:44	0.005
12/16/2014	7:26:44	0.005
12/16/2014	7:27:44	0.005
12/16/2014	7:28:44	0.005
12/16/2014	7:29:44	0.005
12/16/2014	7:30:44	0.005
12/16/2014	7:31:44	0.005
12/16/2014	7:32:44	0.005
12/16/2014	7:33:44	0.004
12/16/2014	7:34:44	0.004
12/16/2014	7:35:44	0.004
12/16/2014	7:36:44	0.004
12/16/2014	7:37:44	0.004
12/16/2014	7:38:44	0.004
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12/16/2014	7:40:44	0.004
12/16/2014	7:41:44	0.004
12/16/2014	7:42:44	0.004
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12/16/2014	7:44:44	0.004
12/16/2014	7:45:44	0.004
12/16/2014	7:46:44	0.004
12/16/2014	7:47:44	0.004
12/16/2014	7:48:44	0.004
12/16/2014	7:49:44	0.004
12/16/2014	7:50:44	0.004
12/16/2014	7:51:44	0.066
12/16/2014	7:52:44	0.005
12/16/2014	7:53:44	0.004
12/16/2014	7:54:44	0.005
12/16/2014	7:55:44	0.004
12/16/2014	7:56:44	0.004
12/16/2014	7:57:44	0.005

12/16/2014	7:58:44	0.005
12/16/2014	7:59:44	0.004
12/16/2014	8:00:44	0.005
12/16/2014	8:01:44	0.005
12/16/2014	8:02:44	0.004
12/16/2014	8:03:44	0.005
12/16/2014	8:04:44	0.005
12/16/2014	8:05:44	0.005
12/16/2014	8:06:44	0.005
12/16/2014	8:07:44	0.004
12/16/2014	8:08:44	0.004
12/16/2014	8:09:44	0.004
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12/16/2014	8:11:44	0.004
12/16/2014	8:12:44	0.004
12/16/2014	8:13:44	0.005
12/16/2014	8:14:44	0.004
12/16/2014	8:15:44	0.004
12/16/2014	8:16:44	0.004
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12/16/2014	8:27:44	0.008
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12/16/2014	8:30:44	0.005
12/16/2014	8:31:44	0.005
12/16/2014	8:32:44	0.005
12/16/2014	8:33:44	0.006
12/16/2014	8:34:44	0.007
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12/16/2014	8:36:44	0.01
12/16/2014	8:37:44	0.009
12/16/2014	8:38:44	0.009
12/16/2014	8:39:44	0.009
12/16/2014	8:40:44	0.008
12/16/2014	8:41:44	0.007
12/16/2014	8:42:44	0.007
12/16/2014	8:43:44	0.007
12/16/2014	8:44:44	0.007

12/16/2014	8:45:44	0.007
12/16/2014	8:46:44	0.006
12/16/2014	8:47:44	0.006
12/16/2014	8:48:44	0.006
12/16/2014	8:49:44	0.006
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12/16/2014	8:51:44	0.006
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12/16/2014	8:53:44	0.007
12/16/2014	8:54:44	0.006
12/16/2014	8:55:44	0.006
12/16/2014	8:56:44	0.006
12/16/2014	8:57:44	0.006
12/16/2014	8:58:44	0.007
12/16/2014	8:59:44	0.006
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12/16/2014	9:02:44	0.006
12/16/2014	9:03:44	0.006
12/16/2014	9:04:44	0.006
12/16/2014	9:05:44	0.006
12/16/2014	9:06:44	0.006
12/16/2014	9:07:44	0.006
12/16/2014	9:08:44	0.006
12/16/2014	9:09:44	0.005
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12/16/2014	9:11:44	0.005
12/16/2014	9:12:44	0.005
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12/16/2014	9:14:44	0.007
12/16/2014	9:15:44	0.007
12/16/2014	9:16:44	0.007
12/16/2014	9:17:44	0.007
12/16/2014	9:18:44	0.007
12/16/2014	9:19:44	0.006
12/16/2014	9:20:44	0.006
12/16/2014	9:21:44	0.006
12/16/2014	9:22:44	0.006
12/16/2014	9:23:44	0.005
12/16/2014	9:24:44	0.005
12/16/2014	9:25:44	0.006
12/16/2014	9:26:44	0.006
12/16/2014	9:27:44	0.006
12/16/2014	9:28:44	0.005
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12/16/2014	9:30:44	0.008
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12/16/2014	9:34:44	0.01
12/16/2014	9:35:44	0.012
12/16/2014	9:36:44	0.014
12/16/2014	9:37:44	0.013
12/16/2014	9:38:44	0.012
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12/16/2014	9:42:44	0.011
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12/16/2014	10:15:44	0.005
12/16/2014	10:16:44	0.005
12/16/2014	10:17:44	0.004
12/16/2014	10:18:44	0.004

12/16/2014	10:19:44	0.005
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12/16/2014	10:36:44	0.004
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12/16/2014	10:46:44	0.003
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12/16/2014	10:51:44	0.002
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12/16/2014	10:53:44	0.002
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12/16/2014	10:59:44	0.003
12/16/2014	11:00:44	0.003
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12/16/2014	11:46:44	0.003
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12/16/2014	11:51:44	0.003
12/16/2014	11:52:44	0.003

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12/16/2014	11:55:44	0.003
12/16/2014	11:56:44	0.003
12/16/2014	11:57:44	0.003
12/16/2014	11:58:44	0.004
12/16/2014	11:59:44	0.003
12/16/2014	12:00:44	0.003
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12/16/2014	12:14:44	0.004
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12/16/2014	12:37:44	0.004
12/16/2014	12:38:44	0.004
12/16/2014	12:39:44	0.004

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12/16/2014	12:42:44	0.003
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12/16/2014	12:52:44	0.003
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12/16/2014	13:03:44	0.003
12/16/2014	13:04:44	0.003
12/16/2014	13:05:44	0.003
12/16/2014	13:06:44	0.002
12/16/2014	13:07:44	0.003
12/16/2014	13:08:44	0.003
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12/16/2014	13:12:44	0.003
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12/16/2014	13:14:44	0.003
12/16/2014	13:15:44	0.003
12/16/2014	13:16:44	0.003
12/16/2014	13:17:44	0.003
12/16/2014	13:18:44	0.003
12/16/2014	13:19:44	0.004
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12/16/2014	13:26:44	0.003

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12/16/2014	14:41:44	0.001
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12/16/2014	15:02:44	0.001
12/16/2014	15:03:44	0.001
12/16/2014	15:04:44	0.001
12/16/2014	15:05:44	0.001
12/16/2014	15:06:44	0.001
12/16/2014	15:07:44	0.001

SITE 5

TrakPro Version 4.61 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530142616
Test ID:	1
Test Abbreviatio	MANUAL_001
Start Date:	12/16/2014
Start Time:	6:56:10
Duration (dd:hh:	0:08:12:00
Log Interval (mm	1:00
Number of point	492
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.008
	Minimum:	0
	Time of Minimum:	13:49:10
	Date of Minimum:	12/16/2014
	Maximum:	0.116
	Time of Maximum:	7:45:10
	Date of Maximum:	12/16/2014

Calibration	Sensor:	AEROSOL
	Cal. date	6/25/2014

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
12/16/2014	6:57:10	0.009
12/16/2014	6:58:10	0.009
12/16/2014	6:59:10	0.009
12/16/2014	7:00:10	0.009
12/16/2014	7:01:10	0.009
12/16/2014	7:02:10	0.008
12/16/2014	7:03:10	0.009
12/16/2014	7:04:10	0.008
12/16/2014	7:05:10	0.008
12/16/2014	7:06:10	0.008
12/16/2014	7:07:10	0.009
12/16/2014	7:08:10	0.09
12/16/2014	7:09:10	0.011
12/16/2014	7:10:10	0.008
12/16/2014	7:11:10	0.012
12/16/2014	7:12:10	0.019
12/16/2014	7:13:10	0.01

12/16/2014	7:14:10	0.012
12/16/2014	7:15:10	0.015
12/16/2014	7:16:10	0.012
12/16/2014	7:17:10	0.017
12/16/2014	7:18:10	0.009
12/16/2014	7:19:10	0.009
12/16/2014	7:20:10	0.008
12/16/2014	7:21:10	0.008
12/16/2014	7:22:10	0.009
12/16/2014	7:23:10	0.008
12/16/2014	7:24:10	0.009
12/16/2014	7:25:10	0.008
12/16/2014	7:26:10	0.008
12/16/2014	7:27:10	0.008
12/16/2014	7:28:10	0.008
12/16/2014	7:29:10	0.008
12/16/2014	7:30:10	0.008
12/16/2014	7:31:10	0.008
12/16/2014	7:32:10	0.008
12/16/2014	7:33:10	0.008
12/16/2014	7:34:10	0.008
12/16/2014	7:35:10	0.008
12/16/2014	7:36:10	0.008
12/16/2014	7:37:10	0.008
12/16/2014	7:38:10	0.008
12/16/2014	7:39:10	0.008
12/16/2014	7:40:10	0.007
12/16/2014	7:41:10	0.007
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12/16/2014	7:43:10	0.007
12/16/2014	7:44:10	0.008
12/16/2014	7:45:10	0.116
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12/16/2014	7:59:10	0.007
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12/16/2014	8:02:10	0.007
12/16/2014	8:03:10	0.007
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12/16/2014	8:05:10	0.007
12/16/2014	8:06:10	0.007
12/16/2014	8:07:10	0.007
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12/16/2014	8:14:10	0.007
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12/16/2014	8:16:10	0.012
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12/16/2014	8:47:10	0.016

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12/16/2014	8:57:10	0.009
12/16/2014	8:58:10	0.01
12/16/2014	8:59:10	0.009
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12/16/2014	9:03:10	0.009
12/16/2014	9:04:10	0.008
12/16/2014	9:05:10	0.008
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12/16/2014	9:07:10	0.009
12/16/2014	9:08:10	0.009
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12/16/2014	9:12:10	0.012
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12/16/2014	9:15:10	0.016
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12/16/2014	11:57:10	0.003
12/16/2014	11:58:10	0.004
12/16/2014	11:59:10	0.004
12/16/2014	12:00:10	0.004
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12/16/2014	12:06:10	0.005
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12/16/2014	12:14:10	0.004
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12/16/2014	12:24:10	0.005
12/16/2014	12:25:10	0.005
12/16/2014	12:26:10	0.005
12/16/2014	12:27:10	0.005
12/16/2014	12:28:10	0.005
12/16/2014	12:29:10	0.007
12/16/2014	12:30:10	0.005
12/16/2014	12:31:10	0.004
12/16/2014	12:32:10	0.004
12/16/2014	12:33:10	0.003
12/16/2014	12:34:10	0.005
12/16/2014	12:35:10	0.005
12/16/2014	12:36:10	0.004
12/16/2014	12:37:10	0.004
12/16/2014	12:38:10	0.004
12/16/2014	12:39:10	0.007
12/16/2014	12:40:10	0.004
12/16/2014	12:41:10	0.005
12/16/2014	12:42:10	0.004

12/16/2014	12:43:10	0.004
12/16/2014	12:44:10	0.004
12/16/2014	12:45:10	0.004
12/16/2014	12:46:10	0.004
12/16/2014	12:47:10	0.004
12/16/2014	12:48:10	0.004
12/16/2014	12:49:10	0.003
12/16/2014	12:50:10	0.004
12/16/2014	12:51:10	0.004
12/16/2014	12:52:10	0.003
12/16/2014	12:53:10	0.003
12/16/2014	12:54:10	0.003
12/16/2014	12:55:10	0.003
12/16/2014	12:56:10	0.003
12/16/2014	12:57:10	0.003
12/16/2014	12:58:10	0.003
12/16/2014	12:59:10	0.003
12/16/2014	13:00:10	0.003
12/16/2014	13:01:10	0.003
12/16/2014	13:02:10	0.002
12/16/2014	13:03:10	0.002
12/16/2014	13:04:10	0.002
12/16/2014	13:05:10	0.002
12/16/2014	13:06:10	0.003
12/16/2014	13:07:10	0.003
12/16/2014	13:08:10	0.003
12/16/2014	13:09:10	0.003
12/16/2014	13:10:10	0.002
12/16/2014	13:11:10	0.002
12/16/2014	13:12:10	0.022
12/16/2014	13:13:10	0.005
12/16/2014	13:14:10	0.007
12/16/2014	13:15:10	0.003
12/16/2014	13:16:10	0.004
12/16/2014	13:17:10	0.004
12/16/2014	13:18:10	0.005
12/16/2014	13:19:10	0.004
12/16/2014	13:20:10	0.003
12/16/2014	13:21:10	0.005
12/16/2014	13:22:10	0.005
12/16/2014	13:23:10	0.004
12/16/2014	13:24:10	0.003
12/16/2014	13:25:10	0.003
12/16/2014	13:26:10	0.003
12/16/2014	13:27:10	0.003
12/16/2014	13:28:10	0.003
12/16/2014	13:29:10	0.003

12/16/2014	13:30:10	0.003
12/16/2014	13:31:10	0.003
12/16/2014	13:32:10	0.003
12/16/2014	13:33:10	0.001
12/16/2014	13:34:10	0.001
12/16/2014	13:35:10	0.002
12/16/2014	13:36:10	0.002
12/16/2014	13:37:10	0.001
12/16/2014	13:38:10	0.002
12/16/2014	13:39:10	0.002
12/16/2014	13:40:10	0.002
12/16/2014	13:41:10	0.002
12/16/2014	13:42:10	0.002
12/16/2014	13:43:10	0.002
12/16/2014	13:44:10	0.002
12/16/2014	13:45:10	0.001
12/16/2014	13:46:10	0.001
12/16/2014	13:47:10	0.001
12/16/2014	13:48:10	0.001
12/16/2014	13:49:10	0
12/16/2014	13:50:10	0
12/16/2014	13:51:10	0
12/16/2014	13:52:10	0
12/16/2014	13:53:10	0
12/16/2014	13:54:10	0
12/16/2014	13:55:10	0
12/16/2014	13:56:10	0
12/16/2014	13:57:10	0
12/16/2014	13:58:10	0
12/16/2014	13:59:10	0
12/16/2014	14:00:10	0
12/16/2014	14:01:10	0.001
12/16/2014	14:02:10	0
12/16/2014	14:03:10	0
12/16/2014	14:04:10	0
12/16/2014	14:05:10	0
12/16/2014	14:06:10	0
12/16/2014	14:07:10	0
12/16/2014	14:08:10	0
12/16/2014	14:09:10	0
12/16/2014	14:10:10	0
12/16/2014	14:11:10	0
12/16/2014	14:12:10	0
12/16/2014	14:13:10	0
12/16/2014	14:14:10	0
12/16/2014	14:15:10	0
12/16/2014	14:16:10	0

12/16/2014	14:17:10	0
12/16/2014	14:18:10	0
12/16/2014	14:19:10	0
12/16/2014	14:20:10	0
12/16/2014	14:21:10	0
12/16/2014	14:22:10	0
12/16/2014	14:23:10	0
12/16/2014	14:24:10	0
12/16/2014	14:25:10	0
12/16/2014	14:26:10	0
12/16/2014	14:27:10	0
12/16/2014	14:28:10	0
12/16/2014	14:29:10	0
12/16/2014	14:30:10	0.001
12/16/2014	14:31:10	0
12/16/2014	14:32:10	0
12/16/2014	14:33:10	0.001
12/16/2014	14:34:10	0
12/16/2014	14:35:10	0.019
12/16/2014	14:36:10	0.002
12/16/2014	14:37:10	0
12/16/2014	14:38:10	0
12/16/2014	14:39:10	0.001
12/16/2014	14:40:10	0
12/16/2014	14:41:10	0
12/16/2014	14:42:10	0
12/16/2014	14:43:10	0.001
12/16/2014	14:44:10	0.001
12/16/2014	14:45:10	0.001
12/16/2014	14:46:10	0.001
12/16/2014	14:47:10	0
12/16/2014	14:48:10	0
12/16/2014	14:49:10	0
12/16/2014	14:50:10	0
12/16/2014	14:51:10	0
12/16/2014	14:52:10	0
12/16/2014	14:53:10	0.001
12/16/2014	14:54:10	0
12/16/2014	14:55:10	0
12/16/2014	14:56:10	0
12/16/2014	14:57:10	0.001
12/16/2014	14:58:10	0
12/16/2014	14:59:10	0.001
12/16/2014	15:00:10	0.001
12/16/2014	15:01:10	0
12/16/2014	15:02:10	0.001
12/16/2014	15:03:10	0.001

12/16/2014	15:04:10	0.001
12/16/2014	15:05:10	0.001
12/16/2014	15:06:10	0.001
12/16/2014	15:07:10	0.002
12/16/2014	15:08:10	0.015

ATTACHMENT 5

METEOROLOGICAL DATA AND WINDROSE – RES ENVIRONMENTAL

RIO RICO

Wind Direction in Degrees and Wind Speed in MPH for DECEMBER 15 to 16, 2014

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12
DAY	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V	DDD VV.V
01													
02													
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16	200 04.0	220 04.0	190 04.0	190 04.0	230 04.0	200 04.0	220 05.0	200 05.0	180 04.0	225 04.0	202 01.0	180 01.0	180 03.0
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
MEAN													
MX SPD	200 04.0	220 04.0	190 04.0	190 04.0	230 04.0	200 04.0	220 05.0	200 05.0	180 04.0	225 04.0	202 01.0	180 01.0	180 03.0
MN SPD	200 04.0	220 04.0	190 04.0	190 04.0	230 04.0	200 04.0	220 05.0	200 05.0	180 04.0	225 04.0	202 01.0	180 01.0	180 03.0

DAILY MEANS REQUIRE 75% VALID DATA
MISSING DATA DENOTED BY BLANKS

DDD = Direction from which the wind is blowing, in degrees
VV.V = Wind Speed in MPH

RIO RICO

Wind Direction in Degrees and Wind Speed in MPH for DECEMBER 15 to 16, 2014

HOUR DAY	13 DDD VV.V	14 DDD VV.V	15 DDD VV.V	16 DDD VV.V	17 DDD VV.V	18 DDD VV.V	19 DDD VV.V	20 DDD VV.V	21 DDD VV.V	22 DDD VV.V	23 DDD VV.V	MEAN DDD VV.V	MX SPD DDD VV.V	MN SPD DDD VV.V
01														
02														
03														
04														
05														
06														
07														
08														
09														
10														
11														
12														
13														
14														
15		270 03.0	158 05.0	225 04.0	245 02.0	338 02.0	338 01.0	180 02.0	203 03.0	190 02.0	220 04.0		158 05.0	338 01.0
16	180 04.0	170 10.0	180 10.0	225 08.0	225 08.0	180 09.0						199 05.1	170 10.0	202 01.0
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
MEAN												205 04.3		
MX SPD	180 04.0	170 10.0	180 10.0	225 08.0	225 08.0	180 09.0	338 01.0	180 02.0	203 03.0	190 02.0	220 04.0		170 10.0	
MN SPD	180 04.0	270 03.0	158 05.0	225 04.0	245 02.0	338 02.0	338 01.0	180 02.0	203 03.0	190 02.0	220 04.0			338 01.0

POSSIBLE NUMBER OF OBSERVATIONS = 378 TOTAL NUMBER OF OBSERVATIONS = 29 DATA RECOVERY RATE = 7.7 %

MONTHLY MEAN = 205 04.3 MAXIMUM WIND SPEED WAS 10 MPH AT 170 DEGREES ON 12/16 AT 1400

DAILY MEANS REQUIRE 75% VALID DATA
MISSING DATA DENOTED BY BLANKS

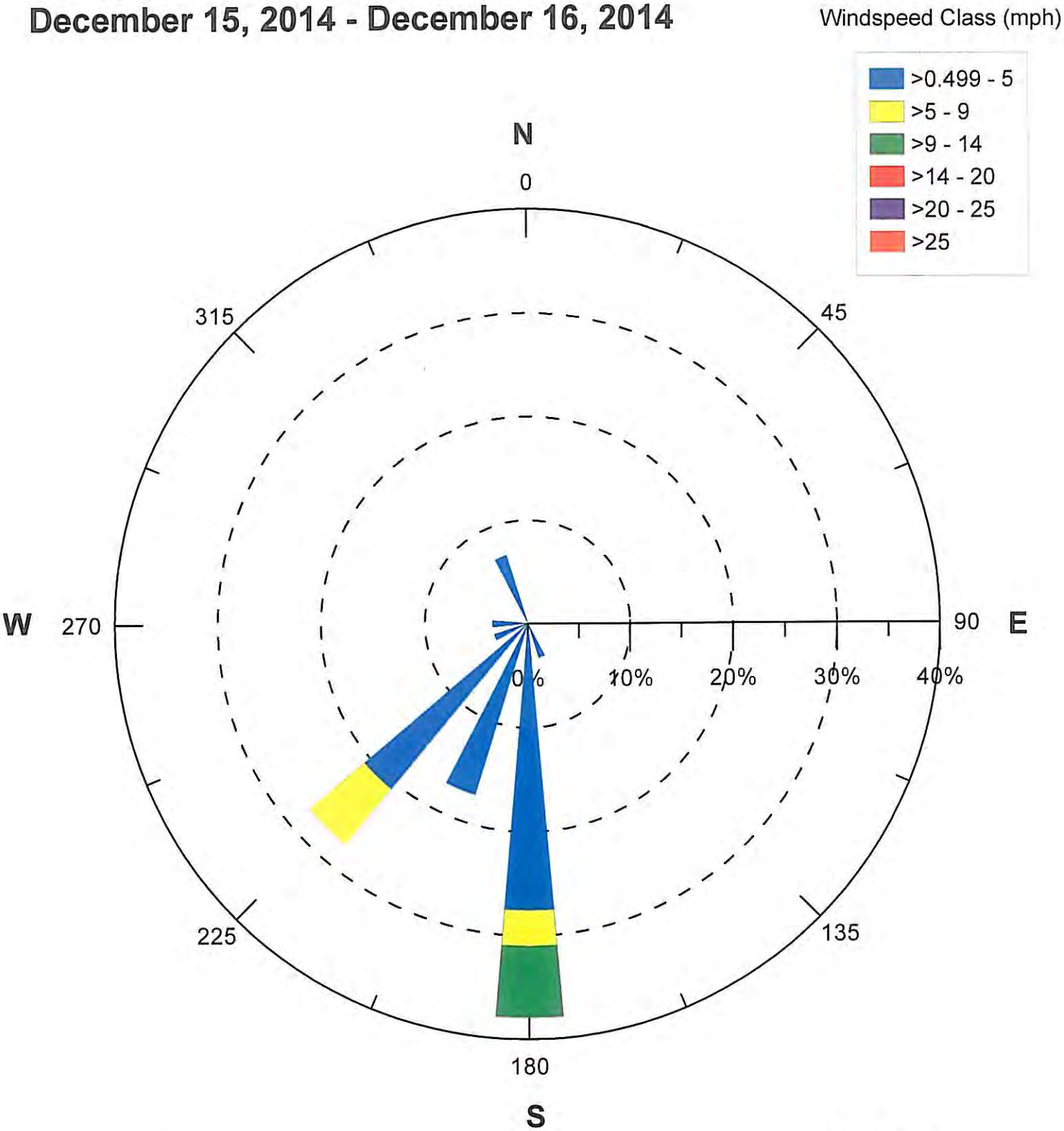
DDD = Direction from which the wind is blowing, in degrees
VV.V = Wind Speed in MPH

RIO RICO
Joint Frequency Distribution
December 15, 2014 - December 16, 2014; All times used

Wind Direction	Wind Speed (MPH) .5-5	5.1-9	9.1-14	14.1-20	20.1-25	Over 25	Total	Avg Speed
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	3.4	.0	.0	.0	.0	.0	3.4	5.0
S	27.6	3.4	6.9	.0	.0	.0	37.9	4.8
SSW	17.2	.0	.0	.0	.0	.0	17.2	3.4
SW	20.7	6.9	.0	.0	.0	.0	27.6	5.1
WSW	3.4	.0	.0	.0	.0	.0	3.4	2.0
W	3.4	.0	.0	.0	.0	.0	3.4	3.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	6.9	.0	.0	.0	.0	.0	6.9	1.5
Calm							.0	
Total	82.8	10.3	6.9	.0	.0	.0	100.0	4.3

Data Spans December 15, 2014 at 1400 to December 16, 2014 at 1800 (29 valid cases)

RIO RICO
December 15, 2014 - December 16, 2014



0% calms

All times used
All speeds used

ATTACHMENT 6

MICROBIAL REPORT – EMSL LABORATORIES

EMSL Analytical, Inc.

29 North Plains HWY Unit #4, Wallingford, CT 06492 (203) 284-5948

Client: SCS Engineers
8799 Balboa Ave. Suite 290
San Diego, CA 92123
Attn. Srividhya Viswanathan
Project: Rio Rico Landfill Sludge Impacts

EMSL Reference: **241405011**
Date Received: 12/19/2014
Date Analyzed: 01/02/2015
Date Reported: 01/05/2015

Staphylococcus aureus Identification by Viable Culture for the Analysis of Air Samples (EMSL Method: M134)

Lab ID Number	Sample	Volume (L/m)	Location	Media	*Staphylococcus aureus*	Raw Count	Conc. (CFU/L)	CRL (CFU/L)
241405011-0001	SITE 1	168	Site 1 Microb Sample	TSA	None Detected	ND	NA	NA
241405011-0002	SITE 2	168	Site 2 Microb Sample	TSA	None Detected	ND	NA	NA
241405011-0003	SITE 3	168	Site 3 Microbe Sample	TSA	None Detected	ND	NA	NA
241405011-0004	SITE 4	168	Site 4 Microbe Sample	TSA	None Detected	ND	NA	NA
241405011-0005	SITE 5	168	Site 5 Microbe Sample	TSA	None Detected	ND	NA	NA

Concentration Reporting Limit (CRL) and Concentration are calculated from client-supplied air-flow data.
EMSL Analytical is responsible for the identification and quantitation of fungi in the client supplied sample, use and interpretation of these data are the responsibilies of the client.
Birdseed Agar is a selective medium and therefore is not exhaustive for all fungi that could be present.
All data is reported to three significant figures.

TSA=Trypticase Soy Agar
ND= Not Detected
NA= Not Applicable
CFU = Colony Forming Units

Microbiology Lab Manager
Or other approved signatory

EMLAP Accreditation: ID# 165118
EMSL Analytical (Wallingford, CT) is accredited by the American Industrial Hygiene Association (AIHA) in the EMLAP accreditation program for specified Field(s) of Testing as documented on the scope of accreditation.

OrderID: 241405011

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number (*Lab Use Only*): 24140501

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE 800-220-3675
FAX 856-786-5973

Company : SCS Engineers	**EMSL-Bill to:** ☒ Same ☐ Different **If Bill to is Different please note in Comments****
Street: 8799 Balboa Avenue, Suite 290	*Third Party Billing requires written authorization from third party*
City: San Diego / **State/Province: CA**	**Zip/Postal Code: 92123** / **Country: USA**
Report To (Name): Srividhya Viswanathan, SCS Engineers	**Fax #:**
Telephone #: (858) 571-5500 Ext 292	**E-mail Address: sviswanathan@scsengineers.com**
Project Name/ Number: Rio Rico Landfill Sludge Impacts - Micorbial Testing	
Please Provide Results: ☐ Fax ☒ E-mail / **PO#**	**State Samples Taken:**

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☒ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps)

- **M001** Air-O-Cell
- **M049** BioSIS
- **M030** Micro 5
- **M173** Allegro M2
- **M003** Burkard
- **M174** MoldSnap
- **M004** Allergenco
- **M043** Cyclex
- **M176** Relle Smart
- **M032** Allergenco-D
- **M002** Cyclex-d
- **M130** Via-Cell
- **M172** Versa Trap

Other Microbiology Test Codes

- **M041** Fungal Direct Examination
- **M005** Viable Fungi ID and Count
- **M006** Viable Fungi ID and Count (Speciation)
- **M007** Culturable Fungi
- **M008** Culturable Fungi (Speciation)
- **M009** Gram Stain Culturable Bacteria
- **M010** Bacterial Count and ID – 3 Most Prominent
- **M011** Bacterial Count and ID – 5 Most Prominent
- **M013** Sewage Contamination in Buildings
- **M014** Endotoxin Analysis
- **M015** Heterotrophic Plate Count
- **M180** Real Time Q-PCR-ERMI 36 Panel
- **M018** Total Coliform (Membrane Filtration)
- **M020** Fecal *Streptococcus* (Membrane Filtration)
- **M210-215** *Legionella* Detection
- **M026** Recreational Water Screen
- **M027** Mycotoxin Analysis
- **M029** *Enterococci*
- **M019** Fecal Coliform
- **M133** MRSA Analysis
- **M028** *Cryptococcus neoformans* Detection
- **M120** *Histoplasma capsulatum* Detection
- **M033-39** Allergen Testing
- **M044** Group Allergen (Cat, Dog, Cockroach, Dustmites)
- **Other** See Analytical Price Guide

RECEIVED EMSL CINNAMINSON, NJ 2014 DEC 17 A 7:57

Preservation Method (Water): Ice Packs

Name of Sampler: Dominique Valdez / **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
~~SA1~~ SITE 1	SITE 1 MICROB SAMPLE	TSA Agar	M134		12-16-14 1045-1052 RR
~~SA2~~ SITE 2	SITE 2 MICROB SAMPLE	TSA Agar	M134		12-16-14 1100-1107
~~SA3~~ SITE 3	SITE 3 MICROBE SAMPLE	TSA Agar	M134		12-16-14 1112-1117
~~SA4~~ SITE 4	SITE 4 MICROBE SAMPLE	TSA Agar	M134		12-16-14 1125-1132
~~SA5~~ SITE 5	SITE 5 MICROBE SAMPLE	TSA Agar	M134		12-16-14 1140-1147

RECEIVED DEC 19 2014 By 11:20am

Client Sample # (s): SA 1 - SA 5		**Total # of Samples:** 5	
Relinquished (Client):		**Date:** 14-16-14	**Time:** 1426
Received (Client): AK Early UPS		**Date:** 12/17/14	**Time:** 0800

Comments: M134-Staphylococcus aureus Detection and Enumeration

Sample Site 1 Cover received broken 12/19/14

Controlled Document – Microbiology COC – R2 – 1/12/2010

5.2°C

1283601211594152969

Gonzalez, Ivanilly

From: Oriol, Gloria
Sent: Tuesday, December 23, 2014 8:57 AM
To: Marsalek, Lucas
Cc: Viswanathan, Srividhya; EMSL Lab - Wallingford
Subject: RE: EMSL microbial testing- project Rio Rico Landfill Sludge Impactors

Good morning,
Thank you for providing the information.
Have a great day,
Gloria

Gloria Oriol | *Laboratory Manager*
EMSL Analytical, Inc. | 29 North Plains Highway, Unit #4 | Wallingford, CT 06492
Phone: 203-284-5948 | Fax: 203-284-5978 | Toll Free: 800-220-3675
Lab Hours: Monday - Friday 8AM - 5:30PM, Saturday-Sunday On-Call

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From: Marsalek, Lucas [mailto:LMarsalek@scsengineers.com]
Sent: Monday, December 22, 2014 5:52 PM
To: Oriol, Gloria
Cc: Viswanathan, Srividhya
Subject: RE: EMSL microbial testing- project Rio Rico Landfill Sludge Impactors

Good Afternoon Gloria,

All five agar plates were sampled using a single phase impactor sampler. The flow rate was set a 24 liters/minute and the sample period was 7 minutes.

Please let me know if you have any further questions.

-Lucas

From: Viswanathan, Srividhya
Sent: Monday, December 22, 2014 2:29 PM
To: Marsalek, Lucas
Subject: Fwd: EMSL microbial testing- project Rio Rico Landfill Sludge Impactors

Thank you,
Vidhya

Begin forwarded message:

From: "Oriol, Gloria" <goriol@EMSL.com>
Date: December 22, 2014 at 2:09:06 PM PST
To: "sviswanathan@scsengineers.com" <sviswanathan@scsengineers.com>
Cc: EMSL Lab - Wallingford <wallingfordlab@EMSL.com>
Subject: EMSL microbial testing- project Rio Rico Landfill Sludge Impactors

Hello,
We are missing volume of the 5 TSA agar plates submitted for M134- Staphylococcus aureus identification and enumeration. Would you be able to submit the Liters/minutes of each of the samples?
Regards,
Gloria Oriol

Gloria Oriol | *Laboratory Manager*
EMSL Analytical, Inc. | 29 North Plains Highway, Unit #4 | Wallingford, CT 06492
Phone: 203-284-5948 | Fax: 203-284-5978 | Toll Free: 800-220-3675
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RES Environmental Inc.

SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

INSTALLATION

INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 24 LPM **ADJUSTED?** ( ) **NO** (✓)

TIME STARTED:

LOCAL 1045

LOCATION: SITE #1 MICROBE SAMPLE

REMOVAL

REMOVED BY: R. ROBERTS **DATE:** 12-16-14

FLOW AT END: 24 LPM

TIME ENDED:

LOCAL 1052

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

COMMENTS: _____

REVIEWED BY: M

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

INSTALLATION

INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 24 LPM **ADJUSTED?** ( ) **NO** (✓)

TIME STARTED:

LOCAL 1100

LOCATION: SITE #2 MICROBE SAMPLE

REMOVAL

REMOVED BY: R. ROBERTS **DATE:** 12-16-14

FLOW AT END: 24 LPM

TIME ENDED:

LOCAL 1107

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

COMMENTS: _____

REVIEWED BY: M

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RES Environmental Inc.

SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

INSTALLATION

INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 24 LPM **ADJUSTED?** ( ) **NO** (✓)

TIME STARTED:

LOCAL 1112

LOCATION: SITE #3 MICROBE SAMPLE

REMOVAL

REMOVED BY: R. ROBERTS **DATE:** 12-16-14

FLOW AT END: 24 LPM

TIME ENDED:

LOCAL 1117

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

COMMENTS: _____

REVIEWED BY: M

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

INSTALLATION

INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 24 LPM **ADJUSTED?** ( ) **NO** (✓)

TIME STARTED:

LOCAL 1125

LOCATION: SITE #4 MICROBE SAMPLE

REMOVAL

REMOVED BY: R. ROBERTS **DATE:** 12-16-14

FLOW AT END: 24 LPM

TIME ENDED:

LOCAL 1132

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( )
(Specify in comments)

COMMENTS: _____

REVIEWED BY: _____

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RES Environmental Inc.

SAMPLER QUALITY CONTROL

PROJECT / SITE: SANTA CRUZ COUNTY LANDFILL

DATE PREPARED: 12-16-14 **PREPARED BY:** R. ROBERTS

SAMPLER #: _____ **RUN DATE:** 12-16-14

INSTALLATION

INSTALLED BY: R. ROBERTS **DATE:** 12-16-14

FLOW READING: 24LPM **ADJUSTED?** ( ) **NO** (✓)

TIME STARTED:

LOCAL 1140

LOCATION: SITE #5 MICROBE SAMPLE

REMOVAL

REMOVED BY: R. ROBERTS **DATE:** 12-16-14

FLOW AT END: 24LPM

TIME ENDED:

LOCAL 1147

SAMPLER STATUS: **WORKING** (✓) **NOT WORKING** ( ) **(Specify in comments)**

COMMENTS: _____

REVIEWED BY: M

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ATTACHMENT 7

GROUNDWATER SAMPLING LOGS AND SAMPLE RESULTS – ESC LAB SCIENCES

SCS ENGINEERS
WATER SAMPLING LOG

Page __ of __

Project Name Rio Rico Groundwater Project Number
Project Location Rio Rico Landfill
Sampling Location/Well Number MW-1
Sample ID RR-MW1 Coded Duplicate ID
Date Sampled 12-11-14 Time Sampled 1330
Weather Conditions Clear 510 30.0 69

Well Casing Material PVC Monitoring Well Locked: Yes ____ No X
Monitoring Well Diameter 3" in.
Total Depth of Well 130 ft.
Depth to Water 111.4 ft.
Height (h) of Water Column 18.6 ft.

$V = (3.14) \times (r^2)$ ____ x (h) ____
V = ____ ft.^{3} x 7.48 gal./ft.^{3} = 138.6 *gal.* x 5 *purge volumes* = 92 *gal.**
* or see reverse for alternative method

Purge Method / Equipment Grundfos submersible pump
Beginning Purge Time 1300 Ending Purge Time 1330
Purge Flow Rate 3 Total Volume Purged 90
Color Clear Odor None Clarity Good
pH/Conductivity/Temperature (see reverse side)
Sampling Method & Equipment Pump discharge tubing at less than 1 gpm

Laboratory TestAmerica Lab

Analysis	Containers	Preservatives
Metals	500 ml	None

Sampler(s) Signatures [signature]

MW1
P-2

Time	Temperature	Conductivity	pH	Comments
1300	22.5	0.342	5.7	
1305	22.8	.342	5.6	5.93
1310	22.9	.343	5.7	
1315	22.9	.345	5.6	
1320	22.6	.343	5.3	8.3
1325	22.6	.341	5.3	6.6
1330	22.6	.341	5.2	5.29

Remarks:

Volume (V) = $(3.14)(r^2)(h)$

Gallons per one well volume,
Sch 40 PVC:
2" well (2.067" ID) = 0.174 x h
4" well (4.026" ID) = 0.661 x h
6" well (6.065" ID) = 1.501 x h

SCS purge protocol 3 - 5 well volumes

Gallons per one well volume,
Sch 80 PVC:
2" well (1.939" ID) = 0.153 x h
4" well (3.826" ID) = 0.597 x h
6" well (5.761" ID) = 1.354 x h

SCS ENGINEERS
WATER SAMPLING LOG

Page 1 of 2

Project Name Rio Rico Ground Water Project Number
Project Location Rio Rico Landfill
Sampling Location/Well Number MW-3
Sample ID RR-MW-3 Coded Duplicate ID
Date Sampled 12-11-14 Time Sampled 1525
Weather Conditions Clear 9-10 30.0 69

Well Casing Material PVC Monitoring Well Locked: Yes ____ No X
Monitoring Well Diameter 4 in.
Total Depth of Well 185 ft.
Depth to Water 127.8 ft.
Height (h) of Water Column 47.2 ft.

$V = (3.14) \times (r^2)$ ____ x (h) ____
V = ____ $ft.^3$ x 7.48 $gal./ft.^3$ = 31.2 *gal.* x 5 *purge volumes* = 156 *gal.**
* or see reverse for alternative method

Purge Method / Equipment Grundfos Submersible Pump
Beginning Purge Time 1050 Ending Purge Time 1525
Purge Flow Rate 4 GPM Total Volume Purged 140
Color Clear Odor None Clarity Good
pH/Conductivity/Temperature (see reverse side)
Sampling Method & Equipment Pump Bailer - Tubing at 1 GPM

Laboratory Test America Lab

Analysis	Containers	Preservatives
metals	500 ml	None

Sampler(s) Signatures

MW-3
P-2

Time	Temperature	Conductivity	pH	Comments (TURBIDITY NTU)
1450	21.9	283	6.36	0.63
1455	22.9	289	6.16	0.18
1500	22.9	288	6.15	0.13
1505	22.8	286	6.16	0.11
1510	22.8	287	6.16	0.33
1515	22.9	286	6.17	0.58
1520	22.9	289	6.19	0.27
1525	22.9	287	6.20	0.39

Remarks:

Volume (V) = $(3.14)(r^2)(h)$

Gallons per one well volume,
Sch 40 PVC:
2" well (2.067" ID) = 0.174 x h
4" well (4.026" ID) = 0.661 x h
6" well (6.065" ID) = 1.501 x h

SCS purge protocol 3 - 5 well volumes

Gallons per one well volume,
Sch 80 PVC:
2" well (1.939" ID) = 0.153 x h
4" well (3.826" ID) = 0.597 x h
6" well (5.761" ID) = 1.354 x h

SCS ENGINEERS
WATER SAMPLING LOG

Page 1 of 1

Project Name RIO RICO GROUNDWATER Project Number
Project Location RIO RICO LANDFILL
Sampling Location/Well Number MW-4
Sample ID RR-MW-4 Coded Duplicate ID
Date Sampled 12-11-19 Time Sampled 1700
Weather Conditions CLEAR 310 30.0 69

Well Casing Material PVC Monitoring Well Locked: Yes ____ No X
Monitoring Well Diameter 4" in.
Total Depth of Well 405 ft.
Depth to Water 375.2 ft.
Height (h) of Water Column 29.8 ft.

$V = (3.14) \times (r^2)$ ____ x (h) ____
V = ____ ft.^{3} x 7.48 gal./ft.^{3} = 19.6 *gal.* x 5 *purge volumes* = 98 *gal.**
* or see reverse for alternative method

Purge Method / Equipment Peristaltic pump
Beginning Purge Time 1630 Ending Purge Time 1700
Purge Flow Rate 3.5 Total Volume Purged 105
Color CLEAR Odor NONE Clarity Good
pH/Conductivity/Temperature (see reverse side)
Sampling Method & Equipment

Laboratory TEST AMERICA LAB.

Analysis	Containers	Preservatives
DRO/RRO	500 ml	None

Sampler(s) Signatures

MW-4
P-2

Time	Temperature	Conductivity	pH	Comments (TURBIDITY)
1630	21.[illegible]	235	6.24	8.03
1635	21.5	238	6.41	0.21
1640	21.7	238	6.50	0.37
1645	21.8	240	6.58	0.22
1650	21.8	240	6.61	0.07
1655	21.8	240	6.64	0.22
1700	21.8	239	6.66	0.21

Remarks:

Volume (V) = $(3.14)(r^2)(h)$

Gallons per one well volume,
Sch 40 PVC:
2" well (2.067" ID) = 0.174 x h
4" well (4.026" ID) = 0.661 x h
6" well (6.065" ID) = 1.501 x h

SCS purge protocol 3 - 5 well volumes

Gallons per one well volume,
Sch 80 PVC:
2" well (1.939" ID) = 0.153 x h
4" well (3.826" ID) = 0.597 x h
6" well (5.761" ID) = 1.354 x h

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1-800-767-5859
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Est. 1970

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

Report Summary

Friday December 19, 2014

Report Number: L738956
Samples Received: 12/13/14
Client Project: 01210126.07

Description: Rio Rico GW

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Mark W. Beasley , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 19, 2014

ESC Sample # : L738956-01

Date Received : December 13, 2014
Description : Rio Rico GW

Site ID :

Sample ID : MW-1 120FT

Project # : 01210126.07

Collected By :
Collection Date : 12/10/14 13:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	0.0020	mg/l	6020	12/19/14	1
Arsenic	0.0040	0.0020	mg/l	6020	12/19/14	1
Lead	BDL	0.0020	mg/l	6020	12/19/14	1
Thallium	BDL	0.0020	mg/l	6020	12/19/14	1
Mercury	BDL	0.00020	mg/l	7470A	12/17/14	1
Beryllium	BDL	0.0020	mg/l	6010B	12/17/14	1
Cadmium	BDL	0.0050	mg/l	6010B	12/17/14	1
Chromium	BDL	0.010	mg/l	6010B	12/17/14	1
Copper	BDL	0.020	mg/l	6010B	12/17/14	1
Nickel	BDL	0.020	mg/l	6010B	12/17/14	1
Selenium	BDL	0.020	mg/l	6010B	12/17/14	1
Silver	BDL	0.010	mg/l	6010B	12/17/14	1
Zinc	BDL	0.050	mg/l	6010B	12/17/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 12/19/14 17:18 Printed: 12/19/14 17:18

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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 19, 2014

ESC Sample # : L738956-02

Date Received : December 13, 2014
Description : Rio Rico GW

Site ID :

Sample ID : MW-3 140FT

Project # : 01210126.07

Collected By :
Collection Date : 12/10/14 15:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	0.0020	mg/l	6020	12/19/14	1
Arsenic	0.0043	0.0020	mg/l	6020	12/19/14	1
Lead	BDL	0.0020	mg/l	6020	12/19/14	1
Thallium	BDL	0.0020	mg/l	6020	12/19/14	1
Mercury	BDL	0.00020	mg/l	7470A	12/17/14	1
Beryllium	BDL	0.0020	mg/l	6010B	12/17/14	1
Cadmium	BDL	0.0050	mg/l	6010B	12/17/14	1
Chromium	BDL	0.010	mg/l	6010B	12/17/14	1
Copper	BDL	0.020	mg/l	6010B	12/17/14	1
Nickel	BDL	0.020	mg/l	6010B	12/17/14	1
Selenium	BDL	0.020	mg/l	6010B	12/17/14	1
Silver	BDL	0.010	mg/l	6010B	12/17/14	1
Zinc	BDL	0.050	mg/l	6010B	12/17/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 19, 2014

ESC Sample # : L738956-03

Date Received : December 13, 2014
Description : Rio Rico GW

Site ID :

Sample ID : MW-4 372FT

Project # : 01210126.07

Collected By :
Collection Date : 12/10/14 17:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	0.0020	mg/l	6020	12/19/14	1
Arsenic	0.0039	0.0020	mg/l	6020	12/19/14	1
Lead	BDL	0.0020	mg/l	6020	12/19/14	1
Thallium	BDL	0.0020	mg/l	6020	12/19/14	1
Mercury	BDL	0.00020	mg/l	7470A	12/17/14	1
Beryllium	BDL	0.0020	mg/l	6010B	12/17/14	1
Cadmium	BDL	0.0050	mg/l	6010B	12/17/14	1
Chromium	BDL	0.010	mg/l	6010B	12/17/14	1
Copper	BDL	0.020	mg/l	6010B	12/17/14	1
Nickel	BDL	0.020	mg/l	6010B	12/17/14	1
Selenium	BDL	0.020	mg/l	6010B	12/17/14	1
Silver	BDL	0.010	mg/l	6010B	12/17/14	1
Zinc	BDL	0.050	mg/l	6010B	12/17/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Reported: 12/19/14 17:18 Printed: 12/19/14 17:18

Summary of Remarks For Samples Printed
12/19/14 at 17:18:58

TSR Signing Reports: 288

Sample: L738956-01 Account: SCSENGSDCA Received: 12/13/14 09:00 Due Date: 12/19/14 00:00 RPT Date: 12/19/14 17:18

Sample: L738956-02 Account: SCSENGSDCA Received: 12/13/14 09:00 Due Date: 12/19/14 00:00 RPT Date: 12/19/14 17:18

Sample: L738956-03 Account: SCSENGSDCA Received: 12/13/14 09:00 Due Date: 12/19/14 00:00 RPT Date: 12/19/14 17:18

Company Name/Address:
SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

Billing Information:

Report to:

Email To:

Project Description: RioRico GW

City/State Collected:

Phone: 858-571-5500 Ext. 250
Fax: 858-571-5357

Client Project # 01210126.07

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Priority Pollutant Metals / 500mL HDPE/ No Pres

Chain of Custody Page ___ of ___

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L# L738956
C079

Acctnum: SCSENGSDCA
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Priority Pollutant Metals / 500mL HDPE/ No Pres	Rem./Contaminant	Sample # (lab only)
MW-1	G		120	12-10-14	1330	2	X		-01
MW-3	G		140	"	1525	2	X		-02
MW-4	G		375	"	1700	2	X		-03

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____ 6127 6743 3620

pH _____ Temp _____

Remarks: Metals= Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn, Mo

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
DaBrown	12-12-14	0845	[illegible]
[illegible]	12-12-14	1830	FedEx
[illegible]			[illegible]

Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 6 D

Date: 12/13/14 Time: 0900

Condition: 5 (lab use only)

COC Seal Intact: ____Y ____N ____NA

pH Checked:

NCF: X

Troy Dunlap

ESC Lab Sciences
Non-Conformance Form

Login #: L738956	Client: SCSENGSDCA	Date: 12/13/14	Evaluated by: Jeremy Watkins

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Total or Dissolved?

Client informed by:		Call		Email		Voice Mail		Date: 12/15/14	Time: 10:15
TSR Initials:DR	Client Contact:								

Login Instructions:

Pour half up and run for total M6010PP
PM is Lucas Marsalek, lmarsalek@scsengineers.com

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ATTACHMENT 8

BASIN WATER AND SEDIMENT SAMPLES – ESC LAB SCIENCES

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Est. 1970

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

Report Summary

Monday December 29, 2014

Report Number: L739689
Samples Received: 12/18/14
Client Project:

Description: Rio Rico Landfill

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards
Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29, 2014

ESC Sample # : L739689-01

Date Received : December 18, 2014
Description : Rio Rico Landfill

Site ID :

Sample ID : BASIN WATER 1

Project # :

Collected By : R. Roberts
Collection Date : 12/16/14 16:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	0.018	mg/l	6020	12/23/14	9
Arsenic	0.082	0.018	mg/l	6020	12/23/14	9
Lead	0.076	0.018	mg/l	6020	12/23/14	9
Thallium	BDL	0.018	mg/l	6020	12/23/14	9
Mercury	0.0011	0.00020	mg/l	7470A	12/23/14	1
Beryllium	BDL	0.0020	mg/l	6010B	12/20/14	1
Cadmium	BDL	0.0050	mg/l	6010B	12/20/14	1
Chromium	0.028	0.010	mg/l	6010B	12/20/14	1
Copper	BDL	0.020	mg/l	6010B	12/20/14	1
Nickel	0.24	0.020	mg/l	6010B	12/20/14	1
Selenium	BDL	0.020	mg/l	6010B	12/20/14	1
Silver	BDL	0.010	mg/l	6010B	12/20/14	1
Zinc	0.21	0.050	mg/l	6010B	12/20/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 12/29/14 12:16 Printed: 12/29/14 12:17

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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29,2014

ESC Sample # : L739689-02

Date Received : December 18, 2014
Description : Rio Rico Landfill

Site ID :

Sample ID : BASIN WATER 2

Project # :

Collected By : R. Roberts
Collection Date : 12/16/14 17:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	0.0031	0.0020	mg/l	6020	12/23/14	1
Arsenic	0.043	0.0020	mg/l	6020	12/23/14	1
Lead	0.0036	0.0020	mg/l	6020	12/23/14	1
Thallium	BDL	0.0020	mg/l	6020	12/23/14	1
Mercury	BDL	0.00020	mg/l	7470A	12/23/14	1
Beryllium	BDL	0.0020	mg/l	6010B	12/20/14	1
Cadmium	BDL	0.0050	mg/l	6010B	12/20/14	1
Chromium	BDL	0.010	mg/l	6010B	12/20/14	1
Copper	BDL	0.020	mg/l	6010B	12/20/14	1
Nickel	0.14	0.020	mg/l	6010B	12/20/14	1
Selenium	BDL	0.020	mg/l	6010B	12/20/14	1
Silver	BDL	0.010	mg/l	6010B	12/20/14	1
Zinc	BDL	0.050	mg/l	6010B	12/20/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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1-800-767-5859
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29, 2014

ESC Sample # : L739689-03

Site ID :

Project :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : BASIN SEDIMENT 1

Collected By : R. Roberts
Collection Date : 12/16/14 16:55

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	12/21/14 0936	BG	1
Mercury	BDL	0.010	mg/l	0.20	7470A	12/23/14 0934	CCS	1
Arsenic	BDL	0.45	mg/l	5.0	6010B	12/22/14 1426	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	12/22/14 1426	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1426	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	12/22/14 1426	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	12/22/14 1426	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1426	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	12/22/14 1426	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29,2014

ESC Sample # : L739689-04

Date Received : December 18, 2014
Description : Rio Rico Landfill

Site ID :

Sample ID : BASIN SEDIMENT 1

Project # :

Collected By : R. Roberts
Collection Date : 12/16/14 16:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	BDL	0.020	mg/kg	7471	12/19/14	1
Antimony	BDL	2.0	mg/kg	6010B	12/20/14	1
Arsenic	BDL	2.0	mg/kg	6010B	12/20/14	1
Barium	0.96	0.50	mg/kg	6010B	12/20/14	1
Beryllium	BDL	0.20	mg/kg	6010B	12/20/14	1
Cadmium	BDL	0.50	mg/kg	6010B	12/20/14	1
Chromium	BDL	1.0	mg/kg	6010B	12/20/14	1
Copper	BDL	2.0	mg/kg	6010B	12/20/14	1
Lead	BDL	0.50	mg/kg	6010B	12/20/14	1
Molybdenum	BDL	0.50	mg/kg	6010B	12/20/14	1
Nickel	BDL	2.0	mg/kg	6010B	12/20/14	1
Selenium	BDL	2.0	mg/kg	6010B	12/20/14	1
Silver	BDL	1.0	mg/kg	6010B	12/20/14	1
Thallium	BDL	2.0	mg/kg	6010B	12/20/14	1
Zinc	BDL	5.0	mg/kg	6010B	12/20/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29, 2014

ESC Sample # : L739689-05

Site ID :

Project :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : BASIN SEDIMENT 2

Collected By : R. Roberts
Collection Date : 12/16/14 17:25

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	12/21/14 0936	BG	1
Mercury	BDL	0.010	mg/l	0.20	7470A	12/23/14 0937	CCS	1
Arsenic	BDL	0.45	mg/l	5.0	6010B	12/22/14 1430	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	12/22/14 1430	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1430	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	12/22/14 1430	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	12/22/14 1430	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	12/22/14 1430	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	12/22/14 1430	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
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REPORT OF ANALYSIS

Vidhya Viswanathan
SCS Engineers - San Diego, CA
8799 Balboa Ave, Ste 290
San Diego, CA 92133

December 29, 2014

ESC Sample # : L739689-06

Site ID :

Project # :

Date Received : December 18, 2014
Description : Rio Rico Landfill

Sample ID : BASIN SEDIMENT 2

Collected By : R. Roberts
Collection Date : 12/16/14 17:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	0.023	0.020	mg/kg	7471	12/19/14	1
Antimony	BDL	2.0	mg/kg	6010B	12/20/14	1
Arsenic	2.6	2.0	mg/kg	6010B	12/20/14	1
Barium	71.	0.50	mg/kg	6010B	12/20/14	1
Beryllium	0.33	0.20	mg/kg	6010B	12/20/14	1
Cadmium	0.53	0.50	mg/kg	6010B	12/20/14	1
Chromium	14.	1.0	mg/kg	6010B	12/20/14	1
Copper	50.	2.0	mg/kg	6010B	12/20/14	1
Lead	5.9	0.50	mg/kg	6010B	12/20/14	1
Molybdenum	0.85	0.50	mg/kg	6010B	12/20/14	1
Nickel	22.	2.0	mg/kg	6010B	12/20/14	1
Selenium	BDL	2.0	mg/kg	6010B	12/20/14	1
Silver	BDL	1.0	mg/kg	6010B	12/20/14	1
Thallium	BDL	2.0	mg/kg	6010B	12/20/14	1
Zinc	64.	5.0	mg/kg	6010B	12/20/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Summary of Remarks For Samples Printed
12/29/14 at 12:17:18

TSR Signing Reports: 288

Sample: L739689-01 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16

Sample: L739689-02 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16

Sample: L739689-03 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16

Sample: L739689-04 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16
Added BAICP and MOICP per MB - JWW 12/24
Sample: L739689-05 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16

Sample: L739689-06 Account: SCSENGSDCA Received: 12/18/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/29/14 12:16
Added BAICP and MOICP per MB - JWW 12/24

Company Name/Address:
SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

Billing Information:

Report to:

Email To:

Project Description: RIO RICO LANDFILL

City/State Collected: RIO RICO, AZ

Phone: 858-571-5500 Ext. 250
Fax: 858-571-5357

Client Project #

Lab Project #

Collected by (print): R. ROBERTS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L739689
B052
Acctnum: SCSENGSDCA
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Priority Pollutant Metals*/ 2oz jar	TCLP Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)/ 8oz jar	Total Priority Pollutant Metals* / 500mL HDPE/ No Pres	Rem./Contaminant	Sample # (lab only)
Basin Water #1				12-16-14	1650	1			X		-01
Basin Water #2				12-16-14	1720	1			X		-02
Basin Sediment #1		SS		12-16-14	1655	1	X	X			-03/-04
Basin Sediment #2		SS		12-16-14	1725	1	X	X			-05/-06

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other 6200 8044 1670

pH _____ Temp _____
Flow _____ Other _____

Remarks: Total Metals= Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn, Mo

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	12-17-14	1319 PM	
Relinquished by: (Signature)	12-17-14	1930	Received by: (Signature) FedEx
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.6 °C Bottles Received: 4
Date: 12/18/14 Time: 09:00

Condition: (lab use only) ok
COC Seal Intact: ____Y ____N ✓NA
pH Checked: NCF: