



October 3, 2013

Ms. Maria Robinson
City of Tucson
Central Safety Services
255 W. Alameda 3 West
Tucson, AZ 85701

RE: Industrial Hygiene Summary Report, Household Hazardous Waste Program, City of Tucson

Dear Ms. Robinson:

Executive Summary:

ACT Environmental, Inc. (AEI) performed baseline employee exposure monitoring during normal work operations at the City of Tucson Household Hazardous Waste program facilities. The evaluation was performed by a certified industrial hygienist. Laboratory analysis was performed by American Industrial Hygiene Association accredited laboratories. Monitoring was performed in April, May, June and July 2013.

The City of Tucson operates a Household Hazardous Waste Program. This includes the operation of the main site located at 2440 W. Sweetwater Drive, Tucson Arizona. The main site processes the hazardous waste. Los Reales Landfill operates an outreach site including a collection, storage and latex processing facility. Outreach sites are operated at the eastside service center. Antifreeze, batteries oil and paint collection sites are also operated at the Sahuarita Landfill, Tangerine Road Landfill, Catalina Transfer Station and Ryan field transfer station. The outreach sites are used for collection proposes. Waste from these sites is transported to the main processing site.

Accepted household hazardous waste includes automotive fluids, oil filters, auto batteries, Ni-Cs, Ni-Mh Li-ion and Pb batteries, cleaning products, mercury products, fluorescent bulbs, paints, solvents, hobby chemicals, pesticides, pool chemicals propane cylinders and items labeled as acid, flammable, caustic, toxic or danger. Household hazardous waste is also collected at the outreach sites. The materials are separated based on compatibility, then transported to main site. The materials are separated into similar waste streams and then processed. Some unused chemicals are removed and placed in storage for the free recycling exchange program. The latex paint is separated and batched into five gallon containers for resale. Oil and antifreeze is recycled. Acids, bases, solvents, pesticides, oxidizers and other toxic materials are processed at the main facility.

Sixteen primary hazardous waste streams were identified. Employee exposure evaluations included waste stream processed during the study period. Some waste streams were not processed during the study period. These waste streams were based upon the classification of the waste. These waste streams included acids, bases, automotive antifreeze, chlorinated flammable solvents, creosote compounds, cyanide compounds, flammable liquids, latex paint, automotive oil, pesticides, oxidizers, mercury waste, batteries, lamp disposal, PCB ballasts and propane. For each group major regulated hazardous materials were evaluated. Additionally, carbon monoxide (CO) exposure was evaluated. Each group is described below.

Acids- Acid concentrations were found to be <7% of the OSHA permissible exposure limit (PEL)

Bases- Alkaline dust concentrations were found to be non detectable and below applicable occupational exposure limits.

Executive Summary Continued:

Automotive antifreeze - This group includes ethylene glycol and propylene glycol. Employee exposures would be anticipated to be below the applicable OSHA PELs.

Chlorinated flammable solvents- All chemicals in this group were found to be <1% of the OSHA PEL.

Creosote compounds- These compounds were not used or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.

Cyanide compounds- These compounds were not used or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.

Flammable liquids- All chemicals in this group were found to be <1% of the OSHA PEL.

Latex paint- All solvents in this group were found to be <1% of the OSHA PEL. Mercury concentrations were found to be non detectable and <1% of the OSHA PEL. Employee occupational exposures to volatile organic compounds (VOCs) and mercury were found to be below all applicable exposure limits. For the main site and the Los Reales site, the work area and surrounding areas are safe for employees and the public.

Automotive oil- Oil mist concentrations were found to be <1% of the OSHA PEL.

Pesticides- All pesticides were found to be <4% of the OSHA PEL. All heavy metals were found to be <1% of the OSHA PEL.

Oxidizers- Oxidizers including bromine and chlorine concentrations were found to be <1% of the OSHA PEL.

Mercury waste- Mercury concentrations were found to be 1% of the OSHA PEL.

Batteries- Metal exposures were found to be <23% of the OSHA PEL.

Lamp disposal- Mercury concentrations were found to be <1% of the OSHA PEL.

PCB ballasts- No PCB ballasts were processed or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.

Propane- Propane contains an odorant called ethyl mercaptan. Ethyl mercaptan does not present an exposure concern. However, the safety issue is exposure to explosive concentrations of propane. Personal air monitoring found propane concentrations ranging from zero to 100% of the lower explosive limit. This presents an explosion hazard. A fire safety evaluation of the propane de-valving operation is required.

Carbon Monoxide (CO)- CO concentrations during operation of a propane powered fork lift were 10% or less of the OSHA PEL.

In general, the operation is operated in a controlled and safe manner. The current use of PPE is acceptable. The findings of this evaluation are consistent with previous industrial hygiene evaluations of the household hazardous waste program.



Monitoring:

ACT Environmental Inc., (AEI) performed industrial hygiene exposure monitoring during normal work operations at the City of Tucson Household Hazardous Waste program facilities. The main facility is located at 2440 W. Sweetwater Drive, Tucson, Arizona. A secondary outreach site process facility is located at the Los Reales land fill at 5300 E. Los Reales Rd., Tucson, Arizona. The exposure monitoring was performed in accordance with AEI's proposal dated August 28, 2012.

Sixteen primary hazardous waste streams were identified. Employee exposure evaluations included waste stream processed during the study period. Some waste streams were not processed during the study period. These waste streams were based upon the classification of the waste. These waste streams included; 1) acids 2) bases 3) automotive antifreeze 4) chlorinated flammable solvents 5) creosote compounds 6) cyanide compounds 7) flammable liquids 8) latex paint 9) automotive oil 10) pesticides 11) oxidizers 12) mercury waste 13) batteries 14) lamp disposal 15) PCB ballasts and 16) propane. For each group major regulated hazardous materials were evaluated. Additionally, carbon monoxide (CO) exposure was evaluated. Each group is described below.

1) Acids- This included photo fixers, pool acid and other acid wastes. Personal air monitoring was performed in accordance with NIOSH Method 7903 evaluating hydrofluoric acid, hydrochloric acid, hydrobromic acid, nitric acid phosphoric acid and sulfuric acid. Two samples were collected.

2) Bases- This group included photo developer and pool/spa ph. increasers. This included sodium hydroxide, potassium hydroxide, ammonia and other hydroxides. Personal air monitoring was performed in accordance with modified NIOSH Method 7401, evaluating alkaline dust, indicated as potassium hydroxide. Two samples were collected.

3) Automotive antifreeze - This group includes ethylene glycol and propylene glycol. The process duration for this operation was too short to perform an adequate evaluation.

4) Chlorinated flammable Solvents- This group included mainly automotive solvents such as carburetor cleaners, brake cleaners and degreasers. Most of this group is contained in aerosol spray cans. Hundreds of individual chemical are included in this group. Air samples were collected from the employee breathing zone while working inside the main process area and at fixed sample locations. Air samples were collected during normal routine operations. The sampling was performed accordance with EPA TO-17 methods. EPA TO-17 is capable of evaluating 7,500 organic compounds. Representative volatile organic compounds (VOCs) include: propene; ethanol; isopropyl alcohol; methylene chloride; acetone; 2- butanone (MEK); toluene; ethyl benzene; and m, p xylene. Two samples were collected.

5) Creosote compounds- This group included cresols and phenols. None of these materials were processed during the study period and were not evaluated.

6) Cyanide compounds No cyanide materials were processed during the study period and not were not evaluated.

7) Flammable liquids- This group included mainly paint thinner and VOC solvents. Hundreds of individual chemical are included in this group. This group was included with the chlorinated flammable solvent group.

8) Latex paint- This includes latex paint and sludge. Processing of this material occurs at the main process facility and the Los Reales site. The latex paint is bulked into 55 gallon drums and repackaged into five gallon cans for resale. This group contains low level VOC solvents and mercury. Mercury has been reported to be a component of old latex paint. VOC sampling was performed in accordance with EPA TO-17 methods. EPA TO-17 is capable of evaluating 7,500 organic compounds. Mercury was analyzed using NIOSH method 6009.

9)Automotive oil- This group includes oil, transmission fluid, power steering fluid. Personal air monitoring was performed in accordance with NIOSH Method 5026/5524. Two samples were collected.



10) Pesticides- This group included all pesticides. These materials were liquid and solid form and were batched into bulk containers. The aerosols spray cans were lab packed. Pesticides are grouped into two general classes. They include organo phosphorus/nitrogen pesticides and chlorinated pesticides. The chlorinated pesticides have been mostly banned since the 1980s. Organo phosphorus/nitrogen pesticides were evaluated by personal air monitoring using NIOSH method 5600. Chlorinated pesticides were evaluated by personal air monitoring using NIOSH method 5510. Common organophosphorous/nitrogen pesticides include: Aldicarb; Carbaryl; Carbofuran; Diazinon, and; Malathion.

Common chlorinated pesticides include: Aldrin; Chloridane; Dieldrin; Heptachlor, and; Toxaphene. Four total samples were collected. Additionally, pesticides may contain heavy metals. Personal air monitoring was performed in accordance with NIOSH Method 7300 including analysis for arsenic, cadmium, iron and lead.

11) Oxidizers This group includes liquid and powder form pool chemicals. These contain chlorine and bromine. Personal air monitoring was performed in accordance with NIOSH Method 6011 for chlorine and bromine. Two samples were collected.

12) Mercury waste- This group included liquid mercury and mercury debris. Common materials include thermometers and blood pressure equipment. Various quantities of liquid mercury were also processed. Personal air monitoring was performed in accordance with NIOSH Method 6009. Two samples were collected.

13) Batteries- This group included lead, alkaline, nickle and cadmium, and lithium batteries. Car/motorcycle lead batteries were placed in large containers for commercial recycling. All other batteries were hand sorted and containerized. Personal air monitoring was performed in accordance with NIOSH Method 7300 including analysis for cadmium, lead, lithium, nickel, silver and zinc.

14) Lamp disposal- Lamps include fluorescent, sodium, xenon and mercury bulbs. The lamps were handled intact in most cases. However, lamp breakage does occur during handling. The primary exposure concern is mercury vapor. Personal air monitoring was performed in accordance with NIOSH Method 6009. Two samples were collected.

15) PCB ballasts- No PCB ballasts were handled during the study period and not evaluated.

16) Propane. Propane tanks were collected, vented, crushed then sent for metal recycling. The tanks were vented in a process called de-valving. This process allows a small amount of vapor propane to escape. This process is performed in an outdoor location with natural ventilation. Propane contains an odorant called ethyl mercaptan. Ethyl mercaptan doesn't present an exposure concern for the de-valving operation. However, the safety issue is explosive concentrations of propane. Personal air monitoring for propane was performed, in accordance with approved OSHA methods.

17) Carbon Monoxide CO- CO is not a waste stream, but is a product of combustion and can be an exposure issue while operating propane, gas and diesel engines. Personal air monitoring for CO was performed in accordance with approved OSHA methods. Sampling was performed using a real time direct reading instrument capable of analyzing CO in a range from one ppm to 600 ppm. Multiple samples were collected.

All work was performed by a certified industrial hygienist. Sampling pumps were pre and post calibrated. Laboratory analysis was performed by the ALS laboratory group and EMSL Analytical. ALS and EMSL are American Industrial Hygiene Association accredited laboratories.



Work Description:

The City of Tucson operates a Household Hazardous Waste Program. This includes the operation of the main site located at 2440 W. Sweetwater Drive, Tucson Arizona. The main site processes the hazardous waste. Los Reales Landfill operates an outreach site including a collection, storage and latex processing facility. Outreach sites are operated at the eastside service center. Antifreeze, batteries oil and paint collection sites are also operated at the Sahuarita Landfill, Tangerine Road Landfill, Catalina Transfer Station and Ryan field transfer station. The outreach sites are used for collection purposes. Waste from these sites is transported to the main processing site.

Accepted household hazardous waste includes automotive fluids, oil filters, auto batteries, Ni-Cs, Ni-Mh Li-ion and Pb batteries, cleaning products, mercury products, fluorescent bulbs, paints, solvents, hobby chemicals, pesticides, pool chemicals propane cylinders and items labeled as acid, flammable, caustic, toxic or danger.

Household hazardous waste is also collected at the outreach sites. The materials are separated based on compatibility, then transported to main site. The materials are separated into similar waste streams and then processed. Some unused chemicals are removed and placed in storage for the free recycling exchange program. The latex paint is separated and batched into five gallon containers for resale. Oil and antifreeze is recycled. Acids, bases, solvents, pesticides, oxidizers and other toxic materials are processed at the main facility. This process involves batching similar materials together for hazardous waste disposal. This is performed by trained hazardous waste technicians. This work is performed under controlled conditions using local exhaust ventilation.

In cases where employees are exposed to un-contained hazardous materials, personal protective equipment is mandated. Personal protective equipment included gloves, work shoes, chemical aprons, face shields and full face respirators. In cases where employees are exposed to low hazard materials, such as latex paint, work uniforms were used. The use of respiratory protection is optional.

Results:

Please see table 1 for specific results and OSHA PELs.

- 1) Acids- This includes photo fixers, pool acid and other acid wastes. Sampling was performed on June 12, 2013, samples 1-6-12 and 2-6-12. Personal air monitoring including hydrofluoric acid, hydrochloric acid, hydrobromic acid, nitric acid phosphoric acid and sulfuric acid. The most restrictive acid in the group was found to be sulfuric acid. Based upon sulfuric acid, acid concentrations were found to be <7% of the OSHA PEL.
- 2) Bases- This group includes photo developer and pool/spa ph increasers. Sampling was performed on June 12, 2013, including samples 3-6-12 and 4-6-12, evaluated alkaline dust, (potassium hydroxide). Alkaline dust concentrations were found to be non detectable reported as <0.51 mg/M³.
- 3) Automotive antifreeze - This group includes ethylene glycol and propylene glycol. As stated above, the process duration for this operation was too short to perform an adequate evaluation.
- 4) Chlorinated flammable solvents- This group included mainly automotive solvents such as carburetor cleaners, brake cleaners and degreasers. Most of this group were contained in aerosol spray cans. Sampling was performed on April 25, 2013, samples 1-4-25 and 2-4-25. Representative solvents included: propene; ethanol; isopropyl alcohol; methylene chloride; acetone; 2- butanone (MEK); toluene; ethyl benzene; and m, p xylene. All chemicals in this group were found to be <1% of the OSHA PEL.
- 5) Creosote compounds- These compounds were not used or evaluated.
- 6) Cyanide compounds- These compounds were not used or evaluated.



7) Flammable liquids- This group included mainly paint thinner and VOC solvents. Hundreds of individual chemical were included in this group. This group was included with the chlorinated flammable solvent group. All chemicals in this group were found to be <1% of the OSHA PEL.

8) Latex paint- This includes latex paint and sludge at the Los Reales site. Monitoring was performed on June 7, 2013 inside the latex paint process area and at the north perimeter fence. These include samples 1-6-7, 2-6-7, 3-6-7, and 4-6-7. Air samples were collected from the employee breathing zone while working inside the latex processing area and at a fixed sample location at the north perimeter fence. Air samples were collected during normal routine operations. Representative solvents included: propene; ethanol; isopropyl alcohol; methylene chloride; acetone; 2-butanone (MEK); toluene; ethyl benzene; and m, p xylene. All solvents in this group were found to be <1% of the OSHA PEL. Mercury concentrations were found to be non detectable and <1% of the OSHA PEL.

9)Automotive oil- This group includes oil, transmission fluid, power steering fluid. Sampling performed on July 17, 2013, including samples 1-7-17 and 2-7-17. Oil mist concentrations were found to be <1% of the OSHA PEL.

10) Pesticides- This group included all pesticides. Sampling was performed on April 16, 2013 and May 1, 2013. These include samples 14-16, 2-4-16, 3-4-16, 1-5-1, 2-5-1, and 3-5-1. Organophosphorous/nitrogen pesticides include: Aldicarb; Carbaryl; Carbofuran; Diazinon, and; Malathion. Chlorinated pesticides include: Aldrin; Chloridane; Dieldrin; Heptachlor, and; Toxaphene. Pesticides may contain heavy metals such as arsenic, cadmium, iron, lead. All pesticides were found to be <4% of the OSHA PEL. All heavy metals were found to be <1% of the OSHA PEL.

11) Oxidizers- This group includes liquid and powder form pool chemicals. These contain chlorine and bromine. Sampling performed on April 23, 2013 included samples 1-4-23 and 2-4-23. Bromine and chlorine concentrations were found to be <1% of the OSHA PEL.

12) Mercury waste This group included liquid mercury and mercury debris. Sampling performed on June 26, 2013, included sample 1-6-26. Mercury concentrations were found to be 11% of the OSHA PEL.

13) Batteries This group included lead, alkaline, nickle and cadmium, and lithium batteries. Batteries were being hand sorted during monitoring activities. Sampling performed on June 25, 2013 included sample 1-6-25. Sampling was performed for cadmium, lead, lithium, nickel, silver and zinc. Non detectable concentrations of these heavy metals were found. It is important to note that cadmium has a very restrictively low OSHA PEL. Based on cadmium, exposures were found to be <23% of the OSHA PEL.

14) Lamp disposal- Lamps include fluorescent, sodium, xenon and mercury bulbs. The lamps were handled intact in most cases. The primary exposure concern is mercury vapor. Sampling performed on May 16, 2013 included samples 1-5-16 and 2-5-16. Mercury concentrations were found to be <1% of the OSHA PEL.

15) PCB ballasts- No PCB ballasts were processed or evaluated.

16) Propane. Propane tanks were collected, vented, crushed then sent for metal recycling. The tanks were vented in a process called de-valving. This process allows a small amount of vapor propane to escape. This process is performed in an outdoor location with natural ventilation. Propane contains an odorant called ethyl mercaptan. Ethyl mercaptan does not present an exposure concern. However, the safety issue is exposure to explosive concentrations of propane. Propane sampling performed on May 16, 2013 included sample 4-5-16. Sampling was performed using a real time direct reading instruments capable of analyzing propane in a range from one percent to 100%. The instrument was equipped with a data logger. The instrument was a Q-RAE PHM 200/2020 multi gas monitor serial # 150-512723. The unit has a certificate of calibration dated February 13, 2013. Personal air monitoring found propane concentrations ranging from zero to 100% of the lower explosive limit. This presents an explosion hazard.

17) Carbon Monoxide CO- Carbon monoxide (CO), fork lift operations for the out door use of the Kumatsu propane powered forklift. CO sampling was performed on May 13, 2013 shown by sample 3-5-16. Sampling was performed



using a real time direct reading instruments capable of analyzing CO in a range from one ppm to 600ppm. The instrument was equipped with a data logger. The instrument was a Q-RAE PHM 200/2020 multi gas monitor serial # 150-512723. The unit has a certificate of calibration dated February 13, 2013. The OSHA PEL is 50 ppm. Carbon monoxide concentrations were 10% or less of the OSHA PEL. This value is based upon a worst case scenario.

Summary/Recommendations:

- 1) Acids- Acid concentrations were found to be <7% of the OSHA PEL. No action is required.
- 2) Bases- Alkaline dust concentrations were found to be non detectable and below applicable occupational exposure limits. No action is required.
- 3) Automotive antifreeze - This group includes ethylene glycol and propylene glycol. Air monitoring was not performed. However, based upon an evaluation of the process and a review of similar chemical exposure data, employee exposures would be anticipated to be below the applicable OSHA PELs. No action is required.
- 4) Chlorinated flammable solvents- All chemicals in this group were found to be <1% of the OSHA PEL. No action is required.
- 5) Creosote compounds- These compounds were not used or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.
- 6) Cyanide compounds- These compounds were not used or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.
- 7) Flammable liquids- All chemicals in this group were found to be <1% of the OSHA PEL. No action is required.
- 8) Latex paint- All solvents in this group were found to be <1% of the OSHA PEL. Mercury concentrations were found to be non detectable and <1% of the OSHA PEL. Employee occupational exposures to VOCs and mercury were found to be below all applicable exposure limits. For the main site and the Los Reales site, the work area and surrounding areas are safe for employees and the public.

For the Los Reales site, additional ventilation is recommended for the metal building latex process enclosure. The addition of a roof mounted evaporative cooler is recommended. This would further control VOC concentrations and decrease worker heat stress. Also, other metal walk-in containers are used for chemical storage purposes. In some cases, and depending on the time of year, aerosol spray cans are in direct sun. This condition may allow the aerosol spray cans to exceed the maximum storage temperature. This is usually 120 degrees F. The installation of additional shade structure is recommended for the storage area.
- 9) Automotive oil- Oil mist concentrations were found to be <1% of the OSHA PEL. No action is required.
- 10) Pesticides- All pesticides were found to be <4% of the OSHA PEL. All heavy metals were found to be <1% of the OSHA PEL. Continue to use the current PPE including the use of respiratory protection.
- 11) Oxidizers- Bromine and chlorine concentrations were found to be <1% of the OSHA PEL. No action is required.
- 12) Mercury waste- Mercury concentrations were found to be 11% of the OSHA PEL. Continue to use current PPE including the use of respiratory protection.
- 13) Batteries- Metal exposures were found to be <23% of the OSHA PEL. No action is required.



14) Lamp disposal- Mercury concentrations were found to be <1% of the OSHA PEL. No action is required.

15) PCB ballasts- No PCB ballasts were processed or evaluated. If these materials are processed in the future, an industrial hygiene evaluation is recommended.

16) Propane. As stated above, propane contains an odorant called ethyl mercaptan. Ethyl mercaptan does not present an exposure concern. However, the safety issue is exposure to explosive concentrations of propane. Personal air monitoring found propane concentrations ranging from zero to 100% of the lower explosive limit. This presents an explosion hazard. A detailed fire safety evaluation is required.

17) Carbon Monoxide CO- Carbon monoxide concentrations during operation of a propane powered fork lift were 10% or less of the OSHA PEL. No action is required.

In general, the operation is operated in a controlled and safe manner. The current use of PPE is acceptable. The findings of this evaluation are consistent with previous industrial hygiene evaluations of the household hazardous waste program.

The table of results follow and a copy of the laboratory report for the sample analysis is attached. If you have any questions concerning this report, please feel free to contact me at (520) 791-9029 ext 101.

Sincerely,



William F. Martin, Certified Industrial Hygienist

enclosures:

Tables of results
Lab Analysis and Chain of Custody



ENVIRONMENTAL INCORPORATED

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Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
1-4-16	employee breathing zone for Tony Diaz, lead hazardous waste technician, batching pesticides at the main site process area also supervising latex processing	4/16/13 184	Arsenic <0.00014 mg/M ³ Cadmium <0.00014 mg/M ³ Iron <0.014 mg/M ³ Lead <0.00014 mg/M ³ all <1% of the PEL	0.010 mg/M ³ 0.005 mg/M ³ 10 mg/M ³ 0.050 mg/M ³
2-4-16	employee breathing zone for Eric Hart, hazardous waste technician, batching pesticides at the main site process area	4/16/13 184	Arsenic <0.00014 mg/M ³ Cadmium <0.00014 mg/M ³ Iron <0.014 mg/M ³ Lead <0.00014 mg/M ³ all <1% of the PEL	0.010 mg/M ³ 0.005 mg/M ³ 10 mg/M ³ 0.050 mg/M ³
3-4-16	area sample collected in the center of the process facility, during batching pesticides at the main site	4/16/13 184	Arsenic <0.00014 mg/M ³ Cadmium <0.00014 mg/M ³ Iron <0.014 mg/M ³ Lead <0.00014 mg/M ³ all <1% of the PEL	0.010 mg/M ³ 0.005 mg/M ³ 10 mg/M ³ 0.050 mg/M ³
1-4-18	employee breathing zone for James Crocker, contract employee, paint technician, batching latex pain inside the process facility at the main site	4/18/13 174	Mercury <0.00023 mg/M ³ <1% of PEL	1.0 mg/M ³
2-4-18	employee breathing zone for Victor Arrieta, contract employee, paint technician, batching latex pain inside the process facility at the main site	4/18/13 174	Mercury 0.00090 mg/M ³ <1% of PEL	1.0 mg/M ³

Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
1-4-23	employee breathing zone for Tony Diaz, lead hazardous waste technician, lab packing oxidizers (pool chlorine, shock, bromine) at the main site process area	4/23/13 225	Bromine <0.0044 mg/M ³ Chlorine 0.0050 mg/M ³ all <1% of the PEL	0.7 mg/M ³ 3.0 mg/M ³
2-4-23	area sample collected above the lab pack area at the process facility during lab packing oxidizers (pool chlorine, shock, bromine) at the main site process area	4/23/13 225	Bromine <0.0044 mg/M ³ Chlorine 0.022 mg/M ³ all <1% of the PEL	0.7 mg/M ³ 3.0 mg/M ³
1-4-25	employee breathing zone for Eric Hart, hazardous waste technician, puncturing aerosol spray cans at the main site process area	4/25/13 150	VOC included an evacuation of 7,500 VOC's Representative compounds include: propene 0.110 ppm ethanol 0.180 ppm isopropyl alcohol 0.022 ppm methylene chloride 0.240 ppm acetone 0.420 ppm 2- butanone (MEK) 0.026 ppm toluene 0.061 ppm ethyl benzene 0.021 ppm m, p xylene 0.039 ppm all <1% of the PEL)	no std. 1,000 ppm 400 ppm 25 ppm 1,000 ppm 200 ppm 200 ppm 100 ppm 100 ppm

Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
2-4-25	area sample collected in the center of the process area, during puncturing aerosol spray cans at the main site process area	4/25/13 150	VOC included an evacuation of 7,500 VOC's Representative compounds include: propene 0.065 ppm ethanol 0.049 ppm isopropyl alcohol 0.005 ppm methylene chloride 0.130 ppm acetone 0.190 ppm 2- butanone (MEK) 0.045 ppm toluene 0.033 ppm ethyl benzene 0.006 ppm m, p xylene 0.017 ppm all <1% of the PEL)	no std. 1,000 ppm 400 ppm 25 ppm 1,000 ppm 200 ppm 200 ppm 100 ppm 100 ppm
1-5-1	employee breathing zone for Eric Hart, hazardous waste technician, batching solid and liquid pesticide waste at the main site process area	5/1/13 271	chlorinated pesticide, mostly banned by the EPA , common pesticides include: Aldrin <0.00074 mg/M ³ Chlordane <0.015 mg/M ³ Dieldrin <0.00074 mg/M ³ Heptachlor <0.00074 mg/M ³ Toxaphene <0.00074 mg/M ³ all <4% of the PEL	0.25 mg/M ³ 0.5 mg/M ³ 0.25 mg/M ³ 0.5 mg/M ³ 0.5 mg/M ³
2-5-1	employee breathing zone for Eric Hart, hazardous waste technician, batching solid and liquid pesticide waste at the main site process area	5/1/13 271	Organophosphorous/nitrogen pesticides including Aldicarb <0.0074 mg/M ³ Carbaryl <0.0074 mg/M ³ Carbofuran <0.0074 mg/M ³ Diazinon <0.0074 mg/M ³ Malathion <0.0074 mg/M ³ all <1% of the PEL	no std. 5 mg/M ³ no std. no std. 15 mg/M ³
3-5-1	employee breathing zone for James Foley, hazardous waste technician, opening pesticide containers at the main site process area	5/1/13 271	Organophosphorous/nitrogen pesticides including Aldicarb <0.0074 mg/M ³ Carbaryl <0.0074 mg/M ³ Carbofuran <0.0074 mg/M ³ Diazinon <0.0074 mg/M ³ Malathion <0.0074 mg/M ³ all <1% of the PEL	no std. 5 mg/M ³ no std. no std. 15 mg/M ³

Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
1-5-16	employee breathing zone for Don Campbell handling florescent light tubes outside the process facility at the main site	5/16/13 265	Mercury 0.0018 mg/M ³ <1% of PEL	1.0 mg/M ³
2-5-16	an area sample collected inside at the perimeter fence near the handling area during transfer of florescent light tubes outside the process facility at the main site	5/16/13 265	Mercury 0.0018 mg/M ³ <1% of PEL	1.0 mg/M ³
3-5-16	area sample collected in the operating area of the Komatsu propane powered fork lift, operating outside	5/16/13 5	CO- 5 ppm 10% of the PEL, this assumes a worst case scenario	50 ppm
4-5-16	employee breathing zone for Eric Hart, hazardous waste technician, de-valving propane tanks at the propane station	5/16/13 5	propane, zero to 100% of the lower explosive limit a PEL comparison is not applicable	not applicable regulated as an asphyxiant
1-6-7	Los Reales site, employee breathing zone Mr. James Cocker, RISE Contractor employee, processing latex paint, including bulk packaging and crushing empty cans	6/7/13 166	VOC included an evacuation of 7,500 VOC's Representative compounds include: propene 0.022 ppm ethanol 0.049 ppm isopropyl alcohol 0.031 ppm acetone 0.210 ppm 2- butanone (MEK) 0.038 ppm toluene 0.047 ppm ethyl benzene 0.023 ppm m, p xylene 0.063 ppm all <1% of the PEL	no standard 1,000 ppm 400 ppm 1,000 ppm 200 ppm 200 ppm 100 ppm 100 ppm



Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
2-6-7	Los Reales site, employee breathing zone, Mr. James Cocker, RISE Contractor employee, processing latex paint, including bulk packaging and crushing empty cans	6/7/13 166	<0.00024 mg/M ³ mercury <1% of PEL	1.0 mg/M ³
3-6-7	Los Reales site, north perimeter fence during processing latex paint, including bulk packaging and crushing empty cans	6/7/13 166	VOC included an evacuation of 7,500 VOC's Representative compounds include: propene 0.004 ppm ethanol 0.023 ppm acetone 0.016 ppm toluene 0.0024 ppm ethyl benzene 0.0009 ppm m, p xylene 0.0029 ppm all <1% of the PEL	no standard 1,000 ppm 1,000 ppm 200 ppm 100 ppm 100 ppm
4-6-7	Los Reales site, north perimeter fence during processing latex paint, including bulk packaging and crushing empty cans	6/7/13 166	<0.00024 mg/M ³ mercury <1% of PEL	1.0 mg/M ³
1-6-12	employee breathing zone for Tony Diaz, lead hazardous waste technician, batching acids from small containers to 55 gallon drums at the main site process area	6/12 95	acids including: hydrofluoric acid <0.022 mg/M ³ hydrochloric acid <0.043 mg/M ³ hydrobromic acid <0.043 mg/M ³ nitric acid <0.19 mg/M ³ phosphoric acid <0.20 mg/M ³ sulfuric acid <0.065 mg/M ³ all <7% of the PEL	2.5 mg/M ³ 7.0 mg/M ³ 5.0 mg/M ³ 5.0 mg/M ³ 1.0 mg/M ³ 1.0 mg/M ³



Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
2-6-12	employee breathing zone for Eric Hart, hazardous waste technician, batching acids from small containers to 55 gallon drums at the main site process area	6/12 95	acids including: hydrofluoric acid <0.022 mg/M ³ hydrochloric acid <0.043 mg/M ³ hydrobromic acid <0.043 mg/M ³ nitric acid <0.19 mg/M ³ phosphoric acid <0.022 mg/M ³ sulfuric acid 0.070 mg/M ³ all <7% of the PEL	2.5 mg/M ³ 7.0 mg/M ³ 5.0 mg/M ³ 5.0 mg/M ³ 1.0 mg/M ³ 1.0 mg/M ³
3-6-12	employee breathing zone for Tony Diaz, lead hazardous waste technician, batching bases from small containers to 55 gallon drums at the main site process area	6/12/13 73	Potassium Hydroxide <0.51 mg/M ³ no PEL	none
4-6-12	employee breathing zone for Eric Hart, hazardous waste technician, batching bases from small containers to 55 gallon drums at the main site process area	6/12/13 73	Potassium Hydroxide <0.51 mg/M ³ no PEL	none
1-6-25	Los Reales, site, employee breathing zone for James Folly, packaging batteries in the office area including alkaline, lithium, Ni-cad batteries	1/6/13 229	Cadmium <0.0022 mg/M ³ Lead <0.0022 mg/M ³ Lithium <0.011 mg/M ³ Nickel <0.0022 mg/M ³ Silver <0.0022 mg/M ³ Zinc <0.0022 mg/M ³ all <23% of the PEL	0.010 mg/M ³ 0.050 mg/M ³ no std. 1 mg/M ³ 0.01 mg/M ³ no std.



Table 1 Air Sample Results Sample number/date	Employee/ Work Activities	Sample Date and Sample Period (minutes)	Results exposure for the sampling period	Permissible Exposure Limit (PEL) 8-Hr. TWA
1-6-26	employee breathing zone for Eric Hart, hazardous waste technician, lab packing mercury waste, consolidating waste liquid mercury. inside the process facility at the main site	6/26/13 229	Mercury 0.11 mg/M ³ 11% of PEL	1.0 mg/M ³
1-7-17	area sample collected at the bulk oil tank inside the facility during transfer for automotive oil base fluids process facility at the main site	7/17/13 241	Oil mist <0.006 mg/M ³ <1% of the PEL	5.0 mg/M ³
3-7-17	area sample collected at the bulk 275 gallon external tank during transfer pumping of oil waste process facility at the main site	7/17/13 241	Oil mist <0.006 mg/M ³ <1% of the PEL	5.0 mg/M ³





EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn:

Bill Martin
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

5/6/2013

Phone: (520) 791-9029
Fax: (520) 791-9062

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/22/2013. The results are tabulated on the attached data pages for the following client designated project:

1263

The reference number for these samples is EMSL Order #011301623. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



Accreditation #100194 NELAC Certification: NJ 03036,
NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> ismith@emsl.com

EMSL Order: 011301623
 CustomerID: ACT50
 CustomerPO: 1263
 ProjectID:

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

Phone: (520) 791-9029
 Fax: (520) 791-9062
 Received: 04/22/13 8:30 AM
 Collected: 4/18/2013

Project: 1263

Analytical Results

<i>Client Sample Description</i>		<i>Collected:</i>			<i>Lab ID:</i>			
1-4-16 HHW		4/16/2013			0001			
<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
7300 Modified	Arsenic	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Cadmium	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Iron	ND	0.014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Lead	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE

<i>Client Sample Description</i>		<i>Collected:</i>			<i>Lab ID:</i>			
2-4-16 HHW		4/16/2013			0002			
<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
7300 Modified	Arsenic	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Cadmium	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Iron	ND	0.014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Lead	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE

<i>Client Sample Description</i>		<i>Collected:</i>			<i>Lab ID:</i>			
3-4-16 HHW		4/16/2013			0003			
<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
7300 Modified	Arsenic	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Cadmium	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Iron	ND	0.014	mg/m ³	4/29/2013	KB	4/29/2013	BE
7300 Modified	Lead	ND	0.00014	mg/m ³	4/29/2013	KB	4/29/2013	BE

<i>Client Sample Description</i>		<i>Collected:</i>			<i>Lab ID:</i>			
1-4-18 HHW		4/18/2013			0004			
<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
6009	Mercury	ND	0.00023	mg/m ³	5/6/2013	JS	5/6/2013	JS

<i>Client Sample Description</i>		<i>Collected:</i>			<i>Lab ID:</i>			
2-4-18 HHW		4/18/2013			0005			
<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
6009	Mercury	0.00090	0.00023	mg/m ³	5/6/2013	JS	5/6/2013	JS

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



ANALYTICAL REPORT

Report Date: May 03, 2013

Bill Martin
ACT Environmental Incorporated
7592 N. LaCholla Blvd.
Tucson, AZ 85741

Phone: 520 791-9029
Fax: 520 791-9062
E-mail: bfmartin@actenv.com

Workorder: **34-1311711**
Client Project ID: City of Tucson
Purchase Order: NA
Project Manager: Rand Potter

Analytical Results

Sample ID: <u>1-4-23</u>		Media: SKC 225-9006, Cleaned silver membrane filter, black poly cassette		Received: 04/26/2013
Lab ID: 1311711001		Sampling Location: City of Tucson		
Method: NIOSH 6011		Sampling Parameter: Air Volume 112.5 L		Analyzed: 05/02/2013
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)
Bromine	<0.50	<0.0044	<0.00068	0.50
Chlorine	0.56	0.0050	0.0017	0.50

Sample ID: <u>2-4-23</u>		Media: SKC 225-9006, Cleaned silver membrane filter, black poly cassette		Received: 04/26/2013
Lab ID: 1311711002		Sampling Location: City of Tucson		
Method: NIOSH 6011		Sampling Parameter: Air Volume 112.5 L		Analyzed: 05/02/2013
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)
Bromine	<0.50	<0.0044	<0.00068	0.50
Chlorine	2.5	0.022	0.0077	0.50

Comments

Quality Control: NIOSH 6011 - (HBN: 106078)

The LCS, LCSD and all field sample results have been media blank corrected with the LMB for chlorine.

Report Authorization

Method	Analyst	Peer Review
NIOSH 6011	Neil Brasfield	Penny A. Foote

Laboratory Contact Information

ALS Environmental
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Salt Lake City, Utah 84123

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Environmental

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ANALYTICAL REPORT

Workorder: **34-1311711**
 Client Project ID: City of Tucson
 Purchase Order: NA
 Project Manager: Rand Potter

General Lab Comments

The results provided in this report relate only to the items tested.
 Samples were received in acceptable condition unless otherwise noted.
 Samples have not been blank corrected unless otherwise noted.
 This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwl/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aiclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
 LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
 ND = Not Detected, Testing result not detected above the LOD or LOQ.
 ** No result could be reported, see sample comments for details.
 < This testing result is less than the numerical value.
 () This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



ANALYTICAL REPORT

Report Date: May 03, 2013

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E-mail: bfmartin@actenv.com

Workorder: **34-1311712**
Project ID: City of Tucson
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
1-4-25	1311712001	NA	04/26/13	City of Tucson
2-4-25	1311712002	NA	04/26/13	City of Tucson

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Environmental 

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ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 1-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712001	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 19:38	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
Propene	1500	190	110	25	1	
Dichlorodifluoromethane	85	11	2.3	25	1	
Chloromethane	ND	<3.3	<1.6	25	1	
Freon 114	ND	<3.3	<0.48	25	1	
Vinyl chloride	ND	<3.3	<1.3	25	1	
1,3-Butadiene	ND	<3.3	<1.5	25	1	
Bromomethane	ND	<3.3	<0.86	25	1	
Chloroethane	ND	<3.3	<1.3	25	1	
Ethanol	2500	330	180	25	1	E
Isopropyl alcohol	400	53	22	25	1	
Freon 11	43	5.7	1.0	25	1	
Freon 113	ND	<3.3	<0.43	25	1	
Acetone	7400	990	420	25	1	E
Carbon disulfide	ND	<3.3	<1.1	25	1	
1,1-Dichloroethene	ND	<3.3	<0.84	25	1	
Methylene chloride	6200	830	240	25	1	E
trans-1,2-Dichloroethene	ND	<3.3	<0.84	25	1	
1,1-Dichloroethane	ND	<3.3	<0.82	25	1	
Methyl t-butyl ether	ND	<3.3	<0.92	25	1	
Vinyl acetate	ND	<3.3	<0.95	25	1	
2-Butanone	580	77	26	25	1	
cis-1,2-Dichloroethene	ND	<3.3	<0.84	25	1	
Ethyl acetate	ND	<3.3	<0.93	25	1	
Hexane	700	93	26	25	1	
Chloroform	ND	<3.3	<0.68	25	1	
Tetrahydrofuran	ND	<3.3	<1.1	25	1	
1,2-Dichloroethane	ND	<3.3	<0.82	25	1	
1,1,1-Trichloroethane	37	4.9	0.90	25	1	
Benzene	ND	<3.3	<1.0	25	1	
Carbon tetrachloride	ND	<3.3	<0.53	25	1	
1,2-Dichloropropane	ND	<3.3	<0.68	25	1	
Bromodichloromethane	ND	<3.3	<0.50	25	1	
Cyclohexane	ND	<3.3	<0.97	25	1	
Trichloroethene	ND	<3.3	<0.62	25	1	
Heptane	1100	150	37	25	1	

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 1-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712001	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 19:38	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
cis-1,3-Dichloropropene	ND	<3.3	<0.73	25	1	
4-Methyl-2-pentanone	400	53	13	25	1	
trans-1,3-Dichloropropene	ND	<3.3	<0.73	25	1	
1,1,2-Trichloroethane	ND	<3.3	<0.61	25	1	
Toluene	1700	230	61	25	1	
2-Hexanone	ND	<3.3	<0.81	25	1	
Dibromochloromethane	ND	<3.3	<0.39	25	1	
Tetrachloroethene	330	44	6.4	25	1	
1,2-Dibromoethane	ND	<3.3	<0.43	25	1	
Chlorobenzene	ND	<3.3	<0.72	25	1	
Ethylbenzene	690	92	21	25	1	
m,p-Xylene	1300	170	39	25	1	
Bromoform	ND	<3.3	<0.32	25	1	
Styrene	ND	<3.3	<0.78	25	1	
1,1,2,2-Tetrachloroethane	ND	<3.3	<0.49	25	1	
o-Xylene	610	81	19	25	1	
4-Ethyl toluene	71	9.5	1.9	25	1	
1,3,5-Trimethylbenzene	93	12	2.5	25	1	
1,2,4-Trimethylbenzene	260	35	7.1	25	1	
1,3-Dichlorobenzene	ND	<3.3	<0.55	25	1	
1,4-Dichlorobenzene	ND	<3.3	<0.55	25	1	
Benzyl chloride	ND	<3.3	<0.64	25	1	
1,2-Dichlorobenzene	ND	<3.3	<0.55	25	1	
1,2,4-Trichlorobenzene	ND	<3.3	<0.45	25	1	
Hexachlorobutadiene	ND	<3.3	<0.31	25	1	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 19:38	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Pentane, 3,3-dimethyl-	310	7.88	1	J
Hexane, 2-methyl-	2300	8.21	1	J
C7 Hydrocarbon	730	8.28	1	J
Hexane, 3-methyl-	2500	8.47	1	J
Pentane, 3-ethyl-	560	8.75	1	J

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 1-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712001	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 19:38	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Cyclohexane, methyl-	330	9.82	1	J
Cyclohexane, 1,3-dimethyl-	240	11.39	1	J
Octane	440	11.91	1	J
Cyclohexane, ethyl-	270	12.87	1	J
Cyclohexane, 1,1,3-trimethyl-	290	13.01	1	J
Nonane	300	14.38	1	J
Decane	380	16.57	1	J
Undecane	350	18.52	1	J
Naphthalene	55	20.04	1	J

Sample ID: 2-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712002	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 20:21	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
Propene	840	110	65	25	1	
Dichlorodifluoromethane	92	12	2.5	25	1	
Chloromethane	ND	<3.3	<1.6	25	1	
Freon 114	ND	<3.3	<0.48	25	1	
Vinyl chloride	ND	<3.3	<1.3	25	1	
1,3-Butadiene	ND	<3.3	<1.5	25	1	
Bromomethane	ND	<3.3	<0.86	25	1	
Chloroethane	ND	<3.3	<1.3	25	1	
Ethanol	700	93	49	25	1	
Isopropyl alcohol	98	13	5.3	25	1	
Freon 11	ND	<3.3	<0.59	25	1	
Freon 113	ND	<3.3	<0.43	25	1	
Acetone	3500	460	190	25	1	E
Carbon disulfide	ND	<3.3	<1.1	25	1	
1,1-Dichloroethene	ND	<3.3	<0.84	25	1	
Methylene chloride	3300	440	130	25	1	E

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 2-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712002	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 20:21	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
-----------------------------	--	---

Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
trans-1,2-Dichloroethene	ND	<3.3	<0.84	25	1	
1,1-Dichloroethane	ND	<3.3	<0.82	25	1	
Methyl t-butyl ether	ND	<3.3	<0.92	25	1	
Vinyl acetate	ND	<3.3	<0.95	25	1	
2-Butanone	100	13	4.5	25	1	
cis-1,2-Dichloroethene	ND	<3.3	<0.84	25	1	
Ethyl acetate	ND	<3.3	<0.93	25	1	
Hexane	170	23	6.6	25	1	
Chloroform	ND	<3.3	<0.68	25	1	
Tetrahydrofuran	ND	<3.3	<1.1	25	1	
1,2-Dichloroethane	ND	<3.3	<0.82	25	1	
1,1,1-Trichloroethane	33	4.4	0.81	25	1	
Benzene	ND	<3.3	<1.0	25	1	
Carbon tetrachloride	ND	<3.3	<0.53	25	1	
1,2-Dichloropropane	ND	<3.3	<0.68	25	1	
Bromodichloromethane	ND	<3.3	<0.50	25	1	
Cyclohexane	ND	<3.3	<0.97	25	1	
Trichloroethene	ND	<3.3	<0.62	25	1	
Heptane	99	13	3.2	25	1	
cis-1,3-Dichloropropene	ND	<3.3	<0.73	25	1	
4-Methyl-2-pentanone	84	11	2.7	25	1	
trans-1,3-Dichloropropene	ND	<3.3	<0.73	25	1	
1,1,2-Trichloroethane	ND	<3.3	<0.61	25	1	
Toluene	940	130	33	25	1	
2-Hexanone	ND	<3.3	<0.81	25	1	
Dibromochloromethane	ND	<3.3	<0.39	25	1	
Tetrachloroethene	130	18	2.6	25	1	
1,2-Dibromoethane	ND	<3.3	<0.43	25	1	
Chlorobenzene	ND	<3.3	<0.72	25	1	
Ethylbenzene	200	27	6.2	25	1	
m,p-Xylene	540	72	17	25	1	
Bromoform	ND	<3.3	<0.32	25	1	
Styrene	ND	<3.3	<0.78	25	1	
1,1,1,2-Tetrachloroethane	ND	<3.3	<0.49	25	1	
o-Xylene	150	21	4.8	25	1	

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 2-4-25	Sampling Site: City of Tucson	Received: 04/26/2013
Lab ID: 1311712002	Media: CarboTrap Thermal	
Matrix: Air	Sampling Parameter: Air Volume 7.5 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 20:21	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
-----------------------------	--	---

Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
4-Ethyl toluene	ND	<3.3	<0.68	25	1	
1,3,5-Trimethylbenzene	ND	<3.3	<0.68	25	1	
1,2,4-Trimethylbenzene	58	7.7	1.6	25	1	
1,3-Dichlorobenzene	ND	<3.3	<0.55	25	1	
1,4-Dichlorobenzene	ND	<3.3	<0.55	25	1	
Benzyl chloride	ND	<3.3	<0.64	25	1	
1,2-Dichlorobenzene	ND	<3.3	<0.55	25	1	
1,2,4-Trichlorobenzene	ND	<3.3	<0.45	25	1	
Hexachlorobutadiene	ND	<3.3	<0.31	25	1	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2274 (HBN: 106257) Analyzed: 05/02/2013 20:21	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
-----------------------------	--	---

Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Butane	160	3.50	1	J
Hexane, 2-methyl-	140	8.19	1	J
Hexane, 3-methyl-	180	8.44	1	J
Cyclohexane, methyl-	78	9.82	1	J
Acetic acid, butyl ester	85	11.79	1	J
Octane	110	11.91	1	J
1-Methoxy-2-propyl acetate	100	13.01	1	J
Ethanol, 2-butoxy-	87	14.14	1	J
Nonane	130	14.38	1	J
Cyclohexane, propyl-	83	15.21	1	J
Benzene, 1-chloro-2-methyl-	71	15.43	1	J
Benzene, 1-ethyl-3-methyl-	100	15.65	1	J
Decane	170	16.57	1	J
Undecane	98	18.52	1	J

Report Authorization

Method	Analyst	Peer Review
EPA TO-17 Mod.	Lisa M. Reid	Thomas J. Masoian



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alsit.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwl/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aiclasscorp.com



ANALYTICAL REPORT

Workorder: **34-1311712**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

< This testing result is less than the numerical value.

** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.

J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.

B = Qualifier indicates that the analyte was detected in the blank.

E = Qualifier indicates that the analyte result exceeds calibration range.

P = Qualifier indicates that the RPD between the two columns is greater than 40%.



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

5/16/2013

Phone: (520) 791-9029
Fax: (520) 791-9062

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 5/2/2013. The results are tabulated on the attached data pages for the following client designated project:

1336

The reference number for these samples is EMSL Order #011301872. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



Accreditation #100194 NELAC Certification: NJ 03036,
NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order: 011301872
 CustomerID: ACT50
 CustomerPO: 1336
 ProjectID:

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

Phone: (520) 791-9029
 Fax: (520) 791-9062
 Received: 05/02/13 9:30 AM
 Collected: 5/1/2013

Project: 1336

Analytical Results

Client Sample Description 1-5-1 *Collected:* 5/1/2013 *Lab ID:* 0001
 HHW

<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
5510 Modified	Alpha-BHC	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Gamma-BHC	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Heptachlor	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Aldrin	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Beta-BHC	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Delta-BHC	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Heptachlor Epoxide	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endosulfan II	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endosulfan I	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Gamma-chlordane	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Alpha-chlordane	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	4,4'-DDE	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Dieldrin	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endrin	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	4,4'-DDD	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	4,4'-DDT	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endrin Aldehyde	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endosulfan Sulfate	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Methoxychlor	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Endrin Ketone	ND	0.00074	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Chlordane	ND	0.015	mg/m ³	5/8/2013	AB	5/14/2013	TL
5510 Modified	Toxaphene	ND	0.037	mg/m ³	5/8/2013	AB	5/14/2013	TL

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



EMSL Analytical, Inc.
 200 Rte 130 North, Cinnaminson, NJ 08077

Order ID: 281300539

Attn: Bill Martin
 ACT Environmental Inc
 7592 N. La Cholla Blvd.
 Tuscon, AZ 85741

Customer ID: ACT50
 Customer PO:
 Date Received: 5/2/13

Fax: 1336
 Project: 1336
 Report Date: 5/16/13

EMSL Order: 281300539
 EMSL Project ID:
 Date Analyzed: 5/15/13

**Organophosphorus and Organonitrogen
 Pesticide Analysis by GC/MS of Solid Sorbent Tubes
 via modified NIOSH 5600/5601, Issue 1, 8/15/94**

Sample ID	Component	Sampling Volume (liters)	Sample Weight (µg)	Sample Conc. (µg/m ³)	Reporting Limit (µg/m ³)
281300521-0001	Acetochlor	135.5	<1.0	<7.4	7.4
2-5-1	Aldicarb		<1.0	<7.4	7.4
	Atrazine		<1.0	<7.4	7.4
	Bendiocarb		<1.0	<7.4	7.4
	Bolstar		<1.0	<7.4	7.4
	Carbaryl		<1.0	<7.4	7.4
	Carbofuran		<1.0	<7.4	7.4
	Chlorpyrifos		<1.0	<7.4	7.4
	Cyanazine		<1.0	<7.4	7.4
	Diazinon		<1.0	<7.4	7.4
	Dichlorvos		<1.0	<7.4	7.4
	Dimethoate		<1.0	<7.4	7.4
	Disulfoton		<1.0	<7.4	7.4
	Malathion		<1.0	<7.4	7.4
	Methiocarb		<1.0	<7.4	7.4
	Methomyl		<1.0	<7.4	7.4
	Oxamyl		<1.0	<7.4	7.4
	Parathion ethyl		<1.0	<7.4	7.4
	Parathion methyl		<1.0	<7.4	7.4
	Simazine		<1.0	<7.4	7.4
	Terbufos		<1.0	<7.4	7.4

SV
 Analyst

Scott VanEtten- Lab Manager
 Or other approved signatory



EMSL Analytical, Inc.
200 Rte 130 North, Cinnaminson, NJ 08077

Order ID:281300539

Attn: Bill Martin
ACT Environmental Inc
7592 N. La Cholla Blvd.
Tuscon, AZ 85741

Customer ID: ACT50
Customer PO:
Date Received: 5/2/13

Fax:
Project: 1336
Report Date: 5/16/13

EMSL Order: 281300539
EMSL Project ID:
Date Analyzed: 5/15/13

**Organophosphorus and Organonitrogen
Pesticide Analysis by GC/MS of Solid Sorbent Tubes
via modified NIOSH 5600/5601, Issue 1, 8/15/94**

Sample ID	Component	Sampling Volume (liters)	Sample Weight (µg)	Sample Conc. (µg /m ³)	Reporting Limit (µg /m ³)
281300539-0002	Acetochlor	135.5	<1.0	<7.4	7.4
3-5-1	Aldicarb		<1.0	<7.4	7.4
	Atrazine		<1.0	<7.4	7.4
	Bendiocarb		<1.0	<7.4	7.4
	Bolstar		<1.0	<7.4	7.4
	Carbaryl		<1.0	<7.4	7.4
	Carbofuran		<1.0	<7.4	7.4
	Chlorpyrifos		<1.0	<7.4	7.4
	Cyanazine		<1.0	<7.4	7.4
	Diazinon		<1.0	<7.4	7.4
	Dichlorvos		<1.0	<7.4	7.4
	Dimethoate		<1.0	<7.4	7.4
	Disulfoton		<1.0	<7.4	7.4
	Malathion		<1.0	<7.4	7.4
	Methiocarb		<1.0	<7.4	7.4
	Methomyl		<1.0	<7.4	7.4
	Oxamyl		<1.0	<7.4	7.4
	Parathion ethyl		<1.0	<7.4	7.4
	Parathion methyl		<1.0	<7.4	7.4
	Simazine		<1.0	<7.4	7.4
	Terbufos		<1.0	<7.4	7.4

Notes:

- 1 Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are not blank corrected unless otherwise noted.
4. Discernable blank(s) not submitted with samples.

SV
Analyst



Scott VanEtten- Lab Manager
Or other approved signatory



ANALYTICAL REPORT

Report Date: May 24, 2013

Bill Martin
ACT Environmental Incorporated
7592 N. LaCholla Blvd.
Tucson, AZ 85741

Phone: 520 791-9029
Fax: 520 791-9062
E-mail: bfmartin@actenv.com

Workorder: **34-1314041**
Client Project ID: HHW 052013
Purchase Order: HHW
Project Manager: Rand Potter

Analytical Results

Sample ID: <u>1-5-16</u>	Media: SKC 226-17-1A, Hopcalite Tube	Collected: 05/16/2013		
Lab ID: 1314041001	Sampling Location: HHW	Received: 05/20/2013		
Method: NIOSH 6009	Sampling Parameter: Air Volume 53 L	Analyzed: 05/23/2013		
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)
Mercury	0.097	0.0018	0.00022	0.010

Sample ID: <u>2-5-16</u>	Media: SKC 226-17-1A, Hopcalite Tube	Collected: 05/16/2013		
Lab ID: 1314041002	Sampling Location: HHW	Received: 05/20/2013		
Method: NIOSH 6009	Sampling Parameter: Air Volume 53 L	Analyzed: 05/23/2013		
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)
Mercury	0.094	0.0018	0.00022	0.010

Report Authorization

Method	Analyst	Peer Review
NIOSH 6009	Christopher R. Hansen	Kristie F. Bitner

Laboratory Contact Information

ALS Environmental
960 W LeVoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alsit.lab@ALSGlobal.com
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www.alsglobal.com

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ANALYTICAL REPORT

Workorder: **34-1314041**
 Client Project ID: HHW 052013
 Purchase Order: HHW
 Project Manager: Rand Potter

General Lab Comments

The results provided in this report relate only to the items tested.
 Samples were received in acceptable condition unless otherwise noted.
 Samples have not been blank corrected unless otherwise noted.
 This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwl/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
 LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
 ND = Not Detected, Testing result not detected above the LOD or LOQ.
 ** No result could be reported, see sample comments for details.
 < This testing result is less than the numerical value.
 () This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



ANALYTICAL REPORT

Report Date: June 18, 2013

Bill Martin
ACT Environmental Incorporated
7592 N. LaCholla Blvd.
Tucson, AZ 85741

Phone: 520 791-9029
Fax: 520 791-9062
E-mail: bfmartin@actenv.com

Workorder: **34-1316241**

Project ID: ACT Environmental Incorporated
Purchase Order: 26126

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
1-6-7	1316241001	NA	06/11/13	
3-6-7	1316241002	NA	06/11/13	

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 | PHONE +1 801 266 7700 | FAX +1 801 268 9992
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

www.alsglobal.com

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ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: 1-6-7	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241001	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 17:58	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
Propene	310	37	22	25	1	
Dichlorodifluoromethane	ND	<3.0	<0.61	25	1	
Chloromethane	ND	<3.0	<1.5	25	1	
Freon 114	ND	<3.0	<0.43	25	1	
Vinyl chloride	ND	<3.0	<1.2	25	1	
1,3-Butadiene	ND	<3.0	<1.4	25	1	
Bromomethane	ND	<3.0	<0.78	25	1	
Chloroethane	ND	<3.0	<1.1	25	1	
Ethanol	770	92	49	25	1	
Isopropyl alcohol	640	77	31	25	1	
Freon 11	ND	<3.0	<0.54	25	1	
Freon 113	ND	<3.0	<0.39	25	1	
Acetone	4200	500	210	25	1	E
Carbon disulfide	ND	<3.0	<0.97	25	1	
1,1-Dichloroethene	ND	<3.0	<0.76	25	1	
Methylene chloride	63	7.6	2.2	25	1	
trans-1,2-Dichloroethene	ND	<3.0	<0.76	25	1	
1,1-Dichloroethane	ND	<3.0	<0.74	25	1	
Methyl t-butyl ether	ND	<3.0	<0.84	25	1	
Vinyl acetate	ND	<3.0	<0.86	25	1	
2-Butanone	940	110	38	25	1	
cis-1,2-Dichloroethene	ND	<3.0	<0.76	25	1	
Ethyl acetate	ND	<3.0	<0.84	25	1	
Hexane	54	6.5	1.8	25	1	
Chloroform	ND	<3.0	<0.62	25	1	
Tetrahydrofuran	ND	<3.0	<1.0	25	1	
1,2-Dichloroethane	ND	<3.0	<0.74	25	1	
1,1,1-Trichloroethane	ND	<3.0	<0.55	25	1	
Benzene	34	4.1	1.3	25	1	
Carbon tetrachloride	ND	<3.0	<0.48	25	1	
1,2-Dichloropropane	ND	<3.0	<0.62	25	1	
Bromodichloromethane	ND	<3.0	<0.45	25	1	
Cyclohexane	ND	<3.0	<0.88	25	1	
Trichloroethene	ND	<3.0	<0.56	25	1	
Heptane	31	3.7	0.90	25	1	

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: <u>1-6-7</u>	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241001	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 17:58	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
cis-1,3-Dichloropropene	ND	<3.0	<0.66	25	1	
4-Methyl-2-pentanone	96	12	2.8	25	1	
trans-1,3-Dichloropropene	ND	<3.0	<0.66	25	1	
1,1,2-Trichloroethane	ND	<3.0	<0.55	25	1	
Toluene	1500	180	47	25	1	
2-Hexanone	ND	<3.0	<0.74	25	1	
Dibromochloromethane	ND	<3.0	<0.35	25	1	
Tetrachloroethene	ND	<3.0	<0.44	25	1	
1,2-Dibromoethane	ND	<3.0	<0.39	25	1	
Chlorobenzene	ND	<3.0	<0.65	25	1	
Ethylbenzene	810	98	23	25	1	
m,p-Xylene	2300	270	63	25	1	
Bromoform	ND	<3.0	<0.29	25	1	
Styrene	ND	<3.0	<0.71	25	1	
1,1,2,2-Tetrachloroethane	ND	<3.0	<0.44	25	1	
o-Xylene	870	100	24	25	1	
4-Ethyl toluene	510	62	13	25	1	
1,3,5-Trimethylbenzene	500	60	12	25	1	
1,2,4-Trimethylbenzene	1300	150	31	25	1	
1,3-Dichlorobenzene	ND	<3.0	<0.50	25	1	
1,4-Dichlorobenzene	ND	<3.0	<0.50	25	1	
Benzyl chloride	ND	<3.0	<0.58	25	1	
1,2-Dichlorobenzene	ND	<3.0	<0.50	25	1	
1,2,4-Trichlorobenzene	ND	<3.0	<0.41	25	1	
Hexachlorobutadiene	ND	<3.0	<0.28	25	1	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 17:58	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Cyclohexane, 1,2,4-trimethyl-	1100	13.44	1	J
Thiophene, 2-propyl-	1100	14.29	1	J
Nonane	3100	14.48	1	J
2-Hexene, 3,4,4-trimethyl-	1900	14.77	1	J
5-Methyl-5-octen-1-ol	2300	15.06	1	J

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: <u>1-6-7</u>	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241001	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 17:58	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Cyclohexane, propyl-	3300	15.28	1	J
C10 Hydrocarbon	1200	15.48	1	J
Cyclohexane, 1,1,2,3-tetramethyl-	1200	15.99	1	J
Benzene, 1,2,3-trimethyl-	1500	17.06	1	J
Nonane, 2,6-dimethyl-	1300	17.14	1	J
C11 Hydrocarbon	1000	17.26	1	J
Cyclohexane, butyl-	1500	17.46	1	J
C11 Hydrocarbon	1200	17.58	1	J
Undecane	1900	18.58	1	J
Naphthalene	28	20.10	1	J

Sample ID: <u>3-6-7</u>	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241002	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 18:42	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
Propene	70	8.4	4.9	25	1	
Dichlorodifluoromethane	ND	<3.0	<0.61	25	1	
Chloromethane	ND	<3.0	<1.5	25	1	
Freon 114	ND	<3.0	<0.43	25	1	
Vinyl chloride	ND	<3.0	<1.2	25	1	
1,3-Butadiene	ND	<3.0	<1.4	25	1	
Bromomethane	ND	<3.0	<0.78	25	1	
Chloroethane	ND	<3.0	<1.1	25	1	
Ethanol	36	4.3	2.3	25	1	
Isopropyl alcohol	ND	<3.0	<1.2	25	1	
Freon 11	ND	<3.0	<0.54	25	1	
Freon 113	ND	<3.0	<0.39	25	1	
Acetone	320	38	16	25	1	
Carbon disulfide	ND	<3.0	<0.97	25	1	
1,1-Dichloroethene	ND	<3.0	<0.76	25	1	

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: <u>3-6-7</u>	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241002	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 18:42	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
-----------------------------	--	---

Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
Methylene chloride	45	5.5	1.6	25	1	
trans-1,2-Dichloroethene	ND	<3.0	<0.76	25	1	
1,1-Dichloroethane	ND	<3.0	<0.74	25	1	
Methyl t-butyl ether	ND	<3.0	<0.84	25	1	
Vinyl acetate	ND	<3.0	<0.86	25	1	
2-Butanone	ND	<3.0	<1.0	25	1	
cis-1,2-Dichloroethene	ND	<3.0	<0.76	25	1	
Ethyl acetate	ND	<3.0	<0.84	25	1	
Hexane	ND	<3.0	<0.85	25	1	
Chloroform	ND	<3.0	<0.62	25	1	
Tetrahydrofuran	ND	<3.0	<1.0	25	1	
1,2-Dichloroethane	ND	<3.0	<0.74	25	1	
1,1,1-Trichloroethane	ND	<3.0	<0.55	25	1	
Benzene	ND	<3.0	<0.94	25	1	
Carbon tetrachloride	ND	<3.0	<0.48	25	1	
1,2-Dichloropropane	ND	<3.0	<0.62	25	1	
Bromodichloromethane	ND	<3.0	<0.45	25	1	
Cyclohexane	ND	<3.0	<0.88	25	1	
Trichloroethene	ND	<3.0	<0.56	25	1	
Heptane	ND	<3.0	<0.73	25	1	
cis-1,3-Dichloropropene	ND	<3.0	<0.66	25	1	
4-Methyl-2-pentanone	ND	<3.0	<0.74	25	1	
trans-1,3-Dichloropropene	ND	<3.0	<0.66	25	1	
1,1,2-Trichloroethane	ND	<3.0	<0.55	25	1	
Toluene	74	8.9	2.4	25	1	
2-Hexanone	ND	<3.0	<0.74	25	1	
Dibromochloromethane	ND	<3.0	<0.35	25	1	
Tetrachloroethene	ND	<3.0	<0.44	25	1	
1,2-Dibromoethane	ND	<3.0	<0.39	25	1	
Chlorobenzene	ND	<3.0	<0.65	25	1	
Ethylbenzene	36	4.3	0.99	25	1	
m,p-Xylene	100	13	2.9	25	1	
Bromoform	ND	<3.0	<0.29	25	1	
Styrene	ND	<3.0	<0.71	25	1	
1,1,2,2-Tetrachloroethane	ND	<3.0	<0.44	25	1	

Results Continued on Next Page



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Analytical Results

Sample ID: <u>3-6-7</u>	Sampling Site: NA	Received: 06/11/2013
Lab ID: 1316241002	Media: Carbo Trap 300	
Matrix: Air	Sampling Parameter: Air Volume 8.3 L	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 18:42	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Analyte	ng/sample	ug/m ³	ppb	RL (ng/sample)	Dilution	Qual.
o-Xylene	35	4.2	0.98	25	1	
4-Ethyl toluene	ND	<3.0	<0.61	25	1	
1,3,5-Trimethylbenzene	ND	<3.0	<0.61	25	1	
1,2,4-Trimethylbenzene	75	9.0	1.8	25	1	
1,3-Dichlorobenzene	ND	<3.0	<0.50	25	1	
1,4-Dichlorobenzene	ND	<3.0	<0.50	25	1	
Benzyl chloride	ND	<3.0	<0.58	25	1	
1,2-Dichlorobenzene	ND	<3.0	<0.50	25	1	
1,2,4-Trichlorobenzene	ND	<3.0	<0.41	25	1	
Hexachlorobutadiene	ND	<3.0	<0.28	25	1	

Analysis Method - EPA TO-17 Mod.

Preparation: Not Applicable	Analysis: EPA TO-17, Air Batch: IVOA/2301 (HBN: 108601) Analyzed: 06/17/2013 18:42	Instrument ID: 5972-X Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	ng/sample	Retention Time	Dilution	Qual.
Nonane	220	14.42	1	J
Cyclohexane, 1-ethyl-4-methyl-	90	14.74	1	J
C9 Cyclichydrocarbon	110	15.04	1	J
C9 Cyclichydrocarbon	230	15.24	1	J
Benzene, 1-ethyl-3-methyl-	180	15.69	1	J
Nonane, 4-methyl-	92	15.83	1	J
C10 Hydrocarbon	190	15.93	1	J
Decane	320	16.61	1	J
Benzene, 1-methyl-2-(1-methylethyl)-	120	17.05	1	J
Decane, 4-methyl-	88	17.12	1	J
Limonene	140	17.26	1	J
Cyclohexane, butyl-	100	17.44	1	J
Naphthalene, decahydro-	90	18.06	1	J
Undecane	150	18.55	1	J



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Comments

Workorder: 1316241

The following compounds were out of control limits : Bromomethane, Chloroethane, 1,1-Dichloroethane, Methylene chloride, Bromodichloromethane, 4-methyl-2-pentanone and 1,1,2-trichloroethane. See quality control report for more information.

EPA TO-17 Mod.: All results are semi-quantitative.

Report Authorization

Method	Analyst	Peer Review
EPA TO-17 Mod.	Lisa M. Reid	Thomas J. Masoian

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alsit.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwl/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aiclasscorp.com



ANALYTICAL REPORT

Workorder: **34-1316241**

Client: ACT Environmental
Incorporated

Project Manager: Rand Potter

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

< This testing result is less than the numerical value.

** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.

J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.

B = Qualifier indicates that the analyte was detected in the blank.

E = Qualifier indicates that the analyte result exceeds calibration range.

P = Qualifier indicates that the RPD between the two columns is greater than 40%.



ANALYTICAL REPORT

Report Date: June 17, 2013

Bill Martin
ACT Environmental Incorporated
7592 N. LaCholla Blvd.
Tucson, AZ 85741

Phone: 520 791-9029
Fax: 520 791-9062
E-mail: bfmartin@actenv.com

Workorder: **34-1316239**
Client Project ID: ACT Environmental
Incorporated
Purchase Order: 26126
Project Manager: Rand Potter

Analytical Results

Sample ID: 2-6-7		Media: SKC 226-17-1A, Hopcalite Tube		Received: 06/11/2013	
Lab ID: 1316239001					
Method: NIOSH 6009		Sampling Parameter: Air Volume 41.5 L		Analyzed: 06/17/2013	
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)	
Mercury	<0.010	<0.00024	<0.000029	0.010	

Sample ID: 4-6-7		Media: SKC 226-17-1A, Hopcalite Tube		Received: 06/11/2013	
Lab ID: 1316239002					
Method: NIOSH 6009		Sampling Parameter: Air Volume 41.5 L		Analyzed: 06/17/2013	
Analyte	ug/sample	mg/m ³	ppm	RL (ug/sample)	
Mercury	<0.010	<0.00024	<0.000029	0.010	

Report Authorization

Method	Analyst	Peer Review
NIOSH 6009	Christopher R. Hansen	Kevin Tucker

Laboratory Contact Information

ALS Environmental
960 W LeVoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@t.lab@ALSGlobal.com
Web: www.alslsc.com

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ANALYTICAL REPORT

Workorder: **34-1316239**
 Client Project ID: ACT Environmental
 Incorporated
 Purchase Order: 26126
 Project Manager: Rand Potter

General Lab Comments

The results provided in this report relate only to the items tested.
 Samples were received in acceptable condition unless otherwise noted.
 Samples have not been blank corrected unless otherwise noted.
 This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html	
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aiclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
 LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
 ND = Not Detected, Testing result not detected above the LOD or LOQ.
 ** No result could be reported, see sample comments for details.
 < This testing result is less than the numerical value.
 () This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: ismith@emsl.com

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

6/20/2013

Phone: (520) 791-9029
Fax: (520) 791-9062

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/13/2013. The results are tabulated on the attached data pages for the following client designated project:

1336

The reference number for these samples is EMSL Order #011302575. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



Accreditation #100194 NELAC Certification: NJ 03036,
NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order: 011302575
 CustomerID: ACT50
 CustomerPO: 1336
 ProjectID:

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

Phone: (520) 791-9029
 Fax: (520) 791-9062
 Received: 06/13/13 9:15 AM
 Collected: 6/12/2013

Project: 1336

Analytical Results

Client Sample Description 1-6-12 **Collected:** 6/12/2013 **Lab ID:** 0001
 HHW

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
7903	Hydrofluoric Acid	ND	0.022	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Hydrochloric Acid	ND	0.043	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Hydrobromic Acid	ND	0.043	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Nitric Acid	ND	0.19	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Phosphoric Acid	ND	0.20	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Sulfuric Acid	ND	0.065	mg/m ³	6/17/2013	MM	6/18/2013	MM

Client Sample Description 2-6-12 **Collected:** 6/12/2013 **Lab ID:** 0002
 HHW

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
7903	Hydrofluoric Acid	ND	0.022	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Hydrochloric Acid	ND	0.043	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Hydrobromic Acid	ND	0.043	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Nitric Acid	ND	0.19	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Phosphoric Acid	ND	0.20	mg/m ³	6/17/2013	MM	6/18/2013	MM
7903	Sulfuric Acid	0.070	0.065	mg/m ³	6/17/2013	MM	6/18/2013	MM

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



- EMSL Analytical, Inc.
200 Rte 130 North, Cinnaminson, NJ 08077

Order ID: 281300731

Attn:	Bill Martin	Customer ID:	ACT50
	ACT Environmental	Customer PO:	
	7592 N. La Cholla Blvd	Date Received:	6/13/13
	Tuscon, AZ 85741		
Fax:		EMSL Order:	281300731
Project:	1336	EMSL Project ID:	
Report Date:	6/20/13: R0	Date Analyzed:	6/20/13
	6/21/13: R1 Corrected EMSL Order #		

TEST REPORT: Alkaline Dust (as Potassium Hydroxide) Analysis by Titration of Filters via modified NIOSH 7401, Issue 2, 8/15/94

Sample ID	Location	Sampling Volume (liters)	Sample Weight (mg)	Sample Conc. (mg/m ³)	Reporting Limit (mg/m ³)
281300731-0003	3-6-12	196	<0.10	< 0.51	0.51
281300731-0004	4-6-12	196	<0.10	< 0.51	0.51
Media Blank		0	<0.10	NA	NA

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected.
4. A discernable field blank was not submitted for analysis

SV
Analyst

Digitally signed by
Vincent M. Daliessio Jr.,
CIH
Vincent Daliessio
Date: 2013.06.21
08:35:19 -04'00'

Scott VanEtten, CIH - Lab Manager
Or other approved signatory



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: ismith@emsl.com

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

7/3/2013

Phone: (520) 791-9029

Fax: (520) 791-9062

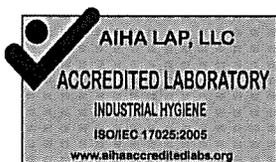
The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/26/2013. The results are tabulated on the attached data pages for the following client designated project:

1263

The reference number for these samples is EMSL Order #011302882. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



Accreditation #100194 NELAC Certification: NJ 03036,
NY 10872

The Batch QC (LCS/LCSD) was not spiked for Lithium. Therefore, the percent recoveries and RPD results could not be measured for Lithium.

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order: 011302882
 CustomerID: ACT50
 CustomerPO: 1336
 ProjectID:

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

Phone: (520) 791-9029
 Fax: (520) 791-9062
 Received: 06/26/13 10:15 AM
 Collected: 6/25/2013

Project: 1263

Analytical Results

Client Sample Description 1-6-25 *Collected:* 6/25/2013 *Lab ID:* 0001
 HHW Los Reales

<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
7300 Modified	Cadmium	ND	0.0022	mg/m ³	7/2/2013	JS	7/2/2013	BE
7300 Modified	Lead	ND	0.0022	mg/m ³	7/2/2013	JS	7/2/2013	BE
7300 Modified	Lithium	ND	0.011	mg/m ³	7/2/2013	JS	7/2/2013	BE
7300 Modified	Nickel	ND	0.0022	mg/m ³	7/2/2013	JS	7/2/2013	BE
7300 Modified	Silver	ND	0.0022	mg/m ³	7/2/2013	JS	7/2/2013	BE
Silver Oxide (Ag2O) by calculation = 0.0047 mg/m ³								
7300 Modified	Zinc	ND	0.0022	mg/m ³	7/2/2013	JS	7/2/2013	BE

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

7/2/2013

Phone: (520) 791-9029
Fax: (520) 791-9062

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/27/2013. The results are tabulated on the attached data pages for the following client designated project:

1263

The reference number for these samples is EMSL Order #011302899. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



Accreditation #100194 NELAC Certification: NJ 03036,
NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order:	011302899
CustomerID:	ACT50
CustomerPO:	1336
ProjectID:	

Attn: **Bill Martin**
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ 85741

Phone: (520) 791-9029
 Fax: (520) 791-9062
 Received: 06/27/13 9:20 AM
 Collected: 6/26/2013

Project: 1263

Analytical Results

Client Sample Description 1-6-26 *Collected:* 6/26/2013 *Lab ID:* 0001
 HHW

<i>Method</i>	<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Units</i>	<i>Prep Date</i>	<i>Analyst</i>	<i>Analysis Date</i>	<i>Analyst</i>
6009	Mercury	0.011	0.00048	mg/m ³	6/28/2013	JR	6/28/2013	JR

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 858-4800

Attn.: *Bill Martin*
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ. 85741

EMSL Case No.: 361301073
Sample(s) Received: 7/18/2013
Date of Analysis: 7/25/2013
Date Printed: 7/25/2013
Reported By: J.Newton
Email: bfmartin@actenv.com

Phone: 520-791-9029 Fax: 520-791-9062

- Laboratory Report -
Airborne Oil Mist
Project: 1336

Conclusions:

- No oil was detected in the sample.

Procurement of Samples and Analytical Overview:

The material for analysis arrived at EMSL Analytical (Cinnaminson, NJ) on 7/18/2013. The package arrived in satisfactory condition with no evidence of damage to the contents. The data reported herein has been obtained using the following equipment and methodologies.

Methods & Equipment: Fourier Transform Infrared Spectrometry (FTIR), *Perkin-Elmer, model Spectrum BX*
Method NIOSH 5026/ 5524

Analyzed by:

John Newton
Senior Materials Scientist

25 July 2013

Date

Reviewed/Approved:

Eugenia Mirica, Ph.D.
Laboratory Manager

25 July 2013

Date



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 858-4800

Attn.: *Bill Martin*
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ. 85741

EMSL Case No.: 361301073
Sample(s) Received: 7/18/2013
Date of Analysis: 7/25/2013
Date Printed: 7/25/2013
Reported By: J.Newton
Email: bfmartin@actenv.com

Phone: 520-791-9029 Fax: 520-791-9062

Results and Discussion:

<i>Sample ID</i>	<i>Description</i>	<i>Volume (m3)</i>	<i>Dust Conc. (mg/m3)</i>	<i>Oil Mass (mg)</i>	<i>Oil Conc. (mg/m3)</i>	<i>Percent Oil</i>	<i>LOQ (mg/m3)</i>
1-7-17	Oil Mist	0.482	N/A	<0.004	<LOQ	N/A	0.006
3-7-17	Oil Mist	0.482	N/A	<0.004	<LOQ	N/A	0.006
<i>Field Blanks</i> -	None Submitted			<i>Background</i> N/A			



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 858-4800

Attn.: *Bill Martin*
ACT Environmental Incorporated
7592 N. La Cholla Blvd.
Tucson, AZ. 85741

EMSL Case No.: 361301073
Sample(s) Received: 7/18/2013
Date of Analysis: 7/25/2013
Date Printed: 7/25/2013
Reported By: J.Newton
Email: bfmartin@actenv.com

Phone: 520-791-9029 Fax: 520-791-9062

Descriptions & Definitions:

None Detected (ND) denotes the absence of analyte in the subsample analyzed. Trace levels of the analyte may be present in the sample below the limit of detection (LOD).

Limit of Detection (LOD): The minimum concentration that can be theoretically achieved for a given analytical procedure in the absence of matrix or sample processing effects. Particle analysis is limited to a single occurrence of an analyte particle in the sub-sample analyzed.

Limit of Quantitation (LOQ): The minimum concentration of an analyte that can be measured within specified limits of precision and accuracy during routine laboratory operating conditions

Important Terms, Conditions, and Limitations:

Sample Retention: Samples analyzed by EMSL will be retained for 60 days after analysis date. Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling may be returned to the client immediately. EMSL reserves the right to charge a sample disposal or return shipping fee.

Change Orders and Cancellation: All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL is not responsible for holding times that are exceeded due to such changes.

Warranty: EMSL warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

Limits of Liability: In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder.

The data and other information contained in this report, as well as any accompanying documents, represent only the samples analyzed. They are reported upon the condition that they are not to be reproduced wholly or in part for advertising or other purposes without the written approval from the laboratory.

Industrial Hygiene Chain of Custody
 EMSL Order Number (Lab Use Only):

01301623

Corporate - Cinnaminson, NJ
 200 Route 130 North
 Cinnaminson, NJ 08077
 PHONE: 1-800-220-3675
 FAX: (856) 786-9574

Report To Contact Name: Bill Martin
 Company Name: ACT Environmental
 Address 1: 7592 N. La Cholla Blvd
 Address 2: Tucson, AZ 85741
 Phone : 520/919029 Fax :

Bill To Company: ACT Environmental
 Attention To: Bill Martin
 Address 1: 7592 N. La Cholla Blvd
 Address 2: Tucson, AZ 85741
 Phone : 520/919029 Fax :

Sampled By (Signature):
 Number of Samples in Shipment:
 Date of Shipment:
 U.S. State where Samples Collected: AZ
 Purchase Order: 1263

Project Name: 1263

Turnaround Time - Please Check: Please Note Standard TAT is 2 Week.

2 Week	1 Week	4 Day	3 Day	2 Day	1 Day	Other (Call Lab)	Media Type:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Manufacturer/Part #:					
							Lot #:

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
① 1-4-16		N7300 AB3500C	368L	4-16-13	HHSW	Normal
② 2-4-16		IPUN	368L	4-16-13		copiation.
③ 3-4-16		LEAD	368L	4-16-13		
④ 1-4-18		N6009 Hg	43.5	4-18-13		
⑤ 2-4-18			43.5	4-18-13		

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By: *WPM* Date: 4/18/13
 Received By: *Drewi Albert* Date: 4/22/13 8:30 AM
 Temperature: 22°C

Comments/Special Instructions:
 emm.c to bf mart in e get env.com

1478-40 5136-3



ANALYTICAL REQUEST FORM

1. REGULAR Status 13/1/11

RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE _____

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 4/25/13 Purchase Order No. _____

3. Company Name ACT Environmental ALS Project Manager MMd.

Address 7592 N La Cholla Blvd Tucson AZ

Person to Contact B.K. Martin

Telephone (520) 791-9029 403-6977

Fax Telephone () _____

E-mail Address bfmartin@actenv.com

Billing Address (if different from above) _____

4. Quote No. _____

5. Sample Collection

Sampling Site City of Tucson

Industrial Process _____

Date of Collection _____

Time Collected _____

Date of Shipment _____

Chain of Custody No. _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	1-4-23	225-9006	112.5L	CL & BR N6011	3 40
	2-4-23	225-9006	112.5L	CL & BR	3 40
	1-4-25	226-350	7.5L	GC/MS 30 solvent	3 3
	2-4-25	226-350	7.5L	solvent	3 3
				By method 2549	
				please call out 6-17	
				1/1/11	
				4/26/11	

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by <u>[Signature]</u>	Date/Time <u>4/25/13</u>
Received by <u>[Signature]</u>	Date/Time <u>04/26/13 1020</u>
Relinquished by _____	Date/Time _____
Received by _____	Date/Time _____

478-40 5136-3



W 1311711



ANALYTICAL REQUEST FORM

1. REGULAR Status 13/1/11

RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE _____

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 4/25/13 Purchase Order No. _____

3. Company Name ACT Environmental 4. Quote No. _____

Address 7592 N La Ochiai Blvd Tucson AZ ALS Project Manager Paul

Person to Contact B. U. Martin 5. Sample Collection

Telephone 520 791 9029 #030977 Sampling Site City of Tucson

Fax Telephone () _____ Industrial Process _____

E-mail Address bfmartin@actenv.com Date of Collection _____

Billing Address (if different from above) _____ Time Collected _____

_____ Date of Shipment _____

_____ Chain of Custody No. _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	1-4-23	225-9006	112.5L	CL & BR N6011	3 40
	2-4-23	225-9006	112.5L	CL & BR	3 40
	1-4-25	226-950	7.5L	GC/MS 30 Solvent	3 3
	2-4-25	226-950	7.5L	solvent	3 3
				By method 2599	
				please call 206-17	
				1 Bill	
				4/26/11	

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by [Signature] Date/Time 4/25/13

Received by [Signature] Date/Time 04/26/13 1028

Relinquished by _____ Date/Time _____

Received by _____ Date/Time _____

Corporate - Cinnaminson, NJ
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5874

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only):

01301872

Report To Contact Name: Bill Martin
 Company Name: ACT Environmental
 Address 1: 7592 N. La Cholla Blvd
 Address 2: Tucson, AZ 85741
 Phone: 5207919029 Fax:
 Email Results To: bmartin@actenv.com

Bill To Company: ACT Environmental
 Attention To: Bill Martin
 Address 1: 7592 N. La Cholla Blvd
 Address 2: Tucson, AZ 85741
 Phone: 5207919029 Fax:
 Project Name: 1336

Sampled By (Signature): *[Signature]*
 Number of Samples in Shipment: 3
 Date of Shipment: 5/11/13
 U.S. State where Samples Collected: AZ
 Purchase Order: 1295-1336

Turnaround Time - Please Check: Please Note Standard TAT is 2 Week.

1 Week	2 Week	3 Day	4 Day	1 Day	2 Day
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Media Type: _____
 Manufacturer/Part #: _____
 Lot #: _____

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
1-5-1	226-38	pos. for de. aerosol antibiotic N. 024 05.0	135.5	5/11/13	HWH	mid N1 N14 STD
2-5-1		pos. for de. aerosol antibiotic N. 024 05.0	135.5			mid 5800 ↓
3-5-1		pos. for de. aerosol antibiotic N. 024 05.0	135.5			Chem IH IH

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By: *WCH* Date: 5/11/13
 Received By: *[Signature]* Date: 5/2/13 9:30AM

Comments/Special Instructions: *EMSA results*

21°C

14701



1314041



ANALYTICAL REQUEST FORM

1314041

1. REGULAR Status

RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE _____

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/17/13 Purchase Order No. _____

3. Company Name ACT Environmental ALS Project Manager PTW

Address 7592 N La Jolla

Tucson AZ

5. Sample Collection

Person to Contact Bill Martin Sampling Site HHW

Industrial Process _____

Telephone (520) 791-9029 Date of Collection 5/16/13

Fax Telephone () _____ Time Collected _____

E-mail Address bfmartin@actenv.com Date of Shipment _____

Billing Address (if different from above) Chain of Custody No. _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	1-5-16	226-17	530	140 6009	ppm
	2-5-16	226-17	530	140 6005	ppm

43
1

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by W F Martin Date/Time 2:00 5/17/13

Received by [Signature] Date/Time 05/20/13 0820

Relinquished by _____ Date/Time _____

Received by _____ Date/Time _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental
Fed Ex 800 807 9203 54

Industrial Hygiene Chain of Custody
 EMSL Order Number (Lab Use Only):

281300732

Corporate - Cinnaminson, NJ
 200 Route 130 North
 Cinnaminson, NJ 08077
 PHONE: 1-800-220-3675
 FAX: (856) 786-5974

Report To Contact Name: Bill Martin	Bill To Company: ACT Environmental	Sampled By (Signature):
Company Name: ACT Environmental	Attention To: Bill Martin	Number of Samples in Shipment:
Address 1: 7592 N. La Cholla Blvd	Address 1: 7592 N. La Cholla Blvd	Date of Shipment:
Address 2: Tucson, AZ 85741	Address 2: Tucson, AZ 85741	U.S. State where Samples Collected: AZ
Phone: 5207919029 Fax:	Phone: 5207919029 Fax:	Purchase Order: 2263 1336
Email Results To: bmartin@actenv.com	Project Name: 1336	

Turnaround Time - Please Check: Please Note Standard TAT is 2 Week.

2 Week	<input type="checkbox"/>	4 Day	<input type="checkbox"/>	3 Day	<input type="checkbox"/>	2 Day	<input type="checkbox"/>	1 Day	<input type="checkbox"/>	Other (Call Lab)	<input type="checkbox"/>	Media Type:
1 Week	<input checked="" type="checkbox"/>											Manufacturer/Part #:
												Lot #:

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
1-6-12	226-1003	INORGANIC ACID/7901	23.75L	6/12/13	HHW	
2-6-12	226-1003	INORGANIC ACID/7901	23.75L			to Chemistry - SH 6/19/13
3-6-12	225-1715	ALCALINE DUST 7901	196L			
4-6-12	225-1715	ALKALINE DUST 7901	196L			IH - SH 6/13/13

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By	Date	Received By	Date
WPS	6/12/13	Wooty Field	6-12-13 2 0930A

Comments/Special Instructions:

Corporate - Cinnaminson, NJ
 200 Route 130 North
 Cinnaminson, NJ 08077
 PHONE: 1-800-220-3675
 FAX: (856) 786-5974

Industrial Hygiene Chain of Custody

EMSL Order Number Lab Use Only: 61302882



Report To Contact Name: Bill Martin	Bill To Company: ACT Environmental	Sampled By (Signature):
Company Name: ACT Environmental	Attention To: Bill Martin	Number of Samples In Shipment:
Address 1: 7592 N. La Cholla Blvd	Address 1: 7592 N. La Cholla Blvd	Date of Shipment:
Address 2: Tucson, AZ 85741	Address 2: Tucson, AZ 85741	U.S. State where Samples Collected: AZ
Phone : 5207919029 Fax :	Phone : 5207919029 Fax :	Purchase Order: 4865 <u>1336</u>
Email Results To: bmartin@actenv.com	Project Name: 1263	

Turnaround Time - Please Check: Please Note Standard TAT is 2 Week.

2 Week <input type="checkbox"/>	1 Week <input checked="" type="checkbox"/>	4 Day <input type="checkbox"/>	3 Day <input type="checkbox"/>	2 Day <input type="checkbox"/>	1 Day <input type="checkbox"/>	Other (Call Lab) <input type="checkbox"/>	Media Type: Manufacturer/Part # Lot #:
---------------------------------	--	--------------------------------	--------------------------------	--------------------------------	--------------------------------	---	--

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
① 1-6-25	myLE	N7300 For Nickel Cadmium Lead	450L	6/25/13	HHW Los Peñas	
		Zinc				
		Sulfur Oxide				

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By <u>gms</u>	Date <u>6/25/13</u>	Received By <u>Veronica Allent</u>	Date <u>6/26/13 10:54a</u>
------------------------	---------------------	------------------------------------	----------------------------

Comments/Special Instructions:

Lead Ex 7960 9250 6833

Corporate - Cinnaminson, NJ
 200 Route 130 North
 Cinnaminson, NJ 08077
 PHONE: 1-800-220-3675
 FAX: (856) 786-5974

06/13/13 8:55 AM
 361301073

Industrial Hygiene Chain of Custody
 EMSL Order Number/Lab Use Only:

361301073

Report To Contact Name: Bill Martin	Bill To Company: ACT Environmental
Company Name: ACT Environmental	Attention To: Bill Martin
Address 1: 7592 N. La Cholla Blvd	Address 1: 7592 N. La Cholla Blvd
Address 2: Tucson, AZ 85741	Address 2: Tucson, AZ 85741
Phone : 5207919029 Fax :	Phone : 5207919029 Fax :
Email Results To: bmartin@actenv.com	Project Name: 1376

Turnaround Time - Please Check: Please Note Standard TAT is 2 Week.		Media Type:
2 Week <input type="checkbox"/>	1 Day <input type="checkbox"/>	Manufacturer/Part #:
3 Day <input type="checkbox"/>	2 Day <input type="checkbox"/>	Lot #:
4 Day <input type="checkbox"/>	Other (Call Lab) <input type="checkbox"/>	

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
1-7-17	MCE	oil mist N5026	482	7/17/13	HHH	
2-7-17	XAD-7 OVS	Col. Col. N5523	120.5			
3-7-17	MCE	oil mist N5026	982			
4-7-17	XAD-7 OVS	Col. Col. N5523	120.5			

EMSL
 CINNAMINSON, NJ
 13 JUL 18 AM 10:53

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By: <i>W. Martin</i>	Date: 7/17/13	Received By: <i>AK</i>	Date: 7/18/13 9:30A
-------------------------------	---------------	------------------------	---------------------

Comments/Special Instructions:
 EMAIL RESULTS

* Samples 1+3 to lab 04
 ** Samples 2+4 to IH