BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

July 19, 2011

Project No. 07205105000

Via Email jmccrady@ucnj.org

County of Union
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

ATTN: MR. JAMES MCCRADY
RISK MANAGER

Re: Indoor Air Quality Investigation
Union County Administration Building – Fourth Floor
Elizabeth, Union County, New Jersey

Dear Mr. McCrady:

Attached is the report of **Birdsall Services Group's (BSG)** indoor air quality investigation within the Fourth Floor of the Union County Administration Building located in Elizabeth, New Jersey.

Should you have any questions or require further assistance, please contact us at our Farmingdale, New Jersey office.

Very truly yours,

BIRDSALL SERVICES GROUP

Ryan Garner
Business Development Director

cc: Mr. Matt DiRado
Email: mdirado@ucnj.org

Enclosure

RG/BN/M:\Cranford\Jobs\Union County\07205105000\Reports\IAQ\07205105000-01-R-071411-Admin-IAQ.doc

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

INDOOR AIR QUALITY INVESTIGATION
UNION COUNTY ADMINSTRATION BUILDING
ELIZABETH, NEW JERSEY
PROJECT NO. 07205105000

PREPARED FOR:

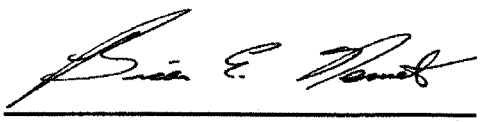
COUNTY OF UNION
OFFICE OF THE COUNTY MANAGER
10 ELIZABETHTOWN PLAZA
ELIZABETH, NEW JERSEY 07207

PREPARED BY:

BIRDSALL SERVICES GROUP
1415 WYCKOFF ROAD
FARMINGDALE, NEW JERSEY 07727

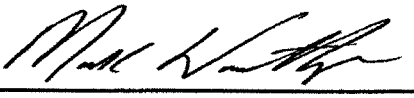
July 19, 2011

Prepared By:



Brian Nemetz
Associate – Senior Industrial Hygienist

Reviewed By:



Mark Worthington, CHMM
Vice President – Health & Safety Services

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

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I. INTRODUCTION

At the request of the County of Union (the "Client"), Birdsall Services Group (BSG) conducted an Indoor Air Quality (IAQ) Investigation within designated areas of the Union County Administration Building. Mr. Brian Nemetz of BSG conducted the IAQ investigation on July 6, 7, and 8, 2011.

II. PROJECT BACKGROUND

BSG understands that several employees of the Human Services Planning department on the Fourth Floor of the Administration Building reportedly detected a "sweet-like" odor on July 1, 2011. As a result of the reported odor, the Union County Hazardous Materials Department, the Elizabeth Fire Department, and the Elizabeth Ambulance Service were called into the area. Reportedly, the odor had dissipated by the time the emergency services teams arrived. Several employees were evaluated and released by the Elizabeth Ambulance Service. The Union County Hazardous Materials Department and the Elizabeth Fire Department did not believe it was necessary to evacuate the building.

Due to the Independence Day holiday, the area was vacant until July 5, 2011 the odor reportedly returned. The Union County Hazardous Materials Department, the Elizabeth Fire Department, and the Elizabeth Ambulance Service were again called into the area. This time "readings" were collected though it should be noted that BSG is unaware of what type of reading were collected. As per the Union County Hazardous Materials Department and the Elizabeth Fire Department, "no toxin involved and saw no reason not to allow employees to return to their work stations".

The Union County Sheriff's department coordinated the emergency services that called to the area.

On both days, several employees sought medical attention for various ailments such as headaches, dizziness, and difficulty breathing. Reportedly, several employees were told by doctors not to return to their work stations and/or wear a mask. It should be noted that BSG has not reviewed any medical diagnoses as it would be prohibited as per the Health Insurance Portability and Accountability Act (HIPAA).

Due to the odor, BSG was scheduled to be onsite on July 6 and 7, 2011. Since no odor was detected for two days, BSG was not asked to return. However, on the morning of July 8, 2011, the odor returned and BSG was summoned to the site.

As part of this indoor air quality investigation, BSG conducted monitoring for the following to assess the presence or absence of atypical and/or potentially harmful concentrations of the following parameters: temperature, relative humidity, carbon dioxide (CO_2), carbon monoxide (CO), airborne particulate, volatile organic compounds (VOCs), lower explosive limits (LEL), and Hydrogen Sulfide (H_2S). The aforementioned parameters are commonly measured as screening tools to determine if there is an IAQ issue within the measured space. Additionally, these parameters are considered important when evaluating the perception of comfort of the building's environment by occupants. Measurements for VOCs and LELs can be numerous

different chemicals and/or compounds. As such screening for them allows for a greater variety of detectable agents that can be harmful.

III. INVESTIGATION PROTOCOLS AND SAMPLING METHODOLOGIES

BSG's investigation was limited to the entire Fourth Floor, sections of the Third and Fifth Floors as well as the penthouse and the roof that houses the mechanical equipment for the building. BSG did not investigate any other part of the building. The investigation was completed during normal business hours. However, due to complaints, employees were moved from their work stations on various days of the investigation activities. Reportedly, other employees have been relocated to other areas of the building due to the odor complaints. Mr. James McCrady, the Union County Risk Manager provided information and access to BSG during the investigation activities.

Appendix A of this Report presents the visual investigation protocol and Appendix B of this Report presents the sampling methodologies and interpretation of analytical results utilized during the investigation. Copies of the two Union County Sheriff's Reports are located in Appendix C of this report.

IV. ON-SITE OBSERVATIONS

The six-story Administration Building was constructed in 1979 and renovated in 2005. The building is utilized as office space. The interior of the building was observed to have carpeting, 12"x12" floor tiles, gypsum walls, and 2'x2' ceiling tiles. The center corridors of all floors are constructed of painted concrete block and house the elevators and stairways.

The building is heated and cooled via forced air heating, ventilation, and air-conditioning (HVAC) units and radiated heat system. The HVAC system is located on the roof and a penthouse. The radiated heat is located by the exterior walls of the building. Floors 2, 3, 4, 5, and 6 are controlled by the same HVAC system. The HVAC system utilizes variable air volume (VAV) boxes to help control air flow as well as air temperature. Air is returned to the HVAC system via a fresh air intake on the roof and a return air plenum that recycles air from within the space. As per the County's HVAC employees, as well as the County's HVAC contractor, the HVAC system does not use any chemicals in the process of heating or cooling the air.

The epicenter of the odor appears to be the two walkways that meet and form a corner in front of Daisy Ortiz's desk. The two walkways lead to other desks/cubicles. The odor was reportedly detected within 20 to 30 feet down either walkway with no area having a stronger odor than another area.

BSG's investigation identified the following;

- BSG did not detect any odors during the investigations on July 6 and 7, 2011. No one from Union County detected odors when BSG was on site.
- Reportedly the odor was present on the morning of July 8, 2011. When BSG arrived on site in the late morning the odor had dissipated. BSG did detect a very faint fruit like odor in the afternoon of July 8, 2011. Several Union County employees also detected the aforementioned odor. However, this odor was not believed to be the same odor the other employees had voiced concerns about.

- Many of the diffusers within the Fourth Floor are blocked with cardboard and/or tape to prevent airflow. When asked, several of the employees said they blocked the air flow as the diffusers supply air that is too cold or too hot for their comfort.
- Many of the plants in the area have molded soil and/or molded planters.
- Most of the tops of the cubicles, cabinets, shelves, etc. have a layer of dust on top.
- No refrigerators or microwaves were present in the area of concern.
- Many of the desks in the area of concern as well as the bathrooms and janitor's closet were opened and inspected by County employees to aid in the location of a potential odor source. BSG was present during this operation. Several cleaners, hand creams, and air fresheners were discovered, but none of the items discovered matched the reported odor. Employees that originally detected the odor were present to verify that the complaint odor was not similar to the items discovered.
- As part of the investigation, the County cut a hole in the column that was near the epicenter of the reported odor. No odor was detected within the column.
- Numerous diffusers and the VAV boxes were inspected during the investigations. No odors or other issues were detected within the inspected area with the exception of one VAV box. One VAV box has un-insulated copper pipes that have allowed condensation to migrate to a ceiling thus creating water-staining on the ceiling tile. The County's HVAC employees aided BSG in the inspection of the diffusers and VAV boxes.
- The plenum (area between the drop ceiling and metal decking) was inspected. No odors were present.
- Reportedly, odors were detected on July 11, 12, and 15, 2011. BSG was not present during the reported odors.
- The Director of Division Planner's office had several water-stained ceiling tiles stored above the observable ceiling system. During the inspection, the County removed the water-stained ceiling tiles. Although samples were not collected, BSG believes that some of the ceiling tiles had mold growth based upon visible evidence. BSG did not observe any other readily visible mold growth.

V. INDOOR AIR QUALITY MEASUREMENTS

As part of the project, BSG collected direct-read measurements for basic IAQ parameters (i.e. temperature, relative humidity, carbon dioxide, carbon monoxide, airborne particulate, volatile organic compounds, lower explosive limits, and hydrogen sulfide. The results of the IAQ measurements are as follows:

Temperature – All of the indoor temperature measurements obtained from within the designated areas were within the temperature range adopted by the State of New Jersey and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) recommended temperature range for comfort.

Relative Humidity – All of the measured RH measurements were within the ASHRAE recommended range of (30% - 60%).

Carbon Monoxide (CO) – All of the detectable CO concentrations were below the Occupational Safety and Health Administration (OSHA) promulgated 8-hour average exposure of 25 parts per million (ppm).

Carbon Dioxide – Most of the indoor carbon dioxide measurements were below both the ASHRAE exposure level and NJIAQ trigger level (1000 ppm) to check that all HVAC systems are operating as they should. Three of the measurements were above the aforementioned ranges. Additionally, many of the other measurements were within 100 ppm of the 1000 ppm trigger limit. This is most likely due to the number of blocked diffusers that limit the amount of fresh air that enters the space. Elevated levels of carbon dioxide have been linked to headaches and fatigue.

Airborne Particulates – All of the airborne particulate measurements were below the OSHA permissible exposure limit (PEL) of 15 mg/m^3 as well as similar to the control measurements.

Volatile Organic Compounds (VOCs) – All except two VOC measurements were below the analytical detection limits of the real-time monitor utilized during the investigation with the exception of one outside measurement. One of the two detectable concentrations were collected outside. The one detectable indoor measurement was collected in the elevator lobby by the Janitor's closet that has numerous cleaners in it.

Hydrogen Sulfide (H_2S) - All indoor H_2S measurements were below the analytical detection limits of the real-time monitor utilized during this investigation.

Lower Explosive Limit (LEL) Gases - All indoor LEL measurements were below the analytical detection limits of the real-time monitor utilized during this investigation.

Appendix D of this Report presents the results of the indoor air quality measurements collected on-site.

VI. CONCLUSIONS AND RECOMMENDATIONS

The results of the IAQ investigation did not confirm the presence or location of the reported odor. BSG understands that the odor has been detected since our investigation was completed. As such, the odor source appears to still be present. It is possible that an employee or employees is unknowingly (or knowingly) creating the odor. The odor could be associated with a perfume, a food or some other source that has been introduced to the area. The county should continue to inspect the area as the odors arise. The County may even wish to install a video camera system to be able to see the area of concern before and after the odor is detected.

Since the area of concern is in such a defined area, it is doubtful that the odor is related to the HVAC system as a whole as the entire range of the HVAC system would be affected. However, since the HVAC utilizes VAV boxes, it is possible although not probable that one or two VAV boxes have an issue that was not detected during the investigations. As part of further investigation activities the County should shut down the HVAC system for several hours. Employees should be stationed at each diffuser in the area of concern when the HVAC system is

activated to allow for immediate detection. The County should also consider a complete investigation of the VAV boxes, including the interior of the VAV boxes and ducts to ensure that an interior leak that may be creating an odor has not occurred.

All blocked diffusers should have the cardboard, tape, etc. removed to allow for proper air flow. The County should test and balance the system to ensure that tempered air is being supplied as designed and required.

Although no gaps in the windows were observed, there were some areas that BSG could not observe due to furniture. The County should continue to inspect all window seals to ensure that no odors can migrate into the area from the exterior of the building.

If the odor persists, the County may wish to remove all employee belongings and the furniture as a means of eliminating potential odor sources. Following that, the County should inspect the remaining building materials.

The employees with plants at their work stations should be required to periodically clean the soil and planters as they easily grow mold due to the constant addition of moisture. Although this condition does not appear to have created the odor issue, it has the potential to cause other IAQ related issues.

As part of the general housekeeping procedures, the County should dust all horizontal surfaces such as the tops of desks, cabinets and shelves. Although this condition does not appear to have created the odor issue, it has the potential to cause other IAQ related issues.

APPENDIX A

VISUAL INVESTIGATION PROTOCOLS

The purpose of the investigation conducted by BSG was to evaluate the potential presence of an undetermined odor. BSG's investigation was non-destructive in nature as directed by the Client. As such, BSG did not cut into any walls, ductwork, etc. All observations were of readily visible areas.

The investigation also extended to a visual examination of the ventilation equipment and accessible portions of ventilation ductwork serving indoor spaces as such equipment play an integral role in indoor air quality by supplying fresh air to the occupants in indoor spaces and by removing internally generated pollutants.

Onsite visual investigation of the building also concentrated on identifying conditions that could lead to indoor air quality concerns such as:

- Odors,
- Dirty or unsanitary conditions,
- Water leaks, water damage in easily accessible and/or readily visible areas,
- Visible suspect mold growth or moldy odors in obvious or in readily accessible areas,
- Presence of hazardous materials,
- Unusual noises from light fixtures or mechanical equipment ,
- Blocked airflow,
- Heat sources (e.g., unusual types/quantities of copiers, printers), and
- Obvious contamination entrainment sources.

All observations, measurements, samples, etc, are of the conditions present at the time of the investigation and may not reflect the conditions before or after the investigation.

APPENDIX B

SAMPLING PROTOCOLS

As part of this indoor air quality investigation, BSG conducted monitoring for the following to assess the presence or absence of atypical and/or potentially harmful concentrations of the following parameters: temperature, relative humidity, carbon dioxide (CO_2), carbon monoxide (CO), airborne particulate, volatile organic compounds (VOCs), lower explosive limits (LEL), and Hydrogen Sulfide (H_2S). These parameters are considered important when evaluating the perception of comfort of the building's environment by occupants.

All temperature, relative humidity, carbon dioxide, and carbon monoxide measurements were obtained using a Q-Trak™ Plus equipped with a calibrated temperature and relative humidity probe.

Temperature and Relative Humidity

The American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) standards 55-1992 and 62-2001, have identified preferred temperature and humidity ranges in which 80 percent or more of building occupants are not expected to complain of discomfort. The ASHRAE recommendations are for a temperature between 72°F and 78° F with a relative humidity between 30% and 60% and note that relative humidity in excess of 70% can enhance the growth of microorganisms including molds and mildews. ASHRAE does differentiate between the acceptable temperature ranges for summer and winter, due primarily to the seasonal clothing habits of building occupants. The ASHRAE recommended temperature range for comfort during summer months is between 73°F and 79°F at 60% relative humidity. For the winter, ASHRAE recommends a temperature range between 68°F and 74°F at 60% relative humidity. The New Jersey Indoor Air Quality Standard (N.J.A.C. 12:100) sets a range of 68°F to 79°F as an acceptable indoor temperature range.

Carbon Dioxide

Carbon dioxide (CO_2) is an odorless colorless gas that occurs naturally in the atmosphere and is the primary effluent of human respiration. CO_2 is classed as a simple asphyxiant gas At concentrations usually found in non-industrial settings, CO_2 does not normally present a health hazard, even though concentrations greater than 1000 ppm have reportedly produced symptoms of increased respiratory rates, lassitude and sleepiness in some individuals. Measurements of indoor CO_2 levels are used as an indicator of the general effectiveness of building ventilation. The closer the indoor CO_2 levels are to outdoor concentrations the more effective building ventilation generally is. Elevated CO_2 concentrations therefore tend to indicate poorer ventilation exchange, usually resulting from an inadequate supply of fresh air into the building space. The New Jersey Indoor Air Quality Standard (N.J.A.C. 12:100) specifies a maximum concentration of 1000 ppm of CO_2 as a flag to check that all HVAC systems are operating, as they should.

Real-time Airborne Particulate Monitoring

Particulate measurements were taken with a Thermo Electron Corporation PDR-1000AN model dust meter (serial no. 5999) that was "zeroed" at the beginning of each days use. This instrument reports the concentrations of total airborne particulates in micrograms per cubic meter (mg/m^3). The average concentration of an approximately one minute sample was collected at each

location. The (OSHA) permissible exposure limit (PEL) of 15 mg/m^3 for particulates not otherwise regulated.

Real-Time Air Monitoring Utilizing a Multi-RAE

A Multi-Rae is a hand held one-to-five gas monitor with built-in sampling pump and data logging capabilities. The Multi-Rae has the capability of sampling for numerous gases. BSG-PMK utilized the Multi-Rae to collected measurements for Lower Explosive Limit (LEL) gases, Volatile organic compounds (VOCs), carbon monoxide, Oxygen, and Hydrogen Sulfide (H_2S).

Gas	Range	Resolution
Lower Explosive Limit (LEL)	0-100%	1%
Volatile organic compounds (VOCs)	0-200 ppm	.1 ppm
Hydrogen sulfide (H_2S).	0-100 ppm	.1 ppm
Oxygen	0-30%	0.1%
Carbon Monoxide	0-500 ppm	1.0 ppm

It should be noted that LEL's and VOC's can be any number of chemicals and/or compounds that share the characteristics of other LEL's and VOC's. As such, OSHA has not and cannot establish a Permissible Exposure Limit (PEL) for total LEL's and VOC's.

OSHA considers an atmosphere consisting of less than 19.5 % oxygen to be deficient in Oxygen. It should be noted that BSG did not collected measurements for oxygen as it was not a concern.

OSHA has established federal regulations for employee exposures to air contaminants that are published in Title 29, Code of Federal Regulations (CFR), Part 1910.1000. These standards set permissible exposure limits (PELs), most often as 8-hour time-weighted averages (TWAs), for a variety of chemical hazards. OSHA has also adopted action levels for some regulated chemical and physical hazards. If the action levels are exceeded, the employer must institute specific programs to control exposures and to protect workers.

For a limited number of chemicals, OSHA has promulgated standards, called short-term exposure limits (STELs) that allow employee exposures above the TWA for a defined period of time, usually 15 minutes. OSHA has also promulgated standards for some substances, called ceiling limits. The maximum peak exposures that OSHA has established for these chemicals, designated by a "C" preceding the concentration, must not be exceeded at any time during the work shift. For H_2S OSHA has set a Ceiling limit of 20 ppm

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless and tasteless gaseous by-product of the combustion process that is readily absorbed into the blood stream on inhalation of the gas. While CO is one of the most common individual causes of poisoning in both the home and in industry, the concentrations found in most typical indoor environments are generally well below

the levels that can cause serious exposure symptoms. Many sources of CO in the indoor environment originate from outside the building. Such outside sources may include: gasoline powered vehicles/equipment and exhaust stack emissions all of which may be drawn into the building through fresh air intakes, leaks in the building envelope or through open doors, stairwells and shafts. Inside sources of CO may include improper venting of heaters, furnaces, boilers, other combustion processes and/or cigarette smoke.

The current TLV for CO exposure over an eight-hour day, 40 hours per week time weighted average is 25 ppm while the Occupational Safety and Health Administration (OSHA) has promulgated an 8-hour average exposure of 50 ppm.

APPENDIX C

UNION COUNTY SHERIFF REPORTS

UNION COUNTY SHERIFF

INVESTIGATION REPORT

CC No.

1 Referral/Connecting/Property Slip #	2 Code	3 UCR Code	4 Trans Disc No.	5 Case Number
				R-11-1644-1

6 Crime ☐ Incident ☒	7 Patrol District	8 NJS	9 Victim's Name

13 Time & Date Crime or Incident Occurred	14 Hour	15 Week	16 Month	17 Day	18 Year
Date Between	1212	1	7	5	2011
AND					
Time At					

10 Race	11 Sex	12 Age

19 Home Address- City - State — Phone — Cell / Pager No.

20 Location	21 Employer - School	22 Business Phone
4th Floor Administration- Planning		

23 Time & Date Unit Notified	24 Person Reporting Crime	25 Age	26 Time & Date Reported

27 Type of Premises	28 Code	29 Weapons - Tools	30 Code	31 Address	32 Phone
Gov't					

33 Vehicle	34 Year	35 Make	36 Body Type	37 Color	38 Reg. Number & State	39 Serial Number

Value Stolen Prop.	40 Currency	41 Jewelry	42 Furs	43 Clothing	44 Auto	45 Misc.

46 Total Value Stolen	47 Total Value Recovered	48 Teletype ☐ Yes ☐ No	49 Alarm No.	50 Weather	51 Status Crime	52 Status Case

53 CLEARED BY ARREST ADULT ☐ JUVENILE ☐ ADULT & JUVENILE ☐ NARCOTICS INVOLVED ☐

LIST OF INVOLVED - LIST AND IDENTIFY ADDITIONAL VICTIMS - DESCRIBE PERPETRATORS OR SUSPECTS - ACTION TAKEN INCLUDE FINDINGS AND OBSERVATIONS OF INVESTIGATOR - PHYSICAL EVIDENCE FOUND - WHERE - BY WHOM - DISPOSITION AND TECHNICAL SERVICES PERFORMED - INTERVIEW OF VICTIMS - WITNESSES - PERSONS CONTACTED - SUSPECTS- LIST - DESCRIBE STOLEN PROPERTY - VALUE - COURT ACTION - ATTACH STATEMENTS

54 PERSON INVOLVED — ADDRESS — PHONE NO.	RACE	SEX	DOB	ARREST SUSPECT WITNESS
See report R-11-1644				
				☐
				☐
				☐
				☐
				☐

Narrative

At approximately 1212 on Monday, July 5 I responded to the 4th floor Administration Building. The odor experienced on Friday had returned and made employees ill. See report- R-11-1627

I called Control for an EMT, S/O Anastasio responded at 1235 and treated the employees who had gathered outside in the courtyard area. Haz-Mat responded along with the County Police at approx 1240 and took readings. Nothing toxic was discovered. Haz-Mat went to the roof to see if source could be determined. HVAC work was being done, but no source was discovered.

EMT Anasatasio found as a result of his employee evaluations that further evaluation was necessary. He called Elizabeth MSU. They responded along with the Fire Dep't. at 1305. The Fire dep't. also tried to discover the source, but was unsuccessful. At this time the odor had abated. The Fire Department agreed with Haz-Mat that their was no toxin involved and saw no reason not to allow employees to return to their work stations.

See Report R-11-1644 for a list of employees treated by EMT Anastasio and MSU.

55 Type Name	56 Badge Number	57	58 Date of Report
Robert a Woelpper	7	Page 1 of 1 Pages	7/5/11 Time 1130
Signature R A Woelpper	59 Typist	60 Desk Supervisor	
		Capt Buckley	

UNION COUNTY SHERIFF

INVESTIGATION REPORT

CC No.

1 Referral/Connecting/Property Slip #	2 Code	3 UCR Code	4 Trans Disc No.	5 Case Number
				R-11-1627

6 Crime ☐ Incident ☒	7 Patrol District	8 NJS	9 Victim's Name

13 Time & Date Crime or Incident Occurred	14 Hour	15 Week	16 Month	17 Day	18 Year	10 Race	11 Sex	12 Age
Date Between	1420	1	7	1	2011			
AND								
Time At								

18 Home Address - City - State	Phone
	Cell / Pager No.

20 Location	21 Employer - School	22 Business Phone
4th Floor Administration- Planning		

23 Time & Date Unit Notified	24 Person Reporting Crime	25 Age	26 Time & Date Reported

27 Type of Premises	28 Code	29 Weapons - Tools	30 Code	31 Address	32 Phone
Gov't					

33 Vehicle	34 Year	35 Make	36 Body Type	37 Color	38 Reg. Number & State	39 Serial Number

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53 CLEARED BY ARREST ADULT ☐ JUVENILE ☐ ADULT & JUVENILE ☐ NARCOTICS INVOLVED ☐

LIST OF INVOLVED - LIST AND IDENTIFY ADDITIONAL VICTIMS - DESCRIBE PERPETRATORS OR SUSPECTS - ACTION TAKEN INCLUDE FINDINGS AND OBSERVATIONS OF INVESTIGATOR - PHYSICAL EVIDENCE FOUND - WHERE - BY WHOM - DISPOSITION AND TECHNICAL SERVICES PERFORMED - INTERVIEW OF VICTIMS - WITNESSES - PERSONS CONTACTED - SUSPECTS- LIST - DESCRIBE STOLEN PROPERTY - VALUE - COURT ACTION - ATTACH STATEMENTS

54 PERSON INVOLVED / ADDRESS / PHONE NO.	RACE	SEX	DOB	ARREST SUSPECT WITNESS
See narrative for employees involved				

Narrative

At approx 1420 on Friday, July 1st I received a call that several people from Planning on the 4th floor of the Administration were complaining about an odor in their office area which was making them ill. These employees left the building and were gathered in the court area on the south side of the Administration Building. Union County Haz- Mat and the Elizabeth Fire Department were called as well as the Elizabeth Ambulance Service to assess the condition of the employees who were affected by the odor. Haz- Mat and the Fire Department arrived at 1440 and searched for a source of the odor but found none. They were asked if evacuation was necessary and they said no. The employees were evaluated by the EMT's and released[see below for names]
Helen Garnor, James Baker, Melissa Lespinasse, Karen Jirimec, Annz Kacmierczyk, Katie Regan, Tricia Stone. All work on the 4th floor Planning. The phone for Planning is 908- 527-4857

55 Type Name	56 Badge Number	57	58 Date of Report
Robert a Woelpper	7	Page 1 of 1 Pages	7/5/11 Time 1130
Signature R A Woelpper	59 Typist	60 Desk Supervisor	
		Capt. Buckley	

APPENDIX D

DIRECT-READ MEASUREMENTS

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

Project No. 07205105000
Union County
Administration Building
July 19, 2011

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**TEMP (°F)**	**RH (%)**	**CO2 (ppm)**	**Total Particulate**
Optimum Ranges		**68-79**	**30-60**	**<1000**	**15 mg/m^3**
July 6, 2011					
Outside R. Gora Cubical	09:26	72.3	48.7	794	0.01
C. Topolosky Cubical	09:35	72.0	47.7	804	0.02
Outside Utility Room	09:45	73.4	50.7	814	0.02
Above Ceiling Helen Gormann Cubical	09:56	72.0	54.6	860	0.014
Direction of Division of Planning	10:05	74.1	48.4	866	0.013
Above Ceiling	10:12	75.6	46.0	892	0.038
Division of Aging Storage	10:34	69.8	49.0	862	0.008
S. Cordoma Cubical	10:37	71.2	51.1	953	0.015
Barbara Smart Cubical	10:41	72.0	50.2	870	0.008
Outgoing Mail	10:43	72.3	49.9	888	0.006
Jose Perez Cubical	10:46	74.2	48.7	937	0.008
P. Burns-Wyatt Cubical	10:55	74.7	47.4	891	0.007
B. Smith Cubical	11:21	72.5	48.4	938	0.017
D. Ortiz Cubical	11:25	72.0	49.2	890	0.038

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	Time	TEMP (°F)	RH (%)	CO2 (ppm)	Total Particulate
Optimum Ranges		68-79	30-60	<1000	15 mg/m^3
July 6, 2011					
M. Robinson Cubical	11:28	72.1	49.9	883	0.029
P. Kardl Cubical	11:31	73.2	49.0	912	0.010
Workforce Development	11:34	73.6	49.9	930	0.013
By Elevators	11:36	73.9	49.3	925	0.024
Jim McCrady Office	13:23	73.9	53.2	908	0.011
I.D.R.C. Office	13:31	72.9	50.8	850	0.011
Director of Division of Planning	13:34	73.6	51.5	895	0.008
A. Moore Cubical	13:36	73.6	50.9	964	0.010
Nutrition Program Office	13:38	73.4	50.3	913	0.023
R. Lubow Cubical	13:41	73.4	50.4	943	0.014
I Anzolom Cubical	13:44	73.4	49.3	948	0.014
Jean Koszulinski Cubical	13:46	73.2	50.0	952	0.019
C. Jaskula Cubical	13:49	73.6	50.3	895	0.013
Katie Regan Cubical	13:51	72.9	50.1	957	0.011

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**TEMP (°F)**	**RH (%)**	**CO2 (ppm)**	**Total Particulate**
Optimum Ranges		**68-79**	**30-60**	**<1000**	**15 mg/m³**
July 7, 2011					
Elevator Room	11:03	81.5	43.8	740	0.012
Roof by Air Intake	11:13	94.2	39.5	350	0.015
Fourth Floor Elevator Hallway	11:30	73.7	47.0	850	0.004
R. Johnson's Cubicle	12:06	72.3	47.9	**1040**	0.004
C. Topolosky's Cubicle	12:22	73.0	48.9	980	0.007
Barbara Smart's Cubicle	12:24	73.0	48.7	940	0.010
Jose Perez's Cubicle	12:26	73.6	48.3	951	0.008
Workforce Development Cubicle	12:30	73.9	47.8	936	0.009
Outside I.D.R.C. Office	13:35	73.4	50.1	943	0.005
Daisy Ortiz's Cubicle	13:38	72.7	49.9	925	0.007
S. Cordoma Cubicle	13:41	73.2	50.2	963	0.008
A. Patruseviah's Cubicle	13:44	73.4	50.4	954	0.007
R. Lubow's Cubicle	13:46	73.4	49.8	**1023**	0.013
P. Burns-Wyatt Cubicle	13:48	73.9	47.7	938	0.056

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**TEMP (°F)**	**RH (%)**	**CO2 (ppm)**	**Total Particulate**
Optimum Ranges		**68-79**	**30-60**	**<1000**	**15 mg/m^3**
July 7, 2011					
5th Floor Outside Robert Barry Office	14:08	73.6	47.8	953	0.013
5th Floor Outside Staff of Adjuster	14:12	73.0	48.0	971	0.035
3rd Floor Liza Betz's Office	14:16	73.2	49.9	993	0.008
3rd Floor Outside Chuck Lerant's Office	14:20	73.2	49.8	954	0.026
July 8, 2011					
Daisy Ortiz's Cubicle	1305	72.0	56.8	861	0.012

Notes:

1. The New Jersey Indoor Air Quality Standard (N.J.A.C. 12:100) sets a range of 68° F to 79° F as an acceptable indoor temperature range during the winter months.

   The ASHRAE recommendations are for a temperature between 68° F and 74° F (winter season) with a relative humidity between 30% and 60% and note that relative humidity in excess of 70% can enhance the growth of microorganisms including molds and mildews.

2. The New Jersey Indoor Air Quality Standard (N.J.A.C. 12:100) specifies a maximum concentration of 1000 ppm of CO_2 as a flag to check that all HVAC systems are operating, as they should.

   The American Conference of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV) of 5000 parts per million (ppm) as an eight-hour time weighted average (8 Hr TWA) exposure limit for carbon dioxide.

ASHRAE recommends an indoor to outdoor differential concentration of not greater than approximately 700 ppm of CO_2 as an indicator of comfort criteria related to human bioeffluents.

3. All temperature, relative humidity, and carbon dioxide measurements were collected using a calibrated Q-Trak™ Plus IAQ Surveyor.

4. Particulate measurements were taken with a Thermo Electron Corporation PDR-1000AN model dust meter (serial no. 5999) that was "zeroed" at the beginning of each days use. This instrument reports the concentrations of total airborne particulates in micrograms per cubic meter (mg/m^3). The average concentration of an approximately one minute sample was collected at each location. The (OSHA) permissible exposure limit (PEL) of 15 mg/m^3 for particulates not otherwise regulated.

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**CO (ppm)**	**VOC (ppm)**	**LEL %**	**H_2S (ppm)**
Optimum Ranges		**25**	**NA**	**NA**	**20**
July 6, 2011					
Outside R. Gora Cubical	09:26	0.0	0.0	0.0	0.0
C. Topolosky Cubical	09:35	0.0	0.0	0.0	0.0
Outside Utility Room	09:45	0.0	0.0	0.0	0.0
Above Ceiling Helen Gormann Cubical	09:56	0.0	0.0	0.0	0.0
Director of Division of Planning	10:05	0.0	0.0	0.0	0.0
Above Ceiling	10:12	0.0	0.0	0.0	0.0
Division of Aging Storage	10:34	0.0	0.0	0.0	0.0
S. Cordoma Cubical	10:37	0.0	0.0	0.0	0.0
Barbara Smart Cubical	10:41	0.0	0.0	0.0	0.0
Outgoing Mail	10:43	0.0	0.0	0.0	0.0
Jose Perez Cubical	10:46	0.0	0.0	0.0	0.0
P. Burns-Wyatt Cubical	10:55	0.0	0.0	0.0	0.0
B. Smith Cubical	11:21	0.0	0.0	0.0	0.0

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**CO (ppm)**	**VOC (ppm)**	**LEL %**	**H_2S (ppm)**
Optimum Ranges		**25**	**NA**	**NA**	**20**
July 6, 2011					
D. Ortiz Cubical	11:25	0.0	0.0	0.0	0.0
M. Robinson Cubical	11:28	0.0	0.0	0.0	0.0
P. Kardl Cubical	11:31	0.0	0.0	0.0	0.0
Workforce Development	11:34	0.0	0.0	0.0	0.0
By Elevators	11:36	0.0	0.0	0.0	0.0
Jim McCrady Office	13:23	0.0	0.0	0.0	0.0
I.D.R.C. Office	13:31	0.0	0.0	0.0	0.0
Director of Division of Planning	13:34	0.0	0.0	0.0	0.0
A. Moore Cubical	13:36	0.0	0.0	0.0	0.0
Nutrition Program Office	13:38	0.0	0.0	0.0	0.0
R. Lubow Cubical	13:41	0.0	0.0	0.0	0.0
I. Anzolom Cubical	13:44	0.0	0.0	0.0	0.0
Jean Koszulinski Cubical	13:46	0.0	0.0	0.0	0.0
C. Jaskula Cubical	13:49	0.0	0.0	0.0	0.0

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**CO (ppm)**	**VOC (ppm)**	**LEL %**	**H_2S (ppm)**
Optimum Ranges		**25**	**NA**	**NA**	**20**
July 6, 2011					
Katie Regan Cubical	13:51	0.0	0.0	0.0	0.0
July 7, 2011					
Elevator Room	11:03	0.0	0.1	0.0	0.0
Roof by Air Intake	11:13	0.0	0.6	0.0	0.0
Fourth Floor Elevator Hallway	11:30	0.0	0.0	0.0	0.0
R. Johnson's Cubicle	12:06	0.0	0.0	0.0	0.0
C. Topolosky's Cubicle	12:22	0.0	0.0	0.0	0.0
Barbara Smart's Cubicle	12:24	0.0	0.0	0.0	0.0
Jose Perez's Cubicle	12:26	0.0	0.0	0.0	0.0
Workforce Development Cubicle	12:30	0.0	0.0	0.0	0.0
Outside I.D.R.C. Office	13:35	0.0	0.0	0.0	0.0
Daisy Ortiz's Cubicle	13:38	0.0	0.0	0.0	0.0
S. Cordoma Cubicle	13:41	0.0	0.0	0.0	0.0
A. Patruseviah's Cubicle	13:44	0.0	0.0	0.0	0.0

INDOOR AIR QUALITY MEASUREMENTS					
MEASUREMENT LOCATION	**Time**	**CO (ppm)**	**VOC (ppm)**	**LEL %**	**H_2S (ppm)**
Optimum Ranges		**25**	**NA**	**NA**	**20**
July 7, 2011					
R. Lubow's Cubicle	13:46	0.0	0.0	0.0	0.0
P. Burns-Wyatt Cubicle	13:48	0.0	0.0	0.0	0.0
5th Floor Outside Robert Barry Office	14:08	0.0	0.0	0.0	0.0
5th Floor Outside Staff of Adjuster	14:12	0.0	0.0	0.0	0.0
3rd Floor Liza Betz's Office	14:16	0.0	0.0	0.0	0.0
3rd Floor Outside Chuck Lerant's Office	14:20	0.0	0.0	0.0	0.0
July, 2011					
Daisy Ortiz's Cubicle	1305	0.0	0.0	0.0	0.0

Notes:

1. All carbon monoxide (CO), volatile organic compounds (VOCs), lower explosive limits (LEL), and hydrogen sulfide (H_2S) measurements were collected using a calibrated MultiRAE Plus Surveyor.

2. The current TLV for carbon monoxide exposure over an eight-hour day, 40 hours per week time weighted average is 25 ppm while the Occupational Safety and Health Administration (OSHA) has promulgated an 8-hour average exposure of 50 ppm.

3. It should be noted that VOC's and LEL's can be any number of chemicals and/or compounds that share the characteristics of other VOC's and LEL's. As such, OSHA has not and cannot establish a Permissible Exposure Limit (PEL) for total VOC's or LEL's.

4. The Occupational Safety and Health Administration (OSHA) has promulgated an 8-hour average exposure of 20 ppm for H_2S.

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

1. DATE OF INCIDENT : 07/01/2011 CASE # I-U2011-000419 NJDEP CASE # N/A

TIMES : NOTIFICATION TIME : 14:28 ARRIVAL : 14:33 AVAILABLE-IN SERVICE : 15:59

2. INCIDENT LOCATION : UNION COUNTY ADMINISTRATION BUILDING 10 ELIZABETHTOWN PLAZA

HIGHWAY : N/A MILEPOST : N/A COUNTY : UNION CITY : ELIZABETH ZIP CODE : 07201

3. SCENE TYPE : (CHECK ONE)

☐ PUBLIC ROAD ☑ PUBLIC STRUCTURE ☐ PUBLIC LAND ☐ RAILROAD
☐ PRIVATE ROAD ☐ PRIVATE STRUCTURE ☐ PRIVATE LAND ☐ WATERWAY

4. AREA TYPE : (CHECK ONE)

☐ INDUSTRIAL ☑ COMMERCIAL ☐ RESIDENTIAL
☐ RURAL / AGRI ☐ FOREST ☐ RECREATIONAL

5. RESPONSIBLE PARTY (IES) : N/A

COMPANY : CONTACT PERSON :

ADDRESS : CITY : STATE :

ZIP CODE : PHONE : OR :

6. PROPERTY OWNER INFORMATION : COUNTY OF UNION

COMPANY : N/A CONTACT PERSON :

ADDRESS : 10 ELIZABETHTOWN PLAZA CITY : ELIZABETH STATE : NJ

ZIP CODE : 07201 PHONE : OR : 908-527-4200

7. WEATHER : ☑ CLEAR ☐ CLOUDY ☐ RAIN ☐ FOG ☐ SNOW ☐ ICE / HAIL

APPROX. TEMPERATURE : ☐ BELOW 32 F ☐ 32 - 40F ☐ 41 - 50F ☐ 51 - 60F ☐ 61 - 70F ☐ 71 - 80F ☑ 81 - 90F ☐ 91 - 100F ☐ ABOVE 100 F

WIND SPEED (mph) : ☑ 0 - 5 ☐ 6 - 9 ☐ 10 - 15 ☐ 16 - 20 ☐ 20 + ☐ DIRECTION : ☐ N : ☐ NE : ☑ E : ☐ SE : ☐ S : ☐ SW : ☐ W : ☐ NW :

8. OPERATION BEING PERFORMED WHEN INCIDENT OCCURRED : (CHECK ONE)

☑ N / A ☐ NORMAL OPERATION ☐ DURING DELIVERY / SHIPMENT ☐ EN ROUTE ☐ TAKEOFF / LANDING
☐ DURING MANUFACTURE ☐ DURING EQUIPMENT REPAIR ☐ DOCKED ☐ RAILCAR CONNECT

9. CAUSE OF INCIDENT :

☐ CLANDESTINE DRUG LAB ☐ IMPROPER STORAGE ☐ INTENTIONAL RELEASE ☐ MVA ☐ EQUIPMENT MALFUNCTION ☐ IMPROPER HANDLING
☐ EXCAVATION ☐ ABANDONED ☐ CONTAINER RUPTURE ☐ DERAILMENT ☐ FIRE / EXPLOSION ☑ UNKNOWN

10. HAZMAT BEHAVIOR ON RELEASE : (CHECK ALL THAT APPLY)

☐ INERT / NO REACTION ☐ ENTERED WATERWAY ☐ BECAME AIRBORNE ☐ CONTAMINATED AREA ☐ CAUSED FIRE ☐ DISPERSED
☐ CONTRIBUTED TO FIRE ☐ CAUSED EXPLOSION ☐ CONTRIBUTED TO EXPLOSION ☐ ABSORBED ☐ EVAPORATED ☑ NO RELEASE

REPORT BY : TECHNICIAN WIRKUS, PATRICK ID# SIGNATURE :

ATTACHMENTS : SUPER. APPROVAL : CAPTAIN WARCHOL, DAN

INCIDENT REPORT

11. CHEMICAL / TRADE NAME : UNKNOWN UN/NA# : ______

AMOUNT AT RISK : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : ______ IDLH : ______ F.P : ______ I.T : ______

V.P : ______ S.G : ______ LEL : ______ UEL : ______

CHEMICAL / TRADE NAME : ______ UN/NA# : ______

AMOUNT AT RISK : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : ______ IDLH : ______ F.P : ______ I.T : ______

V.P : ______ S.G : ______ LEL : ______ UEL : ______

CHEMICAL / TRADE NAME : ______ UN/NA# : ______

AMOUNT AT RISK : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : ______ IDLH : ______ F.P : ______ I.T : ______

V.P : ______ S.G : ______ LEL : ______ UEL : ______

CHEMICAL / TRADE NAME : ______ UN/NA# : ______

AMOUNT AT RISK : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ______ ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : ______ IDLH : ______ F.P : ______ I.T : ______

V.P : ______ S.G : ______ LEL : ______ UEL : ______

PPE USED :

☐ A ☐ B ☐ C ☑ D ☐ TURNOUT ☐ SAFETY VEST ☐ ______

☐ ______

12. METHOD USED TO IDENTIFY MATERIAL :

☐ SHIPPING PAPERS ☐ PLACARDS / LABELS ☐ CHEM-TREC ☐ TEXTBOOK

☐ RESPONSIBLE PARTY ☑ ON-SCENE ANALYSIS ☐ OFF-SCENE ANALYSIS ☐ ______

REPORT BY : TECHNICIAN WIRKUS, PATRICK ID# ______ SIGNATURE : ______

ATTACHMENTS : ______ SUPER. APPROVAL : CAPTAIN WARCHOL, DAN

INCIDENT REPORT

13. HAZARD MONITORING & ACTUAL READINGS :

LEL INSTRUMENT(S) :	O2 INSTRUMENT(S) :
0% OF THE LEL UNIT 23	20.9% UNIT 23
TOXICITY / PPM INSTRUMENT(S) :	**RADIOLOGICAL INSTRUMENT(S) :**
0 PPM UNIT 23	BACKGROUND UNIT 30

COMMENT :

ALL METER READINGS WERE WITHIN NORMAL LIMITS.

14. DECONTAMINATION PROCEDURES

DECONTAMINATION PROCEDURES	☑ NOT APPLICABLE	☐ DEFINITIVE	☐ MASS	☐ GROSS	YES ☐	NO ☑

COMMENT :

N/A

15. SITE COMMUNICATIONS

COMMAND FREQUENCY :	TACTICAL FREQUENCY :	ENTRY FREQUENCY :
DISPATCH	HAZMAT DIGITAL	N/A

16. MEDICAL ASSISTANCE

MEDICAL MONITORING :	YES ☐	NO ☑	MEDICAL TREATMENT AND TRANSPORT IN-PLACE :	YES ☐	NO ☑

COMMENT :

N/A

17. NARRATIVE

RESPONSE- 10 ELIZABETHTOWN PLAZA, ELIZABETH, NJ- REQUESTED TO RESPOND TO THE ABOVE LOCATION FOR AN UNKNOWN ODOR INSIDE THE BUILDING ON DIVISION 4- B SIDE. UPON ARRIVAL HAZ-MAT UNITS INVESTIGATED WHAT WAS DESCRIBED AS A SWEET SMELLING ODOR. ELIZABETH FIRE AND EFD EMS WERE ALSO NOTIFIED TO RESPOND DUE TO SOME WORKERS FEELING ILL. METER READINGS THROUGHOUT THE STRUCTURE REMAINED WITHIN NORMAL LIMITS AT ALL TIMES. CAPTAIN THARALDSEN SPOKE WITH A CONTRACTOR WORKING ON SCENE DOING WORK ON THE ROOF. THAT DID NOT APPEAR TO BE THE CAUSE OF THE PROBLEM. NO SOURCE WAS FOUND AT THE COMPLETION OF THE INVESTIGATION. ALSO NO HAZARDS WERE FOUND. ALL UNITS PICKED UP SHORTLY AFTER. 9 RMA'S WERE OBTAINED BY ELIZABETH FIRE/EMS. NO FURTHER ACTION NEEDED BY UNION COUNTY HAZ-MAT.

HELEN GARNOVA- DRY THROAT
MELISSA LESPINASSE- DRY THROAT
KAREN JIRINEC- HEADACHE/DRY THROAT
ANNA KAZMIERCZYK- HEADACHE/LIGHT HEADED/DRY THROAT
KATIE REGAN- SHAKY
JAMES BAKER- HEADACHE
ELENA GAMORA- SHAKING
PATRICIA STONE- COUGH/HEADACHE
CHERYL HATHANAY- NO COMPLAINT

REPORT BY : TECHNICIAN WIRKUS, PATRICK ID# _____ SIGNATURE : _____

ATTACHMENTS : _____ SUPER. APPROVAL : CAPTAIN WARCHOL, DAN

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

DATE: Jul 01, 2011 14:23 CASE #: I-U2011-000419

AGENCY	NOTIFIED	ON SCENE	PERSON CONTACTED	TIME
MUNICIPAL				
POLICE	☐	☐		
FIRE	☑	☑	ENGINE 1 LADDER 3 BATT 3	14:32
HEALTH	☐	☐		
OEM	☐	☐		
DPW	☐	☐		
EMS	☑	☑	CHIEF MARKINSON/EMS-7	14:32
	☐	☐		
	☐	☐		
	☐	☐		
COUNTY				
POLICE	☑	☑	MULTIPLE UNITS	14:28
LINCS	☐	☐		
DPW	☐	☐		
PARKS	☐	☐		
SHERIFFS	☑	☑	MULTIPLE UNITS	14:28
	☐	☐		
	☐	☐		
STATE				
DEP	☐	☐		
STATE POLICE	☐	☐		
STATE POLICE OEM	☐	☐		
STATE POLICE HMRU	☐	☐		
NJDOH	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
OTHER AGENCIES				
COAST GUARD	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		

FILED BY: TECHNICIAN WIRKUS, PATRICK 5210 APPROVED BY: CAPTAIN WARCHOL, DAN 5204

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

DATE: Jul 01, 2011

CASE #: I-U2011-000419

DUTY OFFICER	5210	TECHNICIAN WIRKUS, PATRICK
HAZ-MAT COMMAND	5206	TECHNICIAN THARALDSEN, MICHAEL
SUPPORT OPERATIONS	5205	TECHNICIAN KANE, WILLIAM
SUPPORT OPERATIONS	5202	CHIEF SCATURO, CHRISTOPHER J

FILED BY: TECHNICIAN WIRKUS, PATRICK 5210

APPROVED BY: CAPTAIN WARCHOL, DAN 5204

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

1. DATE OF INCIDENT: 07/05/2011 CASE # I-U2011-000431 NJDEP CASE #

TIMES: NOTIFICATION TIME: 12:13 ARRIVAL: 12:35 AVAILABLE-IN SERVICE: 13:30

2. INCIDENT LOCATION: UNION COUNTY ADMINISTRATION BUILDING 10 ELIZABETHTOWN PLAZA

HIGHWAY: MILEPOST: COUNTY: UNION CITY: ELIZABETH ZIP CODE: 07201

3. SCENE TYPE: (CHECK ONE)

☐ PUBLIC ROAD ☑ PUBLIC STRUCTURE ☐ PUBLIC LAND ☐ RAILROAD
☐ PRIVATE ROAD ☐ PRIVATE STRUCTURE ☐ PRIVATE LAND ☐ WATERWAY

4. AREA TYPE: (CHECK ONE)

☐ INDUSTRIAL ☑ COMMERCIAL ☐ RESIDENTIAL
☐ RURAL / AGRI ☐ FOREST ☐ RECREATIONAL

5. RESPONSIBLE PARTY (IES):

COMPANY: CONTACT PERSON:

ADDRESS: CITY: STATE:

ZIP CODE: PHONE: OR:

6. PROPERTY OWNER INFORMATION: COUNTY OF UNION

COMPANY: N/A CONTACT PERSON:

ADDRESS: 10 ELIZABETHTOWN PLAZA CITY: ELIZABETH STATE: NJ

ZIP CODE: 07201 PHONE: 908-527-4200 OR:

7. WEATHER: ☑ CLEAR ☐ CLOUDY ☐ RAIN ☐ FOG ☐ SNOW ☐ ICE / HAIL

APPROX. TEMPERATURE: ☐ BELOW 32 F ☐ 32 - 40F ☐ 41 - 50F ☐ 51 - 60F ☐ 61 - 70F ☐ 71 - 80F ☑ 81 - 90F ☐ 91 - 100F ☐ ABOVE 100 F

WIND SPEED (mph): ☑ 0 - 5 ☐ 6 - 9 ☐ 10 - 15 ☐ 16 - 20 ☐ 20 + ☐ DIRECTION: ☐ N: ☐ NE: ☐ E: ☐ SE: ☐ S: ☐ SW: ☐ W: ☐ NW:

8. OPERATION BEING PERFORMED WHEN INCIDENT OCCURRED: (CHECK ONE)

☐ N / A ☑ NORMAL OPERATION ☐ DURING DELIVERY / SHIPMENT ☐ EN ROUTE ☐ TAKEOFF / LANDING
☐ DURING MANUFACTURE ☐ DURING EQUIPMENT REPAIR ☐ DOCKED ☐ RAILCAR CONNECT

9. CAUSE OF INCIDENT:

☐ CLANDESTINE DRUG LAB ☐ IMPROPER STORAGE ☐ INTENTIONAL RELEASE ☐ MVA ☐ EQUIPMENT MALFUNCTION ☐ IMPROPER HANDLING
☐ EXCAVATION ☐ ABANDONED ☐ CONTAINER RUPTURE ☐ DERAILMENT ☐ FIRE / EXPLOSION ☑ UNKNOWN

10. HAZMAT BEHAVIOR ON RELEASE: (CHECK ALL THAT APPLY)

☐ INERT / NO REACTION ☐ ENTERED WATERWAY ☑ BECAME AIRBORNE ☐ CONTAMINATED AREA ☐ CAUSED FIRE ☐ DISPERSED
☐ CONTRIBUTED TO FIRE ☐ CAUSED EXPLOSION ☐ CONTRIBUTED TO EXPLOSION ☐ ABSORBED ☐ EVAPORATED ☐ NO RELEASE

REPORT BY: RESPONDER MACRI, ERIN A ID# SIGNATURE:

ATTACHMENTS: SUPER. APPROVAL: CAPTAIN WARCHOL, DAN

INCIDENT REPORT

11. CHEMICAL / TRADE NAME : UNKNOWN UN/NA# :

AMOUNT AT RISK : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : IDLH : F.P : I.T :

V.P : S.G : LEL : UEL :

CHEMICAL / TRADE NAME : UN/NA# :

AMOUNT AT RISK : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : IDLH : F.P : I.T :

V.P : S.G : LEL : UEL :

CHEMICAL / TRADE NAME : UN/NA# :

AMOUNT AT RISK : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : IDLH : F.P : I.T :

V.P : S.G : LEL : UEL :

CHEMICAL / TRADE NAME : UN/NA# :

AMOUNT AT RISK : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ BIOLOGICAL

AMOUNT RELEASED : ☐ POUNDS ☐ GALLONS ☐ CUBIC FEET ☐ RADIOLOGICAL

CHEMICAL ACTION LEVELS FROM REFERENCE MATERIAL : ☐ N / A ☐ UNKNOWN

PHYSICAL STATE : ☐ S ☐ L ☐ G PH : IDLH : F.P : I.T :

V.P : S.G : LEL : UEL :

PPE USED :

☐ A ☐ B ☐ C ☑ D ☐ TURNOUT ☐ SAFETY VEST ☐ ☐

12. METHOD USED TO IDENTIFY MATERIAL :

☐ SHIPPING PAPERS ☐ PLACARDS / LABELS ☐ CHEM-TREC ☐ TEXTBOOK

☐ RESPONSIBLE PARTY ☑ ON-SCENE ANALYSIS ☐ OFF-SCENE ANALYSIS ☐

REPORT BY : RESPONDER MACRI, ERIN A ID# SIGNATURE :

ATTACHMENTS : SUPER. APPROVAL : CAPTAIN WARCHOL, DAN

INCIDENT REPORT

13. HAZARD MONITORING & ACTUAL READINGS :

LEL INSTRUMENT(S) :	O2 INSTRUMENT(S) :
0 PPM	20.9 %
TOXICITY / PPM INSTRUMENT(S) :	**RADIOLOGICAL INSTRUMENT(S) :**
0 PPM	BACKGROUND

COMMENT :

MINI RAE #10
MULTI RAE #29
PRD UNIT #35

14. DECONTAMINATION PROCEDURES

DECONTAMINATION PROCEDURES	☑ NOT APPLICABLE	☐ DEFINITIVE	☐ MASS	☐ GROSS	YES ☐	NO ☑

COMMENT :

15. SITE COMMUNICATIONS

COMMAND FREQUENCY :	TACTICAL FREQUENCY :	ENTRY FREQUENCY :
DISPATCH		

16. MEDICAL ASSISTANCE

MEDICAL MONITORING :	YES ☐	NO ☑	MEDICAL TREATMENT AND TRANSPORT IN-PLACE :	YES ☑	NO ☐

COMMENT :

17. NARRATIVE

RESPONSE: REQUESTED TO RESPOND TO THE UNION COUNTY ADMINISTRATION BUILDING, 10 ELIZABETH TOWN PLAZA, FOR AN UNKNOWN ODOR ON THE 4TH FLOOR OFFICE. UPON ARRIVAL, MYSELF AND RESPONDER WIRKUS MET WITH SGT. WOELPPER, UCSO, WHO STATED EMPLOYEES ON THE 4TH FLOOR WERE COMPLAINING OF AN UNKNOWN SWEET SMELL THAT WAS CAUSING THROAT IRRITATION. THE EMPLOYEES COMPLAINING OF ILLNESS WERE BROUGHT OUTSIDE TO THE PICNIC AREA AND AWAITED EMS EVALUATION.
UPON ENTERING THE OFFICE AREA ON THE 4TH FLOOR, SOME EMPLOYEES WERE STILL ON SCENE WITH NO COMPLAINTS, A SWEET "STRAWBERRY" LIKE ODOR WAS NOTICED WHICH WAS CONCENTRATED TO THE B/C CORNER OF THE BUILDING. THE ENTIRE FOURTH FLOOR WAS CHECKED WITH A PID AND MULTIRAE METER WITH NO ABNORMAL READINGS. DROP CEILING TILES WERE MOVED AND THE VENTILATION SYSTEM IN THAT OFFICE WERE CHECKED AS WELL WITH NO METER READINGS EITHER. SGT. WOELPPER INFORMED US THAT THERE WAS A CONTRACTOR WORKING ON THE ROOFS AIR CONDITIONING UNITS WHICH MAY HAVE BEEN THE CAUSE OF THE ODOR. WE SPOKE TO ROBERT LEONE, THE CONTRACTOR WORKING ON THE UNIT, WHO WAS NOT USING ANY CHEMICALS AT THE TIME. THERE WAS ONE BOTTLE OF COIL CLEANER IN THE AREA, BUT THE ODOR WAS DIFFERENT AND THERE WERE NO METER READINGS FROM THAT SUBSTANCE AS WELL.
THERE WERE NO HAZARDS FOUND ACCORDING TO OUR METERS AND THE SOURCE OF THE ODOR WAS UNFOUNDED.

EMPLOYEES AFFECTED WERE:
DAISY ORTIZ
LINDA KOSINSKI
ALEIA MOORE
HELEN GAMOVA
KATIE REJAN
SARA THODE...

REPORT BY : RESPONDER MACRI, ERIN A ID# _____ SIGNATURE : _____

ATTACHMENTS : _____ SUPER. APPROVAL : CAPTAIN WARCHOL, DAN

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

DATE: Jul 05, 2011 12:12 CASE #: I-U2011-000431

AGENCY	NOTIFIED	ON SCENE	PERSON CONTACTED	TIME
MUNICIPAL				
POLICE	☐	☐		
FIRE	☑	☑	BATTALION CHIEF WALSH	
HEALTH	☐	☐		
OEM	☐	☐		
DPW	☐	☐		
EMS	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
COUNTY				
POLICE	☑	☑	OFFICER ARLIA	
LINCS	☐	☐		
DPW	☐	☐		
PARKS	☐	☐		
SHERIFFS	☑	☑	SGT. WOELPPER	
	☐	☐		
	☐	☐		
STATE				
DEP	☐	☐		
STATE POLICE	☐	☐		
STATE POLICE OEM	☐	☐		
STATE POLICE HMRU	☐	☐		
NJDOH	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
OTHER AGENCIES				
COAST GUARD	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		
	☐	☐		

FILED BY: RESPONDER MACRI, ERIN A 5209 APPROVED BY: CAPTAIN WARCHOL, DAN 5204

COUNTY OF UNION
DIVISION OF EMERGENCY MANAGEMENT
BUREAU OF HAZARDOUS MATERIALS

DATE: Jul 05, 2011

CASE #: I-U2011-000431

HAZ-MAT COMMAND

SUPPORT OPERATIONS

5210 TECHNICIAN WIRKUS, PATRICK

5209 RESPONDER MACRI, ERIN A

FILED BY: RESPONDER MACRI, ERIN A 5209

APPROVED BY: CAPTAIN WARCHOL, DAN 5204

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

Via e-mail jmccrady@ucnj.org

September 20, 2011 Job No. 07205105000

County of Union
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

Attn: James McCrady
Risk Manager

Re: Indoor Air Quality Investigation
Union County Administration Building – Fourth Floor
10 Elizabethtown Plaza
Elizabeth, New Jersey

Dear Mr. McCrady:

Attached is the second report of **Birdsall Services Group's (BSG)** indoor air quality investigation concerning the reported Fourth Floor health concern within the above-referenced Union County Administration Building.

Should you have any questions or require further assistance, please contact us at our Farmingdale, New Jersey office.

Very truly yours,

BIRDSALL SERVICES GROUP

Ryan Garner
Business Development Director

cc: Mr. Matt DiRado
Email: mdirado@ucnj.org

Enclosures

M:\Cranford\Jobs\Union County\07205105000\Reports\07205105000-DRAFT Union County Admin Bldg - IAQ Investigation Letter Report No 2.doc

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

INDOOR AIR QUALITY INVESTIGATION

- SECOND REPORT -

UNION COUNTY ADMINISTRATION BUILDING
10 ELIZABETHTOWN PLAZA
ELIZABETH, NEW JERSEY

JOB NO. 07205105000

PREPARED FOR:

COUNTY OF UNION
OFFICE OF THE COUNTY MANAGER
10 ELIZABETHTOWN PLAZA
ELIZABETH, NEW JERSEY 07207

PREPARED BY:

BIRDSALL SERVICES GROUP
1415 WYCKOFF ROAD
FARMINGDALE, NEW JERSEY 07727

September 20, 2011

Prepared By:

Paul Price

Paul J. Price, CIH, CSP
Certified Industrial Hygienist

Reviewed By:

Mark Worthington, C.H.M.M.
Vice President – Health & Safety Services

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

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I. INTRODUCTION

As part of an ongoing Indoor Air Quality (IAQ) Investigation concerning the Fourth Floor of the Union County Administration Building, Messrs. Brian Nemetz and Paul Price, CIH, CSP of Birdsall Services Group (BSG) conducted a follow-up site inspection on August 15, 2011. This inspection included the assistance of several County Administration representatives, and Building Maintenance personnel. Mr. Nemetz performed additional investigations and concurrent sampling activities on August 24 and 25 of 2011.

The following report is therefore presented as a continuation of BSG's initial IAQ investigation letter report, dated July 19, 2011, providing the following:

- Observations and findings associated with the August 15th inspection;
- Presentation of recent environmental sampling laboratory results - collected before and after said inspection date; and,
- Updated investigative conclusions and recommendations.

BSG's investigation to date has concerned the Fourth Floor, with select regions of the Third and Fifth Floors, and Penthouse / Roof mechanical region inspected or sampled as a means of comparison or, a potential contributing source of IAQ concern. Following the August 15th inspection, a limited mold remediation (i.e., less than 10 square feet) was undertaken by the County in those areas of intrusive, exterior wall inspection encountering apparent mold growth (AMG). BSG's onsite mold remediation monitoring of this August 24th work was incorporated into the general indoor air monitoring assessment of potential mold-related contribution to the subject IAQ concern.

II. ONSITE INVESTIGATION

August 8th and 9th, 2011

As a means of accessing potential organic chemical contribution to the IAQ concern, BSG collected USEPA Total Organic - 15 (TO-15) Method (with additional screening) air samples using EMSL laboratory-prepared Summa canisters. Each sample was set to collect an approximate twenty-four hour (24-hr) sample via a constant flow, calibrated inlet valve set at 3.5 milliliters per min (ml/min), resulting in a total air sample capture volume of five (5.0) liters. The sampling started at approximately 1030 on August 8th, with the collected sample canisters retrieved August 9th for overnight, chain of custody, shipment to EMSL. Per BSG selection, the selected USEPA TO-15 Method analysis included a *Library Search* option designed to tentativel match additional organic chemical vapors. Analysis of the samples was conducted under a Gas Chromatography / Mass Spectrometry (GC/MS) analytical methodology.

BSG's interpretation of these TO-15 laboratory results concluded a basically similar result at each sample location, that is, no apparent indication of organic chemical vapors of concern. In summary, specific organic vapors were detected at generally low levels, corresponding to specific levels found within an active office environment. These included, for example, ethanol - derived from cleaning products, disinfectants, perfumes; acetone - cleaners, inks, nail polish removers; and, select chemical compounds measured at airborne concentrations significantly beneath both recommended and regulated, prolong human exposure guidelines.

Swab samples for bacteria

On August 9, 2011, BSG collected a total of five (5) swab samples for culturable bacteria. The swab samples were collected from the carpets of three areas on the fourth floor area of concern and two control samples. The results from the area of concern and control samples were similar as the results were slightly above the detection limit. The reported results are common and expected.

Vacuum samples for mold spores

On August 9, 2011, BSG collected a total of five (5) vacuum samples for mold spores. The vacuum samples were collected from the carpets of three areas on the fourth floor area of concern and two control samples. The results from the area of concern and control samples were similar. Specifically, all of the samples identified "rare" *Aspergillius/Penicillium*-Like spores. *Aspergillius/Penicillium*-Like spores are common in low or "rare" concentrations in carpets due to foot traffic.

August 15, 2011

The August 15th site investigation provided both Client and BSG representatives with the opportunity to review preceding IAQ findings, and discuss / investigate additional items of identified interest. Specifically, BSG's Certified Industrial Hygienist - Mr. Price, and Mr. Nemetz, conducted further inquiries and inspections pertaining to:

- The heating, ventilation and air conditioning (HVAC) duct system serving the Fourth Floor, and the remainder of the building, in general. As part of this inquiry, BSG requested, and was provided access to review mechanical engineering blueprints associated with a circa 1991 retrofit of the building's HVAC system. This retrofit encompassed extensive removals / additions of above-ceiling (i.e., ceiling plenum) air supply ductwork; and, the establishment of a separate HVAC system - serving the First and Ground Floors.
- An inspection of the Penthouse HVAC mechanical equipment; and, a review of a recent air conditioning coil cleaning operation - conducted by Client Maintenance personnel.
- Limited above-ceiling inspection of supply ductwork and inline, variable air volume (VAV) boxes regulating ducted airflow within the cited Fourth Floor region of IAQ concern.
- A general assessment of the relative quantity and spatial arrangement of the suspended ceiling mounted, open return grills receiving occupied space return air delivered towards the Penthouse HVAC equipment via the ceiling plenum's negative air pressurization.
- Limited intrusive (below select windows) and non-intrusive (above ceiling) of select exterior wall cavities were made. The intrusive work involved mostly small, floor-level cutouts of gypsum wallboard beneath select windows. The County performed cutting of the wallboard.
- A limited inspection of select bathrooms' apparent exhausted air capacity.
- A limited assessment of the Third Floor's *Employee Lounge* grill / food preparation room area as a potential contributing source of the reported odor complaints.

It should be noted that while this investigation was completed during normal business hours, the Fourth Floor was effectively not occupied. The respective employees had been reportedly re-located on a temporary basis - in response to the subject IAQ concern. Reportedly, other employees have been relocated to other areas of the building due to the odor complaints. Mr. James McCrady, the Union County Risk Manager provided information and access to BSG during the investigation activities BSG's limited investigation of the Fourth Floor, and the upper floor HVAC system as a whole, noted the following based upon BSG inspection, and/or Client input:

- As reported, the odor events were described as a relatively rapid onsets, affecting most prominently, a very limited portion of the Fourth Floor. While these onsets varied in timing, there did appear to be an associated pattern of onset - approximately 10:30 to 11:30 AM - potentially associated with the initial, full activation of the corresponding regions supply ductwork variable air volume (VAV) box. It should be noted that the odor was detected several times outside of the aforementioned usual time.

  VAV boxes serve as the ducted airs inline regulator of wall-mounted, thermostat-controlled heating and cooling. Whereas heating is supplied via a piped hot water coil coupled with air volume delivery, cooling season has the VAV boxes varying the volume of Penthouse derived, conditioned air. Reportedly regulating between 25 to 100 percent of maximum ducted airflow capacity, occupants of the immediate service region are likely to discern a perceptible increase of delivered airflow triggered by the interconnected, office wall-mounted, thermostat control. Within the subject period of odor concern, this increased need for cooling would be triggered via a combination of routine workday build-up of occupancy and heat-generating activity (e.g., electronic equipment usage), as well as, any outdoor-derived heat burden (e.g., rising air temperature, direct sunlight window exposure).

- BSG's correlation of the Fourth Floor's predominant region of odor complaints (i.e., proximate to Ms. Daisy Ortiz's cubicle), observed a total of four (4) VAV box regulated duct branches. Of interest, each of these branches received its air supply via a single supply trunk, though the VAV box specific to serving the one-room office of Ms. Trisha Stone was not appreciably linked to odor emissions. This observation leads to the conclusion that the respective trunk line does not serve as the primary pathway of odor delivery.

  BSG's above-ceiling inspection of the ceiling plenum observed a lack of water piping (supply or drainage), plumbing vent piping, or bathroom exhaust vent ducts within this quadrant of the floor. Further, given the positive pressurization of air supply ductwork - coupled with the surrounding ceiling plenum's negative air pressurization - it would appear highly improbable the local supply ductwork could draw-in a locally-derived odor source.

- The limited above-ceiling inspections also found a lack of water leakage indication - with the noted exception of the minor condensate "sweating" of small, un-insulated segments of the "dormant" hot water piping connected to select VAV boxes, nor the visible indication of apparent mold growth (AMG).

- Return air derived from Floors 2-6 is captured via the above ceiling's plenum negative air pressurization, as derived from two (2) interior core, vertical return stack inlets feeding the Penthouse-based, HVAC system. Return air induction is accomplished via ceiling - mounted, open grills providing a "vacuum-like" intake. Therefore, both the sizing and spatial arrangement (i.e., relative to the floor area and the vertical return stack inlets) provides the determining of balanced return air extraction. As observed, a relatively reduced number of return grills appeared to be provided, coupled with a possible spatial arrangement issue beyond the capacity of BSG's assigned investigators. However, previous measurements of carbon dioxide (CO2) levels appeared to indicate a potential deficiency of balanced air supply / return. It should be noted that these documented levels do not constitute a health concern, and are, in fact, within compliance of the applicable New Jersey Indoor Air Quality Standard (N.J.A.C. 12:100).
- An inspection of the Penthouse HVAC system - and, associated Rooftop air inlet - was found to indicate no apparent IAQ concern. While present, an explanation was provided of the Client Maintenance personnel's air conditioning coil cleaning operation - conducted in late July as a reportedly precautionary measure - which also did not appear to indicate an IAQ-generating concern.
- Within the Third Floor *Employee Lounge*, two (2) apparent exhaust "diffusers" were identified above the food preparation / grill area. A later confirmation by Client personnel, confirmed these as exhaust vent inlets, leading above ceiling to an adjoining, window panel-mounted, exterior exhaust louver. An identified electrical activation has been located, correcting a non-usage situation reportedly extending approximately five (5) years. Despite this discovery, BSG determined that cooking odors related to this room area did not appear likely a contributing factor on the relatively distant, Fourth Floor office corner.
- BSG did not observe any AMG on the readily visible gypsum wallboard. In an effort to confirm the absence or presence of mold growth the County cut into walls in several locations. None of the cut walls had readily AMG. However, within the wall cavity of C. Topolosky's cubicle there was approximately 10 square feet of molded gypsum in various pieces. It appears that this molded gypsum was part of a previous mold remediation project as there is no obvious cause and no other water-stained or molded materials in the space.
- Neither BSG nor County employees detected the odor during the August 15th inspection.

August 23rd and 24th, 2011

As part of this project, BSG employees stationed themselves at Daisy Ortiz's desk in hopes of detected the odor. While BSG was onsite, the county decided to remediate the mold growth discovered on the pieces of gypsum wallboard found in the wall cavity during the August 15th investigation.

On August 24, 2011, BSG collected a total of eleven (11) air samples for total airborne fungal structure analysis. These were collected within the fourth floor area of concern, as well as control sample locations selected outdoors, and upon the 6th floor.

As part of this air sampling effort, the air sampling occurred pre- and post-remediation of previously identified regions of AMG - totaling less than ten (10) square feet - and, largely comprised of AMG-impacted, interior wall cavity surface of gypsum wallboard, located near floor level with in C. Topoloski's cubicle.

As an indication of a successful mold remediation operation, and more generally, the relative lack airborne fungal structures (i.e., mold) contamination within the respective office environ, each total fungal structure airborne concentration was found to be less than the outdoor and 6th Floor - itself, not representing a reading of concern - control air samples. In addition, the range of mold types identified appeared in relative agreement with the outdoor air influence, providing an industry-recognized confirmation of the lack of significant indoor mold growth - as based upon specific the region and times of the air sampling. Therefore, it may be concluded that the subject odor events do not appear to be associated with an indoor mold growth problem.

III. CONCLUSIONS AND RECOMMENDATIONS

The results of the IAQ investigation to date has not confirmed the presence, or identifiable source(s) of the reported odor. BSG appreciates the valid concerns and experiences of those individuals directly encountering the reported odor events. However, based upon the range BSG conducted environmental sampling and building inspections to date, there does not appear to be a significant IAQ evident.

Based on what has been determined, it appears these odor events may be associated with this summer's extended period of unusual heat, and the resultant burden it would have placed on the building's control of indoor, air conditioned comfort. While a "system-wide" HVAC problem does not appear evident, identified "non-odor" problems elsewhere in the respective systems may serve to mitigate, or diminish the causation of future odor events, let alone advancing the relative comfort of building occupants, and/or energy-usage efficiency.

As previously discussed, the observed ceiling-mounted, open grill access of air reaching the return ceiling plenum may benefit from a qualified assessment. Potential corrections may lead to a greater distribution of supplied air, coupled with a more-balanced extraction of system return air. The assessment(s) should take into consideration, but not necessarily be limited to: the relative control of outdoor air intake (i.e., Maintenance Staff perceived or equipment indicated vs. actual). It is further suggested that any planned inspections of the building's HVAC systems - assuming a lack of preceding, future odor events - should be conducted sufficiently prior to next year's cooling season, so as to allow for any identified repairs.

Given the predominant area of odor concern is has been effectively localized, it is recommended that the aforementioned, four (4) supply air duct branches - inclusive of the respective VAV boxes - be internally inspected by a qualified HVAC duct inspector. For the VAV boxes, this may consist of a "duct-adjacent" intrusive visual inspection, rather than a dismantling of the boxes. Otherwise, the duct interiors should realized a complete visual inspection, so as to effectively rule out an unlikely presence of decomposed rodent(s), or indications of biological growth.

As previously noted, occupant blocked (e.g., cardboard, tape, etc.), supply air diffusers should be prevented to ensure designed air delivery. The County may consider testing and balancing select regions where comfort issues have been reported, since the relative level of system balance in not currently known.

APPENDIX A

SAMPLING PROTOCOLS

Methodology for Collection of Airborne Fungal Structure Samples (Non-Culturable)

BSG obtained air samples to determine if indoor mold growth may be contributing to an elevated, indoor airborne fungal structure concentrations within the specifically sampled regions, at the time of sampling. In addition, the range of mold types identified would be compared to outdoor and remote indoor sampling results, so as to determine if a relative mold-type ratio could provide indication of indoor mold growth, even at demonstrably lower, total quantitative counts.

Air sampling for airborne concentrations of total fungal structures (e.g., both viable and non-viable reproductive spores, hyphae, other identifiable growth fragments) were obtained via Air-O-Cell™ sampling cassettes connected to pre- and post-calibrated, vacuum air sampling pumps set to fifteen liters per minute (15 lpm) of air flow. Each sample was collected for a ten (10) minute duration.

Upon laboratory receipt, these air sampling cassettes were prepared as a microscopic slide - essentially, an airstream-exposed, glued collection surface contained within the cassette - prior to undergoing an optical light, direct microscopic identification analysis conducted by a qualified microbiologist. The resulting air sample results are expressed as a calculated quantification of total fungal structures per cubic meter of air, as well as the specific mold-types identified.

Interpretation of Microbiological Sampling Results

At the present time, there are no accepted standards regarding the classification of "safe" or "unsafe" indoor airborne mold contamination. The recognized methodology of interpreting this manner of fungal-specific air sampling is to compare sampled indoor concentrations with building inlet appropriate (i.e., near where outdoor air is drawn in, and then internally distributed) sampling locations. Generally, indoor concentrations should be found to be similar - and, preferably lower - than measured outdoor concentrations. Likewise, the types of fungi identified indoor should relatively match those found outdoors, and within the relative ratio of concentration (i.e., dominant types of indoor fungi should be similar to those found dominant outdoors). Differences in the variety or relative concentration of fungi types may also provide indication of specific forms of indoor growth conditions (e.g., select species are predominantly associated with wet, or long-term, water-damaged conditions).

Vacuum Samples

Vacuum sampling results are provided based upon the analyzed sample density - by specie specific concentration - and, the surface area vacuumed. The laboratory classifies its reported result based upon the relative specie count per area sampled (i.e., two (2) square feet of carpet vacuumed) and analyzed. These are listed as *rare* (a 1-10 count), *low* (11-100), *medium* (101-1000), and *high* (>1000). Where discernible fungal structures are not indicated, the respective report column is left blank.

Trace findings of specific fungal structures generally indictates a settled particulate form of mold contamination, generally perceived as a routine occurence, unless otherwise linked to an identified indoor mold growth source of contamination. The total mold biomass reported is laboratory report characterized as: *normal background*; *settled biomass*; *residual biomass*; *slight growth*; *moderate growth*; or, *significant growth.*

Swab Samples
Swab samples are collected using a swab conditioned with a 2-mil butter field solution. The sample was collected over a two inch area. The samples were cultured using trypic soy agar.

USEPA TO-15 Organic Chemical Vapor Monitoring Methodology

As a means of accessing potential organic chemical contribution to the IAQ concern, BSG collected USEPA Total Organic - 15 (TO-15) Method (with additional screening) air samples using EMSL laboratory-prepared Summa canisters. Each sample was set to collect an approximate twenty-four hour (24-hr) sample via a constant flow, calibrated inlet valve set at 3.5 milliliters per min (ml/min), resulting in a total air sample capture volume of five (5.0) liters. The sampling started at approximately 1030 on August 8th, with the collected sample canisters retrieved August 9th for overnight, chain of custody, shipment to EMSL. Per BSG selection, the selected USEPA TO-15 Method analysis included a *Library Search* option designed to tentativel match additional organic chemical vapors. Analysis of the samples was conducted under a Gas Chromatography / Mass Spectrometry (GC/MS) analytical methodology.

Collected environmental samples were shipped overnight (next business day) using chain of custody procedures to EMSL Analytical, Inc. (EMSL), laboratory for qualified microbiological analysis. EMSL is an American Industrial Hygiene Association (AIHA) accredited *Environmental Microbiology* laboratory. Appendix B of this report summarizes the locations of the various samples obtained, and provides a copy of the respective laboratory analytical results.

BIRDSALL SERVICES GROUP
ENGINEERS & CONSULTANTS

Union County
Job No. 07205105000
September 20, 2011

APPENDIX B

SAMPLING LOG AND ANALYTICAL DATA

MICROBIOLOGICAL INVESTIGATION SAMPLING LOG				
Sampling Date	**Sample Type**	**Sampling Analysis**	**Sample Number**	**Sample Location**
8/9/11	Swab	Culturable Bacteria	07205-080911-S1	Carpet by Daisy Ortiz's desk
8/9/11	Swab	Culturable Bacteria	07205-080911-S2	Carpet by Youth Commission
8/9/11	Swab	Culturable Bacteria	07205-080911-S3	Carpet by IDEC
8/9/11	Swab	Culturable Bacteria	07205-080911-S4	Carpet by Labor Management
8/9/11	Swab	Culturable Bacteria	07205-080911-S5	Carpet by Human Services
8/9/11	Vacuum	Fungal Structures	07205-080911-V1	Carpet by Daisy Ortiz's desk
8/9/11	Vacuum	Fungal Structures	07205-080911-V2	Carpet by Youth Commission
8/9/11	Vacuum	Fungal Structures	07205-080911-V3	Carpet by IDEC
8/9/11	Vacuum	Fungal Structures	07205-080911-V4	Carpet by Labor Management
8/9/11	Vacuum	Fungal Structures	07205-080911-V5	Carpet by Human Services
8/23/11	Air	Fungal Structures	07205-082311-1	Daisy Ortiz's desk
8/23/11	Air	Fungal Structures	07205-082311-2	6th Floor Elevator Lobby
8/23/11	Air	Fungal Structures	07205-082311-3	Roof by Fresh Air Intake
8/23/11	Air	Fungal Structures	07205-082311-4	Youth Services

MICROBIOLOGICAL INVESTIGATION SAMPLING LOG				
Sampling Date	**Sample Type**	**Sampling Analysis**	**Sample Number**	**Sample Location**
8/23/11	Air	Fungal Structures	07205-082311-5	Daisy Ortiz's desk
8/23/11	Air	Fungal Structures	07205-082311-6	Roof, by Fresh Air Intake
8/23/11	Air	Fungal Structures	07205-082311-7	Freeholder Meeting Room
8/23/11	Air	Fungal Structures	07205-082311-8	Daisy Ortiz's desk
8/23/11	Air	Fungal Structures	07205-082311-9	Youth Services
8/23/11	Air	Fungal Structures	07205-082311-10	Daisy Ortiz's desk
8/23/11	Air	Fungal Structures	07205-082311-11	Roof, by Fresh Air Intake

TO-15 SAMPLING LOG				
Sampling Date	**Sample Type**	**Sampling Analysis**	**Sample Number**	**Sample Location**
8/10/11	Bulk	TO-15	07205-080911-Carpet-TO1	Carpet by Daisy Ortiz's desk
8/9/11	Air	TO-15	07205-080911-TO1	Daisy Ortiz's desk
8/9/11	Air	TO-15	07205-080911-TO2	Youth Commission
8/9/11	Air	TO-15	07205-080911-TO3	Labor Management

Indoor Air Quality Chain of Custody

EMSL Order Number *(Lab Use Only)*: 371110920

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

Company: Birdsall	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1415 wyckoff rd	
City/State/Zip: Farmingdale, NJ 07727	
Report To (Name): Brian Nametz	**Fax:**
Telephone: 7327510799	**Email Address:** bnametz@birdsall.com
Project Name/Number:	
Please Provide Results: Email	**Purchase Order:** — **State Samples Taken:** NJ

Turnaround Time (TAT) Options* - Please Check

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

*For RUSH TATs Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)

need results monday by noon = 48HR

Asbestos

PCM - Air
☐ NIOSH 7400
☐ w/ 8hr. TWA

TEM - Air ☐ 4-6hr TAT (AHERA ONLY)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Water
Fibers ≥10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

PLM - Bulk
☐ PLM EPA 600/R-93/116
☐ PLM EPA NOB (<1%)
☐ NYS 198.1 (friable-NY)
☐ NYS 198.6 (non-friable-NY)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/ Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

TEM - Dust
☐ Microvac – ASTM D 5755
☐ Wipe-ASTM D6480

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP

Soil/Rock/Vermiculite
☐ PLM CARB 435 – A (0.25% sensitivity)
☐ PLM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – B (0.1% sensitivity)
☐ EPA Reg. 1 Screening Protocol (Qualitative)

Other: ☐

Lead (Pb)

Flame Atomic Absorption
☐ Chips SW846-7000B or AOAC 974.02
☐ Soil SW846-7000B/7420
☐ Air NIOSH 7082
☐ Wastewater SM3111B or SW846-7000B/7420
☐ ASTM Wipe SW846-7000B/7420
☐ Non ASTM Wipe SW846-7000B/7420
☐ TCLP SW846-1311/7420/SM 3111B

ICP
☐ Air-NIOSH 7300 Modified
☐ Non ASTM Wipe SW846-6010B or C
☐ ASTM Wipe SW846-6010B or C
☐ Soil SW846-6010 B or C
☐ Waste Water SW846-6010B or C
☐ TCLP SW846-6010B or C

Graphite Furnace Atomic Absorption
☐ Soil SW846-7421 ☐ Wastewater EPA 200.9
☐ Air NIOSH 7105 ☐ Drinking Water EPA 200.9

Other: ☐

Microbiology

Wipe and Bulk Samples
☐ Mold & Fungi – Direct Examination
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi Culture (Genus & Species)
☐ Bacterial Count & ID (Up to Three Types)
☐ Bacterial Count & ID (Up to Five Types)
☐ MRSA
☐ *Pseudomonas aeruginosa*

Water Samples
☐ Total Coliform & E.coli (P/A)
☐ Fecal Coliform (SM 9222D)
☐ Sewage Screen
☐ Heterotrophic Plate Count (SM 9215)

Air Samples
☒ Mold & Fungi (Spore Trap)
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi (Genus & Species)
☐ Bacterial Culture & ID (Up to Three Types)
☐ Bacterial Culture & ID (Up to Five Types)
☐ Endotoxin Testing

Real Time Q-PCR (See Analytical Guide for Code)
Code:

Legionella
☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4

Other: ☐

Materials Science

☐ Common Particle ID (large particles)
☐ Full Particle ID (environmental dust)
☐ Basic Material ID (solids)
☐ Advanced Material ID
☐ Physical Testing (Tensile, Compression)
☐ Combustion-by-products (soot, char, etc.)
☐ X-Ray Fluorescence (Elem. analysis)
☐ X-Ray Diffraction (Crystalline Part.)
☐ MMVF's (Fibrous glass, RCF's)
☐ Particle Size (sieve/microscopy/laser)
☐ Combustible Dust
☐ Petrographic Examination
Other: ☐

IAQ

Nuisance Dust NIOSH ☐ 0500 ☐ 0600
Airborne Dust ☐ PM10 ☐ TSP
Silica Analysis: ☐ All Species
Silica Analysis – Single Species
☐ Alpha Quartz ☐ Cristobalite ☐ Tridymite
☐ HVAC Efficiency
☐ Carbon Black
☐ Airborne Oil Mist
Radon Testing: Call for Kit and COC
Other: ☐

Client Sample #'s	670 89 19500 - 1 - 12	**Total # of Samples:**	12
Relinquished (Client):	**Date:** 8/24/11	**Time:**	
Received (Lab):	**Date:** 8-26-11	**Time:**	

Comments/Special Instructions:

RECEIVED
CINNAMINSON, N.J.
2011 AUG 26 A 10 16

SAMPLES ACCEPTED
FOR ANALYSIS BY
EMSL ANALYTICAL INC.

* Per Client email
ON 11 Samples sent

Indoor Air Quality Chain of Custody

EMSL Order Number *(Lab Use Only)*: 371110920

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

COC not Mold

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
371110920-1	Daisy Ortiz's desk	150 L	8/23/11
2	6th floor Elevator lobby		
3	Roof - Fresh air intake		
4	Youth Services		
5	Daisy Ortiz's desk		〃
6	Roof - Fresh air intake		8/24/11
7	Freeholder meeting Room		
8	Daisy Ortiz's desk		
9	Youth Services		
10	Daisy Ortiz's desk		
11	Roof - Fresh air intake		
12	Medic Blank	〃	〃

Comments/Special Instructions:

COC SAMPLES ACCEPTED FOR ANALYSIS BY EMSL ANALYTICAL INC.

RECEIVED
EMSL
CINNAMINSON, N.J.
2011 AUG 26 A 10:16

Asbestos • Lead • Environmental • Materials & Indoor Air Analysis

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-0262 Web: http://www.emsl.com Email:cinnmicrolab@emsl.com

Attn: Brian Nemetz
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727

Proj:

EMSL Order:	371110920
Customer ID:	PMK50B
Collected:	8/23/2011
Received:	8/26/2011
Analyzed:	8/29/2011

Test Report: Air-O - Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (EMSL Method 05-TP-003)

Lab Sample Number:	371110920-0001			371110920-0002			371110920-0003		
Client Sample ID:	07205-10500-1			2			3		
Volume (L):	150			150			150		
Sample Location:	Daisy Ortiz's Desk			6th Floor Elevator Lobby			Roof Fresh Air Intake		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	-	-	-	-	-	-	2*	13*	0.2
Ascospores	-	-	-	-	-	-	34	717	13.3
Aspergillus/Penicillium	1	21	30	1	21	15.8	5	106	2
Basidiospores	2	42	60	4	84	63.2	166	3500	64.9
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1	21	15.8	30	633	11.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	6	127	2.4
Myxomycetes++	-	-	-	1*	7*	5.3	5	106	2
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	21	0.4
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	6	127	2.4
Nigrospora	-	-	-	-	-	-	1	21	0.4
Pestalotia	1*	7*	10	-	-	-	-	-	-
Spegazzinia	-	-	-	-	-	-	1	21	0.4
Total Fungi	**4**	**70**	**100**	**7**	**133**	**100**	**257**	**5390**	**100**
Hyphal Fragment	1	21	-	-	-	-	3	63	-
Insect Fragment	1	21	-	-	-	-	-	-	-
Pollen	1*	7*	-	1*	7*	-	3*	20*	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 300 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

Asbestos • Lead • Environmental • Materials & Indoor Air Analysis

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-0262 Web: http://www.emsl.com Email:cinnmicrolab@emsl.com

Attn: Brian Nemetz
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727

Proj:

EMSL Order: 371110920
Customer ID: PMK50B
Collected: 8/23/2011
Received: 8/26/2011
Analyzed: 8/29/2011

Test Report: Air-O - Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (EMSL Method 05-TP-003)

Lab Sample Number:	371110920-0004			371110920-0005			371110920-0006		
Client Sample ID:	4			5			6		
Volume (L):	150			150			150		
Sample Location:	Youth Services			Daisy Ortiz's Desk			Roof-Fresh Air Intake		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	-	-	-	1*	7*	14.3	5*	33*	0.5
Ascospores	-	-	-	-	-	-	53	1120	18.1
Aspergillus/Penicillium	2	42	50	-	-	-	8	169	2.7
Basidiospores	1	21	25	1	21	42.9	174	3670	59.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	21	25	1	21	42.9	35	739	11.9
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	1	21	0.3
Ganoderma	-	-	-	-	-	-	2	42	0.7
Myxomycetes++	-	-	-	-	-	-	16	338	5.5
Pithomyces	-	-	-	-	-	-	1	21	0.3
Rust	-	-	-	-	-	-	1*	7*	0.1
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	1	21	0.3
Nigrospora	-	-	-	-	-	-	1	21	0.3
Pestalotia	-	-	-	-	-	-	-	-	-
Spegazzinia	-	-	-	-	-	-	-	-	-
Total Fungi	**4**	**84**	**100**	**3**	**49**	**100**	**298**	**6200**	**100**
Hyphal Fragment	-	-	-	-	-	-	4	84	-
Insect Fragment	-	-	-	-	-	-	2*	13*	-
Pollen	1	21	-	-	-	-	6	127	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	3	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

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Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

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Attn: Brian Nemetz
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727

EMSL Order: 371110920
Customer ID: PMK50B
Collected: 8/23/2011
Received: 8/26/2011
Analyzed: 8/29/2011

Proj:

Test Report: Air-O - Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (EMSL Method 05-TP-003)

Lab Sample Number:	371110920-0007			371110920-0008			371110920-0009		
Client Sample ID:	7			8			8		
Volume (L):	150			150			150		
Sample Location:	Freeholder Meeting Room			Daisy Ortiz's Desk			Youth Services		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	1	21	75
Basidiospores	1	21	50	1	21	75	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	21	50	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1*	7*	25	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces	-	-	-	-	-	-	1*	7*	25
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotia	-	-	-	-	-	-	-	-	-
Spegazzinia	-	-	-	-	-	-	-	-	-
Total Fungi	**2**	**42**	**100**	**2**	**28**	**100**	**2**	**28**	**100**
Hyphal Fragment	-	-	-	1	21	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	1*	7*	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 300 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

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Attn: Brian Nemetz
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727

Proj:

EMSL Order:	371110920
Customer ID:	PMK50B
Collected:	8/23/2011
Received:	8/26/2011
Analyzed:	8/29/2011

Test Report: Air-O - Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (EMSL Method 05-TP-003)

Lab Sample Number:	371110920-0010			371110920-0011			
Client Sample ID:	10			11			
Volume (L):	150			150			
Sample Location:	Daisy Ortiz's Desk			Roof-Fresh Air Intake			
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	
Alternaria	-	-	-	-	-	-	
Ascospores	-	-	-	94	1980	29.5	
Aspergillus/Penicillium	1	21	100	2	42	0.6	
Basidiospores	-	-	-	201	4240	63.2	
Bipolaris++	-	-	-	-	-	-	
Chaetomium	-	-	-	-	-	-	
Cladosporium	-	-	-	17	359	5.3	
Curvularia	-	-	-	-	-	-	
Epicoccum	-	-	-	-	-	-	
Fusarium	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	
Myxomycetes++	-	-	-	4	84	1.3	
Pithomyces	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	
Scopulariopsis	-	-	-	-	-	-	
Stachybotrys	-	-	-	-	-	-	
Torula	-	-	-	-	-	-	
Ulocladium	-	-	-	-	-	-	
Cercospora	-	-	-	-	-	-	
Nigrospora	-	-	-	-	-	-	
Pestalotia	-	-	-	-	-	-	
Spegazzinia	-	-	-	-	-	-	
Total Fungi	**1**	**21**	**100**	**318**	**6710**	**100**	
Hyphal Fragment	1	21	-	1	21	-	
Insect Fragment	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	21	-	-	21	-	
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	
Skin Fragments (1-4)	-	1	-	-	1	-	
Fibrous Particulate (1-4)	-	1	-	-	1	-	
Background (1-5)	-	1	-	-	1	-	

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

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Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

USEPA TO-15 Data Report

Client	Report Date
Birdsall Services Group 1415 Wyckoff Rd; Suite 206 Farmingdale, NJ 07727 Attn: Brian Nemetz	08/26/11
	Project Receipt Date
	08/10/11
Client Project ID	**EMSL Project ID**
07205-105000	491100674

Sample Summary

EMSL Sample ID	Client Sample ID	Sample Collection Date
491100674-1	C1	
491100674-BLK	Chamber Blank	08/23/2011

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and electronic data has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

Marjorie Howley

8/26/2011

Marjorie Howley
TO-15 Laboratory Manager
EMSL Analytical, Inc

Indoor Air Quality Chain of Custody

EMSL Order Number *(Lab Use Only)*: 491100674

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

Company: Birdsall	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments" *Third Party Billing requires written authorization from third party*
Street: 1415 wyckoff rd	
City/State/Zip: Farmingdale, NJ 07727	
Report To (Name): Brian Nemetz	**Fax:**
Telephone: 7327510799	**Email Address:** bnemetz@birdsall.com
Project Name/Number: 07205 - 10000	
Please Provide Results: Email	**Purchase Order:** **State Samples Taken:** NJ

Turnaround Time (TAT) Options* - Please Check

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

**For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test.*
Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)

Asbestos

PCM - Air
☐ NIOSH 7400
☐ w/ 8hr. TWA

TEM - Air ☐ 4-6 hr TAT (AHERA ONLY)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Water
Fibers ≥10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

PLM - Bulk
☐ PLM EPA 600/R-93/116
☐ PLM EPA NOB (<1%)
☐ NYS 198.1 (friable-NY)
☐ NYS 198.6 (non-friable-NY)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/ Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)

TEM - Dust
☐ Microvac – ASTM D 5755
☐ Wipe-ASTM D6480

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP

Soil/Rock/Vermiculite
☐ PLM CARB 435 – A (0.25% sensitivity)
☐ PLM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – B (0.1% sensitivity)
☐ EPA Reg. 1 Screening Protocol (Qualitative)
Other: ☐

Lead (Pb)

Flame Atomic Absorption
☐ Chips SW846-7000B or AOAC 974.02
☐ Soil SW846-7000B/7420
☐ Air NIOSH 7082
☐ Wastewater SM3111B or SW846-7000B/7420
☐ ASTM Wipe SW846-7000B/7420
☐ non ASTM Wipe SW846-7000B/7420
☐ TCLP SW846-1311/7420/SM 3111B

ICP
☐ Air NIOSH 7300 Modified
☐ non ASTM Wipe SW846-6010B or C
☐ ASTM Wipe SW846-6010B or C
☐ Soil SW846-6010 B or C
☐ Waste Water SW846-6010B or C
☐ TCLP SW846-6010B or C

Graphite Furnace Atomic Absorption
☐ Soil SW846-7421 ☐ Wastewater EPA 200.9
☐ Air NIOSH 7105 ☐ Drinking Water EPA 200.9

Other: ☐

Microbiology

Wipe and Bulk Samples
☒ Mold & Fungi – Direct Examination
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi Culture (Genus & Species)
☐ Bacterial Count & ID (Up to Three Types)
☐ Bacterial Count & ID (Up to Five Types)
☐ MRSA
☐ *Pseudomonas aeruginosa*

Water Samples
☐ Total Coliform & E.coli (PA)
☐ Fecal Coliform (SM 9222D)
☐ Sewage Screen
☐ Heterotrophic Plate Count (SM 9215)

Air Samples
☐ Mold & Fungi (Spore Trap)
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi (Genus & Species)
☐ Bacterial Culture & ID (Up to Three Types)
☐ Bacterial Culture & ID (Up to Five Types)
☐ Endotoxin Testing

Real Time Q-PCR (See Analytical Guide for Code)
Code:

Legionella
☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4

Other: ☐

Materials Science

☐ Common Particle ID (large particles)
☐ Full Particle ID (environmental dust)
☐ Basic Material ID (solids)
☐ Advanced Material ID
☐ Physical Testing (Tensile, Compression)
☐ Combustion-by-products (soot, char, etc.)
☐ X-Ray Fluorescence (elem. analysis)
☐ X-Ray Diffraction (Crystalline Part.)
☐ MMVF's (Fibrous glass, RCF's)
☐ Particle Size (sieve/microscopy/laser)
☐ Combustible Dust
☐ Petrographic Examination
Other: ☐

IAQ

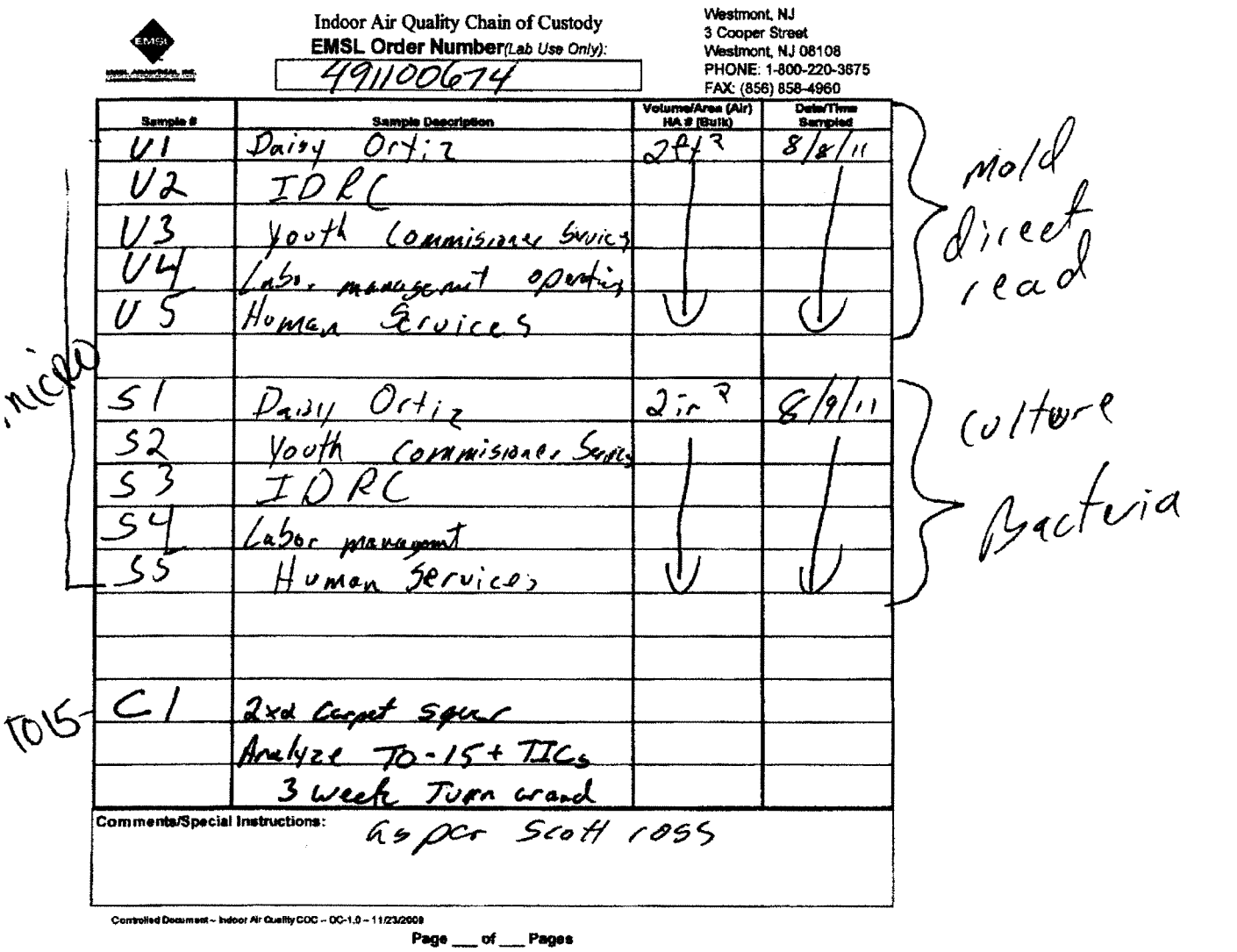
Nuisance Dust NIOSH ☐ 0500 ☐ 0600
Airborne Dust ☐ PM10 ☐ TSP
Silica Analysis: ☐ All Species
Silica Analysis – Single Species
☐ Alpha Quartz ☐ Cristobalite ☐ Tridymite
☐ HVAC Efficiency
☐ Carbon Black
☐ Airborne Oil Mist
Radon Testing: Call for Kit and COC
Other: ☐

Client Sample #'s	-	**Total # of Samples:**	11
Relinquished (Client):	**Date:** 8/9/11	**Time:**	
Received (Lab): A - Longo - Pick	**Date:** 8/9/11	**Time:** 1245PM	

Comments/Special Instructions:
Received: Pickup 08-09-11 19:35
Relinquished: Pickup 08-09-11 22:05

Read-DMB-COC-8A
8-10-11

2011 AUG 10 AM 6:28



Indoor Air Quality Chain of Custody

EMSL Order Number *(Lab Use Only)*: 491100674

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
V1	Daisy Ortiz	2ft²	8/8/11
V2	IDRC		
V3	Youth Commissioner Service		
V4	Labor management opening		
V5	Human Services		
S1	Daisy Ortiz	2in²	8/9/11
S2	Youth Commissioner Service		
S3	IDRC		
S4	Labor management		
S5	Human Services		
C1	2nd Carpet square		
	Analyze TO-15 + TICs		
	3 week Turn around		

mold direct read

culture Bacteria

nickel

TO15

Comments/Special Instructions: as per Scott ross

Controlled Document – Indoor Air Quality COC – OC-1.0 – 11/23/2009

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CINNABAR
2011 AUG 10 AM 6:20

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-105000	**EMSL ID:**	491100674-1
Client Sample ID:	C1	**Canister ID:**	HD
Primary Lab File ID:	K9085.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/25/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	1.0		ND	2.4
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5
Chloromethane	74-87-3	50.49	0.55	0.50		1.1	1.0
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3
Ethanol	64-17-5	46.07	57	0.50	E	110	0.94
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	1.9	0.50		11	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	29	0.50	E	72	1.2
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8
Acetone	67-64-1	58.08	17	0.50		41	1.2
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0
Acetonitrile	75-05-8	41.00	1.9	0.50		3.1	0.84
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6
Carbon disulfide	75-15-0	76.14	0.97	0.50		3.0	1.6
Methylene chloride	75-09-2	84.94	3.8	0.50		13	1.7
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8
2-Butanone(MEK)	78-93-3	72.10	0.70	0.50		2.1	1.5
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4
Tetrahydrofuran	109-99-9	72.11	1.2	0.50		3.7	1.5
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	0.50		ND	2.3
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0
Benzene	71-43-2	78.11	ND	0.50		ND	1.6
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-105000	**EMSL ID:**	491100674-1
Client Sample ID:	C1	**Canister ID:**	HD
Primary Lab File ID:	K9085.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/25/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3
Toluene	108-88-3	92.14	3.9	0.50		15	1.9
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2
Xylene (para, meta)	1330-20-7	106.2	ND	1.0		ND	4.3
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2
Styrene	100-42-5	104.1	ND	0.50		ND	2.1
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	9.4	10	94%

Qualifier Definitions

B = Compound also found in method blank.

ND= Non Detect

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Air Analysis Data Summary

EPA Compendium TO-15

Tentatively Identified Compounds

Client Project Name:	07205-105000	**EMSL ID:**	491100674-1TIC
Client Sample ID:	C1	**Canister ID:**	HD
Primary Lab File ID:	K9085.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/25/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
Difluorochloromethane	000075-45-6	86	1.1	JN	4.0	4.86
Acetaldehyde	000075-07-0	44	1.1	JN	2.0	6.05
Methacrolein	000078-85-3	70	0.92	JN	2.6	13.90
Unknown		92	0.83	J	3.1	15.13
Trichloromethane	000067-66-3	118	0.98	JN	4.7	16.22
1-Butanol	000071-36-3	74	0.96	JN	2.9	17.84
Disulfide, dimethyl	000624-92-0	94	1.2	JN	4.6	21.58
Hexanal	000066-25-1	100	1.2	JN	4.9	22.74
Unknown		92	0.87	J	3.3	25.78
Unknown		92	1.6	J	6.2	25.86
Unknown		92	1.9	J	7.0	27.35
Octanal	000124-13-0	128	0.96	JN	5.0	27.51
Unknown		92	1.5	J	5.5	28.09
Nonanal	000124-19-6	142	2.1	JN	12	29.49
Tetradecane	000629-59-4	198	0.95	JN	7.7	34.25

Qualifier Definitions

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: 07205-105000 **EMSL ID:** 491100674-BLK
Client Sample ID: Chamber Blank **Canister ID:** HD

Primary Lab File ID: K9084.D **Dilution Lab File ID:** NA
Analysis Date: 08/25/2011 **Analysis Date:** NA
Sample Vol(ml): 250 **Sample Vol(ml):** NA
Dilution Factor: 1 **Dilution Factor:** NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	1.0		ND	2.4
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5
Chloromethane	74-87-3	50.49	ND	0.50		ND	1.0
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3
Ethanol	64-17-5	46.07	17	0.50		32	0.94
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.64	0.50		3.6	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	17	0.50		41	1.2
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8
Acetone	67-64-1	58.08	13	0.50		31	1.2
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6
Methylene chloride	75-09-2	84.94	0.92	0.50		3.2	1.7
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8
2-Butanone(MEK)	78-93-3	72.10	2.8	0.50		8.2	1.5
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4
Tetrahydrofuran	109-99-9	72.11	3.3	0.50		10	1.5
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	0.50		ND	2.3
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0
Benzene	71-43-2	78.11	ND	0.50		ND	1.6
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-105000	**EMSL ID:**	491100674-BLK
Client Sample ID:	Chamber Blank	**Canister ID:**	HD
Primary Lab File ID:	K9084.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/25/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3
Toluene	108-88-3	92.14	ND	0.50		ND	1.9
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2
Xylene (para, meta)	1330-20-7	106.2	ND	1.0		ND	4.3
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2
Styrene	100-42-5	104.1	ND	0.50		ND	2.1
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	9.4	10	94%

Qualifier Definitions

B = Compound also found in method blank.

ND= Non Detect

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Air Analysis Data Summary

EPA Compendium TO-15

Tentatively Identified Compounds

Client Project Name:	07205-105000	**EMSL ID:**	491100674-BLKTIC
Client Sample ID:	Chamber Blank	**Canister ID:**	HD
Primary Lab File ID:	K9084.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/25/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
No TICs Reported						

Qualifier Definitions

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

371109926

Indoor Air Quality Chain of Custody

EMSL Order Number (Lab Use Only):

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

SAMPLES ACCEPTED FOR ANALYSIS BY EMSL ANALYTICAL

Company: Birdsall	EMSL-Bill to: ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1115 wyckoff rd	
City/State/Zip: Farmingdale, NJ 07727	
Report To (Name): Brian Nemetz	Fax:
Telephone: 7327510799	Email Address: bnemetz@birdsall.com
Project Name/Number: 07205 - 105000	
Please Provide Results: Email	Purchase Order: / State Samples Taken: NJ

Turnaround Time (TAT) Options* - Please Check

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

*For RUSH TATs Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (ie. 24 Hour = End of Next Business Day)

Asbestos

PCM - Air
☐ NIOSH 7400
☐ w/ 8hr. TWA

TEM - Air ☐ 4-4.5hr TAT (AHERA ONLY)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Water
Fibers > 10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

PLM - Bulk
☐ PLM EPA 600/R-93/116
☐ PLM EPA NOB (<1%)
☐ NYS 198.1 (friable-NY)
☐ NYS 198.6 (non-friable-NY)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/ Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)

TEM - Dust
☐ Microvac – ASTM D 5755
☐ Wipe-ASTM D6480

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP

Soil/Rock/Vermiculite
☐ PLM CARB 435 – A (0.25% sensitivity)
☐ PLM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – B (0.1% sensitivity)
☐ EPA Reg. 1 Screening Protocol (Qualitative)
Other:

Lead (Pb)

Flame Atomic Absorption
☐ Chips SW846-7000B or AOAC 974.02
☐ Soil SW846-7000B/7420
☐ Air NIOSH 7082
☐ Wastewater SM3111B or SW846-7000B/7420
☐ ASTM Wipe SW846-7000B/7420
☐ non ASTM Wipe SW846-7000B/7420
☐ TCLP SW846-1311/7420/SM 3111B

ICP
☐ Air NIOSH 7300 Modified
☐ non ASTM Wipe SW846-6010B or C
☐ ASTM Wipe SW846-6010B or C
☐ Soil SW846-6010 B or C
☐ Waste Water SW846-6010B or C
☐ TCLP SW846-6010B or C

Graphite Furnace Atomic Absorption
☐ Soil SW846-7421 ☐ Wastewater EPA 200.9
☐ Air NIOSH 7105 ☐ Drinking Water EPA 200.9

Other: ☐

Materials Science

☐ Common Particle ID (large particles)
☐ Full Particle ID (environmental dust)
☐ Basic Material ID (solids)
☐ Advanced Material ID
☐ Physical Testing (Tensile, Compression)
☐ Combustion by-products (soot, char, etc.)
☐ X-Ray Fluorescence (elem. analysis)
☐ X-Ray Diffraction (Crystalline Part.)
☐ MMVF's (Fibrous glass, RCF's)
☐ Particle Size (sieve/microscope/laser)
☐ Combustible Dust
☐ Petrographic Examination
Other: ☐

Microbiology

Wipe and Bulk Samples
☒ Mold & Fungi – Direct Examination
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi Culture (Genus & Species)
☐ Bacterial Count & ID (Up to Three Types)
☒ Bacterial Count & ID (Up to Five Types)
☐ MRSA
☐ Pseudomonas aeruginosa

Water Samples
☐ Total Coliform & E.coli (P/A)
☐ Fecal Coliform (SM 9222D)
☐ Sewage Screen
☐ Heterotrophic Plate Count (SM 9215)

Air Samples
☐ Mold & Fungi (Spore Trap)
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi (Genus & Species)
☐ Bacterial Culture & ID (Up to Three Types)
☐ Bacterial Culture & ID (Up to Five Types)
☐ Endotoxin Testing

Real Time Q-PCR (See Analytical Guide for Code)
Code:

Legionella
☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4
Other: ☐

IAQ

Nuisance Dust NIOSH ☐ 0500 ☐ 0600
Airborne Dust ☐ PM10 ☐ TSP
Silica Analysis: ☐ All Species
Silica Analysis – Single Species
☐ Alpha Quartz ☐ Cristobalite ☐ Tridymite
☐ HVAC Efficiency
☐ Carbon Black
☐ Airborne Oil Mist
Radon Testing: Call for Kit and COC
Other: ☐

Client Sample #'s		Total # of Samples: 11
Relinquished (Client): [signature]	Date: 8/9/11	Time:
Received (Lab): A. Lorenzo-Pina	Date: 8/9/11 1245	Time:

Comments/Special Instructions:
Received: [signature] 08-09-11 19:35
Relinquished: [signature] 08-09-11 22:05

Controlled Document – Indoor Air Quality COC – OC-1.0 – 11/23/2009

Page 1 of ___ Pages

Recd-MMB-COR-8A 8-10-11

2011 AUG 10 AM 6:28
EMSL CINNAMINSON

Indoor Air Quality Chain of Custody

EMSL Order Number *(Lab Use Only)*:

Westmont, NJ
3 Cooper Street
Westmont, NJ 08108
PHONE: 1-800-220-3675
FAX: (856) 858-4960

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
V1	Daisy Ortiz	2ft²	8/8/11
V2	IDRC		
V3	Youth Commissioner Services		
V4	Labor management opening		
V5	Human Services		
S1	Daisy Ortiz	2in²	8/9/11
S2	Youth Commissioner Svcs		
S3	IDRC		
S4	Labor management		
S5	Human Services		
C1	2nd Carpet Spore		
	Analyze TO-15 + TICs		
	3 week Turn around		

mold direct read

culture Bacteria

TO15

Comments/Special Instructions: as per Scott ross

2011 AUG 10 AM 6:28

CINNAMINSON

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-0262 Email: cinnmicrolab@emsl.com

Attn: **Brian Nemetz**
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727

Project: **07205-105000**
Fax: (732) 751-9592 Phone: (732) 751-0799530

Customer ID: PMK50B
Customer PO:
EMSL Order: 371109926
EMSL Proj:
Received: 08/10/2011 8:00 AM
Analysis Date: 8/17/2011

Test Report: Identification and Enumeration of Culturable Bacteria by Swab (Five Most Prominent Types (EMSL Method M009))

Sample Description	Location	Media	Temp (C)	Sample Measure (in^2)	Analytical Sensitivity (CFU/in^2)	Dilution	Bacteria Identification	Colony Count	CFUs (CFU/in^2)
S 1	Daisy Ortiz	SBA	35	2	50	100	*Bacillus sp.*	1	50
							Total	**1**	**50**
371109926-0006									
S 2	Youth Commission	SBA	35	2	50	100	**None Detected**		
371109926-0007									
S 3	IDRC	SBA	35	2	50	100	*Bacillus sp.*	4	200
					50	100	*Gram positive rod*	2	100
					50	100	*Micrococcus sp.*	3	150
							Total	**9**	**450**
371109926-0008									
S 4	Labor Mgmt	SBA	35	2	50	100	**None Detected**		
371109926-0009									
S 5	Human Services	SBA	35	2	50	100	**None Detected**		
371109926-0010									

No discernable blank was submitted with this group of samples

Initial report from 08/13/2011 09:07:45

Farbod Nekouei, M.S., Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

USEPA TO-15 Data Report

Client	Report Date
Birdsall Services Group 1415 Wyckoff Road, Suite 206 Farmingdale, NJ 07727 Attn: Brian Nemetz	08/14/11
	Project Receipt Date
	08/10/11
Client Project ID	**EMSL Project ID**
07205-10500	491100675

Sample Summary

EMSL Sample ID	Client Sample ID	Sample Collection Date
491100675-1	Labor Management	08/08/2011
491100675-2	Youth Services	08/08/2011
491100675-3	Daisy Ortiz	08/08/2011

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and electronic data has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

Marjorie Howley

8/14/2011

Marjorie Howley
TO-15 Laboratory Manager
EMSL Analytical, Inc

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-10500	**EMSL ID:**	491100675-1
Client Sample ID:	Labor Management	**Canister ID:**	E0451
Primary Lab File ID:	K8903.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/12/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	1.0		ND	2.4
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.52	0.50		2.6	2.5
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5
Chloromethane	74-87-3	50.49	0.61	0.50		1.3	1.0
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3
Ethanol	64-17-5	46.07	120	0.50	E	220	0.94
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	22	0.50		55	1.2
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8
Acetone	67-64-1	58.08	14	0.50		34	1.2
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8
2-Butanone(MEK)	78-93-3	72.10	0.96	0.50		2.8	1.5
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0
Ethyl acetate	141-78-6	88.10	0.66	0.50		2.4	1.8
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	0.50		ND	2.3
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1
n-Heptane	142-82-5	100.2	0.77	0.50		3.2	2.0
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0
Benzene	71-43-2	78.11	ND	0.50		ND	1.6
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-10500	**EMSL ID:**	491100675-1
Client Sample ID:	Labor Management	**Canister ID:**	E0451
Primary Lab File ID:	K8903.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/12/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3
Toluene	108-88-3	92.14	**1.0**	0.50		**3.8**	1.9
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3
Ethylbenzene	100-41-4	106.2	**1.1**	0.50		**5.0**	2.2
Xylene (para, meta)	1330-20-7	106.2	**3.9**	1.0		**17**	4.3
Xylene (Ortho)	95-47-6	106.2	**0.99**	0.50		**4.3**	2.2
Styrene	100-42-5	104.1	ND	0.50		ND	2.1
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10.7	10	107%

Qualifier Definitions

B = Compound also found in method blank.

ND= Non Detect

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Air Analysis Data Summary

EPA Compendium TO-15

Tentatively Identified Compounds

Client Project Name: 07205-10500 **EMSL ID:** 491100675-1TIC
Client Sample ID: Labor Management **Canister ID:** E0451

Primary Lab File ID: K8903.D **Dilution Lab File ID:** NA
Analysis Date: 08/12/2011 **Analysis Date:** NA
Sample Vol(ml): 250 **Sample Vol(ml):** NA
Dilution Factor: 1 **Dilution Factor:** NA

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
Ethane, 1,1-difluoro-	000075-37-6	66	32	JN	85	4.81
Unknown		92	3.6	J	13	5.27
Butane	000106-97-8	58	5.0	JN	12	5.66
Acetaldehyde	000075-07-0	44	1.5	JN	2.6	6.06
Butane, 2-methyl-	000078-78-4	72	3.3	JN	9.6	7.04
Pentane	000109-66-0	72	18	JN	53	7.85
Unknown		92	0.92	J	3.5	15.13
Hexane, 3-methyl-	000589-34-4	100	1.0	JN	4.1	16.87
Cyclohexane, methyl-	000108-87-2	98	1.4	JN	5.5	19.52
Hexanal	000066-25-1	100	1.5	JN	6.1	22.74
D-Limonene	005989-27-5	136	1.4	JN	7.6	28.05
Undecane	001120-21-4	156	0.95	JN	6.1	28.43
Nonanal	000124-19-6	142	1.6	JN	9.0	29.49

Qualifier Definitions

B = Compound also found in method blank.
J= Estimated value based on a 1:1 response to internal standard.
N= Presumptive evidence of compound based on library match.

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: 07205-10500 **EMSL ID:** 491100675-2
Client Sample ID: Youth Services **Canister ID:** E0354

Primary Lab File ID: K8904.D **Dilution Lab File ID:** NA
Analysis Date: 08/12/2011 **Analysis Date:** NA
Sample Vol(ml): 250 **Sample Vol(ml):** NA
Dilution Factor: 1 **Dilution Factor:** NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	1.0		ND	2.4
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.51	0.50		2.5	2.5
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5
Chloromethane	74-87-3	50.49	0.60	0.50		1.2	1.0
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3
Ethanol	64-17-5	46.07	96	0.50	E	180	0.94
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	22	0.50		55	1.2
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8
Acetone	67-64-1	58.08	14	0.50		33	1.2
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8
2-Butanone(MEK)	78-93-3	72.10	0.91	0.50		2.7	1.5
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0
Ethyl acetate	141-78-6	88.10	0.64	0.50		2.3	1.8
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	0.50		ND	2.3
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1
n-Heptane	142-82-5	100.2	0.69	0.50		2.8	2.0
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0
Benzene	71-43-2	78.11	ND	0.50		ND	1.6
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: 07205-10500 **EMSL ID:** 491100675-2
Client Sample ID: Youth Services **Canister ID:** E0354

Primary Lab File ID: K8904.D **Dilution Lab File ID:** NA
Analysis Date: 08/12/2011 **Analysis Date:** NA
Sample Vol(ml): 250 **Sample Vol(ml):** NA
Dilution Factor: 1 **Dilution Factor:** NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3
Toluene	108-88-3	92.14	0.98	0.50		3.7	1.9
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2
Xylene (para, meta)	1330-20-7	106.2	ND	1.0		ND	4.3
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2
Styrene	100-42-5	104.1	ND	0.50		ND	2.1
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10.9	10	109%

Qualifier Definitions

B = Compound also found in method blank.

ND= Non Detect

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Air Analysis Data Summary

EPA Compendium TO-15

Tentatively Identified Compounds

Client Project Name: 07205-10500
Client Sample ID: Youth Services
EMSL ID: 491100675-2TIC
Canister ID: E0354

Primary Lab File ID: K8904.D
Analysis Date: 08/12/2011
Sample Vol(ml): 250
Dilution Factor: 1

Dilution Lab File ID: NA
Analysis Date: NA
Sample Vol(ml): NA
Dilution Factor: NA

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
Ethane, 1,1-difluoro-	000075-37-6	66	43	JN	120	4.81
Unknown		92	4.1	J	15	5.27
Butane	000106-97-8	58	4.8	JN	11	5.66
Acetaldehyde	000075-07-0	44	1.6	JN	2.9	6.06
Butane, 2-methyl-	000078-78-4	72	2.8	JN	8.2	7.05
Pentane	000109-66-0	72	17	JN	50	7.85
Unknown		92	0.97	J	3.6	15.13
Hexane, 3-methyl-	000589-34-4	100	0.85	JN	3.5	16.88
Cyclohexane, methyl-	000108-87-2	98	1.2	JN	5.0	19.52
Hexanal	000066-25-1	100	1.4	JN	5.6	22.74
Benzaldehyde	000100-52-7	106	0.86	JN	3.7	27.78
D-Limonene	005989-27-5	136	1.2	JN	6.9	28.05

Qualifier Definitions

B = Compound also found in method blank.
J= Estimated value based on a 1:1 response to internal standard.
N= Presumptive evidence of compound based on library match.

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: 07205-10500 **EMSL ID:** 491100675-3
Client Sample ID: Daisy Ortiz **Canister ID:** E0357

Primary Lab File ID: K8905.D **Dilution Lab File ID:** NA
Analysis Date: 08/12/2011 **Analysis Date:** NA
Sample Vol(ml): 250 **Sample Vol(ml):** NA
Dilution Factor: 1 **Dilution Factor:** NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	1.0		ND	2.4
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5
Chloromethane	74-87-3	50.49	0.58	0.50		1.2	1.0
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3
Ethanol	64-17-5	46.07	98	0.50	E	190	0.94
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	21	0.50		52	1.2
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8
Acetone	67-64-1	58.08	14	0.50		32	1.2
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8
2-Butanone(MEK)	78-93-3	72.10	0.88	0.50		2.6	1.5
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0
Ethyl acetate	141-78-6	88.10	0.62	0.50		2.2	1.8
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	0.50		ND	2.3
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1
n-Heptane	142-82-5	100.2	0.68	0.50		2.8	2.0
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0
Benzene	71-43-2	78.11	ND	0.50		ND	1.6
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7

Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name:	07205-10500	**EMSL ID:**	491100675-3
Client Sample ID:	Daisy Ortiz	**Canister ID:**	E0357
Primary Lab File ID:	K8905.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/12/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3
Toluene	108-88-3	92.14	0.96	0.50		3.6	1.9
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2
Xylene (para, meta)	1330-20-7	106.2	ND	1.0		ND	4.3
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2
Styrene	100-42-5	104.1	ND	0.50		ND	2.1
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10.6	10	106%

Qualifier Definitions

B = Compound also found in method blank.

ND= Non Detect

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Air Analysis Data Summary

EPA Compendium TO-15

Tentatively Identified Compounds

Client Project Name:	07205-10500	**EMSL ID:**	491100675-3TIC
Client Sample ID:	Daisy Ortiz	**Canister ID:**	E0357
Primary Lab File ID:	K8905.D	**Dilution Lab File ID:**	NA
Analysis Date:	08/12/2011	**Analysis Date:**	NA
Sample Vol(ml):	250	**Sample Vol(ml):**	NA
Dilution Factor:	1	**Dilution Factor:**	NA

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
Ethane, 1,1-difluoro-	000075-37-6	66	40	JN	110	4.81
Unknown		92	3.9	J	15	5.27
Butane	000106-97-8	58	5.1	JN	12	5.65
Acetaldehyde	000075-07-0	44	1.5	JN	2.6	6.06
Butane, 2-methyl-	000078-78-4	72	4.9	JN	14	7.05
Pentane	000109-66-0	72	18	JN	53	7.84
Pentane, 3-methyl-	000096-14-0	86	0.89	JN	3.1	12.11
Unknown		92	0.90	J	3.4	15.12
Hexane, 2-methyl-	000591-76-4	100	0.85	JN	3.5	16.40
Hexane, 3-methyl-	000589-34-4	100	1.1	JN	4.5	16.87
Cyclohexane, methyl-	000108-87-2	98	1.3	JN	5.1	19.52
Hexanal	000066-25-1	100	1.4	JN	5.8	22.74
D-Limonene	005989-27-5	136	1.1	JN	6.3	28.05
Undecane	001120-21-4	156	0.98	JN	6.3	28.43
Nonanal	000124-19-6	142	1.5	JN	8.5	29.49

Qualifier Definitions

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-0262 Web: http://www.emsl.com Email:cinnmicrolab@emsl.com

Attn: Brian Nemetz
Birdsall Services Group
1415 Wyckoff Road
Suite 206
Farmingdale, NJ 07727
Proj: 07205-105000

EMSL Order: 371109926
Customer ID: PMK50B
Collected: 8/09/2011
Received: 8/10/2011
Analyzed: 8/13/2011

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Bulk Samples (EMSL Method: M041)

Lab Sample Number: / Client Sample ID: / Sample Location:	371109926-0001 V 1 Daisy Ortiz	371109926-0002 V 2 IDRC	371109926-0003 V 3 Youth Commission	371109926-0004 V 4 Labor Mgmt Op	371109926-0005 V 5 Human Services
Spore Types	Category	Category	Category	Category	Category
Agrocybe/Coprinus	-	-	-	-	-
Alternaria	-	-	-	-	-
Ascospores	-	-	-	-	-
Aspergillus/Penicillium	Rare	Rare	Rare	Rare	Rare
Basidiospores	-	-	-	Rare	-
Bipolaris++	-	-	-	-	-
Chaetomium	-	-	-	-	-
Cladosporium	-	-	-	-	-
Curvularia	-	-	-	-	-
Epicoccum	-	-	-	-	-
Fusarium	-	-	-	-	-
Ganoderma	-	-	-	-	-
Myxomycetes++	-	-	-	-	-
Paecilomyces	-	-	-	-	-
Rust	-	-	-	-	-
Scopulariopsis	-	-	-	-	-
Stachybotrys	-	-	-	-	-
Torula	-	-	-	-	-
Ulocladium	-	-	-	-	-
Unidentifiable Spores	-	Rare	-	-	-
Zygomycetes	-	-	-	-	-
Fibrous Particulate	Low	Low	Low	Rare	-
Hyphal Fragment	-	-	-	-	-
Insect Fragment	-	-	-	-	-
Pollen	-	-	-	-	-

Initial report from: 08/13/2011 09:07:45

Category: Count/per area analyzed
Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Perisonia/Smut
* = Sample contains fruiting structures and/or hyphae associated with the spores.

No discernable field blank was submitted with this group of samples.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com